UP&L MINING DIVISION
TECHNICAL SERVICES - HYDROLOGIC MONITORING

DEER CREEK DISCHARGE QUALITY AND QUANTITY

Quality				Quantity	
Date	Time	GPM	Temp.(F)	Month	Gallons/day
01-29-86	1000	200	52	Jan-86	350,000est
02-26-86	1330	453.3	52	Feb	791,142
03-25-86	1440	364	56	Mar	713,583
04-25-86	900	453.3	52	Apr	818,470
05-29-86	1400		56	May	750,000est
07-07-86	1020	300est	56	Jun	750,000est
08-04-86	1500	650	56	Jul	750,000est
08-28-86	930	680	53	Aug	1,047,593
10-01-86	1000	650	56	Sep	884,178
10-29-86	1030	525	53	Oct	705,284
11-26-86	920	510	51	Nov	800,000est
12-15-86	930	668	52	Dec	200,000est
01-30-87	1400	650est	54	Jan-87	800,000est
02-27-87	1400	400est	52	Feb	350,000est
04-06-87	1240	450	52	Mar	550,000est
04-29-87	1100	550	55	Apr	927,066
06-01-87	1300	600	58	May	1,239,270
06-24-87	1000	1100	54	Jun	1,042,636
07-16-87	1030	950	53	Jul	1,052,546
08-18-87	1155	450	55	Aug	934,830
09-22-87	1030	700	56	Sep	1,152,242
10-21-87	1015	1050	56	Oct	1,109,403
11-10-87	1035	700	56	Nov	1,329,328
12-10-87	1110	850	57	Dec	1,303,875
01-21-88	1400	1000	55	Jan-88	1,363,633
02-12-88	1030	1200	56	Feb	1,203,024
03-23-88	1045	1200	55	Mar	1,216,595
04-18-88	1300	650	56	Apr	1,835,355
05-16-88	1550	1550	58	May	1,952,000
06-07-88	1115	750	56	Jun	1,731,815
07-28-88	1700	1400	56	Jul	1,731,815
08-16-88	940	960	58	Aug	1,673,439
09-28-88	1610	780	54	Sep	1,651,790
10-17-88	1100	1000	55	Oct	1,569,102
11-30-88	1515	1250	56	Nov	1,258,861
12-15-88	1340	1270	54	Dec	1,703,900

UP&L MINING DIVISION
TECHNICAL SERVICES - HYDROLOGIC MONITORING

WILBERG - COTTONWOOD DISCHARGE QUALITY AND QUANTITY

Left Fork Grimes Wash

Quality				Quantity	
Date	Time	GPM	Temp.(F)	Month	Gallons/day
Jan-86		NO DISCHARGE		Jan-86	
Feb		NO DISCHARGE		Feb	
Mar		NO DISCHARGE		Mar	
Apr		NO DISCHARGE		Apr	
May		NO DISCHARGE		May	
Jun		NO DISCHARGE		Jun	
Jul		NO DISCHARGE		Jul	
Aug				Aug	76,296
Sep		NO DISCHARGE		Sep	
Oct		NO DISCHARGE		Oct	
Nov		NO DISCHARGE		Nov	
Dec		NO DISCHARGE		Dec	
Jan-Dec 87		NO DISCHARGE		Jan-Dec 87	
Jan-Dec 88		NO DISCHARGE		Jan-Jul 88	

Miller Canyon Breakout

Quality				Quantity	
Date	Time	GPM	Temp.(F)	Month	Gallons/day
Jan-86		NO DISCHARGE		Jan-86	NO DISCHARGE
Feb		NO DISCHARGE		Feb	NO DISCHARGE
Mar		NO DISCHARGE		Mar	NO DISCHARGE
Apr		NO DISCHARGE		Apr	NO DISCHARGE
May		NO DISCHARGE		May	NO DISCHARGE
Jun		NO DISCHARGE		Jun	NO DISCHARGE
Jul		NO DISCHARGE		Jul	NO DISCHARGE
Aug		NO DISCHARGE		Aug	NO DISCHARGE
Sep		NO DISCHARGE		Sep	NO DISCHARGE
11-29-1986	1300	25	46	Oct	36,000
Nov		NO DISCHARGE		Nov	NO DISCHARGE
Dec		NO DISCHARGE		Dec	NO DISCHARGE
Jan-87		NO DISCHARGE		Jan-87	NO DISCHARGE
Feb		NO DISCHARGE		Feb	NO DISCHARGE
Mar		NO DISCHARGE		Mar	NO DISCHARGE
Apr		NO DISCHARGE		Apr	NO DISCHARGE
May		NO DISCHARGE		May	NO DISCHARGE
06-29-87	1300	<5	52	Jun	3,600
07-28-87	1205	10-15	50	Jul	17,419
Aug-Dec 87		NO DISCHARGE		Aug-Dec	8NO DISCHARGE
Jan-Aug 88		NO DISCHARGE		Jan-Aug	8NO DISCHARGE
Sep	1500	4.3	52	Sept	185,760
Oct		NO DISCHARGE		Oct	NO DISCHARGE
11-30-88	1315	12	54	Nov	259,200
Dec 88		NO DISCHARGE		Dec	NO DISCHARGE

UP&L MINING DIVISION
TECHNICAL SERVICES - HYDROLOGIC MONITORING

DES-BEE-DOVE TRANSFER QUANTITY

Quantity

Month	Gallons/day
Jan-86	
Feb	51,139
Mar	32,652
Apr	27,939
May	13,862
Jun	
Jul	
Aug	
Sep	
Oct	10,431
Nov	5,288
Dec	5,288
Jan-87	22,057
Feb	10,214
Mar	367
Apr-Dec 87	
Jan-Dec 88	

UP&L MINING DIVISION
TECHNICAL SERVICES - HYDROLOGIC MONITORING

COTTONWOOD CANYON CREEK & MEETINGHOUSE CANYON

COTTONWOOD CANYON CREEK

Date	Time	Temp.(F)	Flow ft.	Flow GPM	pH	Cond.(uS)	Dissolved Oxygen	Weather
24-Jan-86	1050	32	1.1	1,593				clear 20's
11-Feb-86	1000	34	0.95	1,248				PC 20's
12-Mar-86	1100	35	0.9	1,172				cloudy 30's
07-Apr-86	1310	44	0.95	1,248				PC 50's
13-May-86	1445	52	1.2	1,822				clear 60's
10-Jun-86	1150	56	1.5	2,563				PC 60's
24-Jul-86	1120	52	0.91	1,194				PC 60's
13-Aug-86	830	50	0.83	1,037				clear 60's
08-Sep-86	900	48	0.83	1,037				PC 50's
14-Oct-86	1000	39	0.79	961				clear 50's
14-Nov-86	1400	38	0.78	943				clear 50's
09-Dec-86	1100	34	0.8	977				PC 20's
13-Jan-87	1515	34	0.79	961				cloudy 30's
24-Feb-87	900	38	0.8	977				cloudy 30's
17-Mar-87	1340	42	0.77	925				PC 30's
08-Apr-87	900	41	0.75	889				PC 40's
21-May-87	1035	44	0.85	1,075	8.27	486	14.2	rain 50's
16-Jun-87	1450	62	0.85	1,075	8.2	482.4	13.05	clear 80's
15-Jul-87	934	50	0.75	889	8.66	528	11.5	clear 80's
11-Aug-87	1235	59	0.66	730	7.1	528	10.67	clear 70's
17-Sep-87	1510	57	0.63	680	8.9	537	*	clear 70's
21-Oct-87	1310	48	0.59	615	6.98	516	*	clear 60's
17-Nov-87	920	32	0.6	631	7.09	581	*	snow 20's
15-Dec-87	1014	33	0.52	507	7.99	655	*	PC 20'S
19-Jan-88	1000 Frozen over - inaccessible							PC 10'S
12-Feb-88	1220	34	0.71	816	8.15	582	*	PC 20'S
23-Mar-88	1130	35	0.6	631	7.74	506	*	cloudy 40's
18-Apr-88	915	43	0.65	713	7.95	434	*	rain 40's
16-May-88	900	52	0.92	1,213	7.51	422	*	clear 60's
07-Jun-88	1255	50	0.66	730	7.98	526	*	clear 70's
14-Jul-88	1055	62	0.58	599	*	*	*	PC 80's
15-Aug-88	1405	64	0.56	547	*	*	*	PC 80's
13-Sep-88	1440	48	0.6	631	7.01	502	10.22	snow 30's
12-Oct-88	1039	46	0.59	615	7.74	465	11.56	rain 40's
14-Nov-88	1255	41	0.61	647	7.26	490	9.28	cloudy 30's
15-Dec-88	1300	37	0.55	552	7.81	562	10.38	cloudy 10's

MEETINGHOUSE CANYON

Date	Time	Temp.(F)	Flow ft.	Flow GPM	pH	Cond.(uS)	Dissolved Oxygen	Weather
13-Jan-86	1230		no flow					cloudy 20's
12-Feb-86	1445		no flow					snow 20's
11-Mar-86	1430		no flow					cloudy 30's
09-Apr-86	930		no flow					cloudy 40's
13-May-86	1150	45	0.7	799				clear 60's
10-Jun-86	900	51	1.13	1,661				PC 60's
07-Jul-86	1030	52	0.59	615				cloudy 70's
13-Aug-86	1015	56	0.2	117				PC 70's
19-Sep-86	1030	42	0.11	45				PC 50's
17-Oct-86	1155	38	0.1	40				PC 40's
10-Nov-86	1120		no flow					clear 30's
12-Dec-86	1030		no flow					PC 20'S
13-Jan-87	1100		no flow					rain 30's
13-Feb-87	1015		no flow					snow 20's
17-Mar-87	1145		no flow					clear 40's
08-Apr-87	950		no flow					clear 40's
20-May-86	1350	44	0.89	1,159	8.36	362	13.79	rain 50's
16-Jun-86	1150	55	0.65	713	8.39	380.7	14.42	clear 70's
15-Jul-87	1430	58	0.27	186	8.39	387.33	8.98	clear 80's
18-Aug-87	1100	58	0.13	61	7.47	420	12.14	clear 70's
22-Sep-87	1000	58	0.05	14	8.47	442	*	clear 70's
21-Oct-87	950	36	0.05	14	8.34	485	*	clear 30's
10-Nov-87	1005	33	0.09	35	7.65	478	*	cloudy 30's
15-Dec-87	830		no flow					PC 20'S
21-Jan-88	1300		no flow					PC 10'S
12-Feb-88	900		no flow					clear 20's
23-Mar-88	1000		no flow					cloudy 30's
18-Apr-88	1305	39	0.25	165	8.45	358	*	rain 40's
16-May-88	1500	49	1.15	1,213	8.21	314	*	PC 70's
07-Jun-88	1015	58	0.7	798	7.01	354	*	clear 70's
14-Jul-88	1302	60	0.22	136	*	*	*	PC 80's
16-Aug-88	910	61	0.15	76	*	*	*	clear 70's
13-Sep-88	1230	46	0.2	117	7.02	384	10.92	snow 30's
17-Oct-88	1025	41	0.13	61	7.13	450	10	clear 50's
16-Nov-88	1015		no flow					cloudy 30's
15-Dec-88	900		no flow					cloudy 10's

* meter out of service

UP&L MINING DIVISION
TECHNICAL SERVICES - HYDROLOGIC MONITORING

DEER CREEK IN-MINE QUALTIY & LONG TERM FLOW

QUALITY					LONG TERM FLOW(GPM)			
Date	Location	Time	Temp.(F)	GPM	Date	Site #1	Site #2	Site #3
03-25-86	EM - 3	1138	54	2.91	03-25-86		5.8	
03-25-86	3rd 5 XC-33	1220	56	0.2	08-04-86		5.5	
08-04-86	1st 5 XC-40	1430	55	0.38	09-26-86		5	
08-04-86	3rd 5B XC-21	1330	53	0.57	12-22-86		5	
09-26-86	3rd N XC-41	950	54	5	03-26-87			
09-26-86	EM - 3	1045	56	2.5	03-31-87		4.3	
12-22-86	EM - 3	1050	56	2.5	07-09-87		4.1	
12-22-86	3rd 5B XC-21	1120	52	0.5	10-07-87		4.1	
03-26-87	3rd N XC-41	1230	52	4.3	12-14-87		3.85	
03-31-87	EM - 3	1330	54	2.2	03-25-88		3.76	
07-09-87	3rd 5B XC-21	1300	52	0.46	07-30-88	103.7	3.7	
07-09-87	EM-3	1320	54	2	10-26-88	120.7	3.5	
10-07-87	3rd N XC-41	1350	50	4.1	12-15-88	112.2	4.1	38
10-07-87	EM - 3	1450	53	1.8				
12-14-87	EM - 3	1510	57	1.57				
12-14-87	3rd 5B XC-21	1444	55	0.53				
03-25-88	3rd N XC-41	1300	54	3.76				
03-25-88	3rd 5B XC-21	1245	56	0.41				
07-30-88	3rd N XC-41	1450	54	3.7				
07-30-88	1st W XC-25	1420	56	103.7				
10-26-88	3rd N XC-41	1100	55	3.5				
[illegible]26-88	1st W XC-25	1045	56	120.7				
12-15-88	3rd N XC-41	1040	56	4.1				
12-15-88	1st W XC-25	1050	55	112.2				
12-15-88	TW-10	1200	44	38				

Site #1 1st West XC-25 - flume
Site #2 3rd North XC-41 2R, (hose to belt entry pump)
Site #3 3rd North XC-65 2R, TW-10

EM - 3, 3rd South cross cut 77, terminated as of 3/87 (deteriorating roof conditions)
3rd South "B" cross cut 21, terminated as 7/88 (poor access)

UP&L MINING DIVISION
TECHNICAL SERVICES - HYDROLOGIC MONITORING

WILBERG-COTTONWOOD IN-MINE QUALTIY & LONG TERM FLOW

		QUALITY			LONG TERM FLOW(GPM)			
Date	Location	Time	Temp.(F)	GPM	Date	Site #1	Site #2	Site #3
03-14-86	2nd S XC-11	1400	57	0.09	03-14-86	0.09	1.61	0.08
03-14-86	4th E XC-40	1510	54	0.08	07-29-86	0.09	1.04	0.03
07-29-86	2nd S XC-11	1300	52	0.09	09-27-86	0.09	1.08	dry
07-29-86	4th E XC-24	1245	54	1.04	12-29-86	0.08	0.63	
09-27-86	2nd S XC-11	1350	56	0.09	03-31-87	0.11	0.72	
09-27-86	4th E XC-24	1430	56	1.08	07-07-87	0.06	0.52	
12-29-86	2nd S XC-11	1255	56	0.08	09-30-87	0.08	0.46	
12-29-86	4th E XC-24	1300	54	0.63	12-15-87	0.09	0.4	
03-31-87	2nd S XC-11	915	54	0.11	03-23-88	0.07	0.3	
03-31-87	4th E XC-24	930	52	0.72	07-27-88	0.03	0.27	
07-07-87	2nd S XC-11	1150	52	0.06	10-26-88	0.08	0.25	
07-07-87	4th E XC-24	1240	53	0.52	12-15-88	0.08	0.23	
09-30-87	2nd S XC-11	1500	53	0.08				
09-30-87	4th E XC-24	1530	55	0.46				
12-15-87	2nd S XC-11	1225	56	0.09				
12-15-87	4th E XC-24	1400	55	0.4				
03-23-88	2nd S XC-11	1330	54	0.07				
03-23-88	4th E XC-24	1445	54	0.3				
07-27-88	2nd S XC-11	1020	56	0.03				
07-27-88	4th E XC-24	1320	55	0.27				
10-26-88	2nd S XC-11	1015	56	0.08				
10-26-88	4th E XC-24	1330	58	0.25				
12-15-88	2nd S XC-11	1355	53	0.08				
12-15-88	4th E XC-24	1330	54	0.23				

Site #1 2nd South cross-cut 11
Site #2 4th East cross cut 24
Site #3 4th East cross cut 40, terminated as of 9-26-86

UP&L MINING DIVISION
TECHNICAL SERVICES - HYDROLOGIC MONITORING

SURFACE PIEZOMETRIC DATA

	Cottonwood Canyon (EM-31)		Rilda Canyonland (EM-47)		P - 1		P - 2		P - 3		P - 4		P - 5	
Collar Elevation *	7417.8		8045		7516.8		7612.7		7635.1		7579.3		7564.8	
Date	Reading	Level	Reading	Level	Reading	Level	Reading	Level	Reading	Level	Reading	Level	Reading	Level
01-24-86	-41.1	7376.7	inaccessilbe)		==========									
02-11-86	-40.9	7376.9	inaccessilbe)		==========									
03-12-86	-40.6	7377.2	inaccessilbe)		==========									
04-07-86	-40.6	7377.2	inaccessilbe)		==========									
05-13-86	-40.7	7377.1	-190.9	7854.1										
JUNE-86	METER OUT OF SERVICE													
07-18-86			-200.7	7844.3	-23.3	7493.5	-38.4	7574.3	-22.6	7612.5	-18.5	7560.8	-7.0	7557.8
07-24-86	-41.8	7376.0												
08-13-86	-41.8	7376.0												
08-14-86			-199.7	7845.3	-22.6	7494.2	-38.5	7574.2	-23.2	7611.9	-18.4	7560.9	-7.0	7557.8
09-08-86	-40.8	7377.0												
09-19-86			-200.8	7844.2	-24.4	7492.4	-37.9	7574.8	-24.7	7610.4	-18.6	7560.7	-6.8	7558.0
10-07-86			-204.6	7840.4	-23.5	7493.3	-37.8	7574.9	-28.9	7606.2	-19.2	7560.1	-7.4	7557.4
10-14-86	-40.6	7377.2												
11-10-86			-206.4	7838.6	-22.4	7494.4	-38.8	7573.9	-31.3	7603.8	-18.1	7561.2	-7.0	7557.8
11-14-86	-41.0	7376.8												
12-09-86	-40.6	7377.2	-205.8	7839.2	-21.8	7495.0	-38.5	7574.2	dry		-18.5	7560.8	-7.0	7557.8
JAN-87	inaccessilbe)		==========											
02-13-87	-40.8	7377.0	inaccessilbe)		==========									
03-03-87	-40.8	7377.0	inaccessilbe)		==========									
04-08-87	-40.6	7377.2	inaccessilbe)		==========									
05-20-87			-206.5	7838.5	-22.8	7494.0	-40.5	7572.2	-25.5	7609.6	-18.5	7560.8	-6.8	7558.0
05-21-87	-40.7	7377.1												
06-16-87	-40.8	7377.0	-204.8	7840.2	-22.8	7494.0	-39.0	7573.7	-23.8	7611.3	-14.4	7564.9	-5.9	7558.9
07-15-87	-40.8	7377.0	-205.1	7839.9	-22.6	7494.2	-38.5	7574.2	-23.5	7611.6	-16.8	7562.5	-6.1	7558.7
08-11-87	-40.9	7376.9												
08-18-87			-206.3	7838.7	-23.0	7493.8	-38.7	7574.0	-24.4	7610.7	-18.7	7560.6	-7.1	7557.7
SEP-87 **														
09-22-87	-40.6	7377.2												
10-21-87	-40.1	7377.7												
OCT-87 **														
10-21-87	-40.1	7377.7												
NOV-87 **														
12-15-87	-40.4	7377.4												
DEC-87	inaccessilbe)		==========											
JAN-88	inaccessilbe)		==========											
02-12-88	-41.3	7376.5	inaccessilbe)		==========									
03-23-88	-40.8	7377.0	inaccessilbe)		==========									
04-18-88	-40.8	7377.0	inaccessilbe		-22.8	7494.0	-40.8	7571.9	DRY		-19.0	7560.3	-7.0	7509.8
05-16-88	-40.8	7377.0	-211.5	7833.5	-22.5	7494.3	-41.0	7571.7	-33.8	7601.3	-18.7	7560.6	-7.1	7509.7
JUNE	METER OUT OF SERVICE													
JULY	METER OUT OF SERVICE													
AUGUST	METER OUT OF SERVICE													
09-13-88	-43.8	7374.0	-208.5	7836.5	-22.6	7494.2	-39.7	7573.0	DRY		-18.5	7560.8	-7.4	7509.4
10-11-88	-43.8	7374.0	-210.5	7834.5	-22.5	7494.3	-39.2	7573.5	DRY		-18.8	7560.5	-7.8	7509.0
10-12-88	-44.0	7373.8												
11-14-88	-42.8	7375.0												
11-16-88			DAMP		-23.1	7493.7	-38.8	7573.9	DRY		-19.3	7560.0	-7.2	7509.0
12-15-88	-42.4	7375.4	inaccessilbe)		==========									

* Elevations corrected, surveyed August 27,1987.

** Readings cancelled due to Rilda Canyon bridge failure & replacement.

UP&L MINING DIVISION
TECHNICAL SERVICES - HYDROLOGIC MONITORING

DEER CREEK FLOW & QUALITY

	ABOVE THE MINE							@ PERMIT BOUNDARY							BELOW THE MINE							
	Field Measurements							Field Measurements							Field Measurements							
Date	Time	Temp.(F)	Flow ft.	Flow GPM	pH	Cond.(uS)	Dissolved Oxygen	Time	Temp.(F)	Flow ft.	Flow GPM	pH	Cond.(uS)	Dissolved Oxygen	Time	Temp.(F)	Flow ft.	Flow GPM	pH	Cond.(uS)	Dissolved Oxygen	Weather
13-Jan-86	1055	32	<5.0					1115		no flow					1125		no flow					cloudy 20's
12-Feb-86	1500	33	0.1	12.6				1430	33	0.1	12.6				1415	33	0.1	12.6				snow 20's
11-Mar-86	1330	36	0.1	12.6				1345	37	0.1	12.6				1400		no flow					cloudy 30's
09-Apr-86	1000	35	0.27	58.8				1020	43	0.27	58.8				1030	44	0.27	58.8				cloudy 40's
13-May-86	1000	38	1.7	1020				950	39	1.7	833.7				940	41	1.7	833.7				clear 50's
11-Jun-86	900	44	1.7	1020				910	45	1.7	833.7				920	49	1.7	833.7				clear 60's
07-Jul-86	1010	47	0.89	371.6				1030	49	0.9	378.4				1035	58	0.85	352.8				cloudy 70's
13-Aug-86	1120	51	0.42	116.7				1135	58	0.45	129.7				1050	62	0.48	143.2				PC 70's
19-Sep-86	945	46	0.23	45.8				1000	42	0.28	61.9				1015	44	0.28	61.9				PC 50's
17-Oct-86	1055	32	0.22	42.6				1100	38	0.3	69.1				1135	45		55				PC 40's
10-Nov-86	1150	31	0.1	12.6	6.9	594	13.97	1225	32	0.1	12.6				1245	31	0.1	12.6	7.8	1572	13.56	clear 30's
12-Dec-86	1300		no flow					1320	39	0.93	398.1**				1345	42	0.98	431.3**				PC 20's
13-Jan-87	900		no flow					930							945		no flow					cloudy 30's
13-Feb-87	930	33	0.1	12.6	*	*	*	950	42	-	670**				1010	40	-	670**				clear 20's
17-Mar-87	1030	38	0.1	12.6	*	*	*	1045	40	0.15	23.8				1100	42	0.15	23.8				snow 20's
08-Apr-87	1039	38	-	25 est	7.58	1220	12.75	1130	38	-	35 est				1130	50.4	-	35est	7.81	2284	14.86	clear 40's
20-May-87	1420	42	1.6	921.2	8.33	418.83	12.44	1440	44	1.6	921.2	8.32	684.5	12.48	1450	50	-	1200est	8.13	827.5	11.84	rain 50's
16-Jun-87	1220	48	1.2	590.3	8.33	401.2	14.89	1240	53	1.2	590.3	*	529.17	14.5	1255	64	1.2	590.3	8.19	708.67	11.89	clear 70's
16-Jul-87	1000	49	0.64	223.1	7.9	471.67	12.97	1029	53	0.73	273.8	8.46	660.33	13.86	1040	64	0.71	262.1	8.5	910.33	9.79	clear 80's
18-Aug-87	1145	48	0.34	83.9	7.99	497	12.77	1220	50	0.5	152.2	8.31	985	11.93	1240	66	0.5	152.2	8.26	1365	11.93	clear 70's
22-Sep-87	1020	48	0.22	42.6	8.7	553	*	1040	58	0.24	48.9	8.8	905	*	1050	64	0.24	48.9	7.42	1462	*	clear 70's
21-Oct-87	1025	34	0.18	31.4	7.52	608	*	1035	42	0.18	31.4	7.79	1228	*	1045	48	0.18	31.4	7.95	1625	*	clear 40's
10-Nov-87	1050	36	0.34	83.9	7.83	687	*	1100	40	0.36	92	7.89	1221	*	1110	48	0.36	92	8.03	1562	*	cloudy 30's
10-Dec-87	1120	34	-	10	7.9	908	*	1140		no flow					1200		no flow					PC 10's
21-Jan-88	1420	32	0.1	12.6	7.57	1519	*	1435		no flow					1445		no flow					clear 20's
12-Feb-88	1100	34	0.1	12.6	7.93	1140	*	1115		no flow					1125		no flow					PC 20's
23-Mar-88	1030		frozen - no flow					1045		no flow					1100		no flow					cloudy 40's
18-Apr-88	1325	41	0.69	250.4	8.38	425	*	1400	40	0.8	315.1	8.27	1382	*	1420	46	0.85	352.8	8.33	1114	*	rain 40's
16-May-88	1530	44	-	1200 est	8.15	376	*	1620	46	-	1200est	8.16	474	*	1630	46	-	1200est	8.19	612	*	PC 70'S
07-Jun-88	1100	42	1.6	921.2	8.22	434	*	1150	47	1.6	921	8.42	324	*	1210	58	1.6	921	8.18	678	*	clear 70's
14-Jul-88	1220	62	0.65	228.5	*	*	*	1230	66	0.65	228	*	*	*	1240	68	0.65	228	*	*	*	clear 90's
16-Aug-88	935	58	0.32	76.3	*	*	*	1000	64	0.3	69.1	*	*	*	1010	69	0.27	58.8	*	*	*	clear 80's
14-Sep-88	1550	54	0.27	58.8	7.32	538	10.76	1600	53		1400**	7.83	1006	9.42	1620	56		1400**	8.05	1061	9.18	snow 30's
17-Oct-88	1130	38	0.24	48.9	6.94	548	9.6	1120	40	0.24	48.9	6.8	853	9.3	1130	46	0.25	52.5	6.7	954	8.8	clear 50's
16-Nov-88	1030		frozen - no flow					1045	31	0.02	1.04	7.08	972	8.81	1100	32	0.04	3.06	7.44	1816	13.87	cloudy 30's
15-Dec-88	1015		frozen - no flow					1025		frozen - no flow					1035		frozen - no flow					cloudy 10's

* meter out of service

** includes sediment pond discharge

UP&L MINING DIVISION
TECHNICAL SERVICES - HYDROLOGIC MONITORING

GRIMES WASH FLOW & QUALITY

	RIGHT FORK							LEFT FORK							BELOW THE MINE							
	Field Measurements							Field Measurements							Field Measurements							
ate	Time	Temp.(F)	Flow ft.	Flow GPM	pH	Cond.(uS)	Dissolved Oxygen	Time	Temp.(F)	Flow ft.	Flow GPM	pH	Cond.(uS)	Dissolved Oxygen	Time	Temp.(F)	Flow ft.	Flow GPM	pH	Cond.(uS)	Dissolved Oxygen	Weather
08-Jan-86	1500		no flow					1520	33	0.01	0.35				1630	33		5-10				clear 30's
11-Feb-86	1100		no flow					1045		no flow					1005	33		10-15				PC 20's
12-Mar-86	1050		no flow					1115	39	0.05	8.3				1130	38		10-15				cloudy 30's
07-Apr-86	1410	48	0.1	12.5				1420	49	0.15	44.9				1430	47		65				PC 50's
13-May-86	1530	54	0.18	31.4				1515	48	0.43	242.4				1615	48		280				clear 60's
10-Jun-86	1320	48	0.17	28.7				1305	46	0.37	188.5				1300	48		225				PC 60's
08-Jul-86	1330	61	0.1	12.6				1340	58	0.24	98.7				1350	54		110				PC 80's
13-Aug-86	940	52	0.09	10.7				930	50	0.17	53.9				915	52		70				PC 70's
08-Sep-86	1150	54	0.02	1.04				1140	59	0.11	26.9				1040	52		30				PC 60's
17-Oct-86	1000	38	0.03	1.96				900	36	0.1	22.4				1005	44		40				PC 40's
13-Nov-86	1330		no flow					1330	38	0.05	8.3	8.01	453	9.35	1400	40.1		60*	6.10	1618	11.6	clear 40's
09-Dec-86	1145		no flow					1130	36	0.01	0.35	*	*	*	1200	36		55*	*	*	*	PC 20's
09-Jan-87	1000		no flow					1010		no flow					1030	34		35*	*	*	*	PC 20's
13-Feb-87	1250		no flow					1305		no flow					1335	38		45*	*	*	*	clear 20's
18-Mar-87	1300		no flow					1330	no flow						1400	42		12.5				PC 20's
08-Apr-87	1355	35.3	2250est		8.11	147	13.02	1330	51.6	0.2	71.8	7.74	337	14.12	1430	39.3	2350est		7.96	232	12.94	PC 50's
21-May-87	1125	43.5	-	1	8.22	547	11.05	1100	44	-	88.4	8.26	508.8	13.71	1220	50		70	7.69	1685.2	11.94	rain 50's
16-Jun-87	1550	-	no flow					1540	53	-	42.6	8.1	473.7	14.53	1600	58		60	7.50	1444.2	15.01	clear 80's
15-Jul-87	1000	-	no flow					1008	55	-	51.1	8.12	550.67	11.69	1020	55		75	8.24	1327.67	11.89	clear 80's
11-Aug-87	1300	-	no flow					1315	62	0.11	28.3	8.33	558	9.83	1400	60		50	8.05	1578	10.87	clear 70's
17-Sep-87	1350	-	no flow					1400	66	0.06	5.7	8.56	619	*	1420	66		25	8.56	1779	*	clear 70's
21-Oct-87	1115	-	no flow					1120		no flow					1125	48		50	8.06	1791	*	clear 50's
17-Nov-87	1000	-	no flow					950		no flow					940	38		45	7.16	1985	*	snow 20's
15-Dec-87	1430	-	no flow					1420		no flow					1500	32		25	7.81	4065	*	PC 20's
21-Jan-88	1300	-	no flow					1330		no flow					1400	32		12	7.74	14132	*	PC 10's
12-Feb-88	1300	-	no flow					1330		no flow					1310	36		12	7.92	4763	*	PC 20's
23-Mar-88	1235	36	0.4	108.2	7.21	201	*	1220		no flow					1200	36		150	7.21	1021	*	cloudy 40's
18-Apr-88	1025	46	0.1	12.6	8.18	375	*	1100	49	0.12	32.4	8.07	456	*	1000	48		125	8.18	375	*	rain 40's
16-May-88	1120	-	no flow					1115	60	0.22	84.5	7.83	1055	*	1110	58		110	7.92	1090	*	PC 60's
07-Jun-88	1335	-	no flow					1340	56	0.2	72.7	8.45	559	*	1350	56		100	8.20	1118	*	clear 70's
14-Jul-88	1130	-	no flow					1115	61	0.16	51.1	*	*	*	1100	64		75	*	*	*	PC 80's
15-Aug-88	1425	-	no flow					1430	68	0.1	24.3	*	*	*	1440	66		50	*	*	*	PC 80's
13-Sep-88	1325	-	no flow					1330	-	damp					1340	49		65	7.00	1677	10.92	rain 40's
12-Oct-88	1030	-	no flow					1045	-	damp					1105	52		35	7.54	1658	10.13	rain 40's
14-Nov-88	1330	-	no flow					1345	-	damp					1407	46		46	7.12	1548	9.69	cloudy 30's
15-Dec-88	1345	-	no flow					1350	-	no flow					1430	41		25	7.98	3680	9.88	cloudy 10's

meter out of service

EAST MOUNTAIN SPRINGS DISCHARGE

Spring	Date Sampled	Flow (GPM)	Temp. F	Date Sampled	Flow (GPM)	Temp. F	Seasonal Net Change %
Sheba	07-06-88	10.4	41	10-20-88	1.1	44	-89
Elk Spring	07-06-88	217.4	41	10-20-88	72.7	40	-67
Burnt Tree	07-06-88	12.0	43	10-20-88	10.6	44	-12
Jerk Water							
Pine Springs							
Pine Sp. Trough							
Ted's Tub	07-07-88	60.0	48	10-20-88	2.3	49	-96
79-1							
79-2	07-07-88	2.1	43	10-20-88	3.0	42	43
79-3							
79-4							
79-5							
79-6							
79-7							
79-8							
79-9							
79-10	07-06-88	25.0	41	10-20-88	3.2	46	-87
79-11							
79-12	07-07-88	damp		10-20-88	damp		
79-13							
79-14							
79-15	07-06-88	12.7	40	10-20-88	4.7	44	-63
79-16							
79-17							
79-18							
79-19							
79-20							
79-21							
79-22							
79-23	07-06-88	damp		10-20-88	dry		
79-24	07-06-88	0.8	66	10-20-88	dry		
79-25							
79-26	07-06-88	3.3	60	10-12-88	2.4	42	-27
79-27							
79-28							
79-29	07-06-88	2.6	42	10-12-88	1.6	40	-38
79-30							
79-31							
79-32	07-06-88	0.6	56	10-12-88	inaccessible		
79-33							
79-34	07-06-88	13.3	42	10-20-88	dry		
79-35	07-06-88	2.7	40	10-20-88	0.5	42	-81
79-36							
79-37							
79-38	07-07-88	10.0	46	10-20-88	2.1	42	[illegible]9
79-39							
79-40	07-07-88	5.4	43	10-20-88	dry		
80-41	07-07-88	3.9	42	10-20-88	dry		

EAST MOUNTAIN SPRINGS DISCHARGE

Spring	Date Sampled	Flow (GPM)	Temp. F	Date Sampled	Flow (GPM)	Temp. F	Seasonal Net Change %
80-42							
80-43	07-07-88	1.8	49	10-20-88	dry		
80-44	07-07-88	0.5	49	10-20-88	dry		
80-45							
80-46	07-06-88	6.7	41	10-20-88	2.5	42	-63
80-47	07-06-88	9.9	41	10-20-88	10.0	42	1
80-48							
80-49							
80-50							
82-51	07-06-88	damp		10-20-88	dry		
82-52	07-06-88	21.5	46	10-20-88	7.3	41	-66
84-53							
84-54							
84-55							
84-56	07-07-88	2.9	46	10-20-88	2.4	43	-17
85-57							
86-58							
86-59							

UTAH POWER & LIGHT CO
MINNG DIVISION
SPRING DISCHARGE RECESSION STUDY

YEAR 1988

SPRING		JUN	JUL	AUG	SEP	OCT	NOV	DEC
79-10	F		25.0	8.5	4.3	3.2		
	T		41.0	41.0	43.0	46.0		
	D		7-6-88	8-2-88	9-07-88	10-20-88		
SHEBA SPRINGS	F		10.4	6.0	1.4	1.1		
	T		41.0	41.0	48.0	44.0		
	D		7-6-88	8-2-88	9-07-88	10-20-88		
ELK SPRING	F		217.4	123.7	103.4	72.7		
	T		41.0	41.0	40.0	40.0		
	D		7-6-88	8-2-88	9-07-88	10-20-88		
79-35	F		2.7	2.0	1.7	0.5		
	T		40.0	40.0	40.0	42.0		
	D		7-6-88	8-2-88	9-07-88	10-20-88		
79-26	F		3.3	4.5	2.4	2.4		
	T		60.0	52.0	59.0	42.0		
	D		7-6-88	8-2-88	9-07-88	10-12-88		
79-29	F		2.6	3.6	1.4	1.6		
	T		42.0	42.0	41.0	40.0		
	D		7-6-88	8-2-88	9-07-88	10-12-88		
84-56	F		2.9	2.0	2.0	2.4		
	T		46.0	46.0	41.0	43.0		
	D		7-7-88	8-2-88	9-07-88	10-12-88		
80-44	F		0.5	DAMP	DRY	DRY		
	T		49.0					
	D		7-7-88	8-2-88	9-07-88	10-20-88		
80-46	F		6.7	6.0	3.8	2.5		
	T		41.0	41.0	43.0	42.0		
	D		7-7-88	8-2-88	9-07-88	10-20-88		
BURNT TREE	F		12.0	10.5	12.0	10.6		
	T		43.0	43.0	44.0	44.0		
	D		7-5-88	8-2-88	9-07-88	10-20-88		
79-23	F		DAMP	DAMP	DRY	DRY		
	T							
	D		7-5-88	8-2-88	9-07-88	10-20-88		
82-52	F		21.5	13.9	13.0	7.3		
	T		46.0	46.0	42.0	41.0		
	D		7-6-88	8-2-88	9-07-88	10-20-88		

UTAH POWER & LIGHT MINING DIVISION
EAST MOUNTAIN PRECIPITATION
HISTORICAL COMPARISON

	1981	1982	1983	1984	1985	1986	1987	1988	MEAN	ST DEV
OCT	1.28	1.93	0.38	0.76	3.27	1.15	1.57	2.77	1.64	0.92
NOV	0.39	0.53	2.90	2.43	0.97	2.38	0.39	1.91	1.49	0.97
DEC	0.05	0.97	1.39	2.42	1.67	0.87	0.16	1.29	1.10	0.73
JAN	0.29	3.22	1.30	0.27	0.49	0.30	1.37	1.42	1.08	0.94
FEB	0.52	0.14	1.81	0.65	0.59	2.10	1.37	0.00	0.90	0.72
MAR	2.77	1.67	1.98	1.22	1.77	1.43	1.65	0.99	1.69	0.51
APR	0.64	0.00	0.92	0.50	1.35	1.05	1.16	2.08	0.96	0.58
MAY	0.87	0.45	0.71	0.22	1.73	0.38	1.77	1.03	0.90	0.55
JUN	0.11	0.09	0.61	1.18	0.28	0.53	0.58	0.81	0.52	0.34
JUL	0.57	1.86	1.27	1.90	2.47	0.87	2.49	0.45	1.49	0.76
AUG	0.85	1.10	4.83	2.33	0.12	2.24	1.16	0.96	1.70	1.37
SEP	2.55	2.61	1.62	0.64	2.31	1.63	0.06	0.91	1.54	0.88
TOTAL	10.90	14.57	19.71	14.53	17.02	14.92	13.73	14.61	15.00	2.38

UTAH POWER & LIGHT CO.
MINING DIVISION
EAST MOUNTAIN PRECIPITATION 1989

DATE	TIME		INCHES PRECIPITATION	
06-Oct-88	11:42 AM	START		
06-Oct-88	01:35 PM	STOP	0.03	
06-Oct-88	05:42 PM	START		
06-Oct-88	10:11 PM	STOP	0.08	
08-Oct-88	07:56 AM	START		
08-Oct-88	02:17 PM	STOP	0.11	
12-Oct-88	10:08 AM	START		
12-Oct-88	03:45 PM	STOP	0.09	
12-Oct-88	07:06 PM	START		
13-Oct-88	12:23 PM	START	0.29	0.61 INCHES PRECIP.
03-Nov-88	12:35 PM	START		
03-Nov-88	06:35 PM	START	0.04	
17-Nov-88	07:04 AM	START		
17-Nov-88	01:17 PM	START	0.09	
03-Nov-88	06:11 PM	START		
03-Nov-88	12:37 AM	START	0.03	
18-Nov-88	12:59 PM	START		
18-Nov-88	08:34 PM	STOP	0.03	
24-Nov-88	03:18 AM	START		
24-Nov-88	05:42 AM	STOP	0.06	
25-Nov-88	08:21 PM	START		
26-Nov-88	05:55 AM	STOP	0.08	
26-Nov-88	04:46 PM	START		
27-Nov-88	02:44 AM	STOP	0.08	
28-Nov-88	12:04 PM	START		
28-Nov-88	05:25 PM	STOP	0.03	0.43 INCHES PRECIP.
14-Dec-88	12:58 PM	START		
15-Dec-88	10:33 AM	START	0.17	
19-Dec-88	04:40 AM	START		
19-Dec-88	12:34 PM	START	0.01	
20-Dec-88	03:58 PM	START		
22-Dec-88	12:35 PM	STOP	0.61	
22-Dec-88	04:43 PM	START		
23-Dec-88	03:53 PM	STOP	0.26	
24-Dec-88	06:32 AM	START		
25-Dec-88	01:51 AM	STOP	0.16	
25-Dec-88	04:06 AM	START		
26-Dec-88	07:07 PM	STOP	0.30	
28-Dec-88	04:33 PM	START		
31-Dec-88	06:36 PM	STOP	0.06	1.56 INCHES PRECIP.

UTAH POWER & LIGHT CO
MINING DIVISION
EAST MOUNTAIN PRECIPITATION 1988

DATE	TIME		INCHES PRECIPITATION	
13-Oct-87	04:49	AM START		
13-Oct-87	04:32	AM STOP	0.29	
13-Oct-87	06:03	AM START		
13-Oct-87	08:29	AM STOP	0.10	
13-Oct-87	11:07	AM START		
13-Oct-87	11:05	AM STOP	0.66	
14-Oct-87	01:43	AM START		
14-Oct-87	09:51	AM STOP	0.15	
23-Oct-87	11:22	AM START		
23-Oct-87	11:41	AM STOP	0.20	
24-Oct-87	04:36	AM START		
24-Oct-87	02:03	PM STOP	0.27	
29-Oct-87	04:03	AM START		
29-Oct-87	08:59	AM STOP	0.04	
29-Oct-87	01:09	PM START		
29-Oct-87	06:23	PM STOP	0.67	
30-Oct-87	01:30	AM START		
30-Oct-87	05:03	AM STOP	0.12	
31-Oct-87	09:15	AM START		
31-Oct-87	05:55	PM STOP	0.25	
31-Oct-87	11:33	PM START		2.77 INCHES PRECIP.
01-Nov-87	09:50	AM STOP	0.08	
01-Nov-87	11:44	AM START		
01-Nov-87	11:38	PM STOP	0.40	
03-Nov-87	02:16	AM START		
03-Nov-87	02:20	PM STOP	0.25	
03-Nov-87	10:12	PM START		
04-Nov-87	04:40	AM STOP	0.26	
05-Nov-87	09:20	AM START		
05-Nov-87	12:24	PM STOP	0.20	
05-Nov-87	03:02	PM START		
05-Nov-87	03:50	PM STOP	0.12	
05-Nov-87	05:44	PM START		
05-Nov-87	06:30	PM STOP	0.08	
06-Nov-87	03:53	AM START		
06-Nov-87	08:26	AM STOP	0.11	
06-Nov-87	10:19	AM START		
06-Nov-87	01:46	PM STOP	0.19	
06-Nov-87	11:31	PM START		
07-Nov-87	11:32	AM STOP	0.02	
13-Nov-87	02:19	PM START		
13-Nov-87	09:53	PM STOP	0.11	
14-Nov-87	06:53	AM START		
14-Nov-87	10:16	AM STOP	0.02	
25-Nov-87	07:32	AM START		

UTAH POWER & LIGHT CO
MINING DIVISION
EAST MOUNTAIN PRECIPITATION 1988

DATE	TIME		INCHES PRECIPITATION		
25-Nov-87	02:18 PM	STOP	0.06	1.91	INCHES PRECIP.
05-Dec-87	12:17 AM	START			
05-Dec-87	07:22 AM	STOP	0.30		
07-Dec-87	08:34 AM	START			
07-Dec-87	03:24 PM	STOP	0.06		
16-Dec-87	09:08 AM	START			
16-Dec-87	11:48 AM	STOP	0.03		
17-Dec-87	07:42 PM	START			
18-Dec-87	12:17 AM	STOP	0.07		
22-Dec-87	02:15 AM	START			
22-Dec-87	08:02 AM	STOP	0.14		
22-Dec-87	08:46 AM	START			
23-Dec-87	04:53 AM	STOP	0.54		
23-Dec-87	07:31 AM	START			
23-Dec-87	12:25 PM	STOP	0.01		
30-Dec-87	02:23 AM	START			
30-Dec-87	02:33 PM	STOP	0.13	1.29	INCHES PRECIP.
08-Jan-88	07:16 PM	START			
08-Jan-88	09:56 PM	STOP	0.02		
11-Jan-88	08:59 PM	START			
12-Jan-88	02:50 PM	STOP	0.08		
15-Jan-88	11:13 PM	START			
16-Jan-88	04:16 AM	STOP	0.07		
17-Jan-88	05:28 AM	START			
17-Jan-88	11:59 AM	STOP	0.19		
17-Jan-88	05:37 PM	START			
18-Jan-88	03:42 AM	STOP	0.54		
18-Jan-88	05:59 AM	START			
18-Jan-88	01:46 PM	STOP	0.39		
18-Jan-88	04:45 PM	START			
19-Jan-88	03:31 PM	STOP	0.09		
29-Jan-88	05:39 PM	START			
30-Jan-88	02:23 AM	STOP	0.04	1.42	INCHES PRECIP.
01-Feb-88	12:00 AM	START			
29-Feb-88	11:59 PM	STOP	0.00	0.00	INCHES PRECIP.
01-Mar-88	07:32 AM	START			
01-Mar-88	08:15 AM	STOP	0.21		
02-Mar-88	04:50 AM	START			
02-Mar-88	12:56 PM	STOP	0.03		
06-Mar-88	09:33 AM	START			
07-Mar-88	04:10 AM	START	0.07		
12-Mar-88	01:43 PM	START			

UTAH POWER & LIGHT CO
MINING DIVISION
EAST MOUNTAIN PRECIPITATION 1988

DATE	TIME		INCHES PRECIPITATION	
12-Mar-88	04:06 PM	START	0.03	
15-Mar-88	02:52 PM	START		
16-Mar-88	09:15 PM	STOP	0.60	
29-Mar-88	05:57 PM	START		
31-Mar-88	03:30 AM	STOP	0.05	0.99 INCHES PRECIP.
15-Apr-88	11:03 AM	START		
15-Apr-88	01:20 PM	START	0.03	
16-Apr-88	07:43 AM	START		
16-Apr-88	09:37 AM	START	0.08	
16-Apr-88	12:37 PM	START		
16-Apr-88	01:23 PM	STOP	0.04	
16-Apr-88	03:38 PM	START		
16-Apr-88	04:26 PM	STOP	0.07	
16-Apr-88	06:40 PM	START		
16-Apr-88	06:21 PM	STOP	0.11	
16-Apr-88	08:13 PM	START		
17-Apr-88	03:34 AM	STOP	0.56	
17-Apr-88	07:42 PM	START		
18-Apr-88	01:00 AM	STOP	0.09	
18-Apr-88	03:37 AM	START		
18-Apr-88	10:52 AM	STOP	0.30	
20-Apr-88	07:33 PM	START		
21-Apr-88	12:28 AM	STOP	0.09	
21-Apr-88	03:28 AM	START		
21-Apr-88	10:00 PM	STOP	0.34	
23-Apr-88	12:40 PM	START		
24-Apr-88	02:39 AM	STOP	0.28	
25-Apr-88	12:26 PM	START		
25-Apr-88	10:14 PM	STOP	0.10	2.08 INCHES PRECIP.
17-May-88	01:46 AM	START		
17-May-88	12:43 PM	START	0.26	
29-May-88	01:24 PM	START		
29-May-88	04:10 PM	START	0.09	
29-May-88	08:18 PM	START		
30-May-88	03:18 AM	STOP	0.14	
30-May-88	06:41 AM	START		
30-May-88	12:04 PM	STOP	0.53	1.03 INCHES PRECIP.
13-Jun-88	01:17 PM	START		
13-Jun-88	03:06 PM	START	0.07	
19-Jun-88	07:01 PM	START		
19-Jun-88	06:12 PM	START	0.12	
19-Jun-88	11:04 PM	START		
20-Jun-88	01:16 AM	STOP	0.10	

UTAH POWER & LIGHT CO
MINING DIVISION
EAST MOUNTAIN PRECIPITATION 1988

DATE	TIME			INCHES PRECIPITATION	
25-Jun-88	08:10	PM	START		
25-Jun-88	06:54	PM	STOP	0.31	
27-Jun-88	10:13	AM	START		
27-Jun-88	10:57	AM	STOP	0.03	
28-Jun-88	06:02	AM	START		
28-Jun-88	06:20	PM	STOP	0.18	0.81 INCHES PRECIP.
03-Jul-88	11:23	AM	START		
03-Jul-88	12:30	PM	STOP	0.07	
03-Jul-88	03:30	PM	START		
03-Jul-88	04:32	PM	STOP	0.17	
03-Jul-88	11:16	PM	START		
03-Jul-88	01:52	AM	STOP	0.04	
05-Jul-88	01:04	PM	START		
05-Jul-88	07:01	PM	STOP	0.08	
23-Jul-88	05:34	AM	START		
23-Jul-88	07:06	AM	START	0.07	
26-Jul-88	11:54	AM	START		
26-Jul-88	01:24	PM	START	0.04	0.45 INCHES PRECIP.
02-Aug-88	06:08	PM	START		
03-Aug-88	04:01	AM	START	0.05	
03-Aug-88	05:32	PM	START		
04-Aug-88	03:56	AM	START	0.23	
06-Aug-88	01:45	PM	START		
06-Aug-88	10:45	PM	STOP	0.17	
11-Aug-88	08:45	PM	START		
12-Aug-88	08:23	AM	STOP	0.09	
14-Aug-88	05:31	PM	START		
14-Aug-88	07:39	PM	STOP	0.06	
20-Aug-88	07:49	PM	START		
21-Aug-88	11:45	AM	STOP	0.21	
22-Aug-88	06:06	AM	START		
22-Aug-88	10:05	AM	STOP	0.05	
27-Aug-88	12:12	AM	START		
27-Aug-88	04:41	AM	STOP	0.09	0.96 INCHES PRECIP.
12-Sep-88	11:03	AM	START		
12-Sep-88	05:24	PM	START	0.02	
13-Sep-88	01:40	PM	START		
14-Sep-88	05:21	AM	START	0.35	
14-Sep-88	08:21	AM	START		
14-Sep-88	09:51	AM	STOP	0.03	
14-Sep-88	03:51	PM	START		
14-Sep-88	10:57	PM	STOP	0.24	
15-Sep-88	03:04	AM	START		

UTAH POWER & LIGHT CO
MINING DIVISION
EAST MOUNTAIN PRECIPITATION 1988

DATE	TIME	INCHES PRECIPITATION	
15-Sep-88	10:10 AM STOP	0.05	
19-Sep-88	01:55 AM START		
19-Sep-88	07:32 AM STOP	0.07	
22-Sep-88	03:24 AM START		
22-Sep-88	07:09 AM STOP	0.06	
28-Sep-88	06:23 AM START		
28-Sep-88	03:00 PM STOP	0.08	0.91 INCHES PRECIP.
	1988 WATER YEAR TOTAL		14.61 INCHES PRECIP.

EAST MOUNTAIN TEMPERATURES - 1988 WATER YEAR SUMMARY

Oct-87 SUMMARY

	HIGH	LOW
AVG.	50.1	33.8
MAX.	71.5	54.9
MIN.	30.8	23.1

Nov-87 SUMMARY

	HIGH	LOW
AVG.	30.0	21.5
MAX.	45.5	33.6
MIN.	21.1	9.8

Dec-87 SUMMARY

	HIGH	LOW
AVG.	21.5	9.1
MAX.	42.1	26.7
MIN.	2.7	-4.4

Jan-88 SUMMARY

	HIGH	LOW
AVG.	27.6	7.8
MAX.	43.9	22.8
MIN.	6.7	-1.6

Feb-88 SUMMARY

	HIGH	LOW
AVG.	32.6	16.8
MAX.	38.7	26.6
MIN.	26.1	9.6

Mar-88 SUMMARY

	HIGH	LOW
AVG.	35.2	16.5
MAX.	54.3	31.6
MIN.	15.1	6.7

Apr-88 SUMMARY

	HIGH	LOW
AVG.	47.5	28.4
MAX.	63.8	39.9
MIN.	34.4	17.1

May-88 SUMMARY

	HIGH	LOW
AVG.	54.8	37.4
MAX.	74.8	47.5
MIN.	22.5	17.2

Jun-88 SUMMARY

	HIGH	LOW
AVG.	69.6	47.4
MAX.	80.0	58.8
MIN.	58.1	39.0

Jul-88 SUMMARY

	HIGH	LOW
AVG.	73.6	51.6
MAX.	82.4	57.1
MIN.	64.6	46.0

Aug-88 SUMMARY

	HIGH	LOW
AVG.	70.9	49.1
MAX.	78.2	57.9
MIN.	61.3	37.1

Sep-88 SUMMARY

	HIGH	LOW
AVG.	55.4	38.6
MAX.	76.2	53.3
MIN.	31.6	23.5

1988 SUMMARY

PARAMETER	DATE	TEMP
AVG. HIGH	NA	47.4
MAX. HIGH	21-Jul-88	82.4
MIN. HIGH	01-Dec-87	2.7
AVG. LOW	NA	31.2
MAX. LOW	04-Jun-88	58.8
MIN. LOW	24-Dec-87	-4.4

EAST MOUNTAIN TEMPERATURES - HISTORICAL SUMMARY

OCTOBER SUMMARY

	HIGH	LOW
AVG.	45.2	29.3
MAX.	58.4	40.9
MIN.	22.3	9.5

NOVEMBER SUMMARY

	HIGH	LOW
AVG.	34.4	22.0
MAX.	48.5	35.6
MIN.	13.1	2.7

DECEMBER SUMMARY

	HIGH	LOW
AVG.	29.5	13.2
MAX.	43.6	26.9
MIN.	2.7	-8.8

JANUARY SUMMARY

	HIGH	LOW
AVG.	30.0	14.9
MAX.	44.7	28.7
MIN.	2.0	-15.2

FEBRUARY SUMMARY

	HIGH	LOW
AVG.	32.4	15.7
MAX.	55.5	39.2
MIN.	0.1	-14.1

MARCH SUMMARY

	HIGH	LOW
AVG.	36.2	19.1
MAX.	58.7	39.8
MIN.	15.1	0.1

APRIL SUMMARY

	HIGH	LOW
AVG.	45.2	25.6
MAX.	68.1	45.2
MIN.	12.7	-0.3

MAY SUMMARY

	HIGH	LOW
AVG.	51.5	32.2
MAX.	76.4	53.4
MIN.	15.8	3.4

JUNE SUMMARY

	HIGH	LOW
AVG.	66.4	44.3
MAX.	83.2	61.2
MIN.	27.7	13.1

JULY SUMMARY

	HIGH	LOW
AVG.	72.2	51.2
MAX.	86.9	65.1
MIN.	48.5	20.4

AUGUST SUMMARY

	HIGH	LOW
AVG.	70.8	51.1
MAX.	85.0	63.8
MIN.	47.6	35.4

SEPTEMBER SUMMARY

	HIGH	LOW
AVG.	59.7	41.5
MAX.	79.8	56.3
MIN.	31.6	20.0

HISTORICAL SUMMARY

PARAMETER	DATE	TEMP
AVERAGE HIGH		47.8
MAXIMUM HIGH	04-Jul-85	86.9
AVG. MAX. HIGH		77.8
MINIMUM HIGH	01-Feb-85	0.1
AVG. MIN. HIGH		7.7
AVERAGE LOW		30.2
MAXIMUM LOW	06-Jul-85	65.1
AVG. MAX. LOW		60.8
MINIMUM LOW	31-Jan-85	-15.2
AVG. MIN. LOW		-6.6

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)		
01-Oct-87	11:41 AM	70.1		HIGH
01-Oct-87	08:33 PM		49.1	LOW
02-Oct-87	02:37 AM		47.4	LOW
02-Oct-87	12:32 PM	71.5		HIGH
03-Oct-87	11:56 AM	70.2		HIGH
03-Oct-87	09:50 PM		48.5	LOW
04-Oct-87	12:08 PM	68.3		HIGH
04-Oct-87	09:26 PM		54.9	LOW
05-Oct-87	11:08 AM	66.9		HIGH
05-Oct-87	09:45 PM		43.4	LOW
06-Oct-87	04:20 AM		41.7	LOW
06-Oct-87	12:31 PM	63.9		HIGH
07-Oct-87	03:56 AM		41.7	LOW
07-Oct-87	12:31 PM	64.9		HIGH
08-Oct-87	09:38 AM	60.0		HIGH
08-Oct-87	06:36 PM		36.8	LOW
09-Oct-87	03:33 AM		37.6	LOW
09-Oct-87	11:33 AM	60.6		HIGH
10-Oct-87	01:33 PM	58.0		HIGH
10-Oct-87	08:53 PM		41.0	LOW
11-Oct-87	04:10 AM		38.3	LOW
11-Oct-87	11:46 AM	59.1		HIGH
12-Oct-87	12:11 PM	51.7		HIGH
12-Oct-87	07:07 PM		33.8	LOW
13-Oct-87	10:30 AM	34.7		HIGH
13-Oct-87	09:03 PM		29.2	LOW
14-Oct-87	10:24 AM	34.5		HIGH
14-Oct-87	09:02 PM		23.1	LOW
15-Oct-87	12:45 AM		23.7	LOW
15-Oct-87	10:54 AM	42.7		HIGH
16-Oct-87	02:29 AM		24.8	LOW
16-Oct-87	11:00 AM	43.0		HIGH
17-Oct-87	03:12 AM		31.1	LOW
17-Oct-87	11:10 AM	47.6		HIGH
18-Oct-87	11:32 AM	44.8		HIGH
18-Oct-87	06:39 PM		32.9	LOW
19-Oct-87	02:36 AM		28.5	LOW
19-Oct-87	11:24 AM	45.7		HIGH
20-Oct-87	03:46 AM		26.5	LOW
20-Oct-87	01:18 PM	45.8		HIGH
21-Oct-87	10:14 AM	45.7		HIGH
21-Oct-87	09:07 PM		29.6	LOW
22-Oct-87	02:58 AM		30.7	LOW
22-Oct-87	10:49 AM	47.8		HIGH
23-Oct-87	08:57 AM	41.6		HIGH
23-Oct-87	06:40 PM		27.7	LOW
24-Oct-87	03:22 AM	31.6		HIGH
24-Oct-87	06:01 PM		27.2	LOW
25-Oct-87	12:59 AM		28.4	LOW
25-Oct-87	10:19 AM	43.6		HIGH
26-Oct-87	01:54 AM		28.0	LOW

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)		
26-Oct-87	10:07 AM	44.2		HIGH
27-Oct-87	04:00 AM		32.3	LOW
27-Oct-87	11:27 AM	47.6		HIGH
28-Oct-87	09:56 AM	47.6		HIGH
28-Oct-87	09:20 PM		31.7	LOW
29-Oct-87	03:36 AM	36.5		HIGH
29-Oct-87	07:54 PM		26.1	LOW
30-Oct-87	04:32 AM	32.6		HIGH
30-Oct-87	04:38 PM		25.6	LOW
31-Oct-87	04:24 AM	30.8		HIGH
31-Oct-87	02:03 PM		27.0	LOW
01-Nov-87	03:47 AM		27.6	LOW
01-Nov-87	01:37 PM	32.7		HIGH
02-Nov-87	07:44 PM		27.9	LOW
02-Nov-87	06:12 AM	30.7		HIGH
03-Nov-87	08:14 PM		26.7	LOW
03-Nov-87	10:00 AM	34.9		HIGH
04-Nov-87	10:11 AM	45.5		HIGH
04-Nov-87	09:32 PM		33.6	LOW
05-Nov-87	07:17 AM	43.1		HIGH
05-Nov-87	09:58 PM		30.9	LOW
06-Nov-87	06:30 AM	33.7		HIGH
06-Nov-87	07:30 PM		24.6	LOW
07-Nov-87	01:48 AM		23.7	LOW
07-Nov-87	09:03 AM	34.3		HIGH
08-Nov-87	10:43 AM	42.3		HIGH
08-Nov-87	09:09 PM		28.4	LOW
09-Nov-87	06:34 AM	40.0		HIGH
09-Nov-87	07:13 PM		27.4	LOW
10-Nov-87	05:39 AM	38.1		HIGH
10-Nov-87	06:29 PM		22.6	LOW
11-Nov-87	07:46 AM	39.0		HIGH
11-Nov-87	08:14 PM		26.6	LOW
12-Nov-87	06:18 AM	38.5		HIGH
12-Nov-87	06:25 PM		29.6	LOW
13-Nov-87	02:58 AM	38.0		HIGH
13-Nov-87	09:21 PM		27.5	LOW
14-Nov-87	02:39 AM	29.9		HIGH
14-Nov-87	06:54 PM		14.3	LOW
15-Nov-87	10:07 AM	22.6		HIGH
15-Nov-87	08:42 PM		15.9	LOW
16-Nov-87	06:51 AM		11.1	LOW
16-Nov-87	05:12 PM	30.2		HIGH
17-Nov-87	03:19 AM		29.1	LOW
17-Nov-87	03:55 PM	45.3		HIGH
18-Nov-87	03:39 PM	37.5		HIGH
18-Nov-87	08:59 PM		23.5	LOW
19-Nov-87	08:28 AM		22.2	LOW
19-Nov-87	02:27 PM	32.8		HIGH
20-Nov-87	01:45 PM	29.5		HIGH

Oct-87 SUMMARY

	HIGH	LOW
AVG.	50.1	33.8
MAX.	71.5	54.9
MIN.	30.8	23.1

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)	
20-Nov-87	10:12 PM	18.6	LOW
21-Nov-87	12:58 PM	31.4	HIGH
21-Nov-87	08:56 PM	18.0	LOW
22-Nov-87	06:09 AM	11.9	LOW
22-Nov-87	01:40 PM	28.2	HIGH
23-Nov-87	11:37 AM	21.1	HIGH
23-Nov-87	06:47 PM	16.7	LOW
24-Nov-87	01:31 PM	25.7	HIGH
24-Nov-87	08:21 PM	13.5	LOW
25-Nov-87	04:25 AM	9.8	LOW
25-Nov-87	11:38 AM	25.9	HIGH
26-Nov-87	04:46 AM	11.2	LOW
26-Nov-87	11:05 AM	24.0	HIGH
27-Nov-87	05:03 AM	14.1	LOW
27-Nov-87	02:17 PM	27.6	HIGH
28-Nov-87	03:30 AM	15.6	LOW
28-Nov-87	01:10 PM	30.1	HIGH
29-Nov-87	03:27 AM	19.9	LOW
29-Nov-87	01:04 PM	33.5	HIGH
30-Nov-87	02:21 AM	23.7	LOW
30-Nov-87	11:48 AM	35.2	HIGH
01-Dec-87	03:47 AM	2.7	HIGH
01-Dec-87	07:44 PM	-2.1	LOW
02-Dec-87	10:22 AM	34.9	HIGH
02-Dec-87	01:55 PM	26.7	LOW
03-Dec-87	03:48 AM	-3.1	LOW
03-Dec-87	07:29 AM	6.1	HIGH
04-Dec-87	06:27 AM	41.1	HIGH
04-Dec-87	06:59 PM	25.3	LOW
05-Dec-87	08:53 AM	34.8	HIGH
05-Dec-87	05:52 PM	25.4	LOW
06-Dec-87	07:46 AM	37.4	HIGH
06-Dec-87	09:06 PM	22.3	LOW
07-Dec-87	02:35 AM	21.5	LOW
07-Dec-87	05:47 AM	27.5	HIGH
08-Dec-87	05:42 AM	30.3	HIGH
08-Dec-87	08:45 PM	9.0	LOW
09-Dec-87	02:06 AM	7.4	LOW
09-Dec-87	07:04 AM	23.4	HIGH
10-Dec-87	02:38 AM	16.8	LOW
10-Dec-87	08:50 AM	32.3	HIGH
11-Dec-87	07:56 AM	42.1	HIGH
11-Dec-87	09:23 PM	23.6	LOW
12-Dec-87	04:59 AM	22.2	HIGH
12-Dec-87	09:00 PM	1.7	LOW
13-Dec-87	06:38 AM	9.3	HIGH
13-Dec-87	09:30 PM	1.1	LOW
14-Dec-87	06:41 AM	4.8	HIGH
14-Dec-87	07:28 PM	-2.1	LOW
15-Dec-87	06:35 AM	11.3	HIGH

Nov-87 SUMMARY

	HIGH	LOW
AVG.	30.0	2[illegible]
MAX.	45.5	33.[illegible]
MIN.	21.1	9.8

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)	
15-Dec-87	08:22 PM	-1.9	LOW
16-Dec-87	07:35 AM	12.0	HIGH
16-Dec-87	04:48 PM	2.2	LOW
17-Dec-87	01:42 AM	6.2	LOW
17-Dec-87	09:29 PM	14.4	HIGH
18-Dec-87	07:05 AM	25.3	HIGH
18-Dec-87	08:51 PM	17.5	LOW
19-Dec-87	06:28 AM	26.2	HIGH
19-Dec-87	06:31 PM	12.0	LOW
20-Dec-87	07:05 AM	21.0	HIGH
20-Dec-87	02:34 PM	8.3	LOW
21-Dec-87	02:29 AM	8.1	LOW
21-Dec-87	08:31 AM	22.7	HIGH
22-Dec-87	07:14 AM	29.8	HIGH
22-Dec-87	09:40 PM	16.2	LOW
23-Dec-87	05:45 AM	21.8	HIGH
23-Dec-87	09:33 PM	9.9	LOW
24-Dec-87	05:39 AM	10.5	HIGH
24-Dec-87	08:56 PM	-4.4	LOW
25-Dec-87	06:59 AM	7.1	HIGH
25-Dec-87	01:15 PM	-3.4	LOW
26-Dec-87	08:02 AM	11.9	HIGH
26-Dec-87	09:19 PM	0.5	LOW
27-Dec-87	07:47 AM	14.7	HIGH
27-Dec-87	01:04 PM	6.3	LOW
28-Dec-87	06:35 AM	26.6	HIGH
28-Dec-87	09:58 PM	9.9	LOW
29-Dec-87	05:42 AM	23.4	HIGH
29-Dec-87	07:41 PM	12.0	LOW
30-Dec-87	04:30 AM	22.8	HIGH
30-Dec-87	10:57 AM	8.5	LOW
31-Dec-87	12:43 PM	-0.2	LOW
31-Dec-87	09:03 PM	16.4	HIGH
01-Jan-88	01:14 PM	0.0	LOW
01-Jan-88	06:40 PM	15.9	HIGH
02-Jan-88	09:46 AM	-1.6	LOW
02-Jan-88	05:32 PM	17.3	HIGH
03-Jan-88	08:56 AM	7.1	LOW
03-Jan-88	07:48 PM	27.0	HIGH
04-Jan-88	11:23 AM	14.0	LOW
04-Jan-88	05:34 PM	20.4	HIGH
05-Jan-88	04:46 AM	20.3	LOW
05-Jan-88	12:38 PM	14.4	LOW
06-Jan-88	12:39 AM	23.5	HIGH
06-Jan-88	09:42 AM	14.3	LOW
07-Jan-88	12:34 PM	22.4	HIGH
07-Jan-88	06:47 PM	8.5	LOW
08-Jan-88	09:41 AM	18.6	HIGH
08-Jan-88	08:11 PM	9.5	LOW
09-Jan-88	02:44 AM	10.1	LOW

Dec-87 SUMMARY

	HIGH	LOW
AVG.	21.5	9.1
MAX.	42.1	26.7
MIN.	2.7	-4.4

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)		
09-Jan-88	09:35 AM	23.2		HIGH
10-Jan-88	09:36 AM	34.4		HIGH
10-Jan-88	09:39 PM		15.2	LOW
11-Jan-88	06:35 AM	29.4		HIGH
11-Jan-88	09:27 PM		5.8	LOW
12-Jan-88	02:34 AM		2.6	LOW
12-Jan-88	11:03 AM	15.2		HIGH
13-Jan-88	02:03 AM		4.2	LOW
13-Jan-88	11:56 AM	22.5		HIGH
14-Jan-88	01:10 AM		13.3	LOW
14-Jan-88	12:27 PM	33.7		HIGH
15-Jan-88	08:45 AM	21.8		HIGH
15-Jan-88	09:30 PM		9.9	LOW
16-Jan-88	02:33 AM		8.1	LOW
16-Jan-88	09:46 AM	24.2		HIGH
17-Jan-88	02:44 AM		14.2	LOW
17-Jan-88	06:26 AM	21.8		HIGH
18-Jan-88	04:09 AM	17.4		HIGH
18-Jan-88	09:42 PM		5.3	LOW
19-Jan-88	09:02 AM	6.7		HIGH
19-Jan-88	08:11 PM		3.4	LOW
20-Jan-88	01:39 AM		5.0	LOW
20-Jan-88	10:03 AM	22.0		HIGH
21-Jan-88	09:12 AM	11.0		HIGH
21-Jan-88	08:53 PM		5.5	LOW
22-Jan-88	01:36 AM		7.3	LOW
22-Jan-88	11:00 AM	31.0		HIGH
23-Jan-88	02:10 AM	26.7		HIGH
23-Jan-88	08:24 PM		6.5	LOW
24-Jan-88	02:14 AM		5.1	LOW
24-Jan-88	07:16 AM	19.5		HIGH
25-Jan-88	01:55 AM		17.2	LOW
25-Jan-88	10:41 AM	36.6		HIGH
26-Jan-88	02:43 AM		22.3	LOW
26-Jan-88	10:08 AM	41.5		HIGH
27-Jan-88	03:21 AM		21.7	LOW
27-Jan-88	11:34 AM	43.9		HIGH
28-Jan-88	04:11 AM		22.8	LOW
28-Jan-88	09:22 AM	37.3		HIGH
29-Jan-88	09:28 AM	35.2		HIGH
29-Jan-88	09:26 PM		20.7	LOW
30-Jan-88	04:09 AM	27.6		HIGH
30-Jan-88	12:58 PM		15.6	LOW
31-Jan-88	06:43 AM	27.3		HIGH
31-Jan-88	08:22 PM		12.4	LOW
01-Feb-88	01:42 AM		11.4	LOW
01-Feb-88	08:37 AM	28.6		HIGH
02-Feb-88	03:09 AM	26.1		HIGH
02-Feb-88	04:42 PM		9.6	LOW
03-Feb-88	03:15 AM	29.6		HIGH

Jan-88 SUMMARY

	HIGH	LOW
AVG.	27.6	7.8
MAX.	43.9	22.[illegible]
MIN.	6.7	-[illegible]

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)	
03-Feb-88	10:27 AM	12.9	LOW
04-Feb-88	02:03 AM	33.3	HIGH
04-Feb-88	08:52 AM	16.0	LOW
05-Feb-88	03:11 AM	31.9	HIGH
05-Feb-88	07:41 PM	14.2	LOW
06-Feb-88	04:07 AM	35.3	HIGH
06-Feb-88	07:29 PM	17.1	LOW
07-Feb-88	02:51 AM	36.6	HIGH
07-Feb-88	11:03 AM	20.7	LOW
08-Feb-88	03:26 AM	32.6	HIGH
08-Feb-88	02:41 PM	20.0	LOW
09-Feb-88	03:25 AM	37.9	HIGH
09-Feb-88	08:25 PM	21.1	LOW
10-Feb-88	03:44 AM	27.9	HIGH
10-Feb-88	05:55 PM	15.5	LOW
11-Feb-88	04:02 AM	38.7	HIGH
11-Feb-88	08:29 PM	26.6	LOW
12-Feb-88	03:24 AM	44.8	HIGH
12-Feb-88	05:06 PM	19.7	LOW
13-Feb-88	01:23 AM	32.6	HIGH
13-Feb-88	03:32 PM	10.8	LOW
14-Feb-88	07:14 AM	19.3	LOW
14-Feb-88	10:22 PM	37.7	HIGH
15-Feb-88	02:21 AM	41.7	HIGH
15-Feb-88	07:07 PM	11.8	LOW
16-Feb-88	02:23 AM	19.7	HIGH
16-Feb-88	02:12 PM	6.7	LOW
17-Feb-88	03:28 AM	28.0	HIGH
17-Feb-88	07:44 PM	10.2	LOW
18-Feb-88	01:44 AM	18.6	HIGH
18-Feb-88	09:05 AM	12.5	LOW
19-Feb-88	03:34 AM	36.6	HIGH
19-Feb-88	06:19 PM	19.5	LOW
20-Feb-88	04:01 AM	39.1	HIGH
20-Feb-88	04:56 PM	20.4	LOW
21-Feb-88	02:46 AM	42.4	HIGH
21-Feb-88	02:53 PM	26.7	LOW
22-Feb-88	04:18 AM	42.1	HIGH
22-Feb-88	07:50 PM	23.3	LOW
23-Feb-88	03:49 AM	42.5	HIGH
23-Feb-88	08:23 PM	25.7	LOW
24-Feb-88	04:40 AM	43.7	HIGH
24-Feb-88	06:28 PM	25.8	LOW
25-Feb-88	05:02 AM	43.7	HIGH
25-Feb-88	07:37 PM	26.5	LOW
26-Feb-88	05:45 AM	45.6	HIGH
26-Feb-88	08:23 PM	28.1	LOW
27-Feb-88	06:48 AM	41.6	HIGH
27-Feb-88	02:38 PM	26.0	LOW
28-Feb-88	05:23 AM	37.9	HIGH
28-Feb-88	04:25 PM	25.3	LOW

Feb-88 SUMMARY

	HIGH	LOW
AVG.	32.6	16.8

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)				
29-Feb-88	05:32 AM	35.8		HIGH	MAX.	38.7	26.6
29-Feb-88	02:44 PM		23.4	LOW	MIN.	26.1	9.6
01-Mar-88	05:52 AM	35.9		HIGH			
01-Mar-88	11:54 AM		19.1	LOW			
02-Mar-88	07:43 AM	35.9		HIGH			
02-Mar-88	05:16 PM		20.1	LOW			
03-Mar-88	10:23 AM	40.4		HIGH			
03-Mar-88	04:08 PM		25.3	LOW			
04-Mar-88	09:41 AM	36.1		HIGH			
04-Mar-88	10:19 PM		23.6	LOW			
05-Mar-88	03:22 AM		21.8	LOW			
05-Mar-88	11:32 AM	42.3		HIGH			
06-Mar-88	06:57 AM	42.6		HIGH			
06-Mar-88	09:09 PM		10.2	LOW			
07-Mar-88	02:37 AM		9.7	LOW			
07-Mar-88	09:20 AM	19.8		HIGH			
08-Mar-88	02:47 AM		16.7	LOW			
08-Mar-88	09:50 AM	40.2		HIGH			
09-Mar-88	09:19 AM	37.9		HIGH			
09-Mar-88	08:57 PM		12.8	LOW			
10-Mar-88	03:16 AM		11.2	LOW			
10-Mar-88	08:44 AM	15.1		HIGH			
11-Mar-88	10:24 AM	23.7		HIGH			
11-Mar-88	08:17 PM		6.9	LOW			
12-Mar-88	07:59 AM	19.7		HIGH			
12-Mar-88	09:50 PM		7.1	LOW			
13-Mar-88	02:32 AM		6.7	LOW			
13-Mar-88	09:42 AM	25.4		HIGH			
14-Mar-88	02:33 AM		8.0	LOW			
14-Mar-88	09:47 AM	33.1		HIGH			
15-Mar-88	01:39 AM		13.0	LOW			
15-Mar-88	06:24 AM	32.8		HIGH			
16-Mar-88	05:48 AM	25.2		HIGH			
16-Mar-88	06:35 PM		9.3	LOW			
17-Mar-88	07:50 AM	30.3		HIGH			
17-Mar-88	05:11 PM		11.2	LOW			
18-Mar-88	09:07 AM	39.3		HIGH			
18-Mar-88	09:17 PM		23.4	LOW			
19-Mar-88	02:07 AM		23.0	LOW			
19-Mar-88	09:35 AM	47.0		HIGH			
20-Mar-88	02:05 AM		29.3	LOW			
20-Mar-88	08:31 AM	51.0		HIGH			
21-Mar-88	10:05 AM	51.9		HIGH			
21-Mar-88	09:03 PM		27.2	LOW			
22-Mar-88	05:43 AM	38.2		HIGH			
22-Mar-88	09:56 PM		24.3	LOW			
23-Mar-88	10:30 AM	45.4		HIGH			
23-Mar-88	10:13 PM		14.4	LOW			
24-Mar-88	01:18 AM		16.6	LOW			
24-Mar-88	08:08 AM	34.7		HIGH			

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)		
25-Mar-88	08:06 AM	45.7		HIGH
25-Mar-88	08:57 PM		31.3	LOW
26-Mar-88	01:26 AM		31.6	LOW
26-Mar-88	09:52 AM	54.3		HIGH
27-Mar-88	05:27 AM	48.7		HIGH
27-Mar-88	10:38 PM		8.3	LOW
28-Mar-88	04:08 AM	18.8		HIGH
28-Mar-88	08:25 PM		8.5	LOW
29-Mar-88	01:28 AM		9.1	LOW
29-Mar-88	09:09 AM	32.0		HIGH
30-Mar-88	05:11 AM	19.0		HIGH
30-Mar-88	08:43 PM		14.2	LOW
31-Mar-88	07:58 AM	29.6		HIGH
31-Mar-88	08:18 PM		17.9	LOW
01-Apr-88	01:27 AM		26.8	LOW
01-Apr-88	09:20 AM	43.5		HIGH
02-Apr-88	01:06 AM		32.6	LOW
02-Apr-88	09:20 AM	52.6		HIGH
03-Apr-88	08:34 AM	52.5		HIGH
03-Apr-88	10:59 PM		35.6	LOW
04-Apr-88	09:59 AM	45.3		HIGH
04-Apr-88	06:56 PM		27.6	LOW
05-Apr-88	03:24 AM		23.5	LOW
05-Apr-88	01:38 PM	48.7		HIGH
06-Apr-88	03:50 AM		30.8	LOW
06-Apr-88	12:01 PM	56.0		HIGH
07-Apr-88	05:22 AM		39.3	LOW
07-Apr-88	01:16 PM	61.1		HIGH
08-Apr-88	02:14 AM	37.1		HIGH
08-Apr-88	08:22 PM		17.7	LOW
09-Apr-88	02:39 AM		17.1	LOW
09-Apr-88	01:48 PM	44.2		HIGH
10-Apr-88	02:27 AM		21.5	LOW
10-Apr-88	01:06 PM	49.8		HIGH
11-Apr-88	03:06 AM		34.0	LOW
11-Apr-88	01:37 PM	58.0		HIGH
12-Apr-88	02:25 AM		39.9	LOW
12-Apr-88	12:54 PM	63.8		HIGH
13-Apr-88	12:03 PM	62.4		HIGH
13-Apr-88	09:51 PM		39.8	LOW
14-Apr-88	06:31 AM	47.2		HIGH
14-Apr-88	08:40 PM		31.0	LOW
15-Apr-88	01:53 AM		32.0	LOW
15-Apr-88	09:17 AM	46.4		HIGH
16-Apr-88	10:50 AM	40.1		HIGH
16-Apr-88	08:14 PM		28.4	LOW
17-Apr-88	01:06 AM		29.5	LOW
17-Apr-88	08:16 AM	39.4		HIGH
18-Apr-88	09:39 AM	36.9		HIGH
18-Apr-88	08:30 PM		27.6	LOW

Mar-88 SUMMARY

	HIGH	LOW
AVG.	35.2	16.5
MAX.	54.3	31.6
MIN.	15.1	6.7

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)		
19-Apr-88	12:58 AM		27.1	LOW
19-Apr-88	06:36 AM	42.2		HIGH
20-Apr-88	08:05 AM	42.1		HIGH
20-Apr-88	08:41 PM		25.4	LOW
21-Apr-88	05:28 AM	36.0		HIGH
21-Apr-88	08:49 PM		19.5	LOW
22-Apr-88	05:47 AM	36.4		HIGH
22-Apr-88	09:00 PM		21.3	LOW
23-Apr-88	06:35 AM	35.4		HIGH
23-Apr-88	07:57 PM		22.5	LOW
24-Apr-88	01:31 AM		29.0	LOW
24-Apr-88	08:06 AM	38.3		HIGH
25-Apr-88	03:12 AM	34.4		HIGH
25-Apr-88	08:05 PM		18.4	LOW
26-Apr-88	01:26 AM		22.2	LOW
26-Apr-88	12:36 PM	46.1		HIGH
27-Apr-88	02:26 AM		32.7	LOW
27-Apr-88	01:26 PM	56.7		HIGH
28-Apr-88	08:57 AM	56.6		HIGH
28-Apr-88	09:46 PM		38.1	LOW
29-Apr-88	03:09 AM		37.0	LOW
29-Apr-88	11:51 AM	59.5		HIGH
30-Apr-88	10:12 AM	56.0		HIGH
30-Apr-88	09:58 PM		23.5	LOW
01-May-88	06:55 AM	23.0		HIGH
01-May-88	08:00 PM		17.2	LOW
02-May-88	01:40 AM		17.6	LOW
02-May-88	09:20 AM	42.6		HIGH
03-May-88	01:40 AM		24.0	LOW
03-May-88	11:12 AM	50.3		HIGH
04-May-88	02:54 AM		32.4	LOW
04-May-88	01:03 PM	57.9		HIGH
05-May-88	04:37 AM		38.2	LOW
05-May-88	12:20 PM	59.5		HIGH
06-May-88	01:43 AM	34.3		HIGH
06-May-88	06:18 PM		21.8	LOW
07-May-88	05:13 AM	22.5		HIGH
07-May-88	02:45 PM	40.9		HIGH
08-May-88	02:29 AM		27.3	LOW
08-May-88	02:26 PM	46.1		HIGH
09-May-88	03:35 AM		31.5	LOW
09-May-88	12:36 PM	57.4		HIGH
10-May-88	03:13 AM		36.4	LOW
10-May-88	01:05 PM	59.3		HIGH
11-May-88	03:09 AM		37.2	LOW
11-May-88	01:17 PM	66.4		HIGH
12-May-88	02:08 AM		44.9	LOW
12-May-88	01:14 PM	72.8		HIGH
13-May-88	10:29 AM	73.0		HIGH
13-May-88	09:36 PM		44.8	LOW

Apr-88 SUMMARY

	HIGH	LOW
AVG.	47.5	28.4
MAX.	63.8	39.9
MIN.	34.4	17.1

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)	
14-May-88	01:28 AM	39.3	LOW
14-May-88	10:15 AM	63.6	HIGH
15-May-88	01:55 AM	45.7	LOW
15-May-88	12:15 PM	73.8	HIGH
16-May-88	10:02 AM	72.2	HIGH
16-May-88	10:34 PM	47.5	LOW
17-May-88	05:24 AM	49.0	HIGH
17-May-88	09:18 PM	34.1	LOW
18-May-88	07:04 AM	51.7	HIGH
18-May-88	09:34 PM	31.7	LOW
19-May-88	12:08 AM	30.9	LOW
19-May-88	09:22 AM	47.5	HIGH
20-May-88	01:15 AM	31.3	LOW
20-May-88	12:15 PM	57.2	HIGH
21-May-88	10:59 AM	64.0	HIGH
21-May-88	09:39 PM	41.6	LOW
22-May-88	01:37 AM	37.9	LOW
22-May-88	01:27 PM	64.2	HIGH
23-May-88	01:32 AM	39.3	LOW
23-May-88	11:23 AM	67.3	HIGH
24-May-88	01:48 AM	46.9	LOW
24-May-88	08:21 AM	62.7	HIGH
25-May-88	01:26 AM	46.5	LOW
25-May-88	02:57 PM	68.4	HIGH
26-May-88	02:27 AM	47.0	LOW
26-May-88	01:12 PM	74.8	HIGH
27-May-88	02:56 AM	46.2	LOW
27-May-88	12:40 PM	70.6	HIGH
28-May-88	03:30 AM	44.5	LOW
28-May-88	12:32 PM	72.4	HIGH
29-May-88	09:49 AM	59.2	HIGH
29-May-88	09:28 PM	23.7	LOW
30-May-88	06:38 AM	34.2	HIGH
30-May-88	07:59 PM	20.1	LOW
31-May-88	05:37 AM	41.2	HIGH
31-May-88	06:54 PM	32.6	LOW
01-Jun-88	01:59 AM	39.0	LOW
01-Jun-88	11:34 AM	58.1	HIGH
02-Jun-88	01:57 AM	43.4	LOW
02-Jun-88	10:25 AM	64.3	HIGH
03-Jun-88	02:15 AM	48.8	LOW
03-Jun-88	03:56 PM	74.7	HIGH
04-Jun-88	03:11 PM	80.0	HIGH
04-Jun-88	09:51 PM	58.8	LOW
05-Jun-88	02:39 PM	73.1	HIGH
05-Jun-88	10:34 PM	52.1	LOW
06-Jun-88	04:37 AM	45.9	LOW
06-Jun-88	02:33 PM	70.2	HIGH
07-Jun-88	04:29 AM	43.9	LOW
07-Jun-88	01:50 PM	70.1	HIGH

May-88 SUMMARY

	HIGH	LOW
AVG.	54.8	37.4
MAX.	74.8	47.5
MIN.	22.5	17.2

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)		
08-Jun-88	04:43 AM		41.3	LOW
08-Jun-88	05:59 PM	67.0		HIGH
09-Jun-88	06:50 AM		44.4	LOW
09-Jun-88	05:03 PM	70.9		HIGH
10-Jun-88	04:40 PM	70.7		HIGH
10-Jun-88	09:02 PM		52.1	LOW
11-Jun-88	05:13 AM		44.3	LOW
11-Jun-88	05:32 PM	69.6		HIGH
12-Jun-88	02:58 PM	65.9		HIGH
12-Jun-88	08:37 PM		41.3	LOW
13-Jun-88	03:37 AM		39.4	LOW
13-Jun-88	04:01 PM	59.3		HIGH
14-Jun-88	04:37 AM		39.0	LOW
14-Jun-88	03:58 PM	66.6		HIGH
15-Jun-88	05:42 PM	67.4		HIGH
15-Jun-88	09:33 PM		51.3	LOW
16-Jun-88	04:52 AM		47.3	LOW
16-Jun-88	03:02 PM	74.2		HIGH
17-Jun-88	02:42 PM	62.1		HIGH
17-Jun-88	10:59 PM		48.5	LOW
18-Jun-88	04:56 AM		45.9	LOW
18-Jun-88	05:34 PM	72.5		HIGH
19-Jun-88	03:48 PM	73.6		HIGH
19-Jun-88	10:59 PM		48.9	LOW
20-Jun-88	03:13 AM		47.2	LOW
20-Jun-88	02:59 PM	69.6		HIGH
21-Jun-88	04:54 AM		51.8	LOW
21-Jun-88	12:22 PM	73.6		HIGH
22-Jun-88	03:10 PM	74.4		HIGH
22-Jun-88	10:26 PM		57.2	LOW
23-Jun-88	04:45 AM		51.0	LOW
23-Jun-88	12:42 PM	75.2		HIGH
24-Jun-88	05:05 AM		55.5	LOW
24-Jun-88	01:47 PM	76.8		HIGH
25-Jun-88	03:43 PM	74.8		HIGH
25-Jun-88	09:49 PM		47.5	LOW
26-Jun-88	03:34 AM		46.1	LOW
26-Jun-88	01:00 PM	65.9		HIGH
27-Jun-88	03:32 AM		48.3	LOW
27-Jun-88	12:01 PM	67.6		HIGH
28-Jun-88	03:06 AM		48.2	LOW
28-Jun-88	08:46 AM	58.5		HIGH
29-Jun-88	03:36 AM		46.9	LOW
29-Jun-88	05:04 PM	68.6		HIGH
30-Jun-88	03:20 AM		47.7	LOW
30-Jun-88	05:03 PM	71.0		HIGH
01-Jul-88	06:51 AM		52.3	LOW
01-Jul-88	05:10 PM	74.0		HIGH
02-Jul-88	06:33 AM		53.6	LOW
02-Jul-88	04:34 PM	75.0		HIGH

Jun-88 SUMMARY

	HIGH	LOW
AVG.	69.6	47.4
MAX.	80.0	5[illegible]
MIN.	58.1	39.0

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)		
03-Jul-88	02:39 PM	75.0		HIGH
03-Jul-88	07:47 PM		46.0	LOW
04-Jul-88	05:53 AM		46.0	LOW
04-Jul-88	06:27 PM	64.6		HIGH
05-Jul-88	06:15 AM		48.4	LOW
05-Jul-88	06:39 PM	71.5		HIGH
06-Jul-88	08:50 AM		50.3	LOW
06-Jul-88	02:28 PM	72.4		HIGH
07-Jul-88	02:41 AM		54.2	LOW
07-Jul-88	11:54 AM	71.3		HIGH
08-Jul-88	12:07 AM		52.6	LOW
08-Jul-88	12:08 PM	72.1		HIGH
09-Jul-88	11:44 AM	71.8		HIGH
09-Jul-88	07:56 PM		50.9	LOW
10-Jul-88	03:01 AM		47.5	LOW
10-Jul-88	11:10 AM	68.4		HIGH
11-Jul-88	02:37 AM		47.6	LOW
11-Jul-88	12:28 PM	74.3		HIGH
12-Jul-88	03:32 AM		52.1	LOW
12-Jul-88	11:58 AM	71.6		HIGH
13-Jul-88	02:18 AM		53.8	LOW
13-Jul-88	11:41 AM	78.8		HIGH
14-Jul-88	02:54 AM		55.8	LOW
14-Jul-88	01:05 PM	79.0		HIGH
15-Jul-88	02:40 AM		54.6	LOW
15-Jul-88	12:41 PM	78.8		HIGH
16-Jul-88	02:20 PM	77.6		HIGH
16-Jul-88	07:53 PM		55.1	LOW
17-Jul-88	02:38 AM		55.2	LOW
17-Jul-88	12:42 PM	72.9		HIGH
18-Jul-88	03:16 AM		52.4	LOW
18-Jul-88	01:54 PM	71.5		HIGH
19-Jul-88	12:13 PM	72.9		HIGH
19-Jul-88	09:31 PM		52.4	LOW
20-Jul-88	01:44 AM		47.6	LOW
20-Jul-88	12:35 PM	75.5		HIGH
21-Jul-88	02:13 AM		53.8	LOW
21-Jul-88	01:27 PM	82.4		HIGH
22-Jul-88	12:45 AM		57.1	LOW
22-Jul-88	12:50 PM	79.8		HIGH
23-Jul-88	07:51 AM	73.1		HIGH
23-Jul-88	09:05 PM		53.3	LOW
24-Jul-88	01:47 AM		52.2	LOW
24-Jul-88	12:20 PM	72.6		HIGH
25-Jul-88	02:25 AM		54.2	LOW
25-Jul-88	09:44 AM	75.1		HIGH
26-Jul-88	01:03 PM	75.0		HIGH
26-Jul-88	09:26 PM		50.1	LOW
27-Jul-88	02:20 AM		48.6	LOW
27-Jul-88	01:53 PM	70.2		HIGH
28-Jul-88	01:11 AM		48.7	LOW

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)		
28-Jul-88	11:38 AM	69.1		HIGH
29-Jul-88	01:49 AM		50.0	LOW
29-Jul-88	12:05 PM	72.3		HIGH
30-Jul-88	01:24 AM		50.1	LOW
30-Jul-88	10:25 AM	73.4		HIGH
31-Jul-88	09:34 AM	69.6		HIGH
31-Jul-88	07:58 PM		53.6	LOW
01-Aug-88	02:44 AM		51.7	LOW
01-Aug-88	01:52 PM	71.3		HIGH
02-Aug-88	10:57 AM	69.9		HIGH
02-Aug-88	06:40 PM		46.2	LOW
03-Aug-88	01:45 AM		46.1	LOW
03-Aug-88	07:48 AM	69.0		HIGH
04-Aug-88	07:22 AM	70.5		HIGH
04-Aug-88	07:24 PM		48.9	LOW
05-Aug-88	07:25 AM	74.6		HIGH
05-Aug-88	09:11 PM		51.7	LOW
06-Aug-88	01:58 AM	61.3		HIGH
06-Aug-88	08:16 PM		42.9	LOW
07-Aug-88	07:02 AM	69.0		HIGH
07-Aug-88	07:09 PM		45.3	LOW
08-Aug-88	06:40 AM	67.1		HIGH
08-Aug-88	07:46 PM		46.1	LOW
09-Aug-88	06:46 AM	73.4		HIGH
09-Aug-88	09:37 PM		50.4	LOW
10-Aug-88	03:16 AM	69.4		HIGH
10-Aug-88	07:58 PM		49.8	LOW
11-Aug-88	04:24 AM	69.2		HIGH
11-Aug-88	08:18 PM		37.1	LOW
12-Aug-88	07:18 AM	62.9		HIGH
12-Aug-88	08:44 PM		44.4	LOW
13-Aug-88	08:14 AM	73.5		HIGH
13-Aug-88	07:58 PM		49.7	LOW
14-Aug-88	07:18 AM	78.0		HIGH
14-Aug-88	09:44 PM		54.8	LOW
15-Aug-88	08:02 AM	71.1		HIGH
15-Aug-88	08:08 PM		46.2	LOW
16-Aug-88	07:29 AM	73.3		HIGH
16-Aug-88	07:37 PM		47.0	LOW
17-Aug-88	06:15 AM	74.6		HIGH
17-Aug-88	09:21 PM		50.9	LOW
18-Aug-88	03:35 AM	74.8		HIGH
18-Aug-88	07:32 PM		55.1	LOW
19-Aug-88	06:37 AM	74.6		HIGH
19-Aug-88	09:13 PM		53.9	LOW
20-Aug-88	03:12 AM	70.1		HIGH
20-Aug-88	04:32 PM		44.3	LOW
21-Aug-88	06:15 AM	65.4		HIGH
21-Aug-88	02:16 PM		46.7	LOW
22-Aug-88	07:00 AM	66.5		HIGH

Jul-88 SUMMARY

	HIGH	LOW
AVG.	73.6	51.6
MAX.	82.4	57.1
MIN.	64.6	46.0

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)	
22-Aug-88	05:53 PM	50.6	LOW
23-Aug-88	06:56 AM	77.7	HIGH
23-Aug-88	07:18 PM	56.2	LOW
24-Aug-88	06:09 AM	75.2	HIGH
24-Aug-88	09:03 PM	57.9	LOW
25-Aug-88	06:52 AM	78.2	HIGH
25-Aug-88	08:47 PM	56.1	LOW
26-Aug-88	03:15 AM	65.7	HIGH
26-Aug-88	04:26 PM	47.9	LOW
27-Aug-88	05:51 AM	68.7	HIGH
27-Aug-88	09:14 PM	49.1	LOW
28-Aug-88	09:31 AM	70.8	HIGH
28-Aug-88	07:15 PM	47.2	LOW
29-Aug-88	06:49 AM	72.0	HIGH
29-Aug-88	07:42 PM	48.9	LOW
30-Aug-88	09:01 AM	72.5	HIGH
30-Aug-88	06:06 PM	48.5	LOW
31-Aug-88	05:06 AM	67.5	HIGH
31-Aug-88	06:21 PM	51.2	LOW
01-Sep-88	06:38 AM	74.0	HIGH
01-Sep-88	08:48 PM	48.9	LOW
02-Sep-88	07:59 AM	71.1	HIGH
02-Sep-88	09:19 PM	51.1	LOW
03-Sep-88	09:56 AM	69.0	HIGH
03-Sep-88	09:20 PM	48.0	LOW
04-Sep-88	01:04 AM	48.0	LOW
04-Sep-88	09:58 AM	68.2	HIGH
05-Sep-88	09:03 AM	73.3	HIGH
05-Sep-88	07:45 PM	48.8	LOW
06-Sep-88	01:48 AM	48.9	LOW
06-Sep-88	01:53 PM	72.3	HIGH
07-Sep-88	12:34 PM	71.1	HIGH
07-Sep-88	10:00 PM	53.3	LOW
08-Sep-88	03:03 AM	48.4	LOW
08-Sep-88	12:18 PM	72.4	HIGH
09-Sep-88	02:16 AM	51.3	LOW
09-Sep-88	11:50 AM	76.2	HIGH
10-Sep-88	10:46 AM	67.4	HIGH
10-Sep-88	10:01 PM	42.1	LOW
11-Sep-88	03:58 AM	29.3	LOW
11-Sep-88	11:59 AM	48.7	HIGH
12-Sep-88	12:44 AM	31.6	HIGH
12-Sep-88	08:47 PM	23.5	LOW
13-Sep-88	12:32 AM	23.5	LOW
13-Sep-88	07:58 AM	35.2	HIGH
14-Sep-88	12:22 AM	24.8	LOW
14-Sep-88	10:28 AM	41.3	HIGH
15-Sep-88	12:19 AM	31.7	LOW
15-Sep-88	09:53 AM	55.6	HIGH
16-Sep-88	08:45 AM	61.6	HIGH

Aug-88 SUMMARY

	HIGH	LOW
AVG.	70.9	49.1
MAX.	78.2	57.9
MIN.	61.3	37.1

UTAH POWER & LIGHT CO. MINING DIVISION
TEMPERATURES-1988 WATER YEAR
EAST MOUNTAIN STATION

DATE	TIME	TEMPERATURE (DEG. F)	
16-Sep-88	07:01 PM	41.4	LOW
17-Sep-88	08:04 AM	65.8	HIGH
17-Sep-88	09:52 PM	35.7	LOW
18-Sep-88	03:31 AM	38.3	HIGH
18-Sep-88	08:39 PM	25.2	LOW
19-Sep-88	12:03 AM	30.2	LOW
19-Sep-88	08:34 AM	50.4	HIGH
20-Sep-88	05:39 AM	60.4	HIGH
20-Sep-88	09:40 PM	39.2	LOW
21-Sep-88	01:48 AM	50.8	HIGH
21-Sep-88	07:12 PM	28.1	LOW
22-Sep-88	03:26 AM	46.7	HIGH
22-Sep-88	07:14 PM	32.9	LOW
23-Sep-88	07:25 AM	57.1	HIGH
23-Sep-88	06:21 PM	38.4	LOW
24-Sep-88	07:46 AM	60.1	HIGH
24-Sep-88	09:28 PM	40.4	LOW
25-Sep-88	08:18 AM	64.0	HIGH
25-Sep-88	09:09 PM	42.2	LOW
26-Sep-88	07:20 AM	60.0	HIGH
26-Sep-88	09:01 PM	40.3	LOW
27-Sep-88	03:53 AM	56.2	HIGH
27-Sep-88	08:17 PM	29.3	LOW
28-Sep-88	05:49 AM	46.5	HIGH
28-Sep-88	07:13 PM	31.5	LOW
29-Sep-88	12:35 AM	40.0	LOW
29-Sep-88	07:52 AM	54.7	HIGH
30-Sep-88	07:28 AM	62.9	HIGH
30-Sep-88	06:01 PM	42.4	LOW

Sep-88 SUMMARY

	HIGH	LOW
AVG.	55.4	38.6
MAX.	76.2	53.3
MIN.	31.6	23.5

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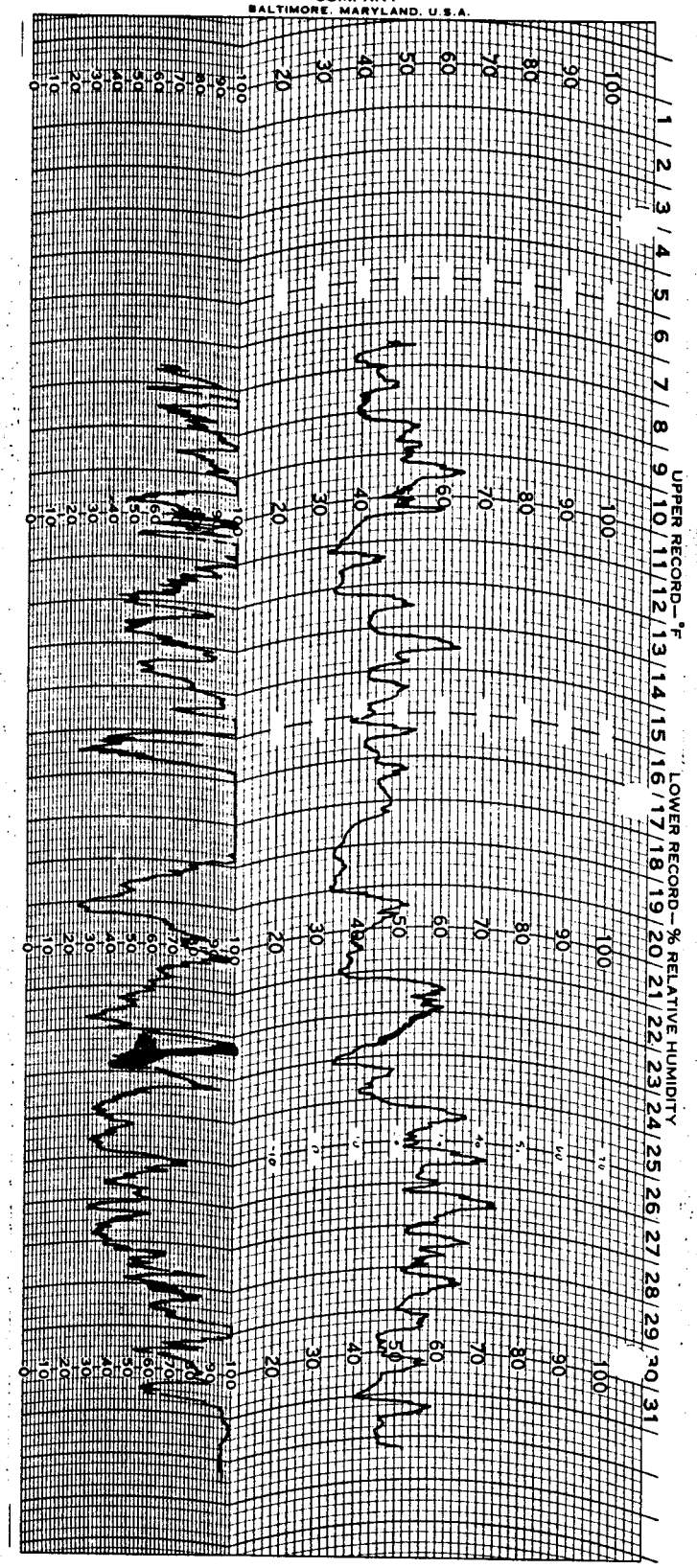
HYGROTHERMOGRAPH

CHART NO. 15627

MONTHLY-861 HRS.

BELFORT INSTRUMENT COMPANY

BALTIMORE, MARYLAND, U.S.A.



OBSERVER C Fry ON 12:00 A.M. P.M. 1-7 19 88

STATION EAST MTN OFF 10:45 A.M. 2-2

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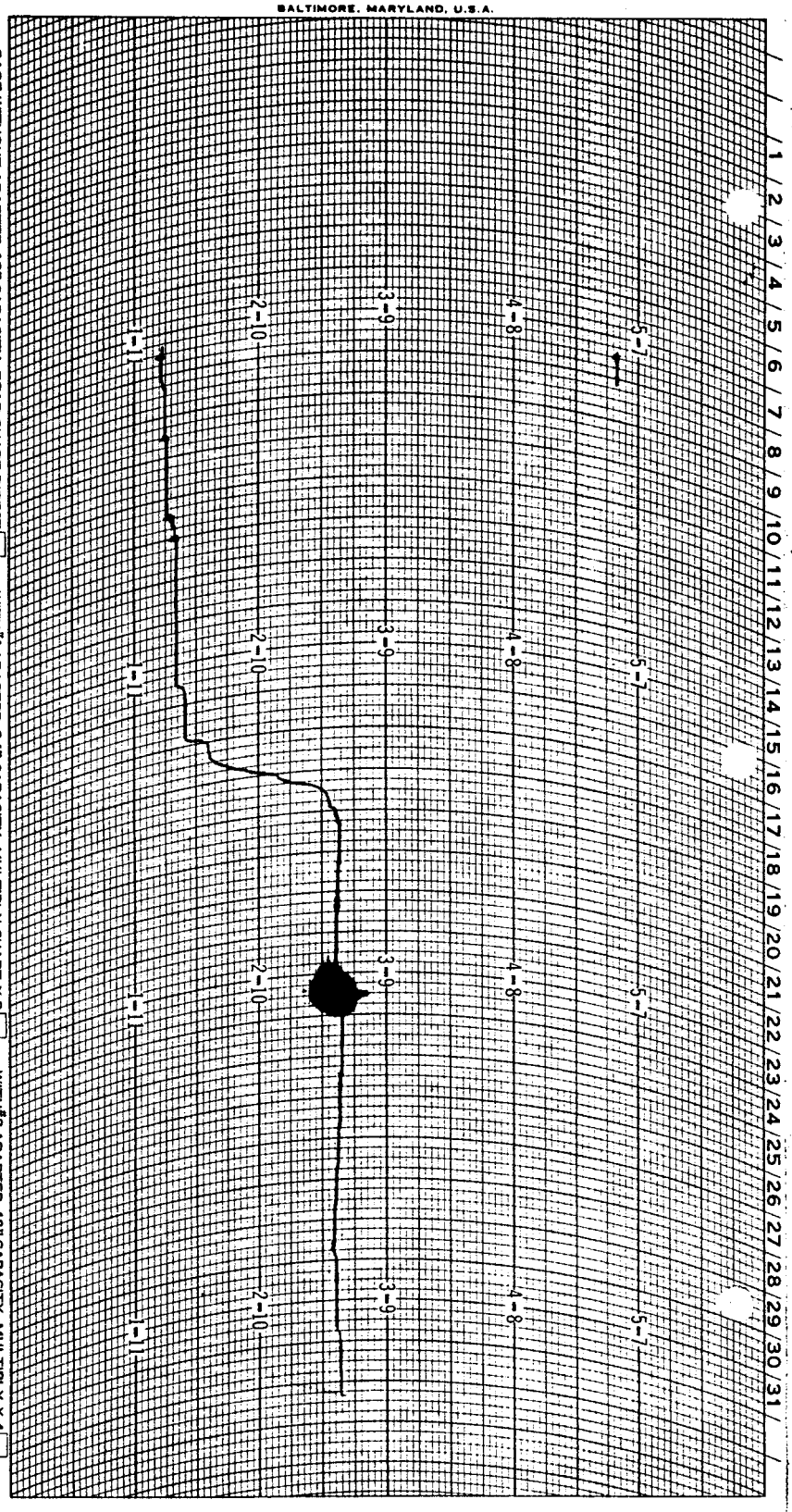
CHART NO. 15668

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER RCF ON 12:00 A.M. P.M. 1-7 19 88

East Md.

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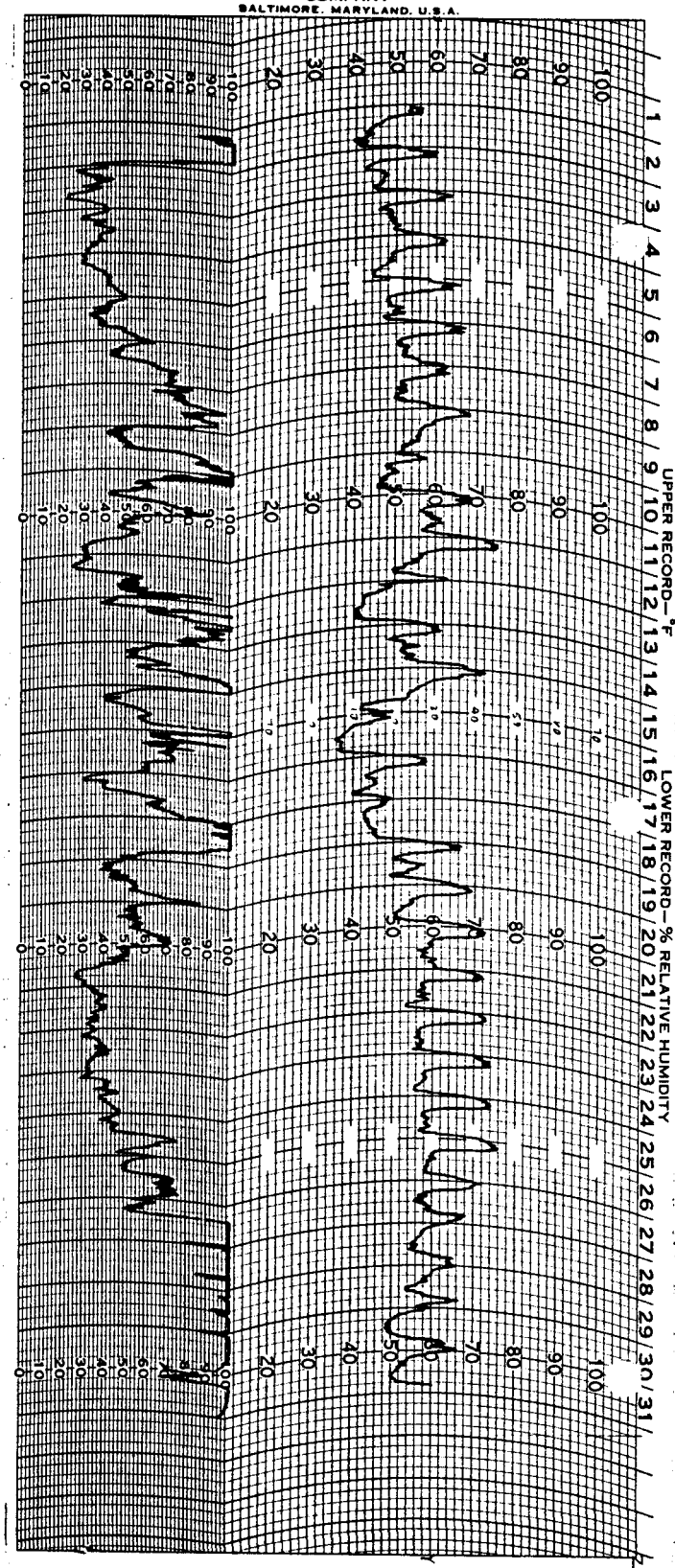
HYGROTHERMOGRAPH

CHART NO. 15627

MONTHLY-861 HRS.

BELFORT INSTRUMENT COMPANY

BALTIMORE, MARYLAND, U.S.A.



OBSERVER KURT SNIDER ON 10:40 A.M. P.M. 2-2 1988

STATION EAST MTN OFF 14:15 A.M. P.M. 3-2

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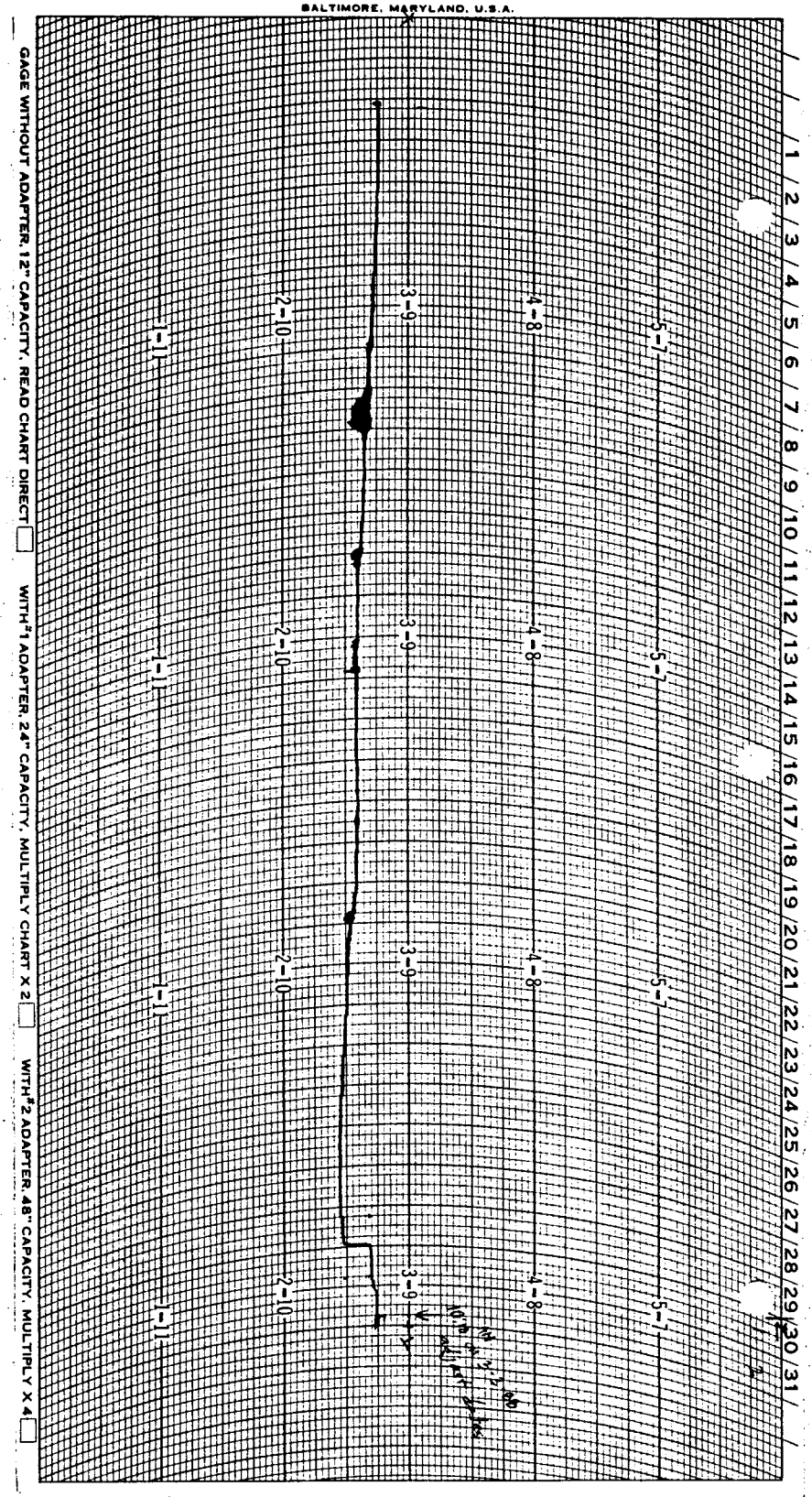
CHART NO. 15668

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER KURT SNIDER ON 10:45 A.M. P.M. 2-2 1988

STATION: EAST MTN DATE 10:10 A.M. P.M. 3-2 1988

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CHART NO. 15627
MONTHLY-861 HRS.
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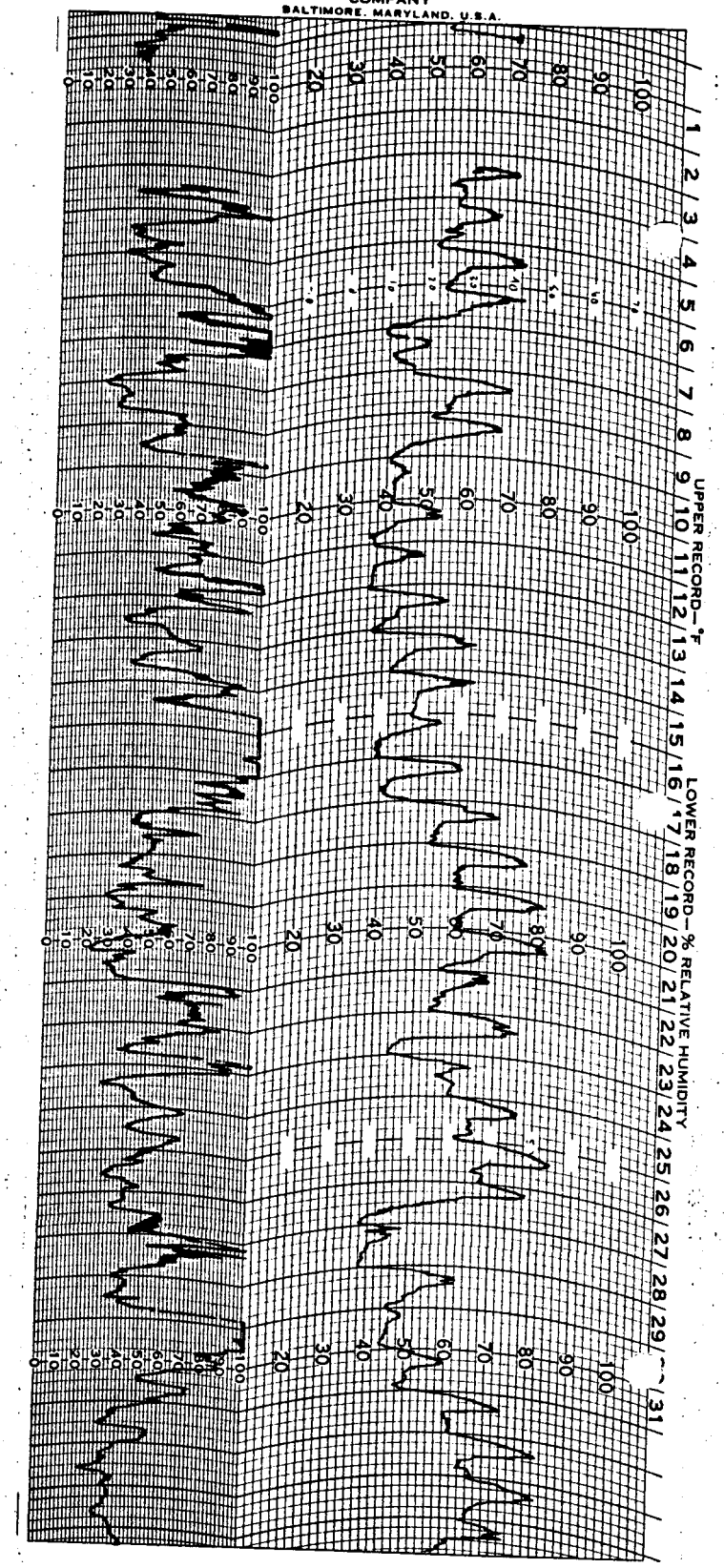

OBSERVER K Snider ON 10:15 A.M. P.M. 3-3- 19 68

STATION EAST MTN OFF 1:00 A.M. P.M. 4-5 19 68

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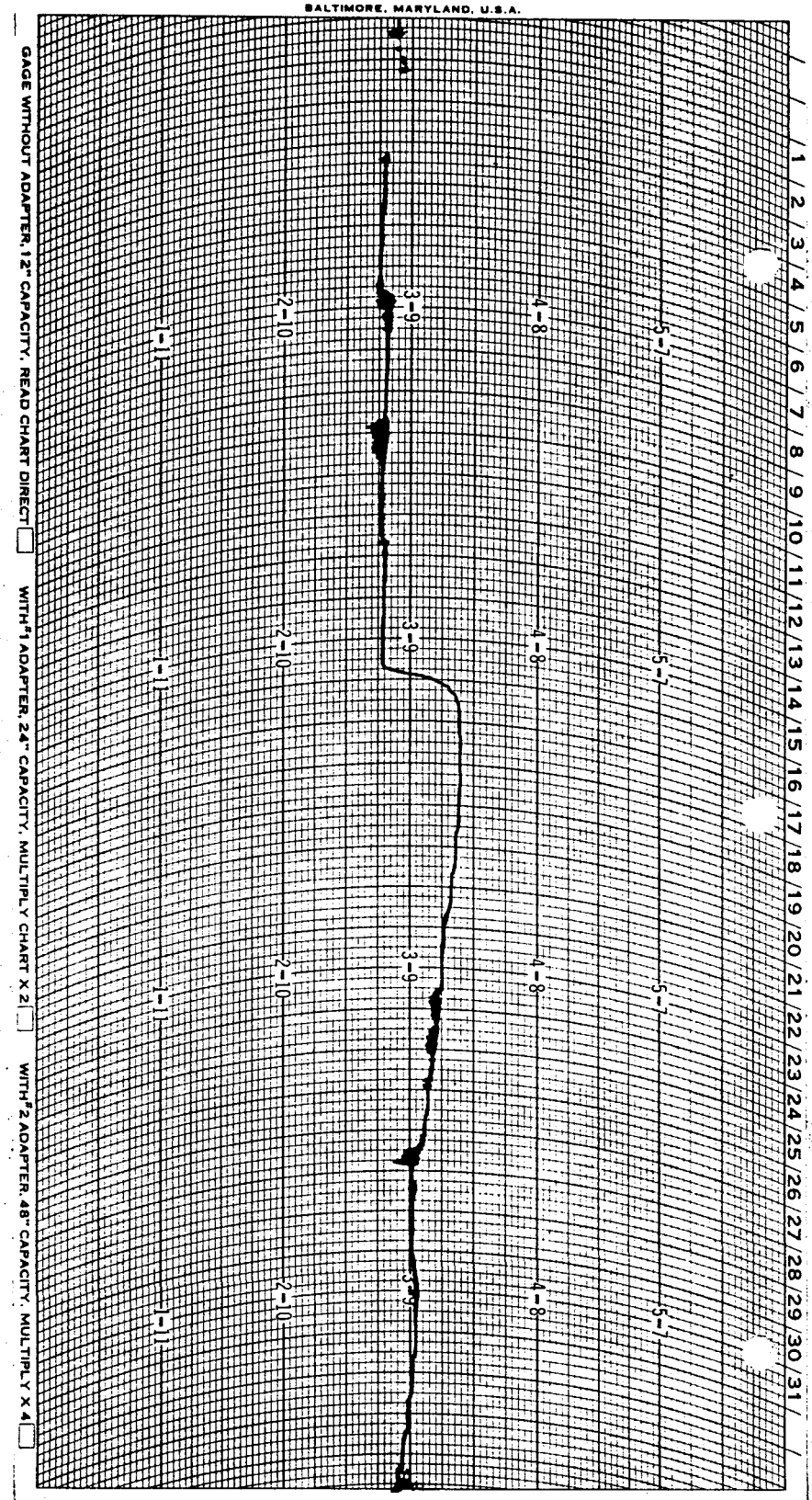
CHART NO. 15668

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER K Snider ON 10:05 (AM) P.M. 3-3 19 88

STATION EAST M+N 12:50 AM 4-5 19 88

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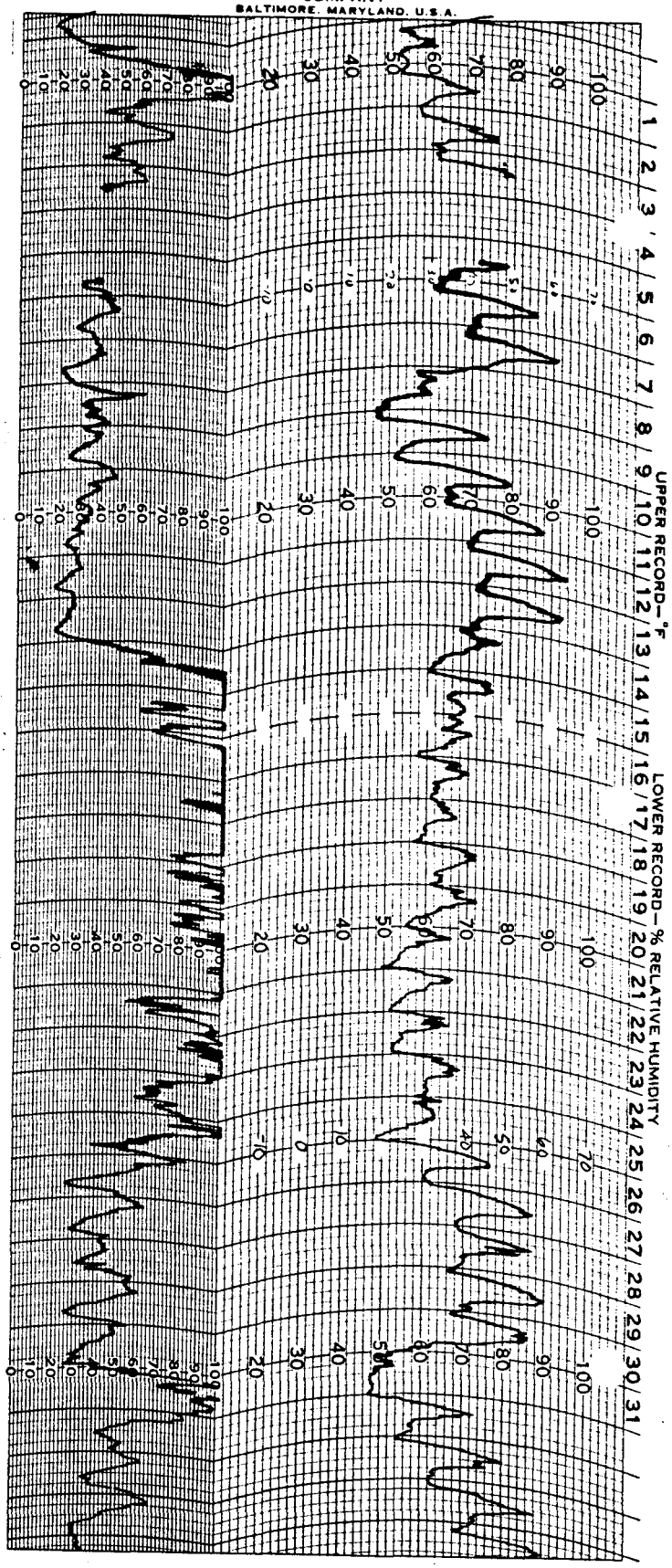
CHART NO. 15627
MONTHLY-861 HRS.
BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



OBSERVER K SNIDER ON 1:00 A.M. P.M. 4-5 1980

STATION EAST MTN

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12-INCH DUAL TRAVERSE MONTHLY-861 HRS.

UNIVERSAL RAIN GAGE

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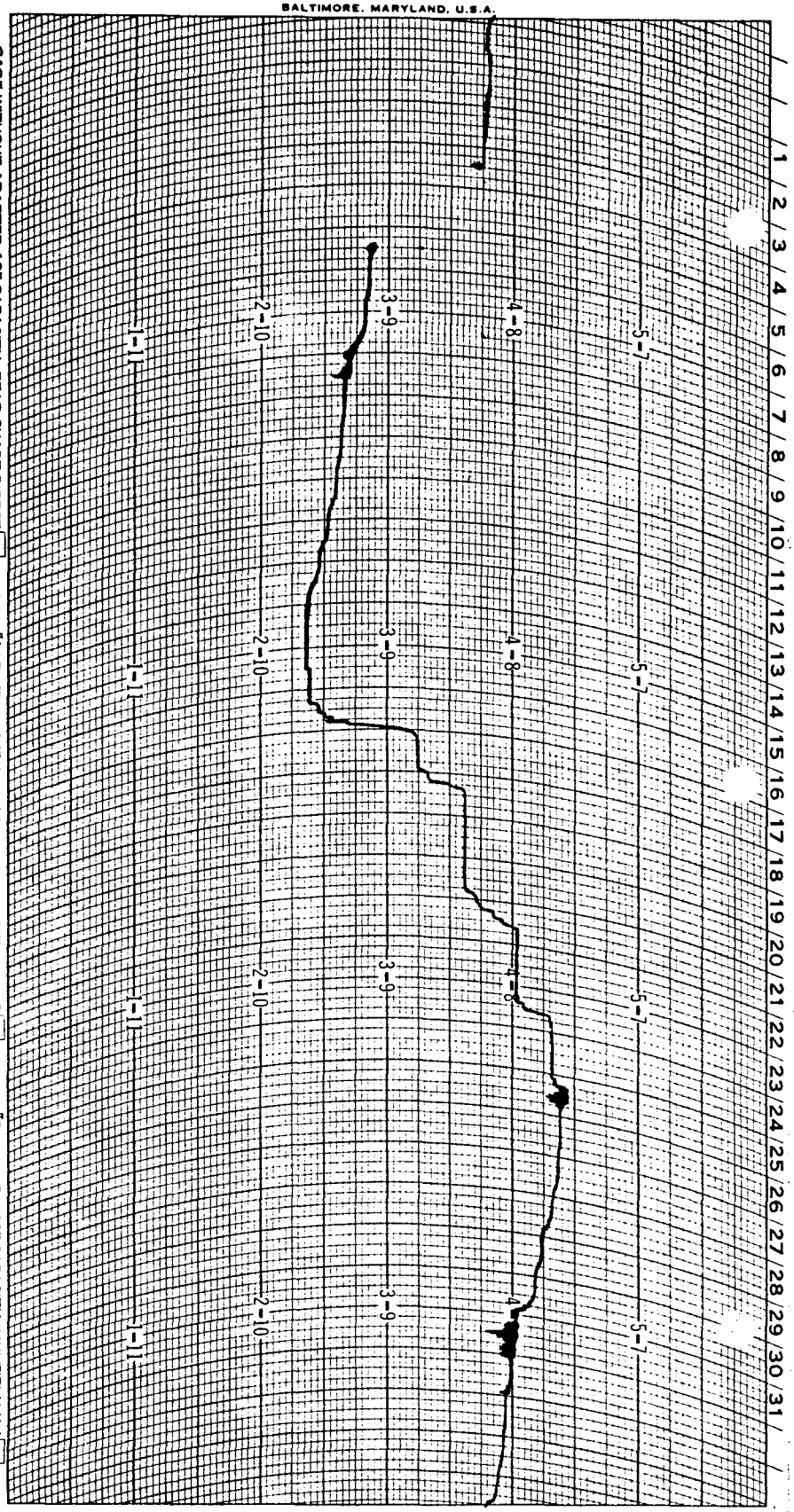
BALTIMORE, MARYLAND, U.S.A.



GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER K SNIDER ON 12:50 A.M. (P.M.) 4-5 19 88

STATION EAST MTN OFF 12:05 A.M. P.M. 5-7 19 88

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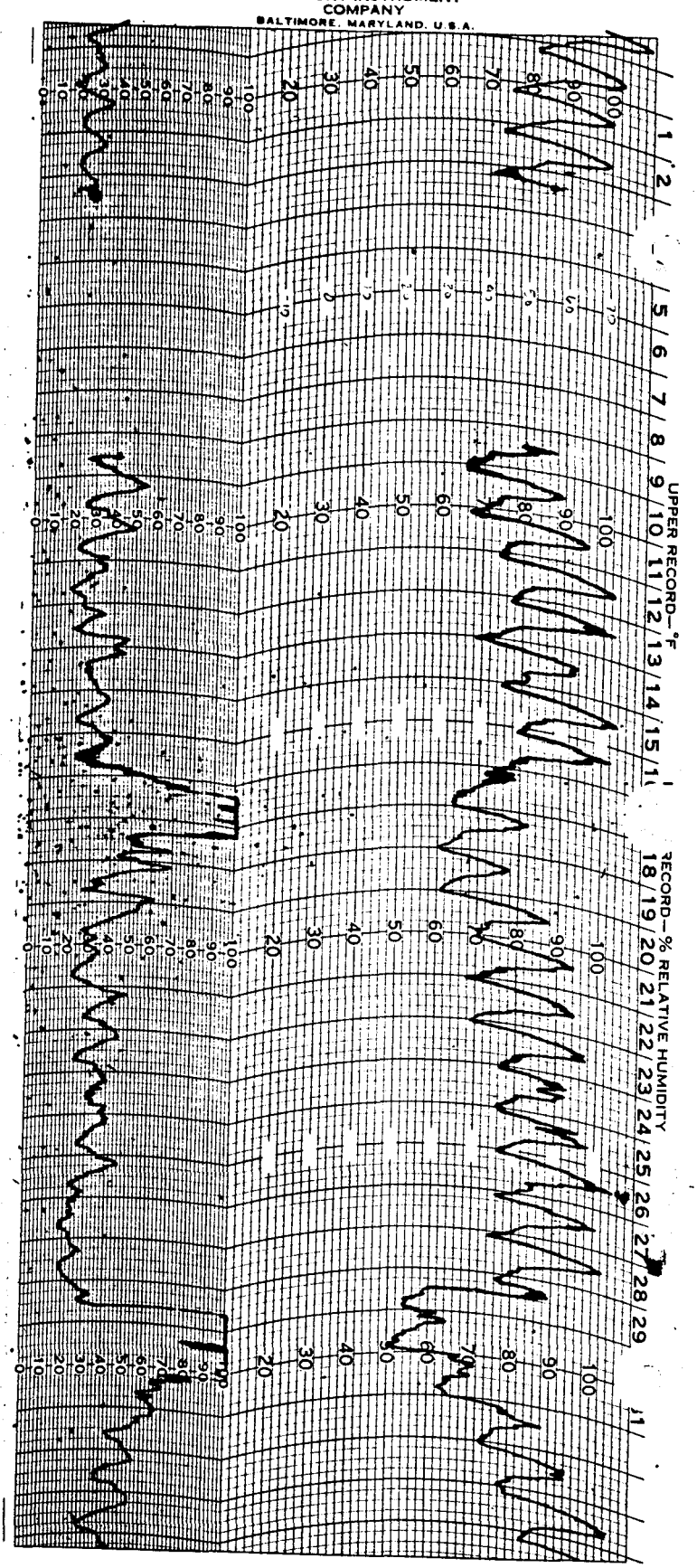
HYGROTHERMOGRAPH
CHART NO. 15627
MONTHLY-861 HRS.
BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



OBSERVER KLS ON 12:10 A.M. (P.M.) 5-9 19 89

STATION EM OFF 10:45 A.M. (P.M.) 6-8 19 88

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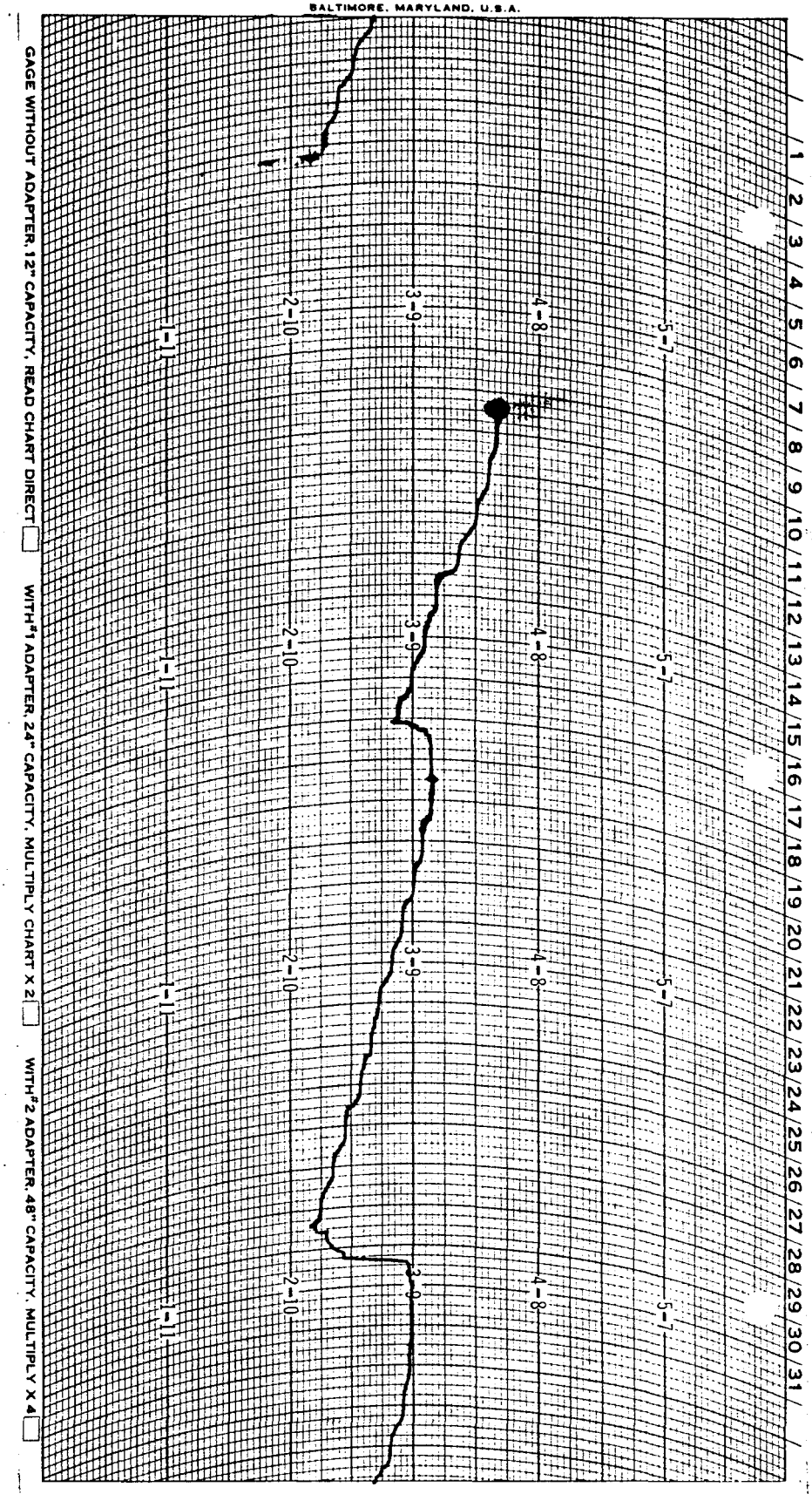
CHART NO. 15668

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER KLS ON 12:05 A.M. P.M. 5-9 1988

STATION EM OFF 10:45 A.M. P.M. 6-8 1988

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CHART NO. 15627
MONTHLY-861 HRS.
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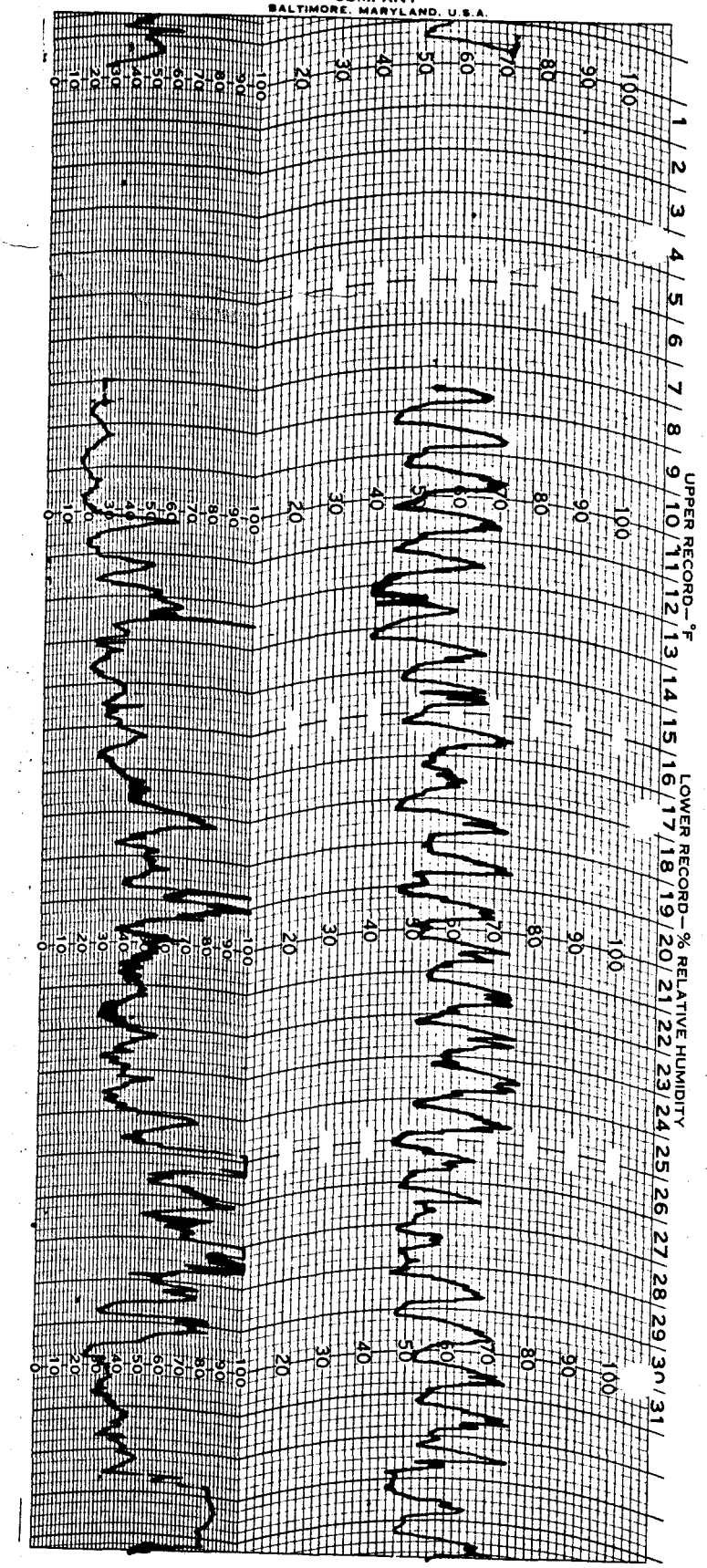

OBSERVER RC 3Y ON 10:45 A.M. P.M. 6-8-

STATION East Mountain OFF 3:17 A.M. P.M. 7-6

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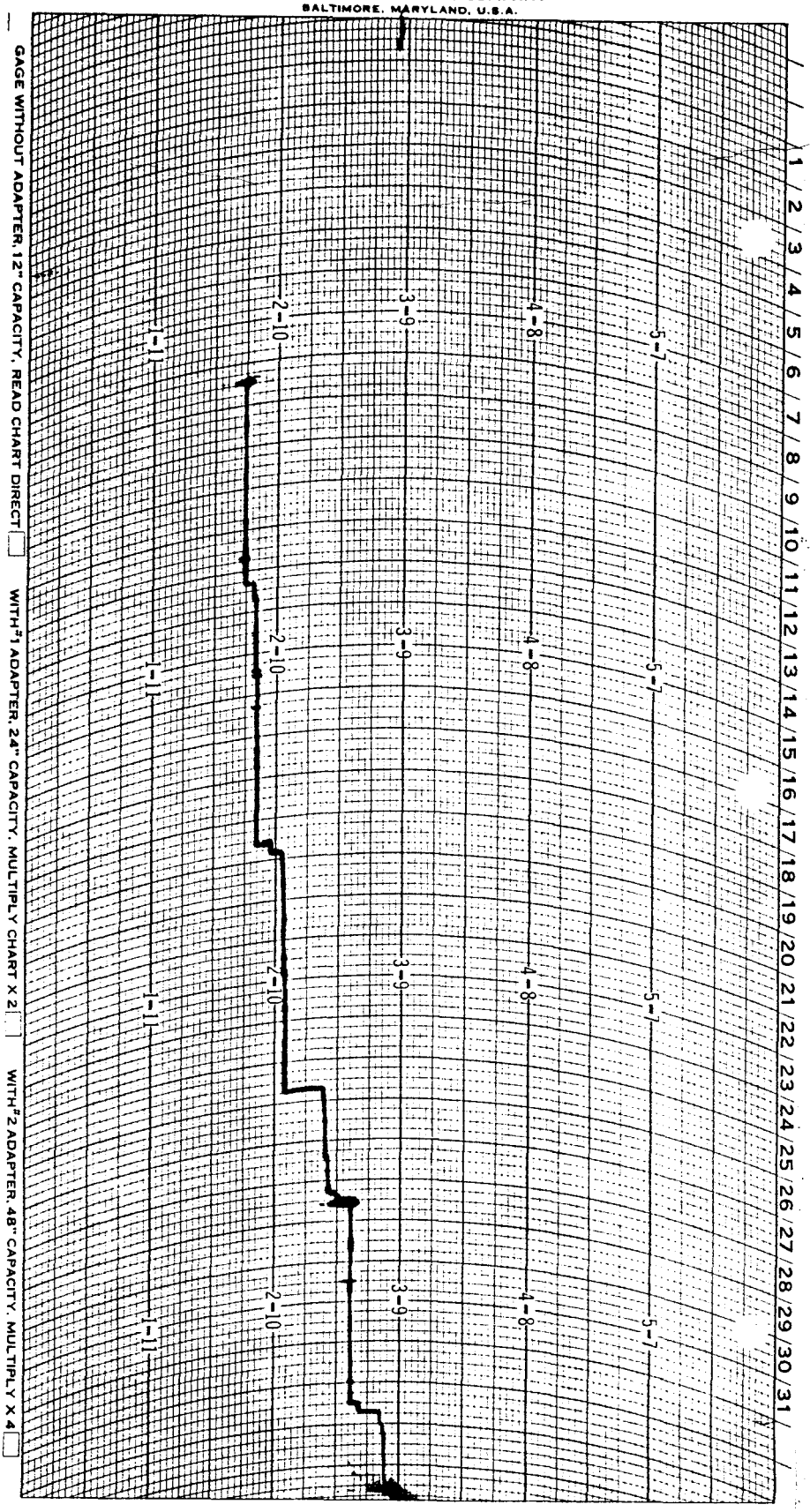
CHART NO. 15668

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER RC Fry

STATION East Mtn

ON 10:45 A.M. 6-8 1988

OFF 3:05 P.M. 7-6 1988

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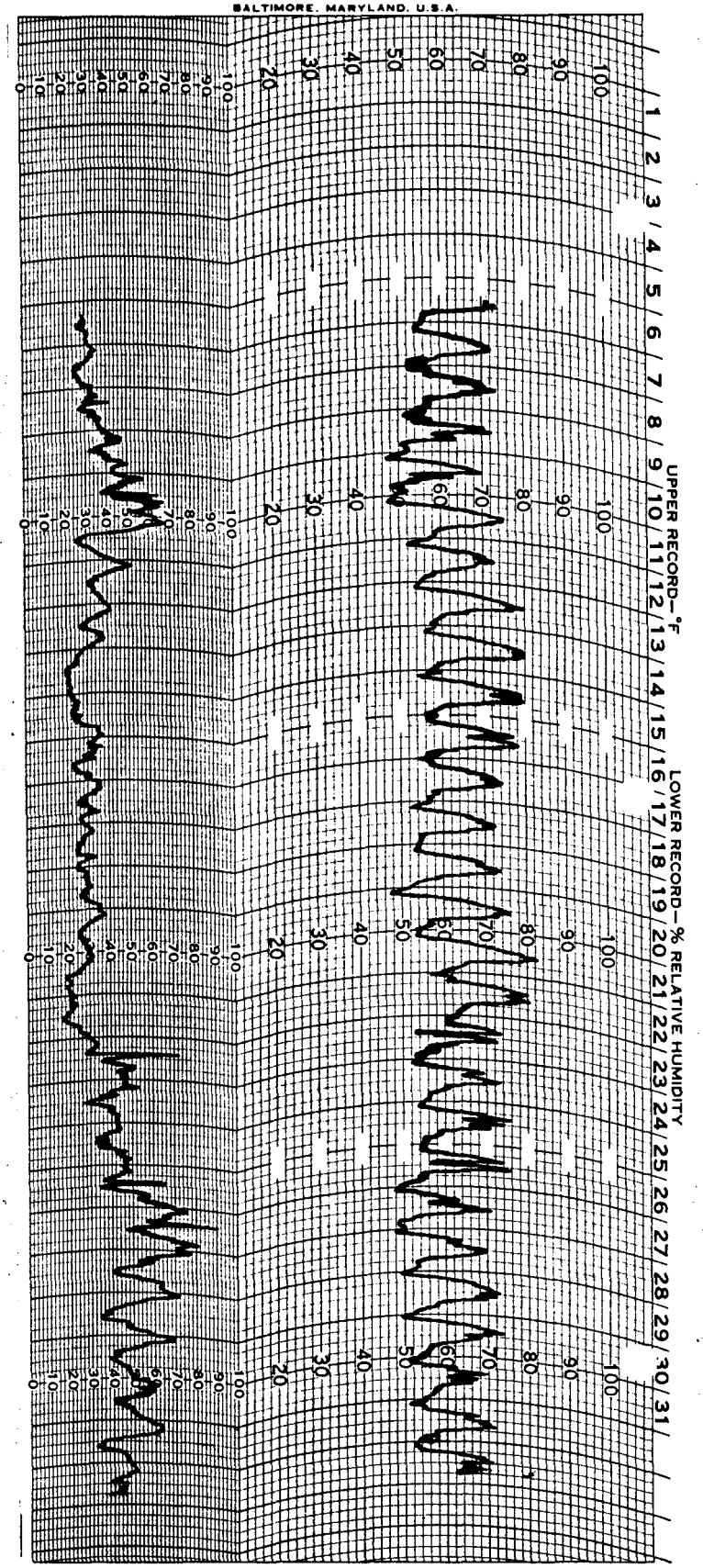
HYGROTHERMOGRAPH
CHART NO. 15627
MONTHLY-861 HRS.
BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



OBSERVER SEMBORSKI ON 3:14 A.M. P.M. 7-6 1988

STATION EAST MTN OFF 6:30 A.M. P.M. 8-2 1988

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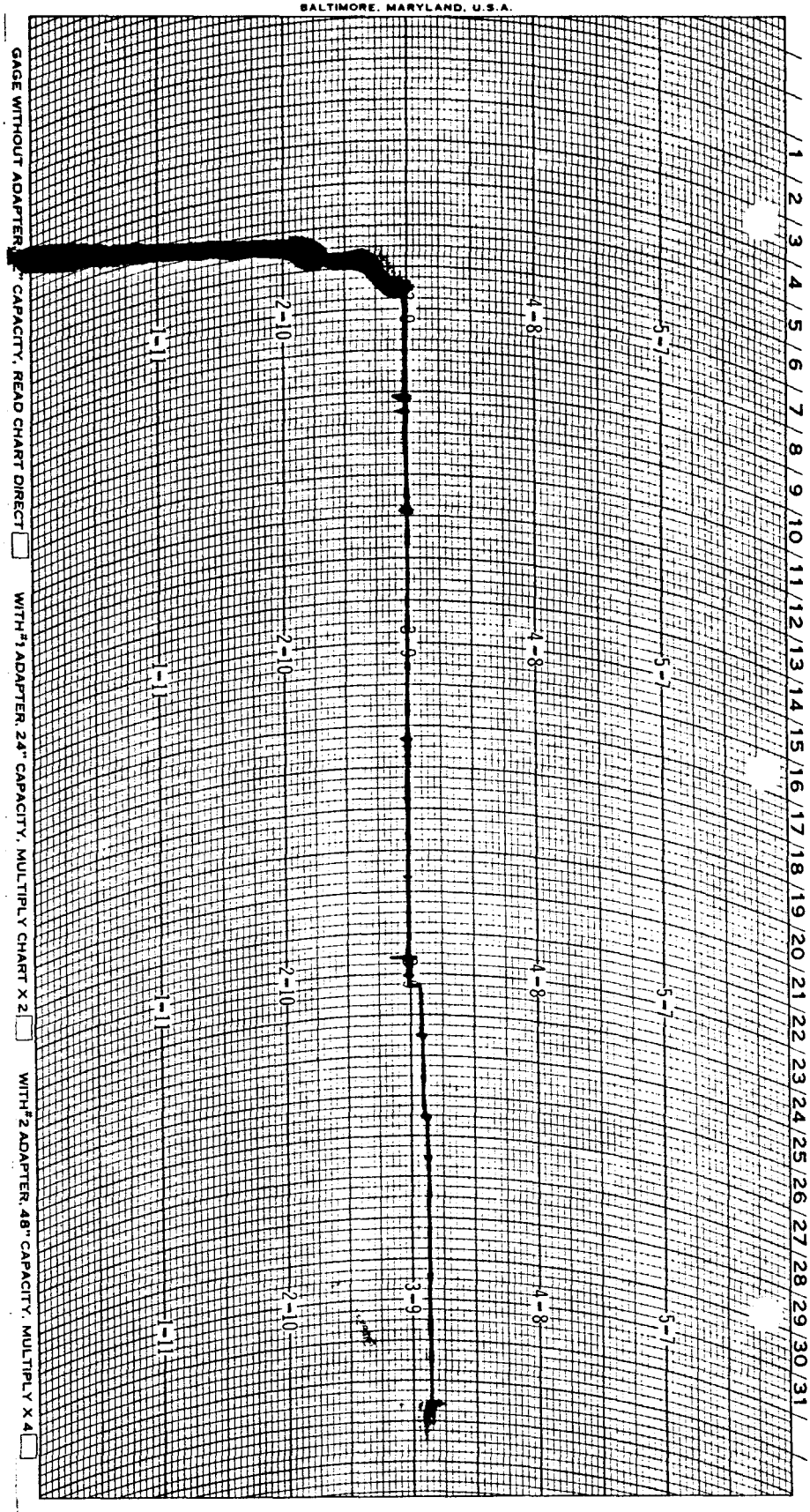
CHART NO. 15668

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

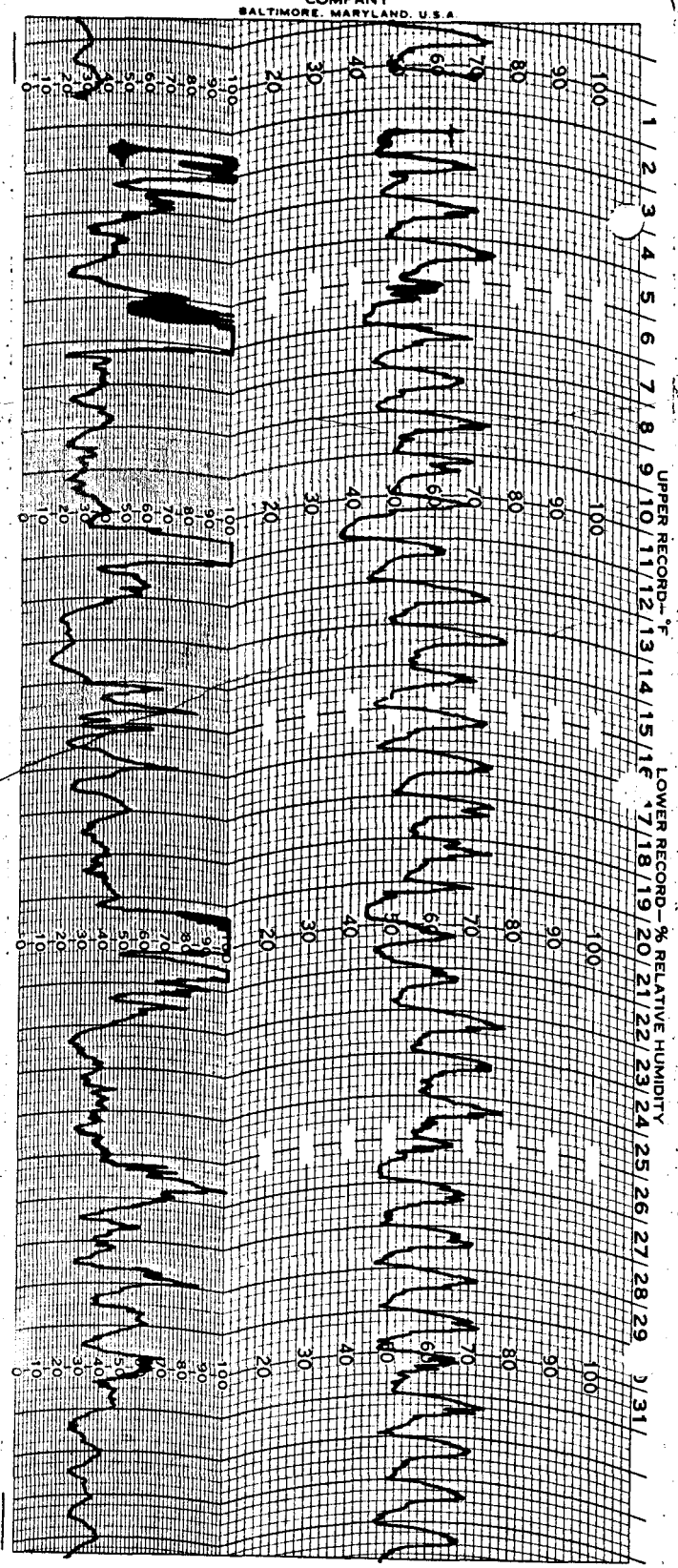
BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



OBSERVER SEMBORSKI ON 3:10 A.M. P.M. 7-6 19 88

STATION EAST MTN OFF A.M. P.M. 19

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



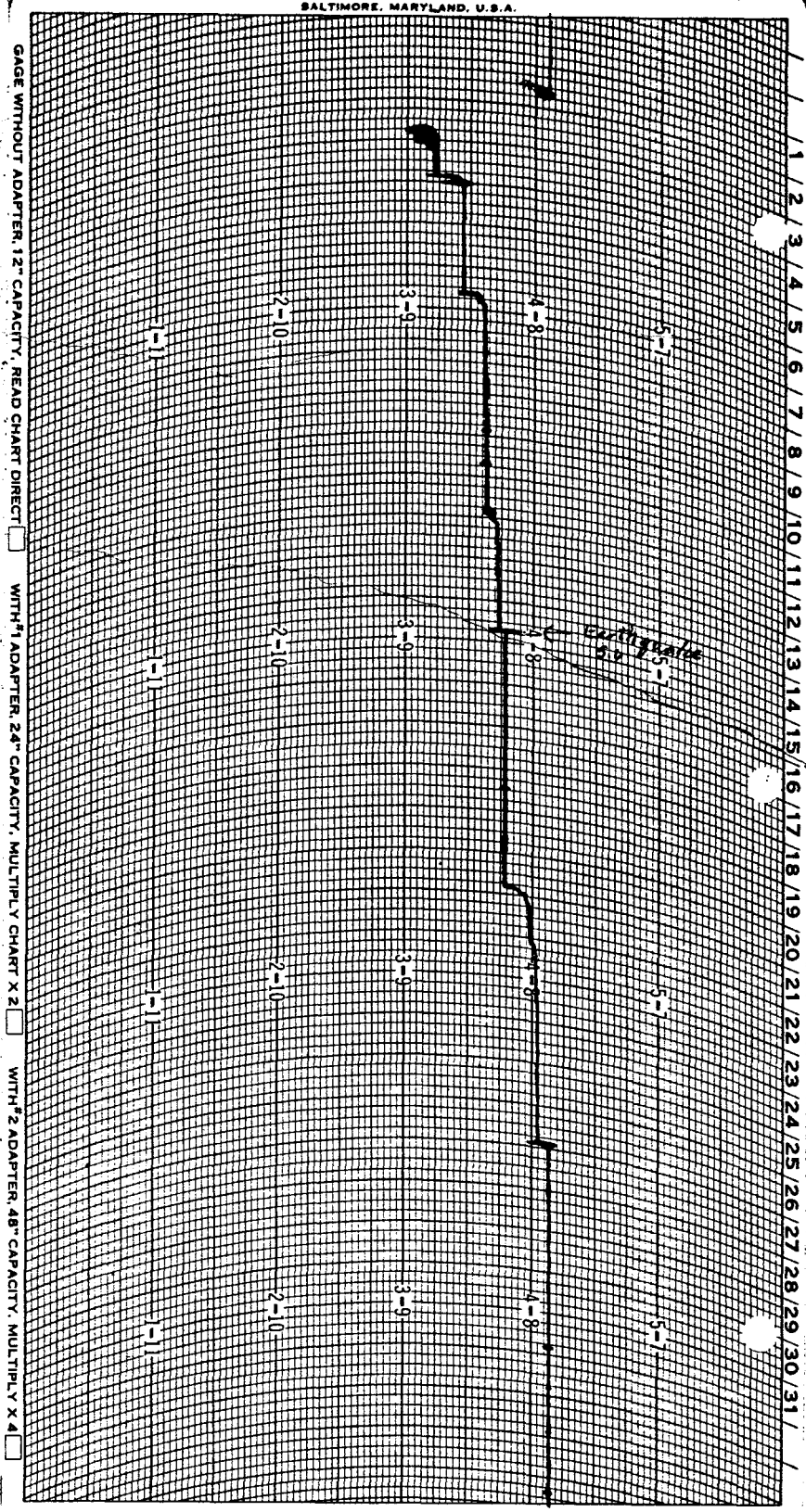
OBSERVER Sc[illegible]UKI ON 6:30 AM PM 8-2 1988

STATION EAST MTN OFF 1:35 AM PM 9-6 1988

CHART NO. 15668

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER R Fru ON 6:30 A.M. P.M. 8-2 1988

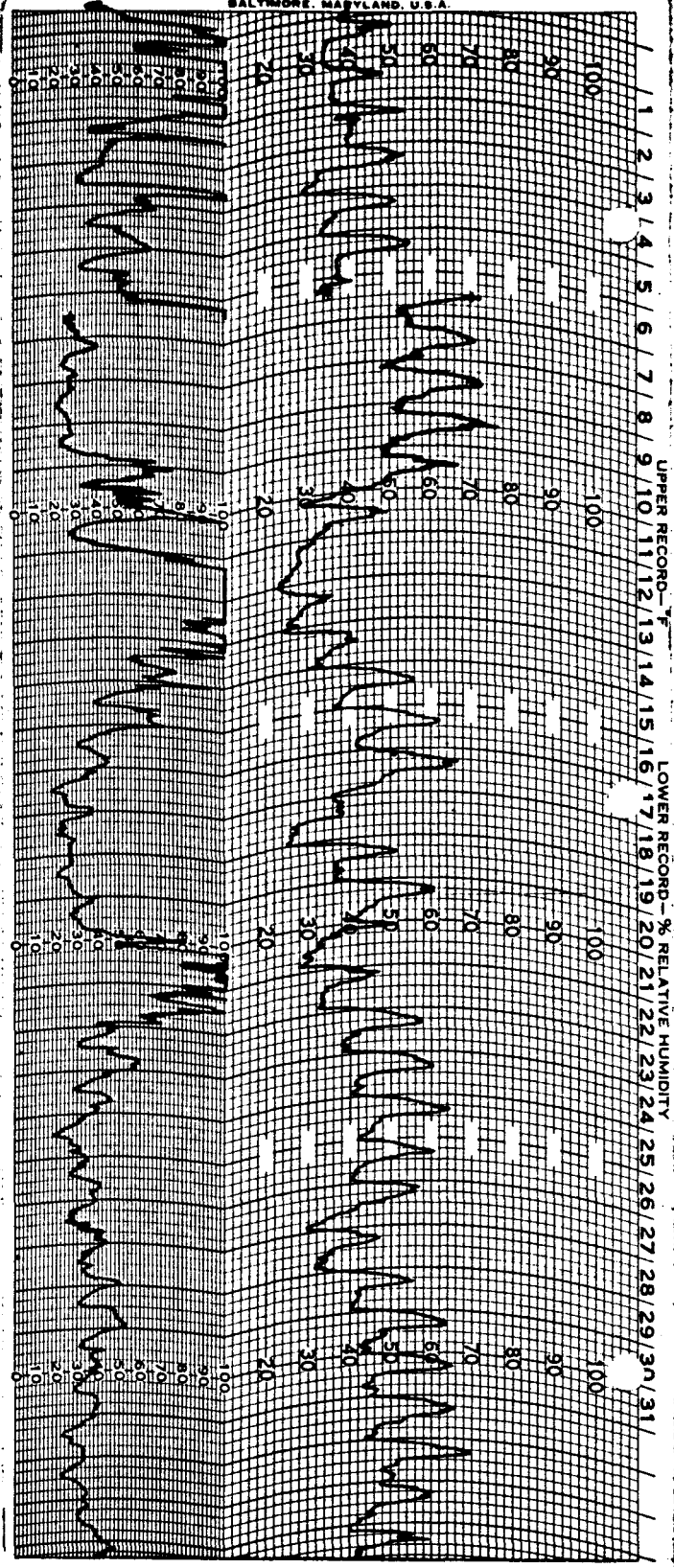
STATION East Mtn OFF 1:30 A.M. P.M. 9-6 1988

CHART NO. 15627

MONTHLY-861 HRS.

BELFORT INSTRUMENT COMPANY

BALTIMORE, MARYLAND, U.S.A.



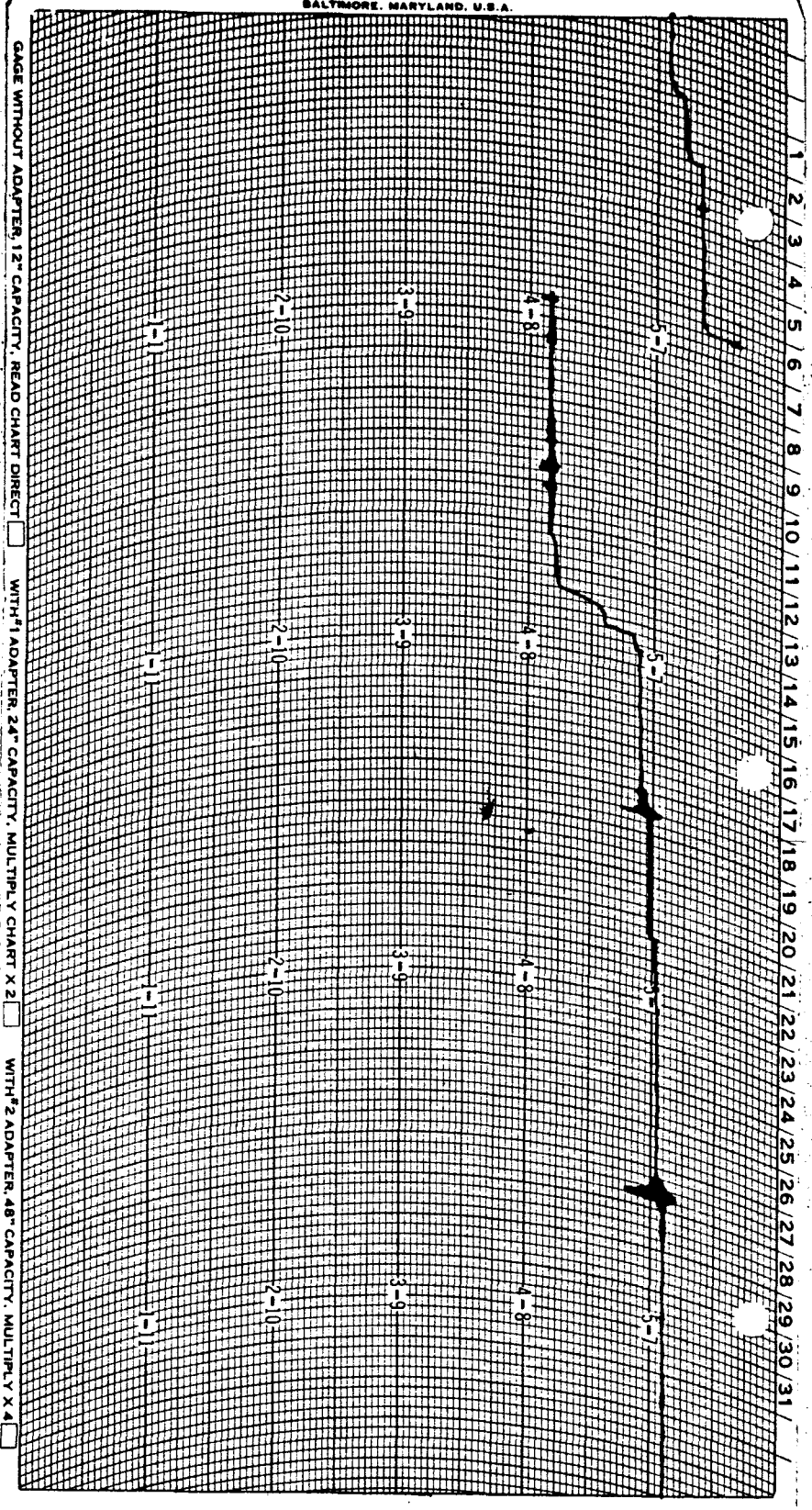
OBSERVER K. SNIDER ON 1:35 AM/PM 9-6 1988

STATION EMtn. OFF 1535 AM/PM 10-12 1988

CHART NO. 15008

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.

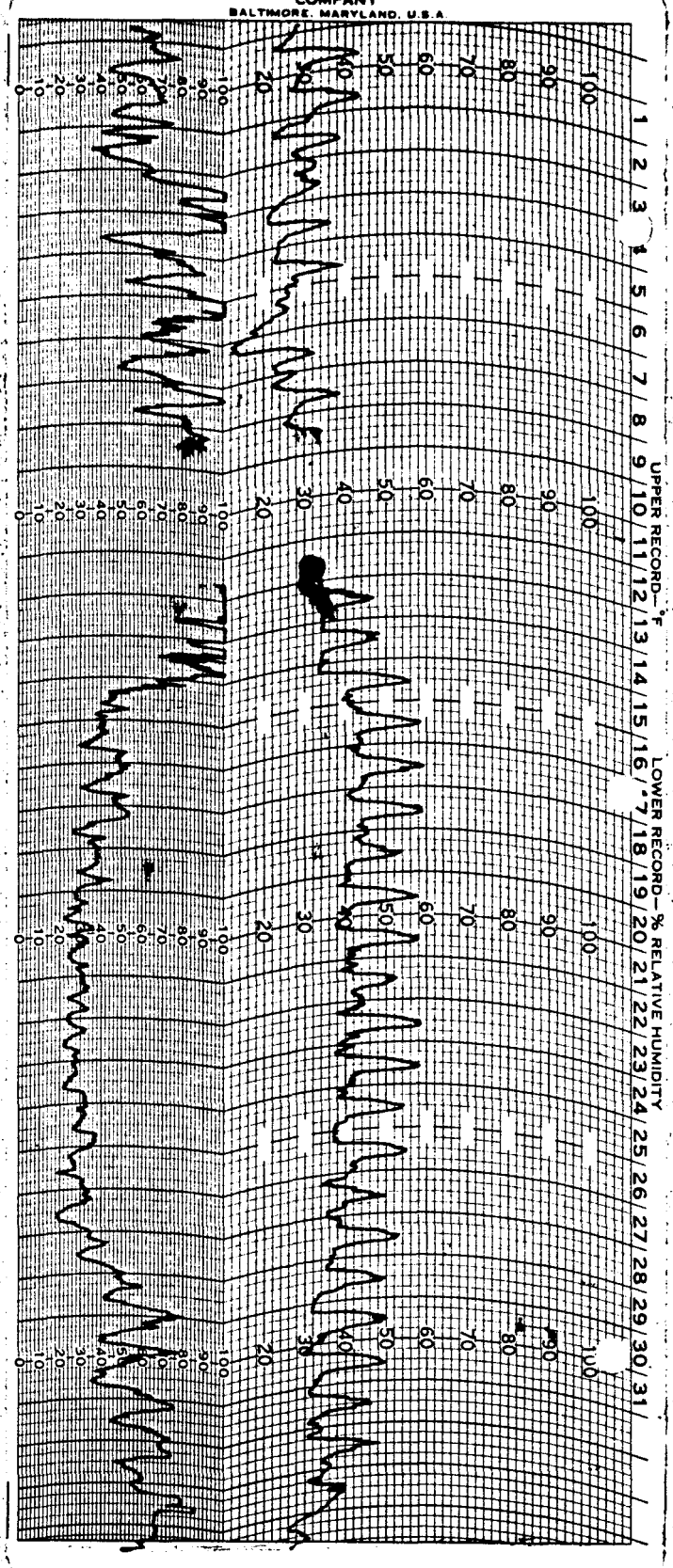


GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER KURT SNIDER ON 1:30 A.M. P.M. 9-6 1988

STATION EM OFF 1535 A.M. P.M. 10-12 1988

CHART NO. 15627
MONTHLY-861 HRS.
BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



OBSERVER RC Fry ON 15:38 A.M. P.M. 10-12-
STATION East MTN OFF 11:04 A.M. 11-

PRINTED IN U.S.A.

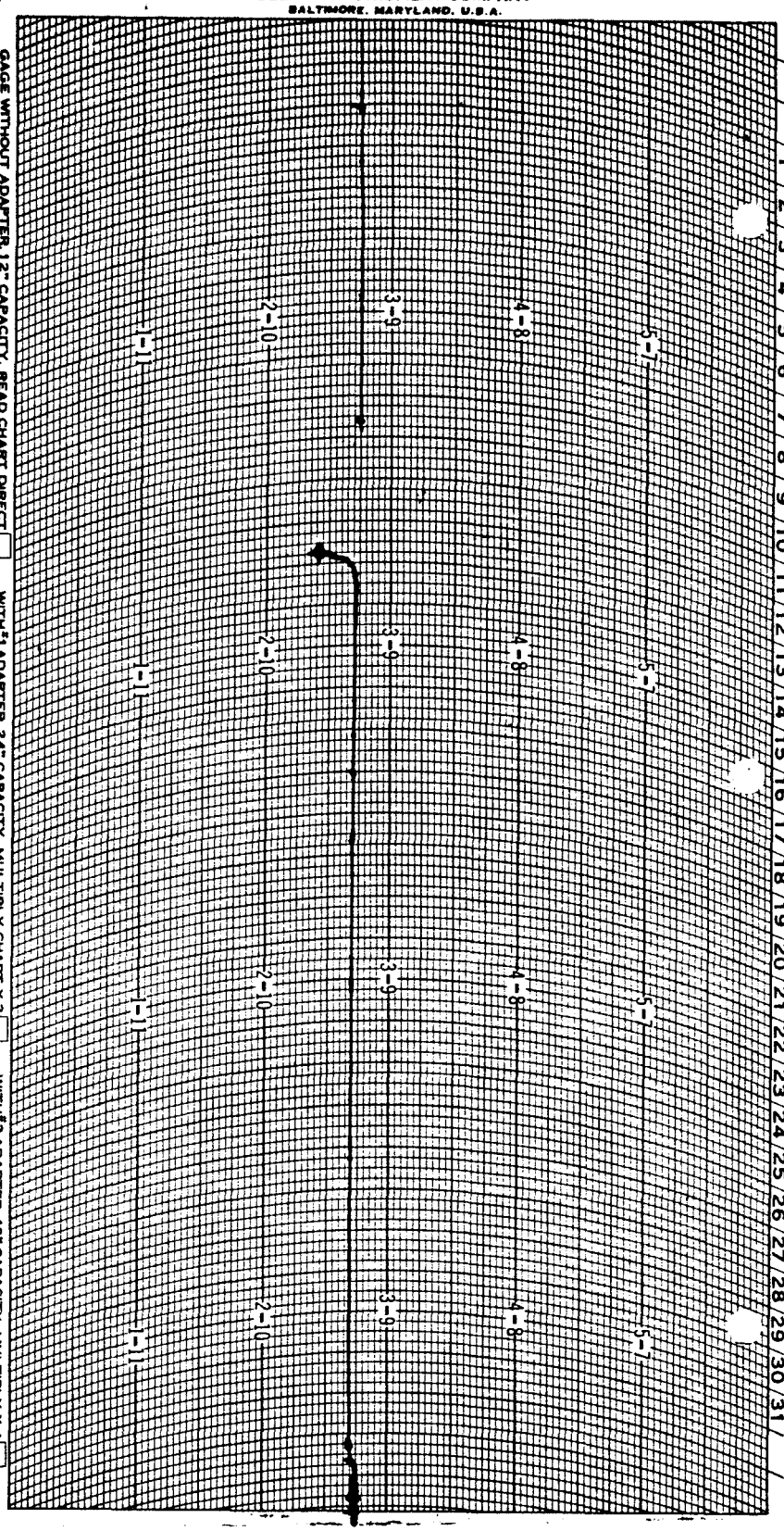
CHART NO. 15668

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.

UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY

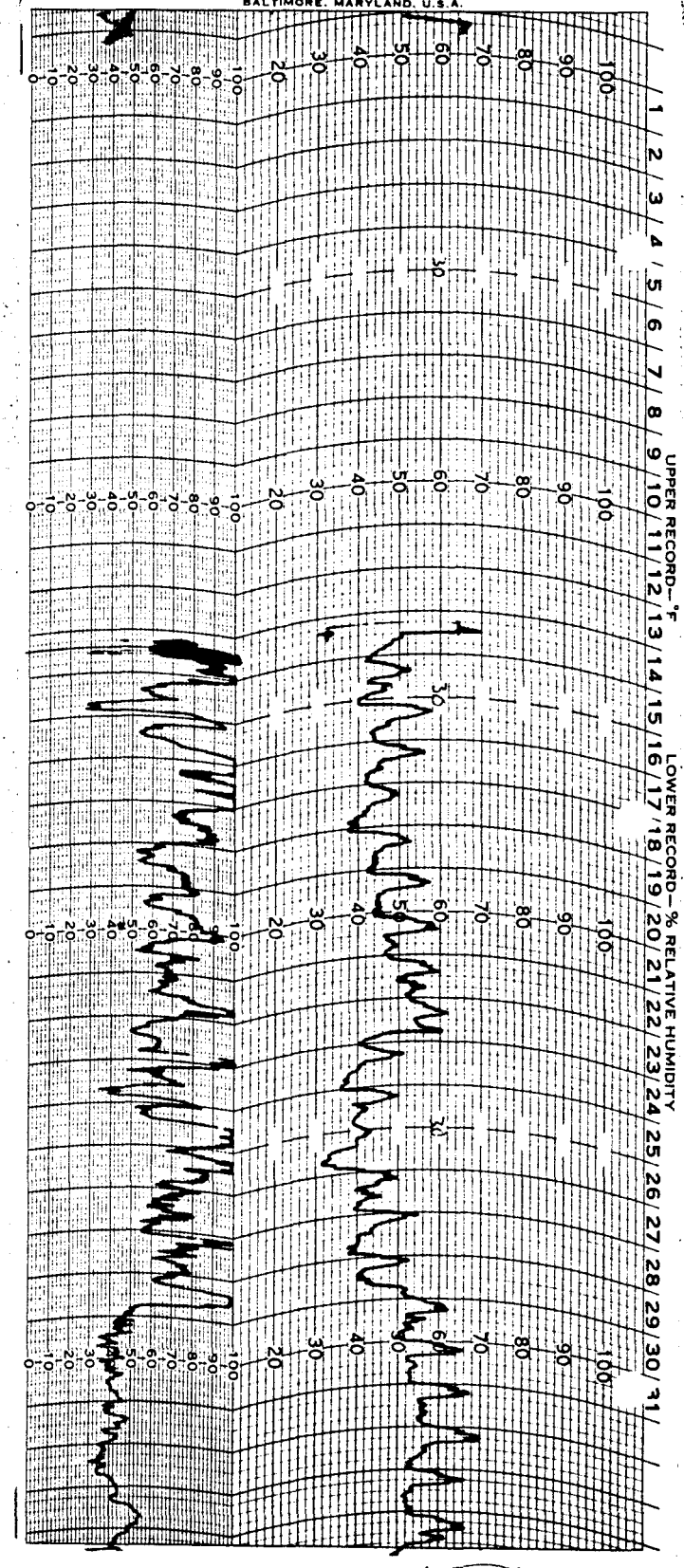
BALTIMORE, MARYLAND, U.S.A.



OBSERVER C SEMBORSKI ON 15:38 A.M. P.M. 10-12 1988

STATION East MTN OFF 11:07 A.M. P.M. 11-14 1988

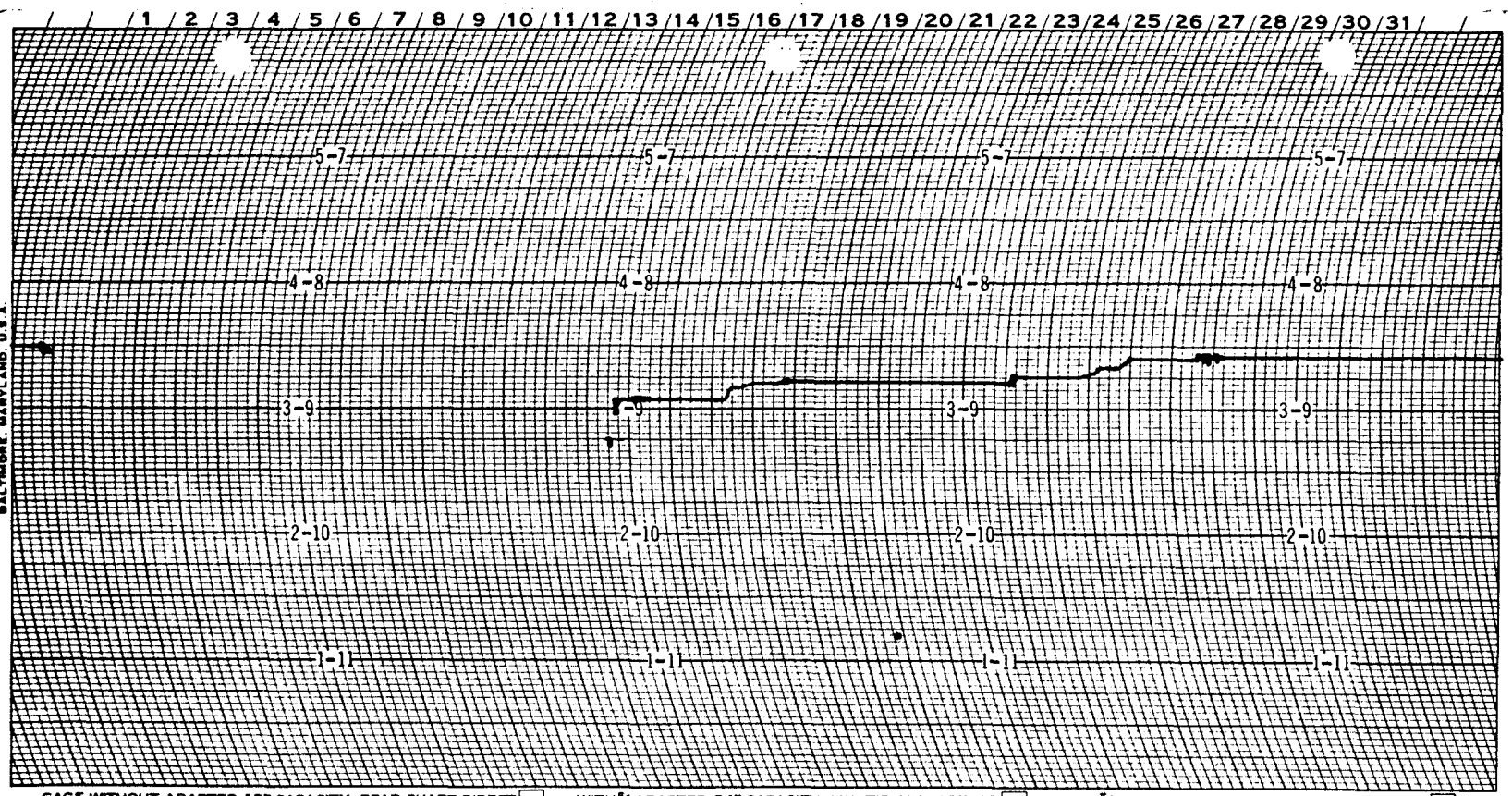
CHART NO. 15627
MONTHLY-861 HRS.
BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



OBSERVER L. Fry ON 11-14-88 A.M. P.M. 11:07 19__

STATION EM OFF 11.16 A.M. P.M. 12-6 1988

CHART NO. 13000
12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE
BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER Semborski/Fry

STATION EAST MTN.

ON 11:10 (P.M.) 11-14 1988

OFF 11:10 (A.M.) 12-6 1988

PRINTED IN U.S.A.

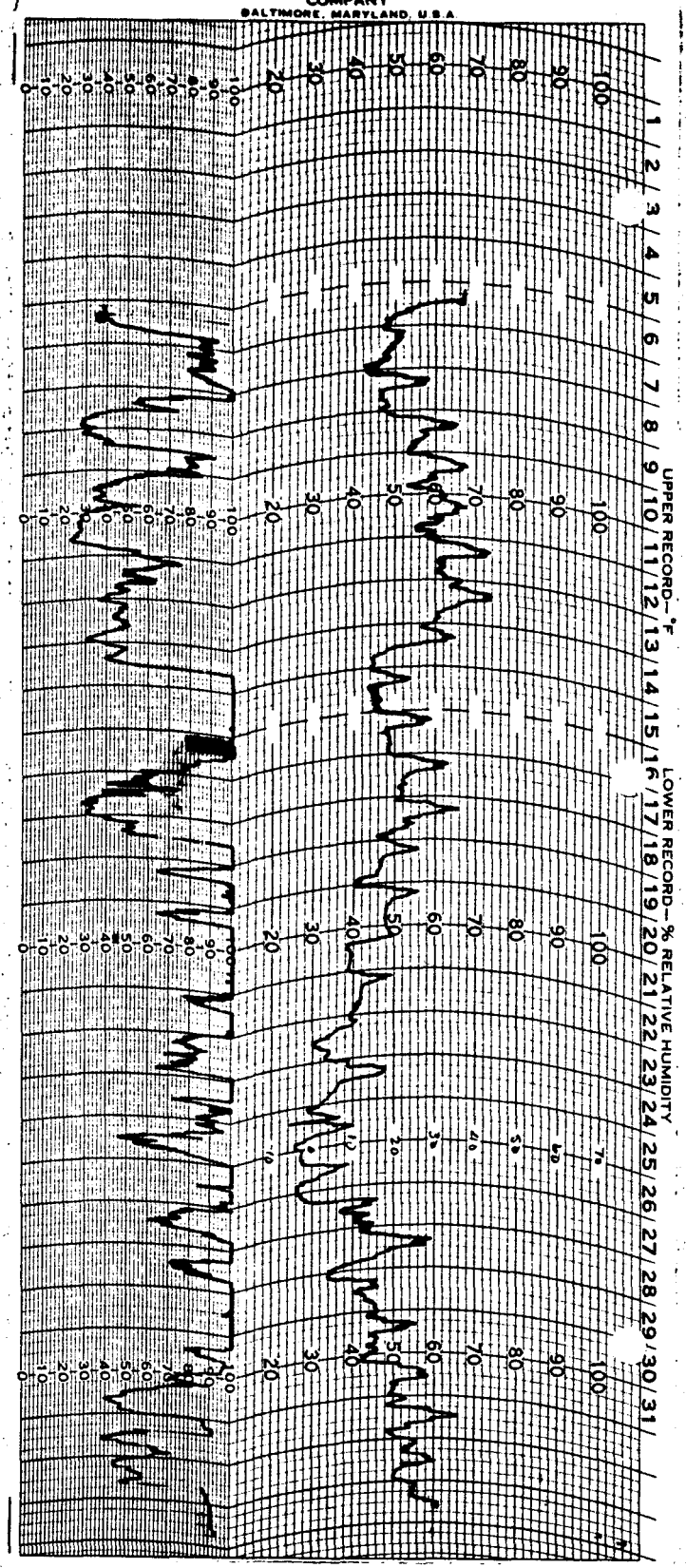
HYGROTHERMOGRAPH

CHART NO. 15627

MONTHLY-861 HRS.

BELFORT INSTRUMENT COMPANY

BALTIMORE, MARYLAND, U.S.A.



OBSERVER KLE Snider ON 11:15 A.M. P.M. 12-6 1988

STATION EAST MTN OFF 12:50 A.M. P.M. 1-5 1989

PRINTED IN U.S.A.

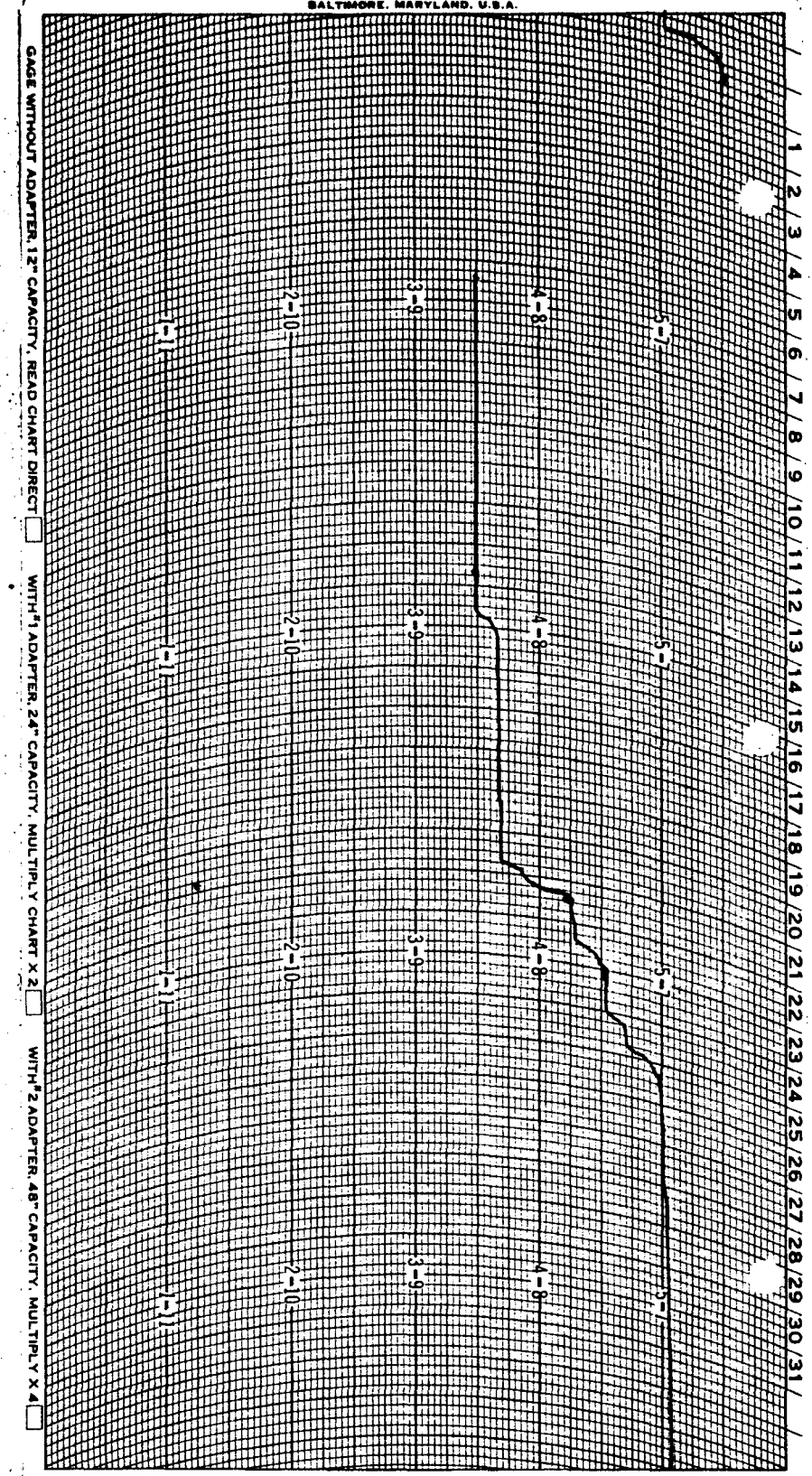
CHART NO. 15068

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.

UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY

BALTIMORE, MARYLAND, U.S.A.



OBSERVER KLSnider

STATION EAST MTN

ON 11.10 A.M. P.M. 12-6 1988

OFF 12.40 A.M. P.M. 1-5 1989

APPENDIX K

UTAH POWER & LIGHT COMPANY
MINING DIVISION - TECHNICAL SERVICES
HYDROLOGIC MONITORING PROGRAM
DEER CREEK, WILBERG/COTTONWOOD, and DES-BEE-DOVE MINES

I. Monitoring Locations

A. Surface Water Hydrology (see attached Map #1 for locations listed below)

1. Cottonwood Creek Drainage System
   a. Cottonwood Canyon Creek - USGS Flume: 700 feet North, 200 feet East of the Southwest corner of Section 31, Township 17 South, Range 7 East.
   b. Grimes Wash
      (1) Right Fork: (Approximately 1500 feet upstream from the inlet culvert for the disturbed area.) 550 feet North, 1500 feet West of the Southwest corner of Section 22, Township 17 South, Range 7 East.
      (2) Left Fork: (Approximately 50 feet upstream from the inlet culvert for the disturbed area.) 200 feet South, 2350 feet East of the Northwest corner of Section 27, Township 17 South, Range 7 East.
      (3) Below the mine: (Approximately 500 feet downstream from the outlet culvert below the disturbed area.) 1770 feet South, 1820 feet West of the Northeast corner of Section 27, Township 17 South, Range 7 East.

2. Huntington Creek Drainage System
   a. Huntington Creek: UP&L's Environmental Department monitors the following four sites along Huntington Creek:
      (1) Below Electric Lake*
      (2) Above the Forks*
      (3) Above the power plant diversion
      (4) Below the power plant

      * Not listed on map due to scale.

   b. Deer Creek
      (1) Above the mine: (Approximately 600 feet upstream from the mine facility.) 200 feet North, 800 feet West of the Southeast corner of Section 10, Township 17 South, Range 7 East.

(2) At Permit: (Approximately 5,000 feet downstream from the mine facility.) 480 feet North, 3360 feet East of the Northwest corner of Section 1, Township 17 South, Range 7 East.

(3) Below the Mine: (Approximately 12,000 feet downstream from the mine facility.) 480 feet South, 3360 feet East of the Northwest corner of Section 1, Township 17 South, Range 7 East.

c. Meetinghouse Canyon - South Fork: (Approximately 200 feet upstream from the north and south convergence.) 800 feet North, 1500 feet East of the Southwest corner of Section 35, Township 16 South, Range 7 East.

B. Groundwater Hydrology

1. East Mountain Springs (see attached Map #2 for spring locations)

Burnt Tree *
Elk Spring *
Sheba Springs *
Ted's Tub
79-2
79-10 *
79-15
79-23 *
79-24
79-26 *
79-28 (Flag Lake)
79-29 *
79-34
79-35 *
80-41
80-43
80-44 *
80-46 *
80-47
82-51
82-52 *
84-56 *
89-60 (Alpine Spring)

* Recession Study Springs

2. Piezometric Data

a. Surface

(1) Rilda Canyon (see attached Map #1 for locations)

P1
P2
P3

P4
P5
EM-47

(2) Cottonwood Canyon Creek
EM-31

b. Underground (Deer Creek): Program was terminated due to access and mine construction projects. New locations will be added when prospective sites meet long-term monitoring criteria.

3. In-Mine
   a. Deer Creek Mine (see attached Map #3 for locations)
      (a) 3rd South "B" xc-21
      (b) 3rd North xc-41
   b. Wilberg/Cottonwood Mines (see attached Map #4 for locations)
      (a) 2nd South xc-11
      (b) 4th East xc-24

II. Monitoring Schedule

A. Field Measurement: Listed below are the sites which will be monitored by UP&L Mining Division in accordance with the guidelines established by DOGM; i.e.,
   - Date and Time
   - Flow
   - pH
   - Temperature
   - Dissolved oxygen

1. Cottonwood Canyon Creek
   a. Cottonwood Canyon Creek - USGS Flume
   b. Grimes Wash
      (1) Right Fork
      (2) Left Fork
      (3) Below the mine

2. Huntington Canyon Drainage
   a. Deer Creek
      (1) Above the mine
      (2) At Permit Boundary
      (3) Below the mine
   b. Meetinghouse Canyon - South Fork

3. East Mountain Springs

4. In-Mine
   a. Deer Creek
   b. Wilberg/Cottonwood

All sites will be monitored monthly except for East Mountain Springs and in-mine locations. East Mountain Springs will be field tested during the months of July and October. In addition, the Recession

Study Springs (denoted by asterisks in the Monitoring Location section) will be field tested from July through October. In-Mine locations will be field tested quarterly.

B. Quality Sampling (Laboratory Measurements)

1. Surface Water Hydrology: Water samples will be collected and analyzed quarterly (one sample at low flow and high flow) during the first or second week of the quarter. Parameters analyzed are those listed in the DOGM Guidelines for Surface Water Quality (see Table #1). Quarterly sampling was initiated during March 1988 and will continue throughout the year; i.e., June, September, and December. Baseline analysis was performed in 1986 and will be repeated every five years thereafter.
   a. Cottonwood Creek Drainage, Grimes Wash
      (1) Right Fork
      (2) Left Fork
      (3) Below the mine
   b. Huntington Creek Drainage
      (1) Deer Creek
         (a) Above the mine
         (b) Below the mine
      (2) Meetinghouse Canyon - South Fork

2. Groundwater Hydrology
   a. East Mountain Springs: Water samples will be collected and analyzed during the months of July and October. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table #2). In addition, the Recession Study Springs (denoted by asterisks in the Monitoring Location section) will be sampled monthly for the following parameters:
      (1) Total Hardness
      (2) Carbonate
      (3) Total Manganese

      (See attached memo for clarification.)

   b. In-Mine: Two water samples will be collected and anlyzed per mine quarterly. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table #2).