APPENDIX C

TIME-HISTORY AND CROSS-SECTION PLOTS OF RESERVOIR AND PIEZOMETRIC LEVELS DECEMBER 1995 - JANUARY 2002

AND

RECENT WATER LEVEL READINGS FOR PIEZOMETERS AND MONITORING WELLS

TIME-HISTORY AND CROSS-SECTION PLOTS OF RESERVOIR AND PIEZOMETRIC LEVELS DECEMBER 1995 - JANUARY 2002

APPENDIX A

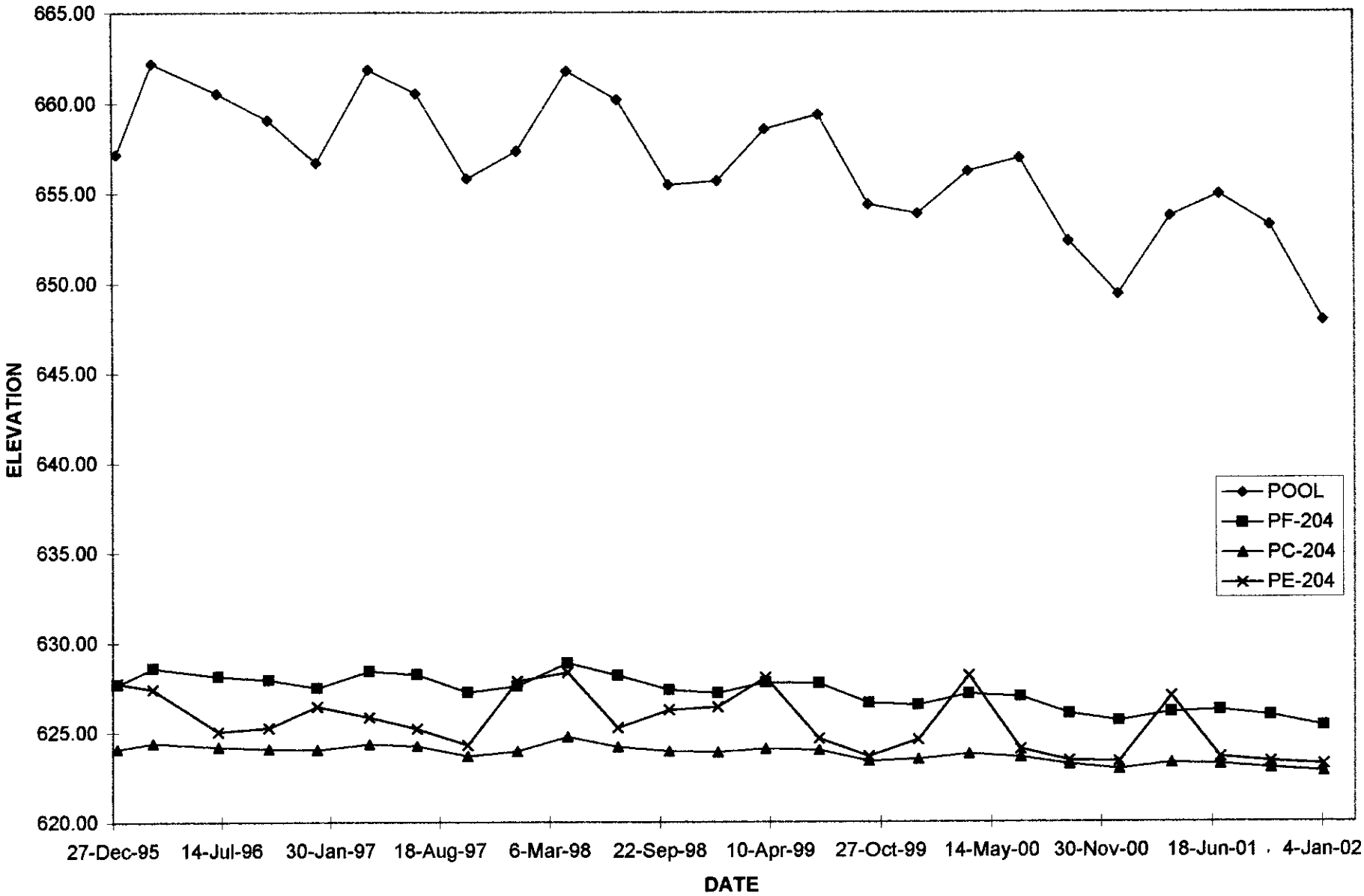
TIME-HISTORY PLOTS OF PIEZOMETRIC LEVELS

CLEMSON UPPER DIVERSION DAM

DECEMBER 1995 – JANUARY 2002

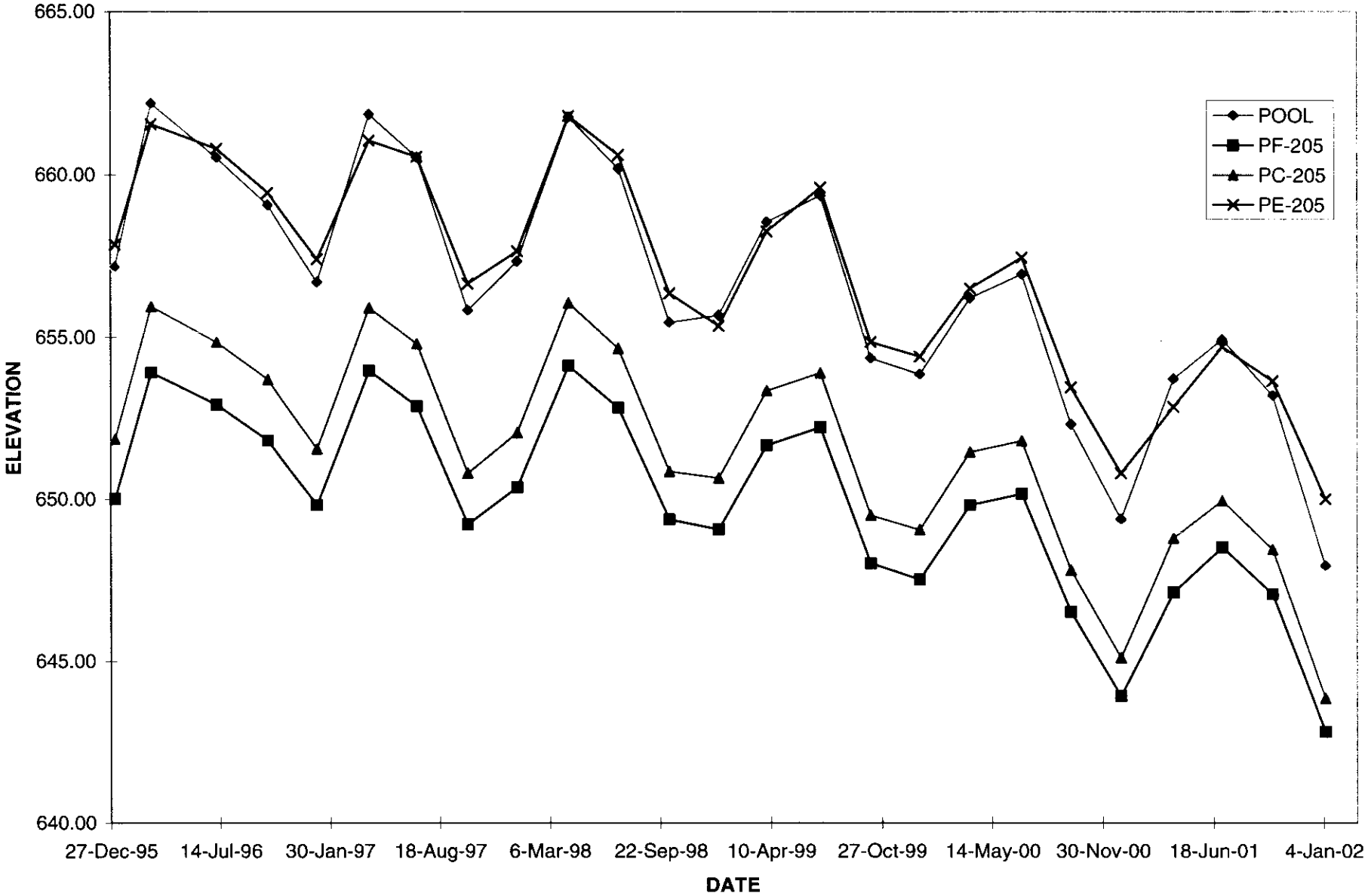
CLEMSON UPPER DAM

PIEZOMETER READINGS STA. 4+06 DOWNSTREAM BERM



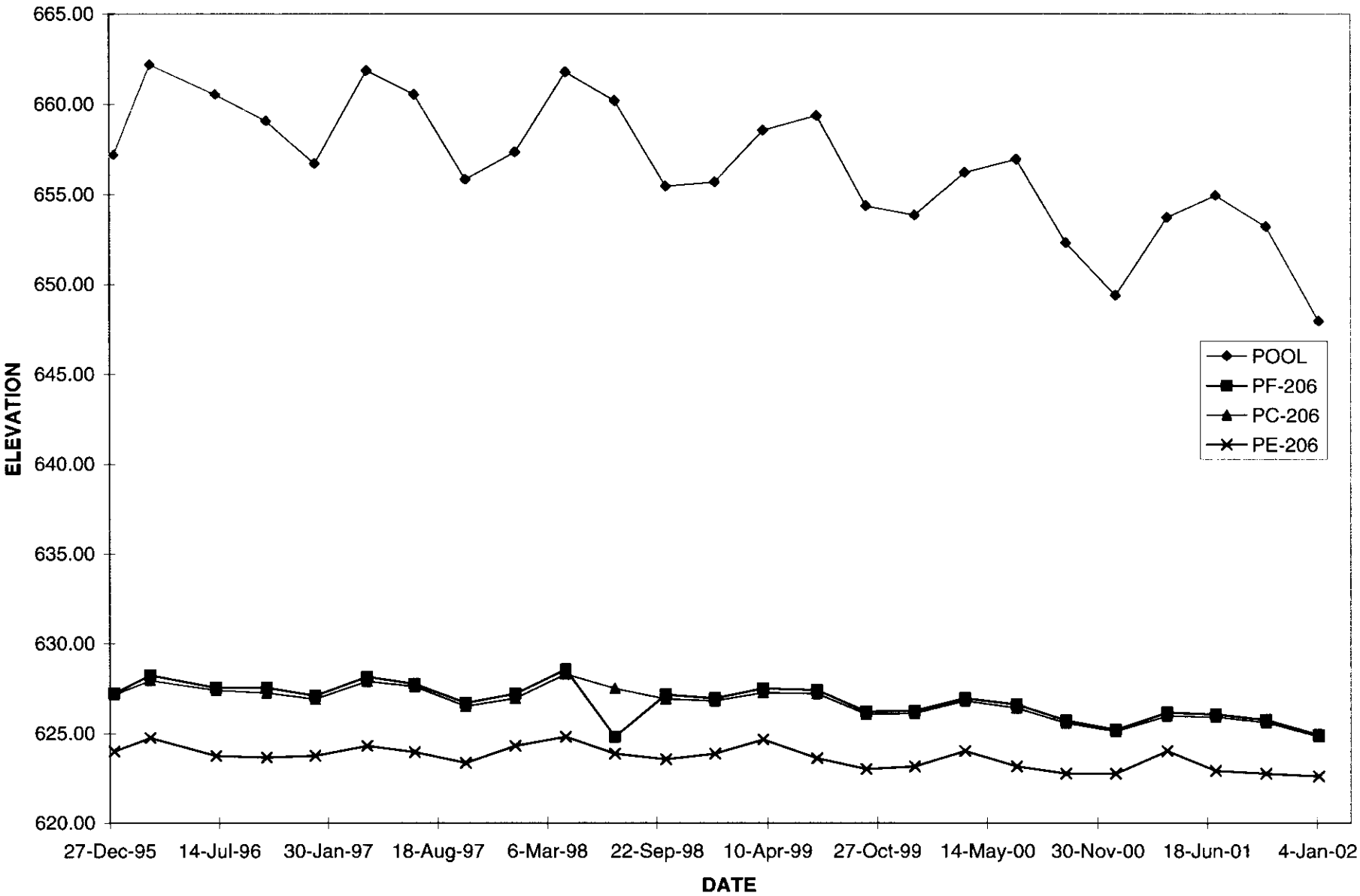
CLEMSON UPPER DAM

PIEZOMETER READINGS STA. 6+00 UPSTREAM CREST



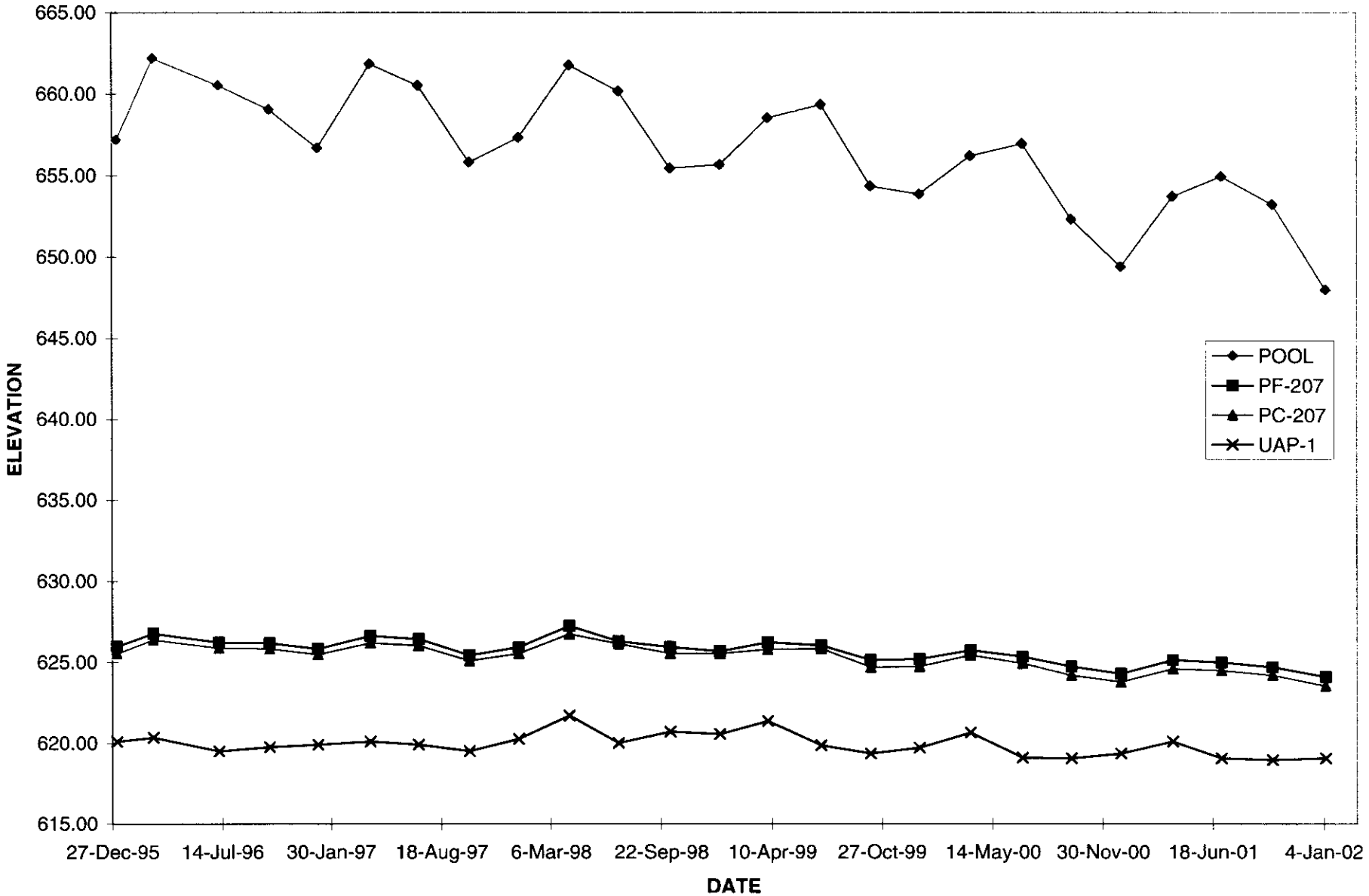
CLEMSON UPPER DAM

PIEZOMETER READINGS STA. 6+00 DOWNSTREAM BERM



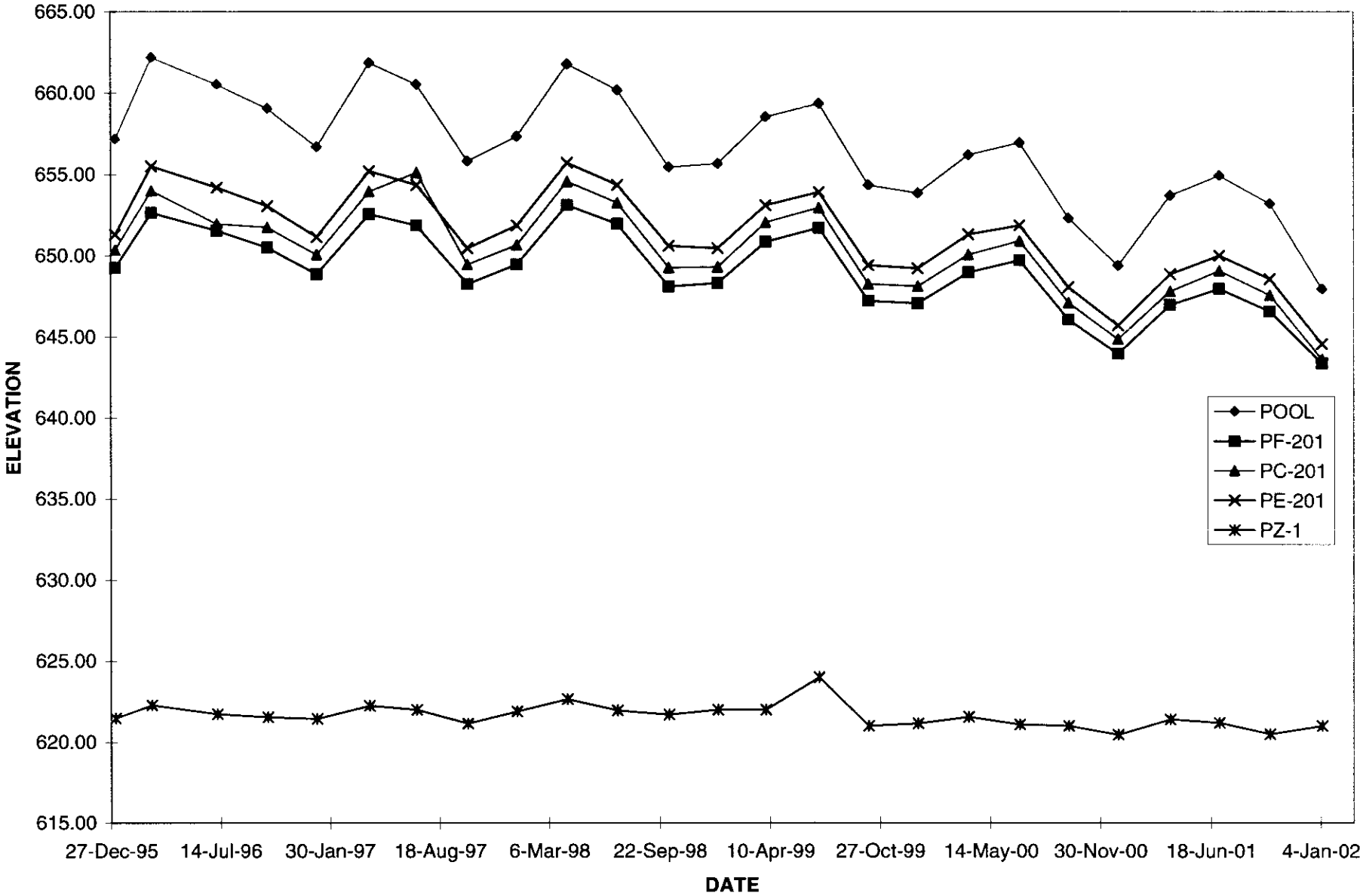
CLEMSON UPPER DAM

PIEZOMETER READINGS STA. 6+11 DOWNSTREAM TOE



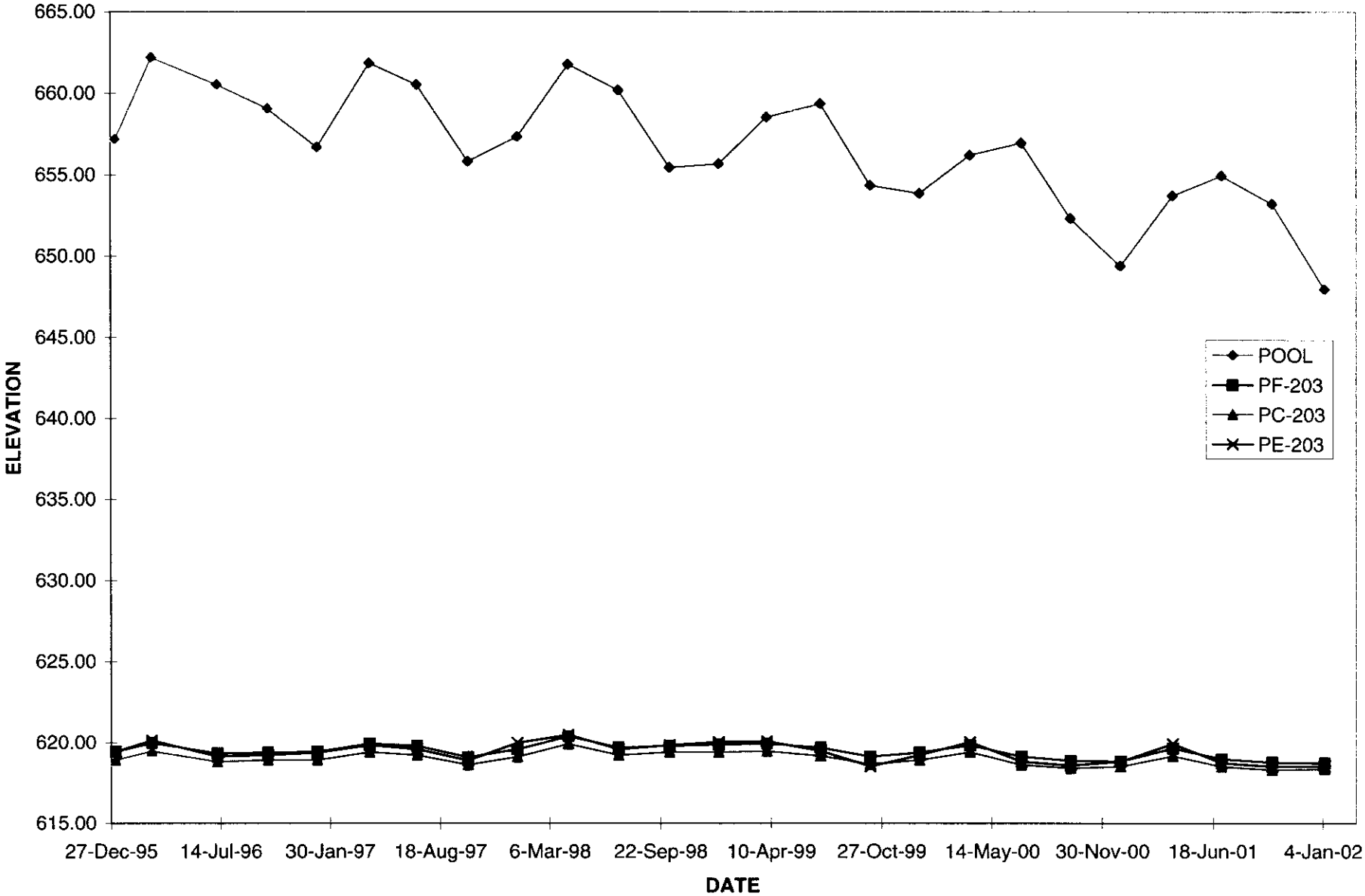
CLEMSON UPPER DAM

PIEZOMETER READINGS STA. 11+00 CREST OF DAM



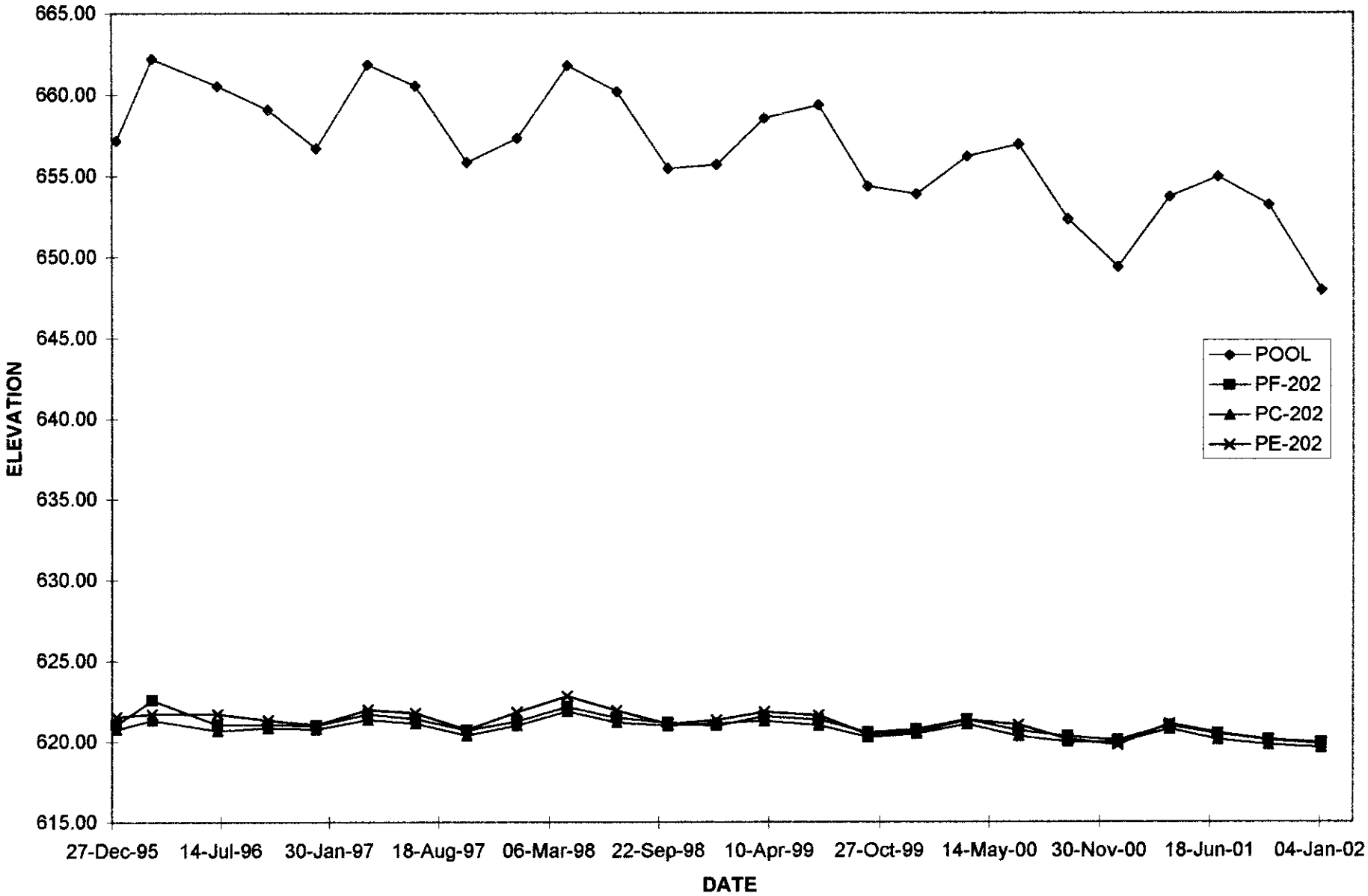
CLEMSON UPPER DAM

PIEZOMETER READINGS STA. 11+00 DOWNSTREAM TOE



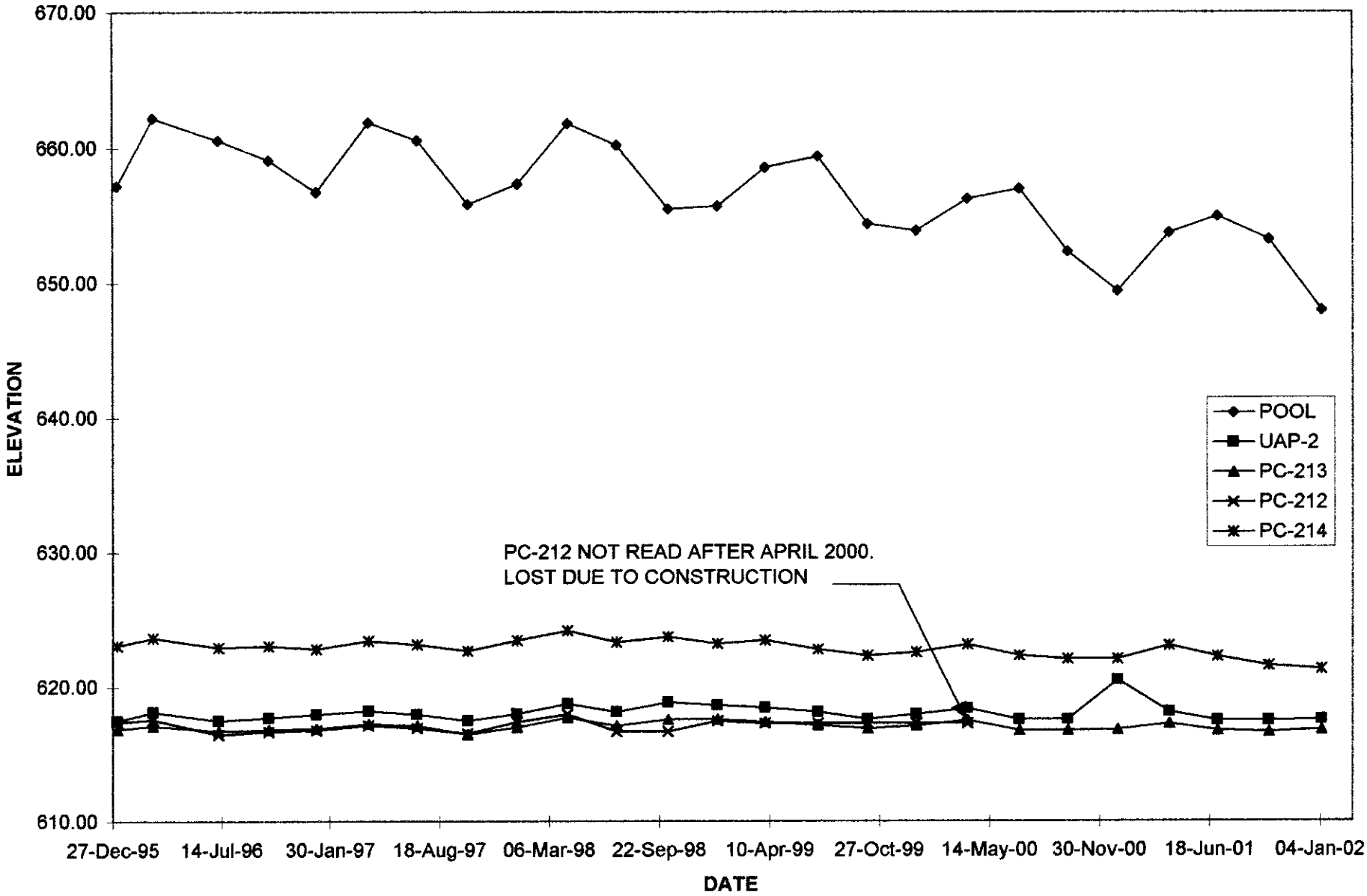
CLEMSON UPPER DAM

PIEZOMETER READINGS STA. 11+10 DOWNSTREAM BERM



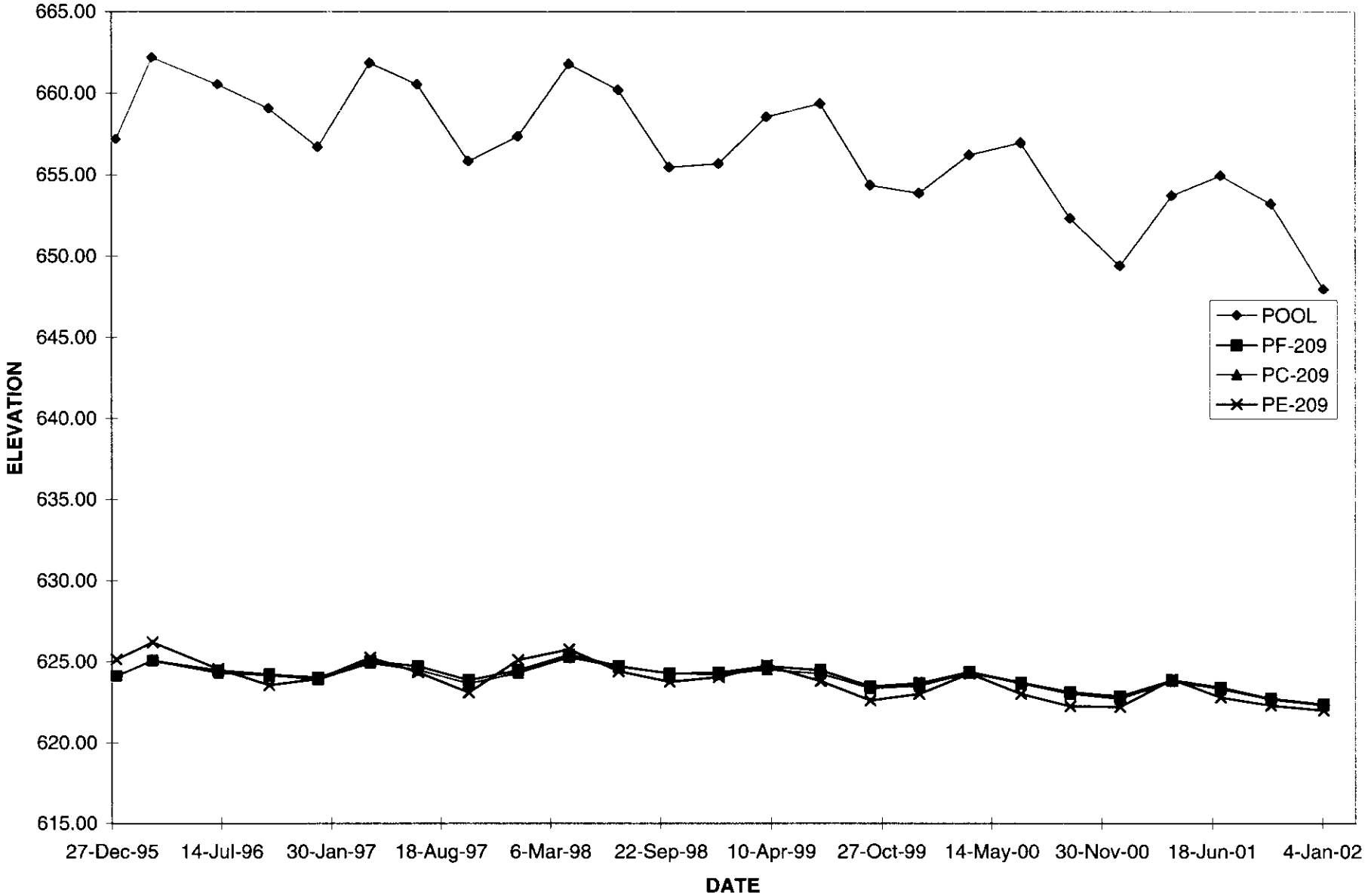
CLEMSON UPPER DAM

PIEZOMETER READINGS STA. 11+18 BEYOND DOWNSTREAM TOE



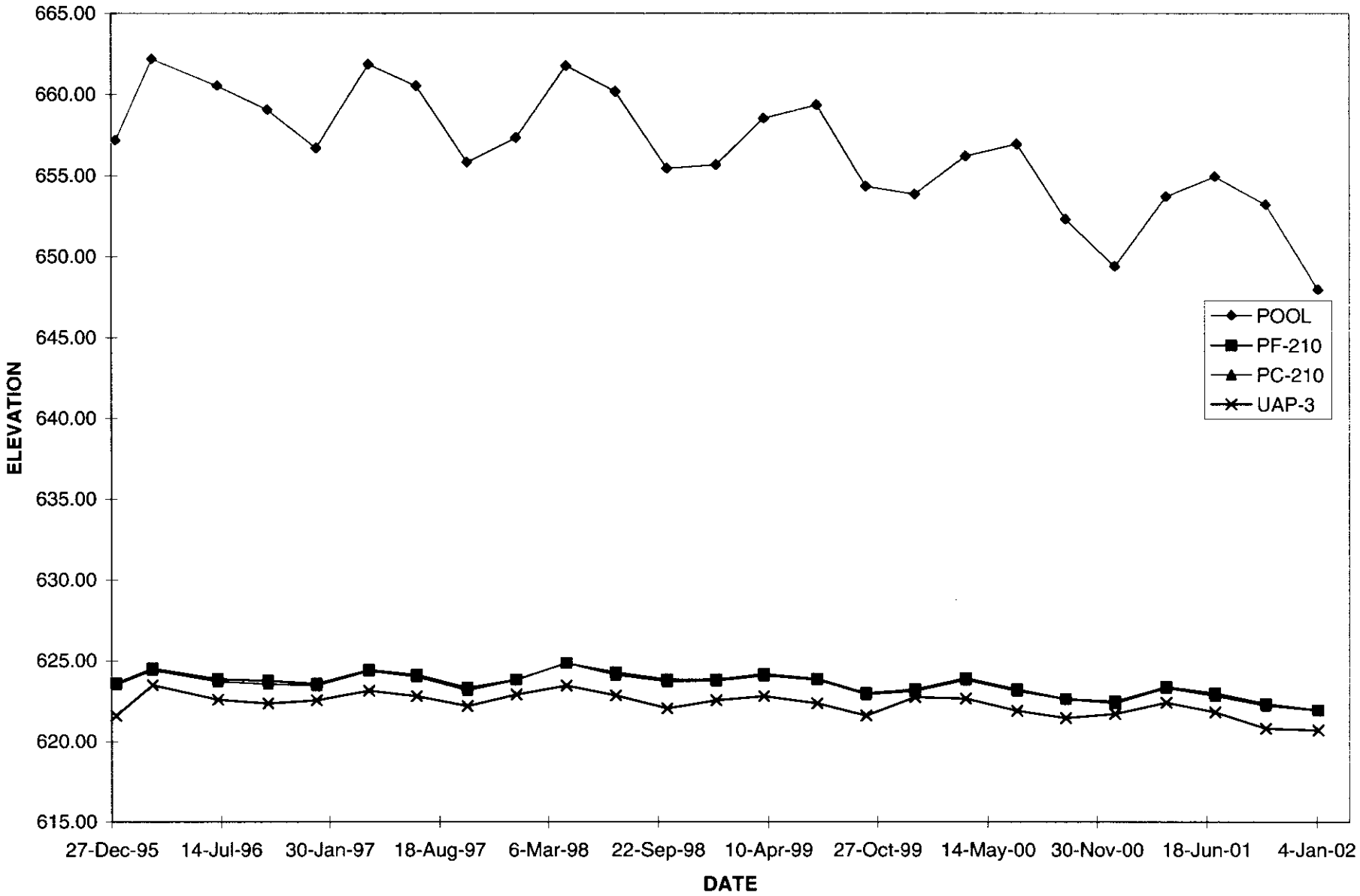
CLEMSON UPPER DAM

PIEZOMETER READINGS STA. 16+00 DOWNSTREAM BERM



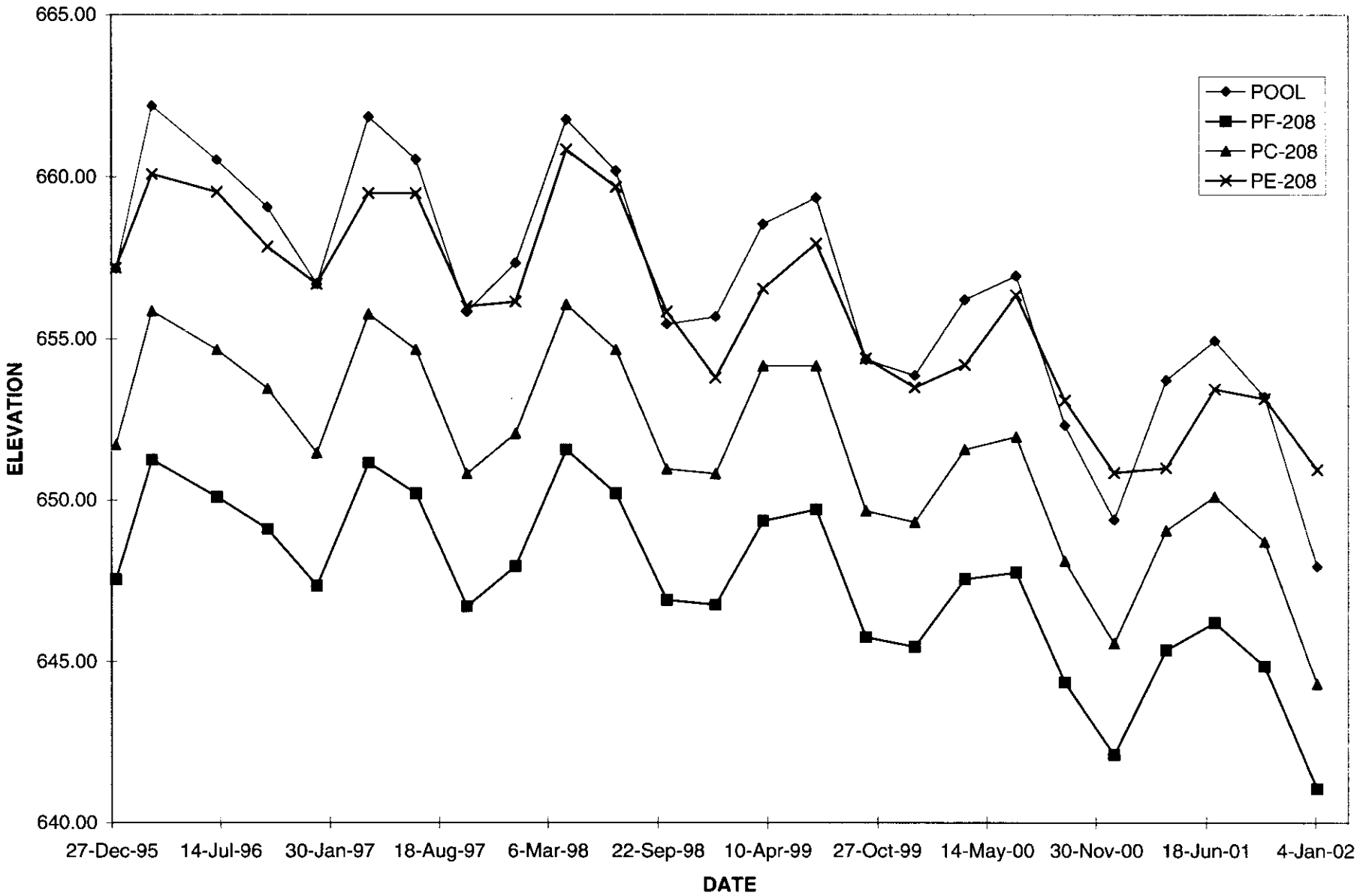
CLEMSON UPPER DAM

PIEZOMETER READINGS STA. 16+00 DOWNSTREAM TOE



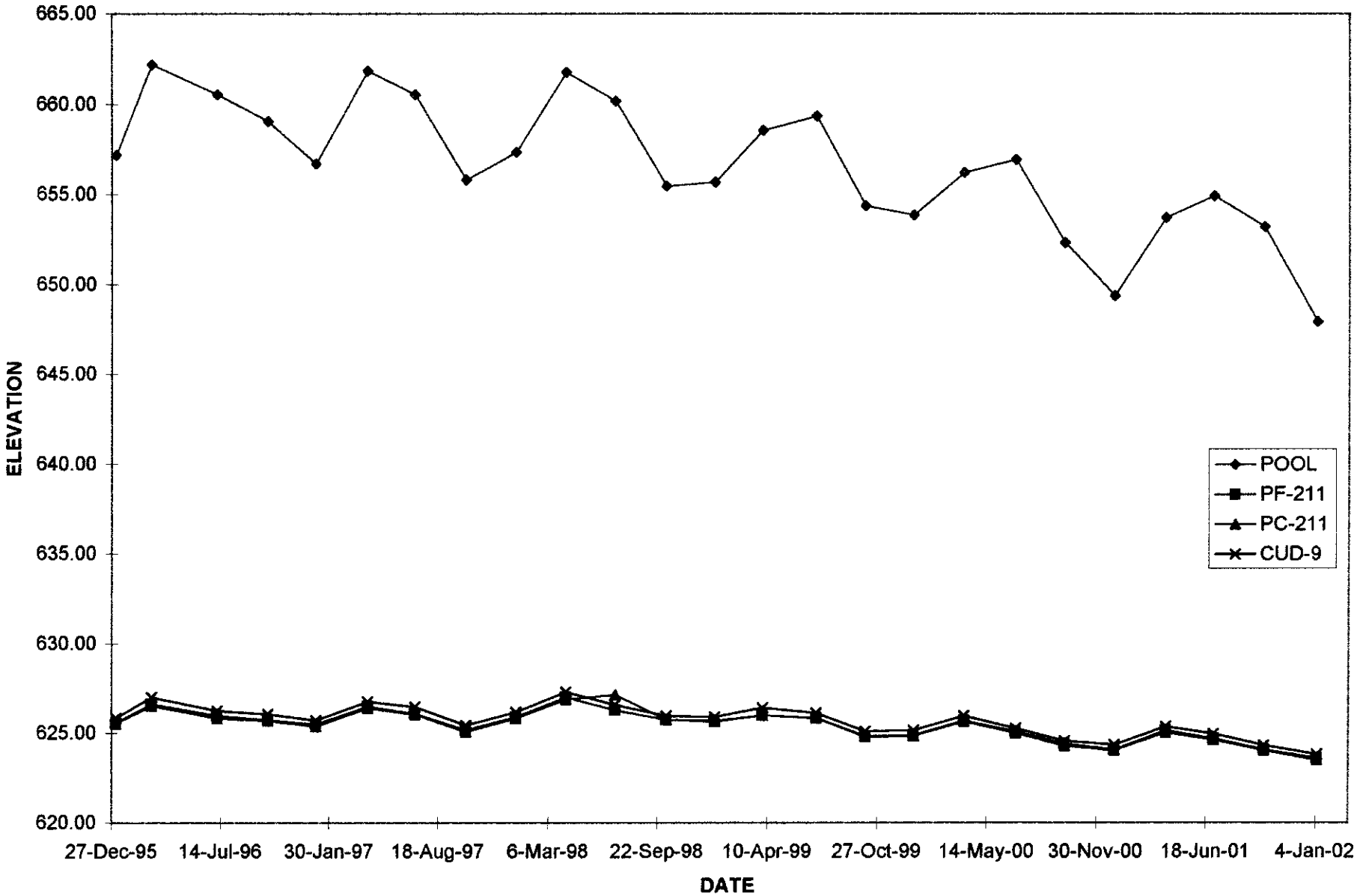
CLEMSON UPPER DAM

PIEZOMETER READINGS STA. 16+04 CREST OF DAM



CLEMSON UPPER DAM

PIEZOMETER READINGS STA. 18+45 DOWNSTREAM BERM & TOE



APPENDIX B

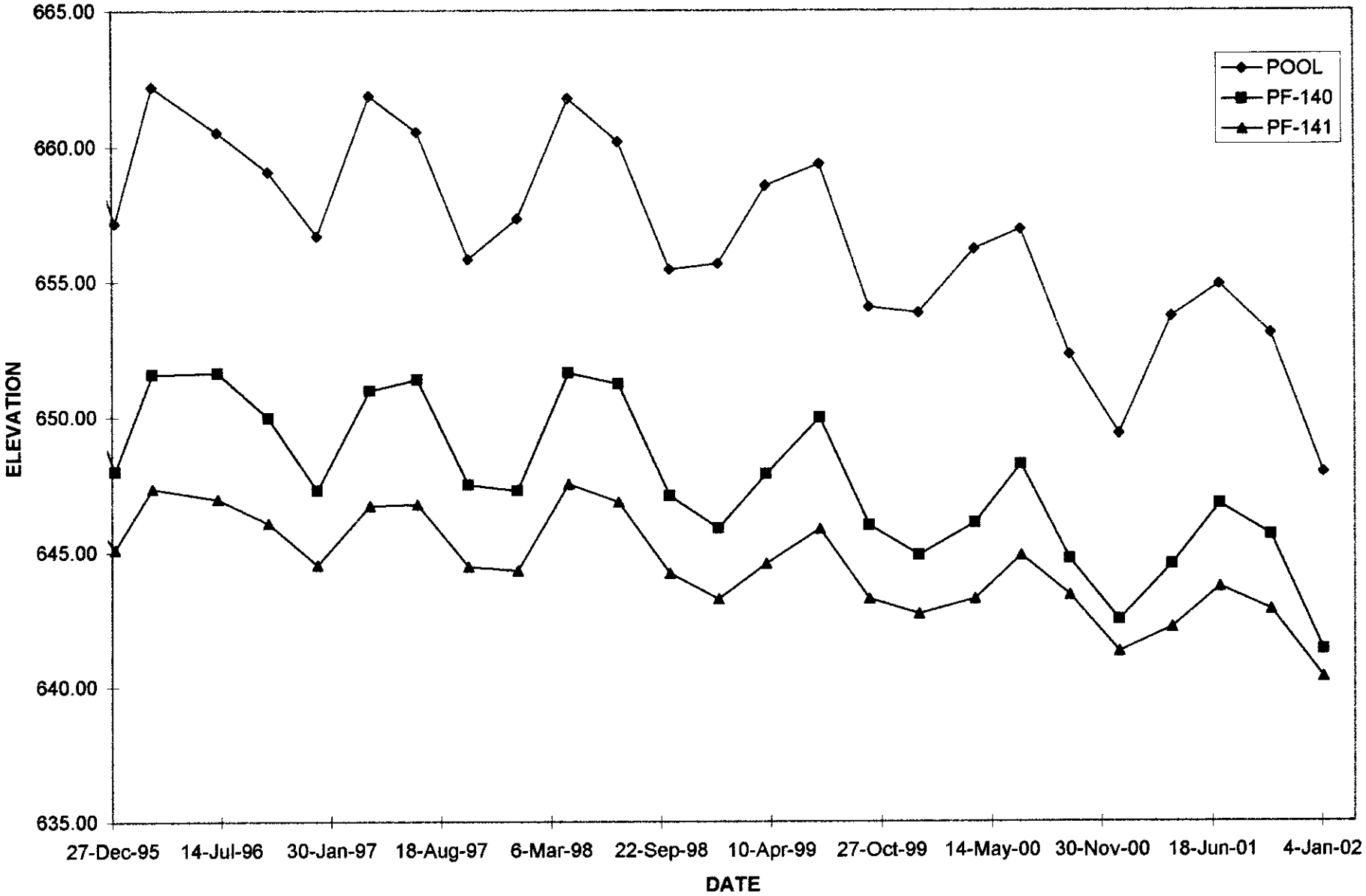
TIME-HISTORY PLOTS OF PIEZOMETRIC LEVELS

CLEMSON LOWER DIVERSION DAM

DECEMBER 1995 – JANUARY 2002

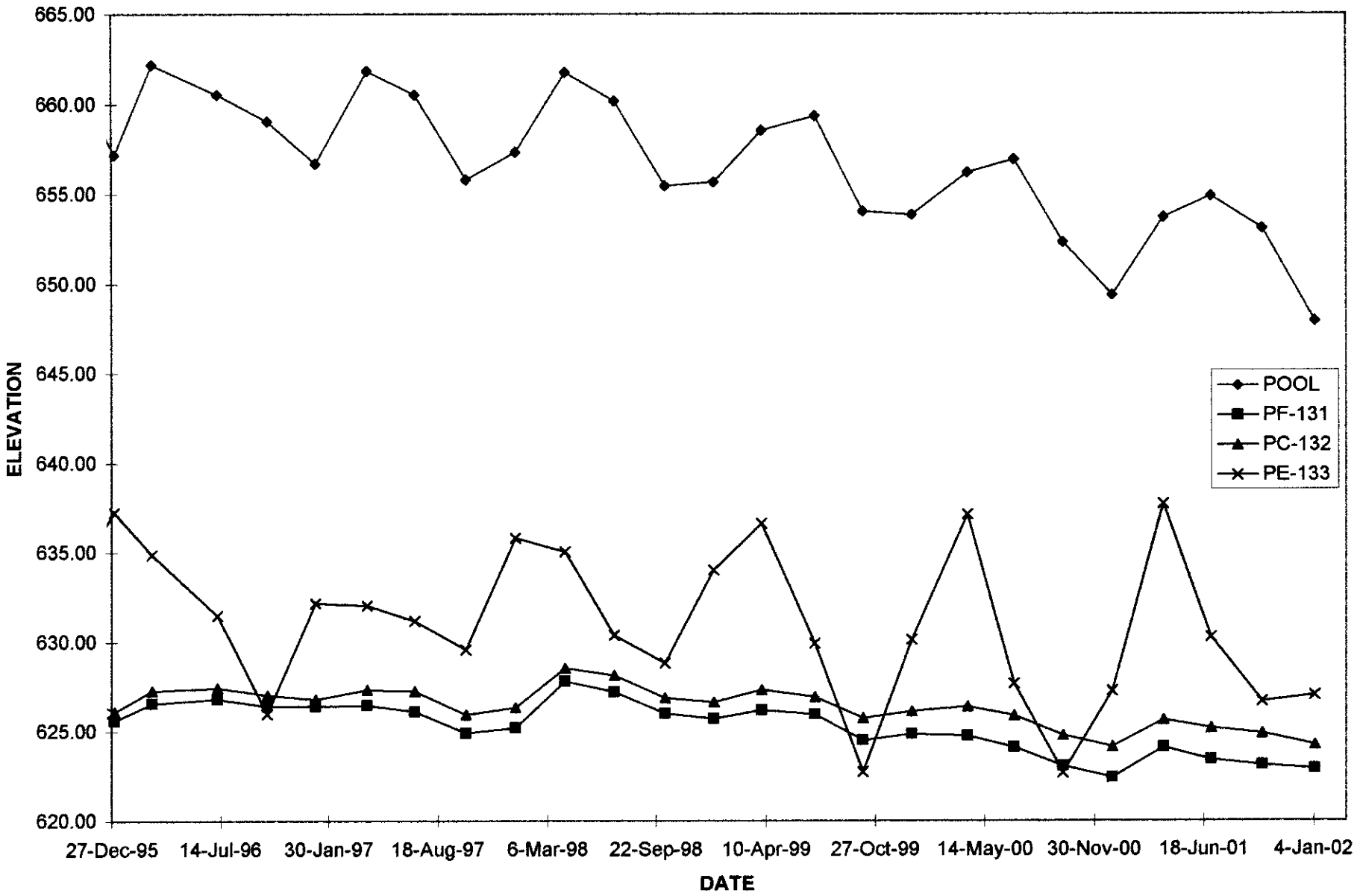
CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 2+16 RIGHT ABUTMENT



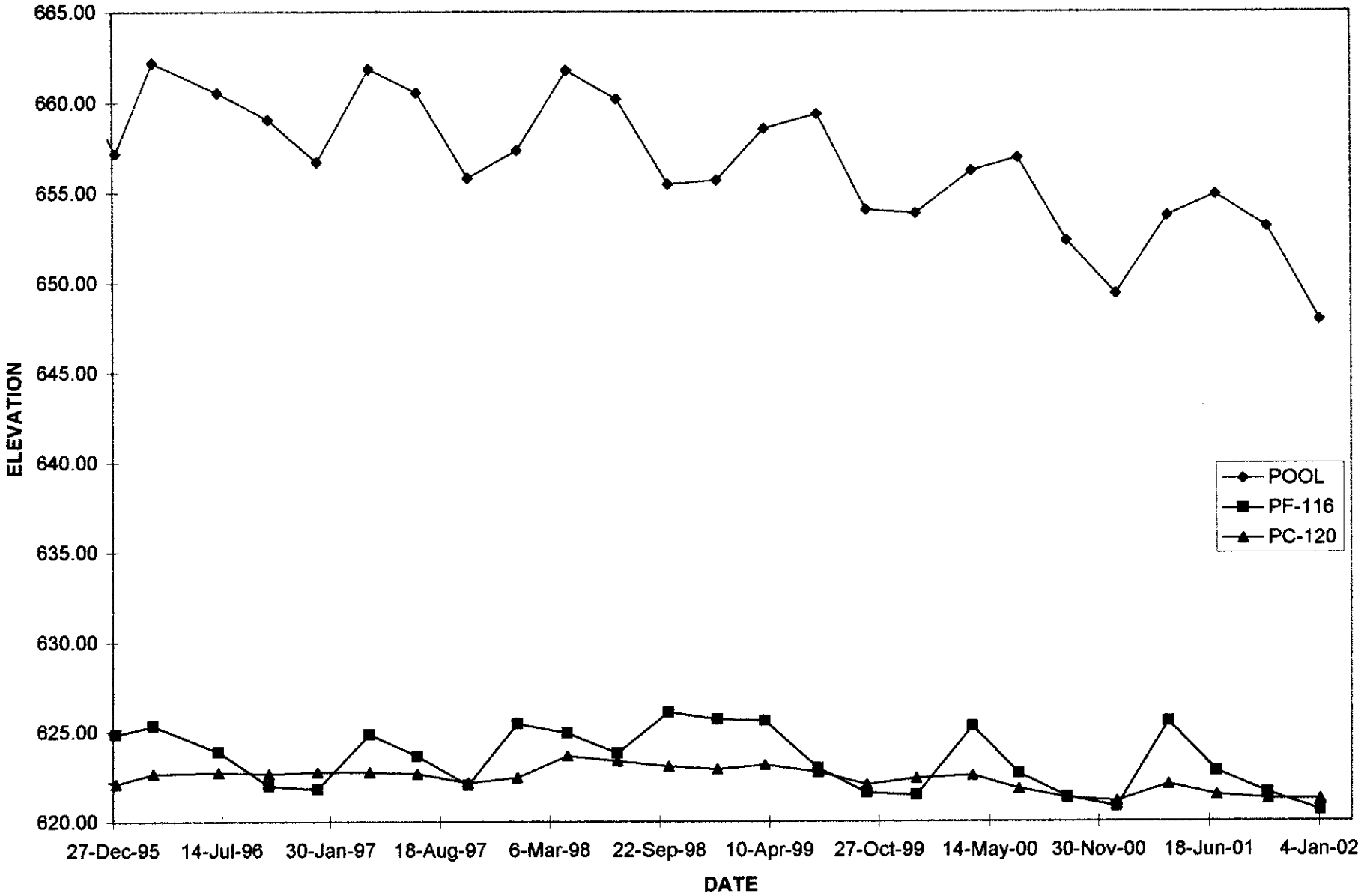
CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 6+20 DOWNSTREAM BERM



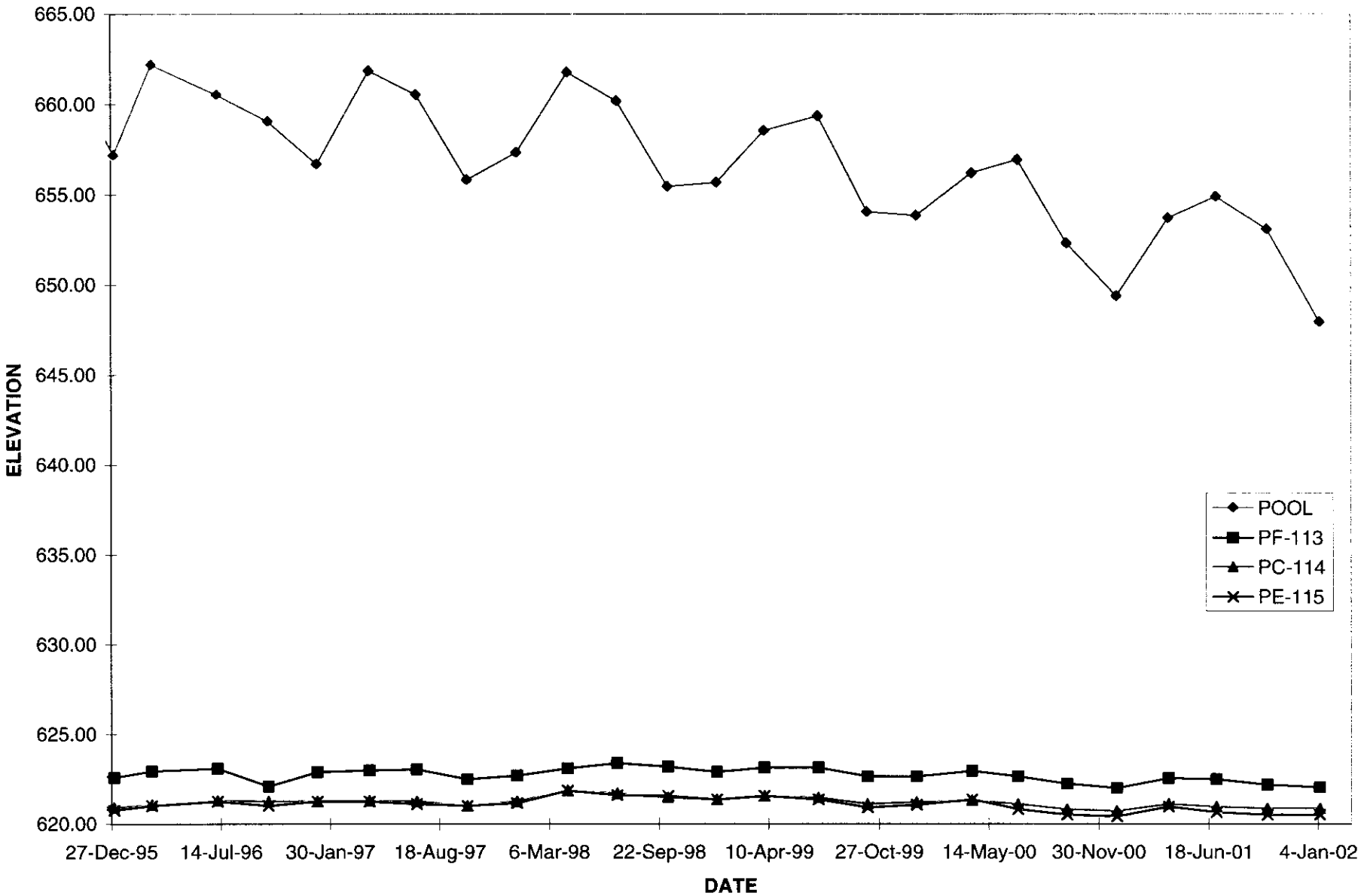
CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 6+40 DOWNSTREAM TOE



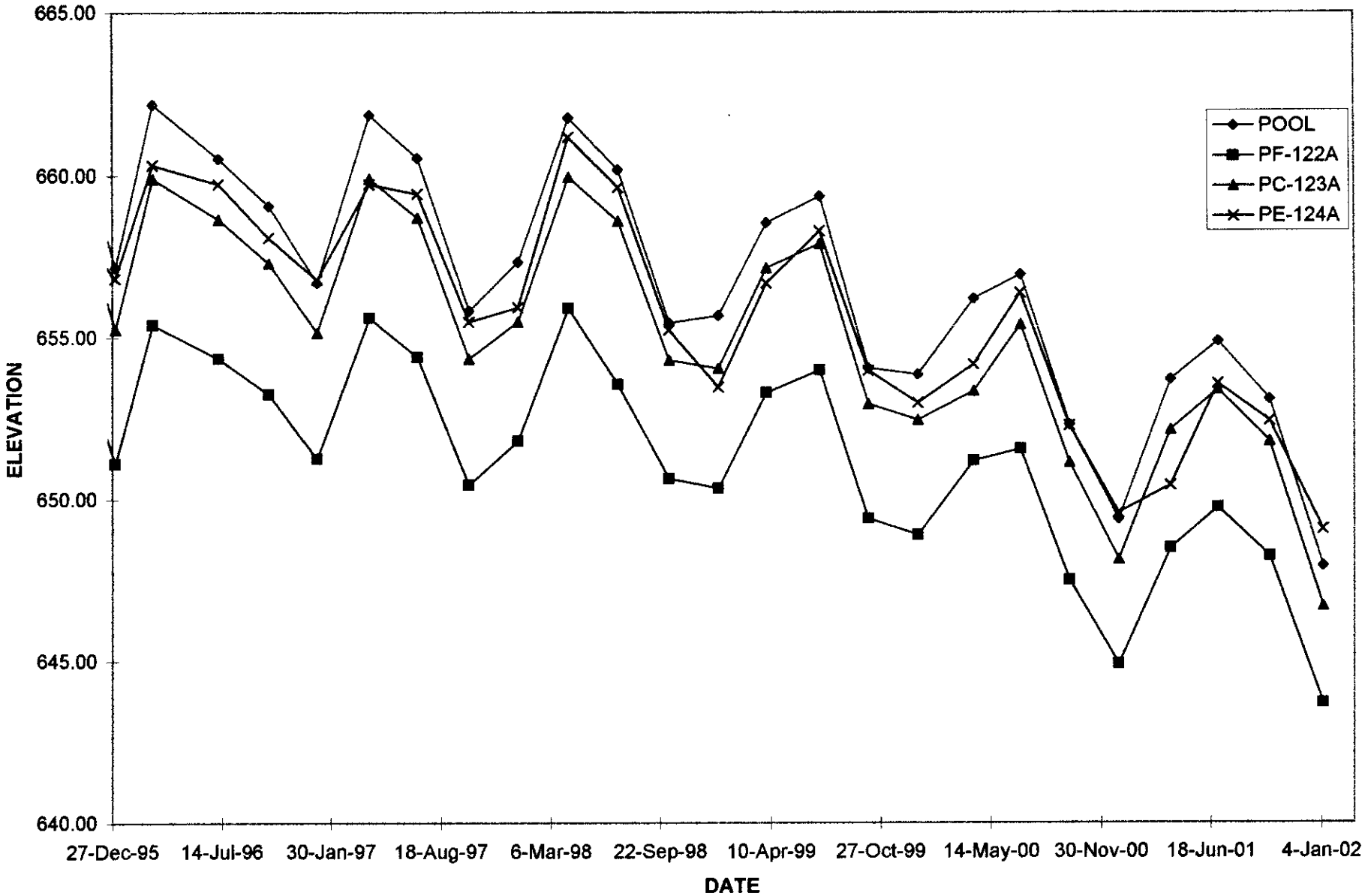
CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 6+70 BEYOND DOWNSTREAM TOE



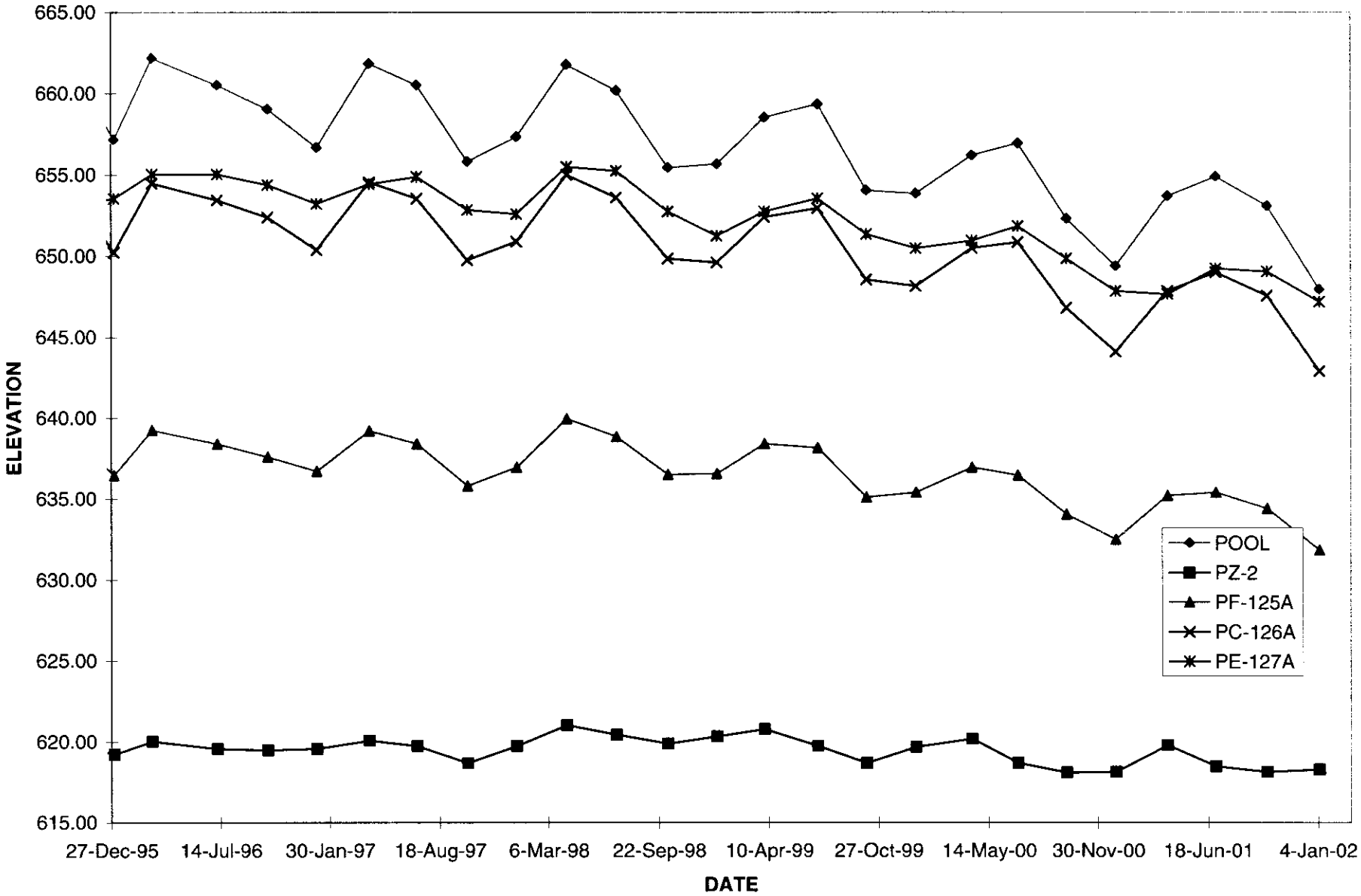
CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 6+77 CREST OF DAM



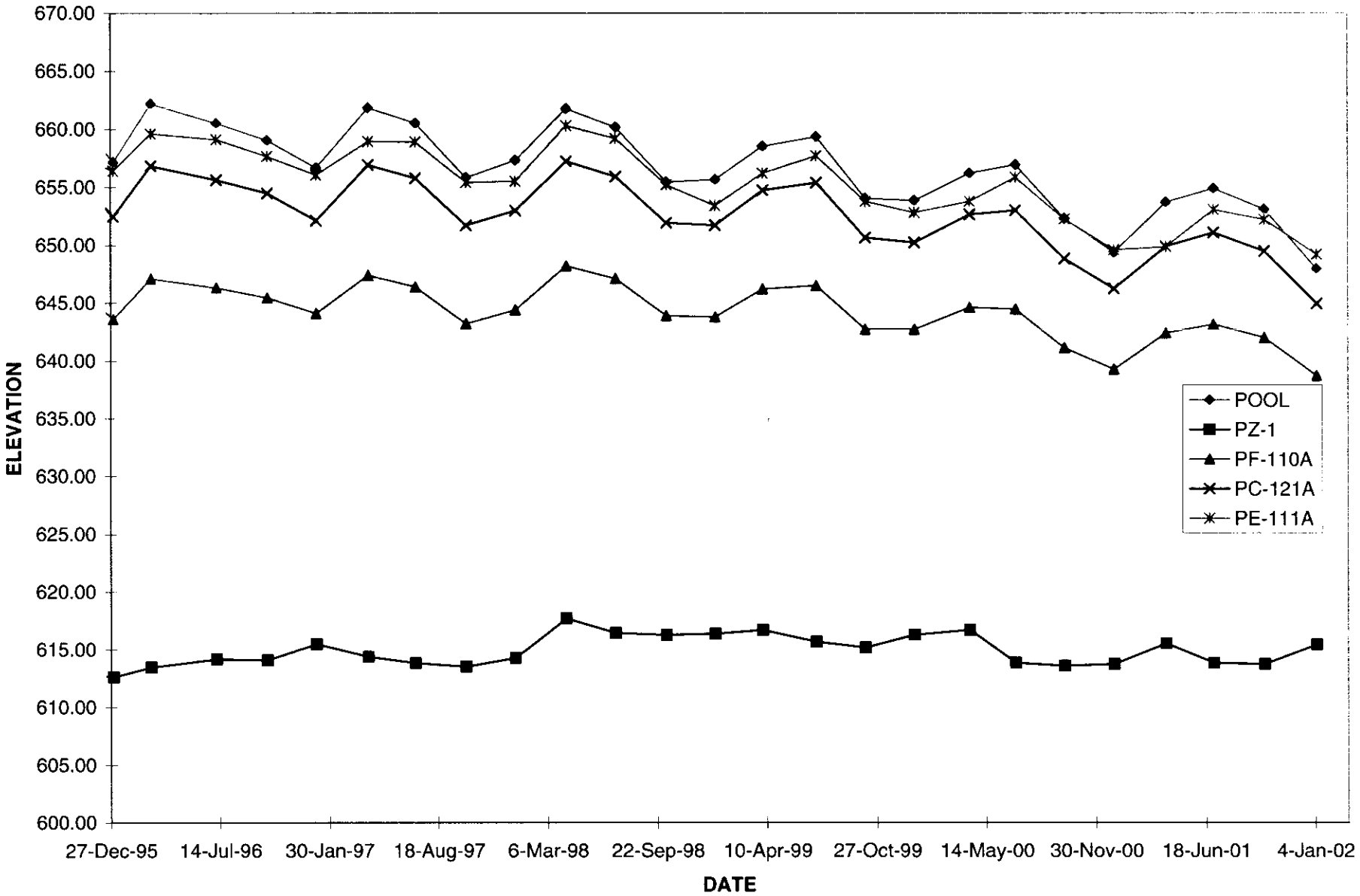
CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 15+00 CREST OF DAM



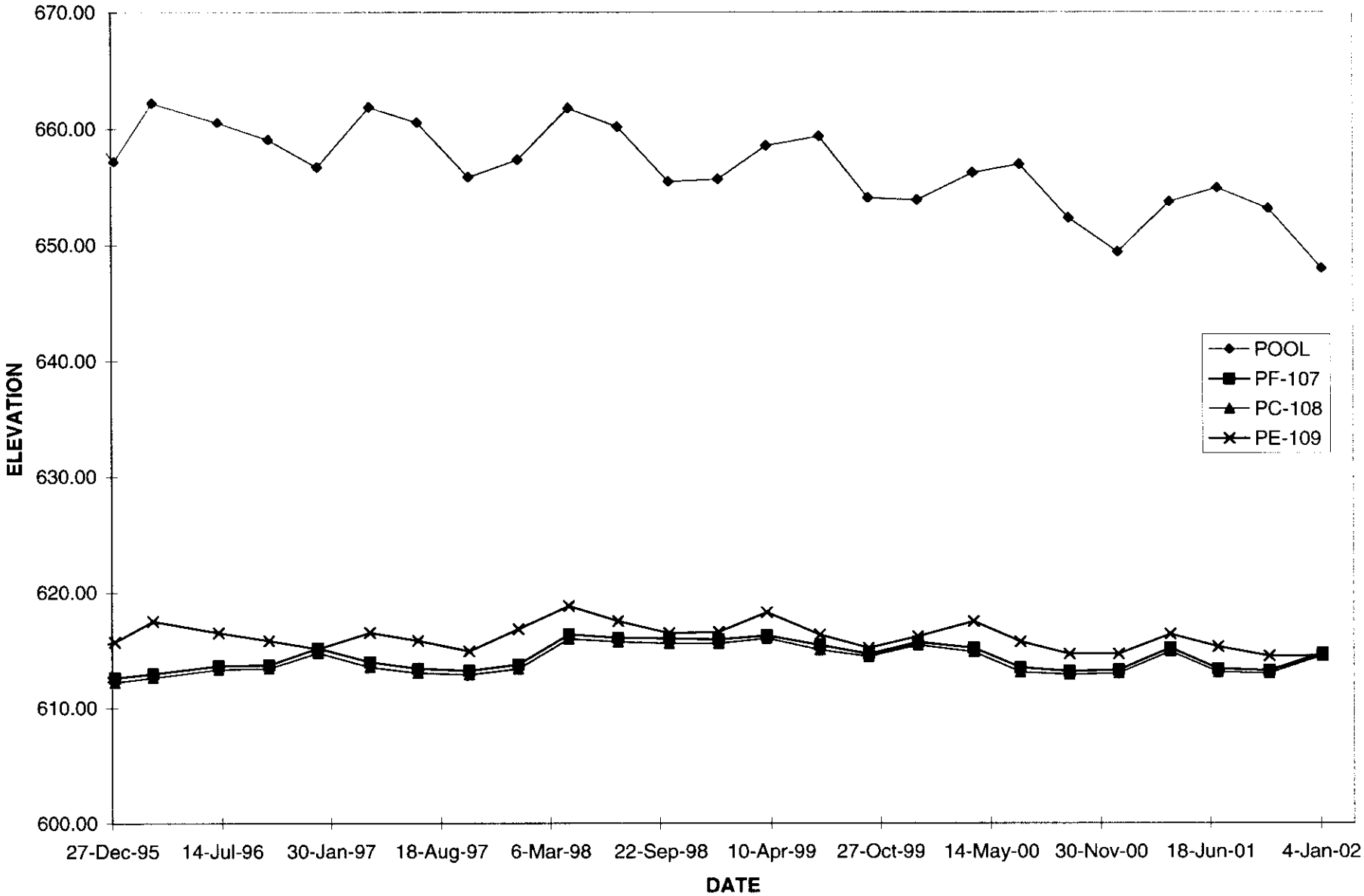
CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 8+90



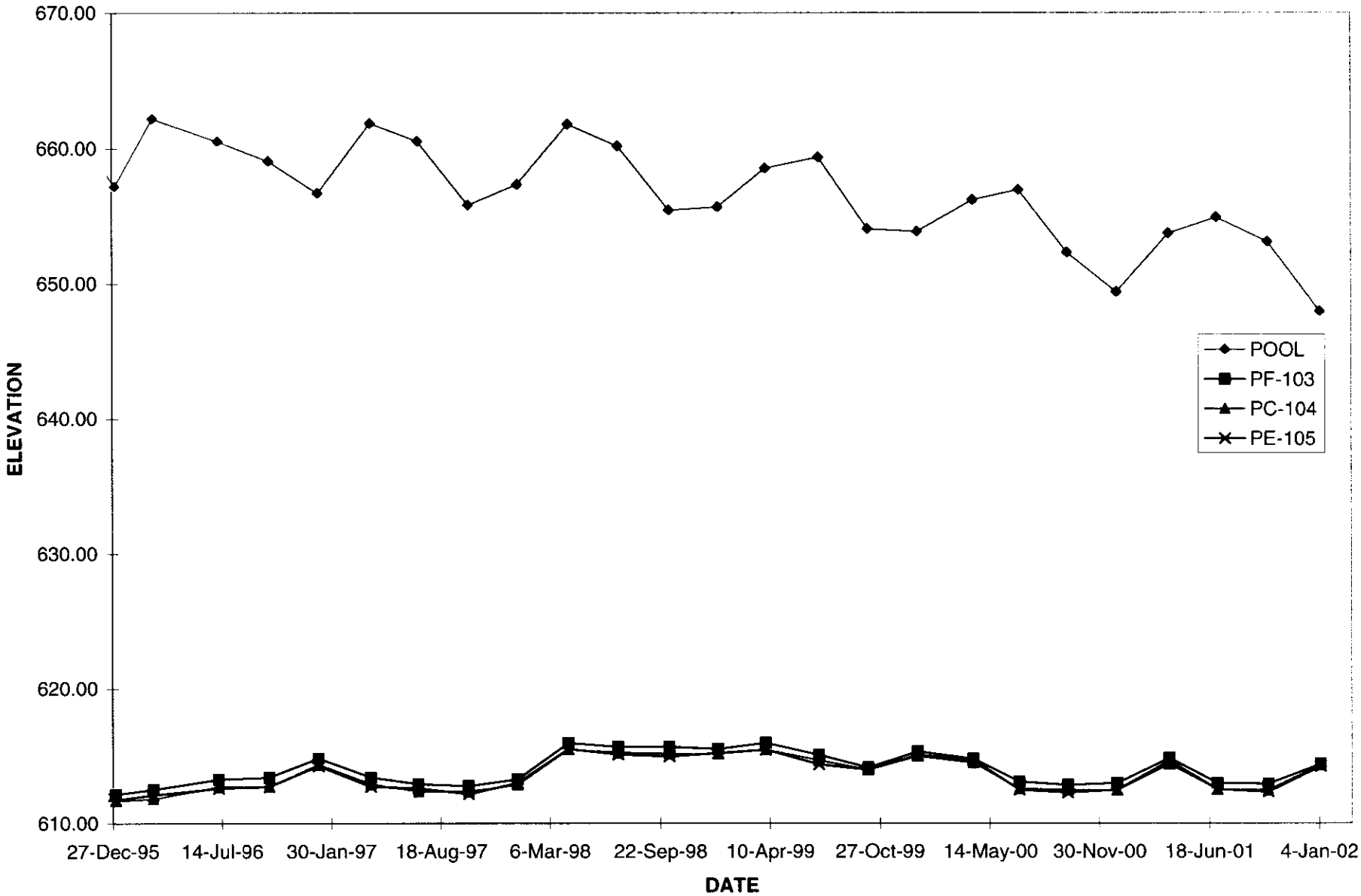
CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 9+20 DOWNSTREAM BERM



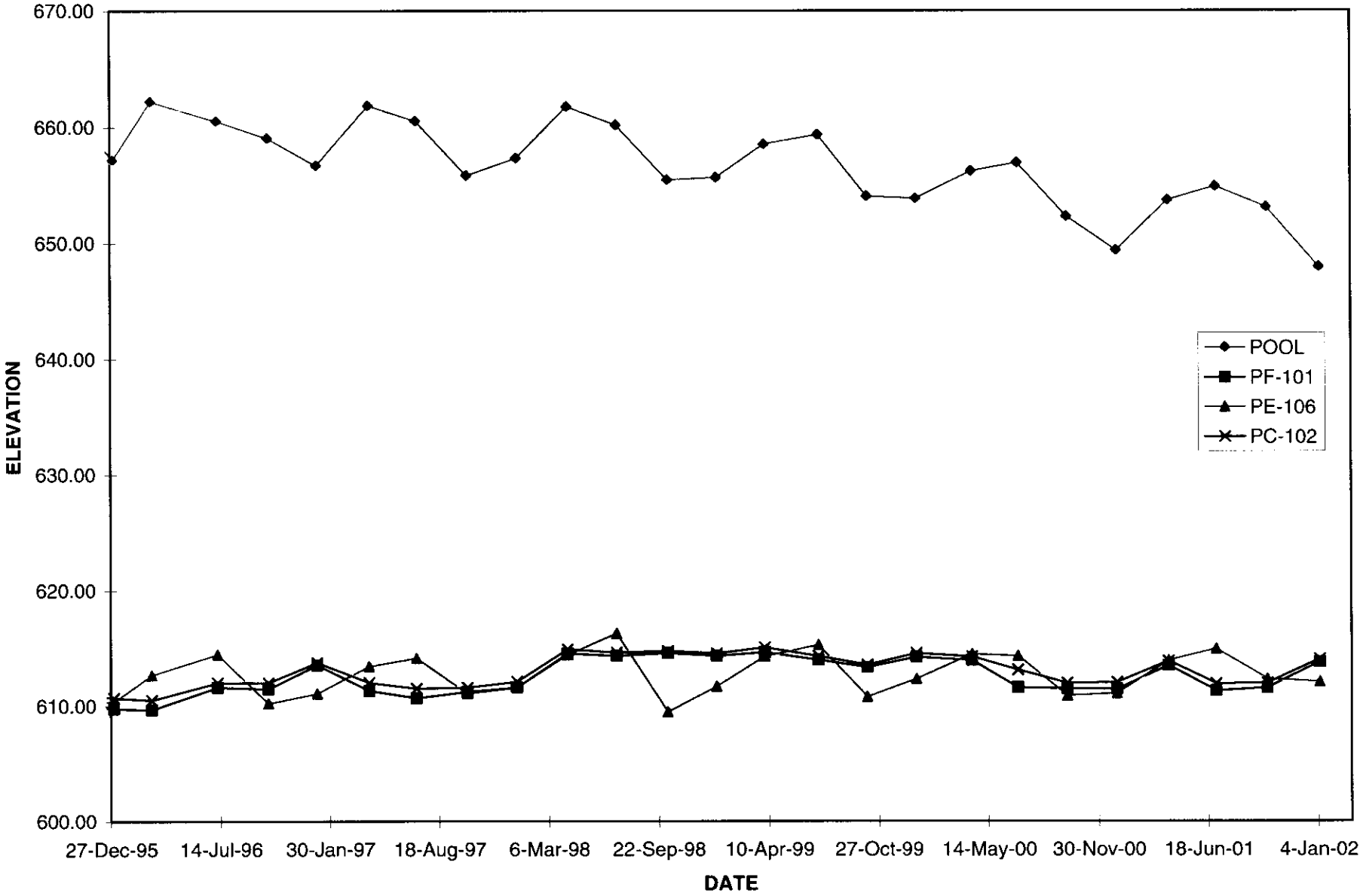
CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 9+35 DOWNSTREAM TOE



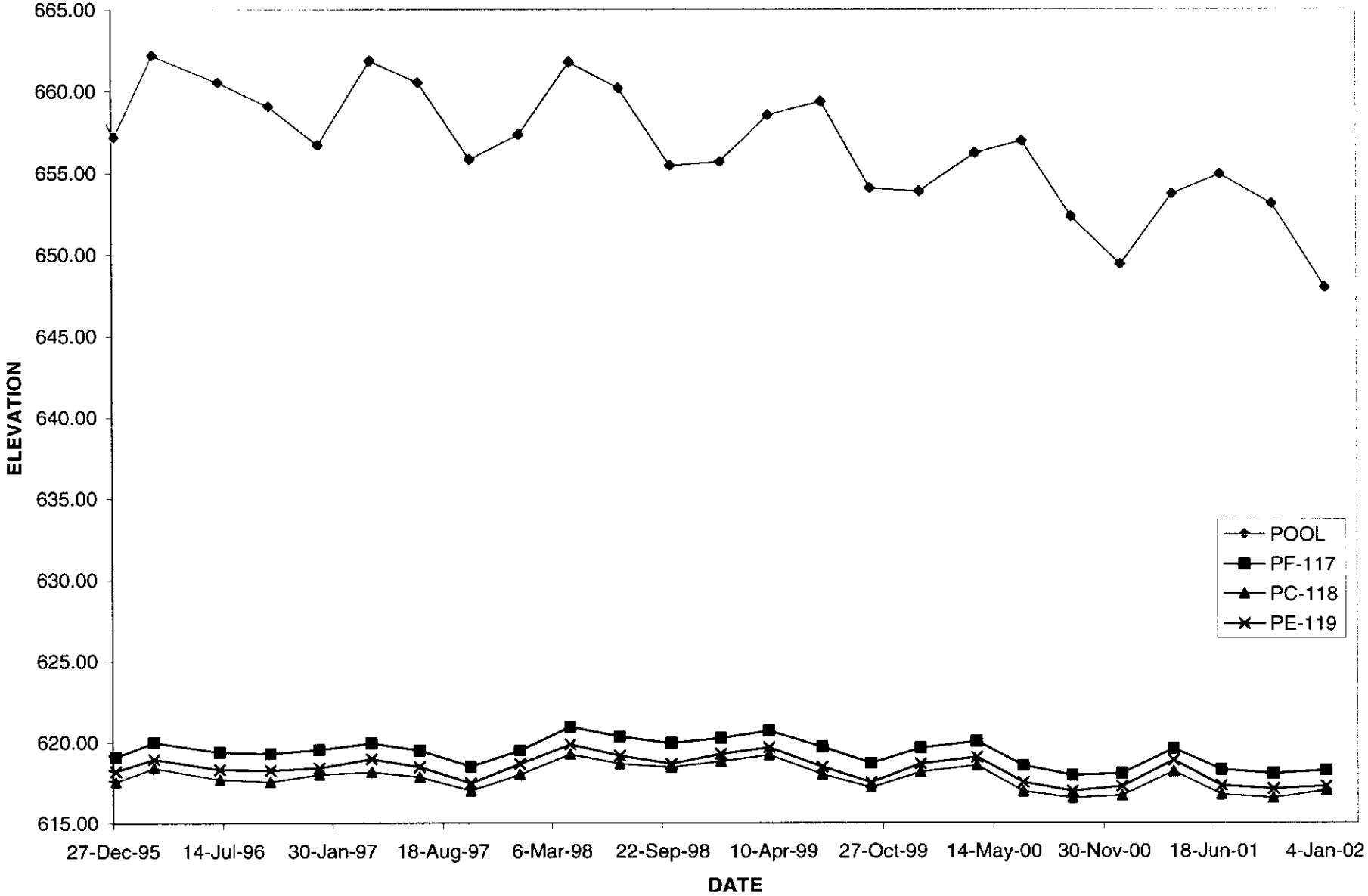
CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 9+75 BEYOND DOWNSTREAM TOE



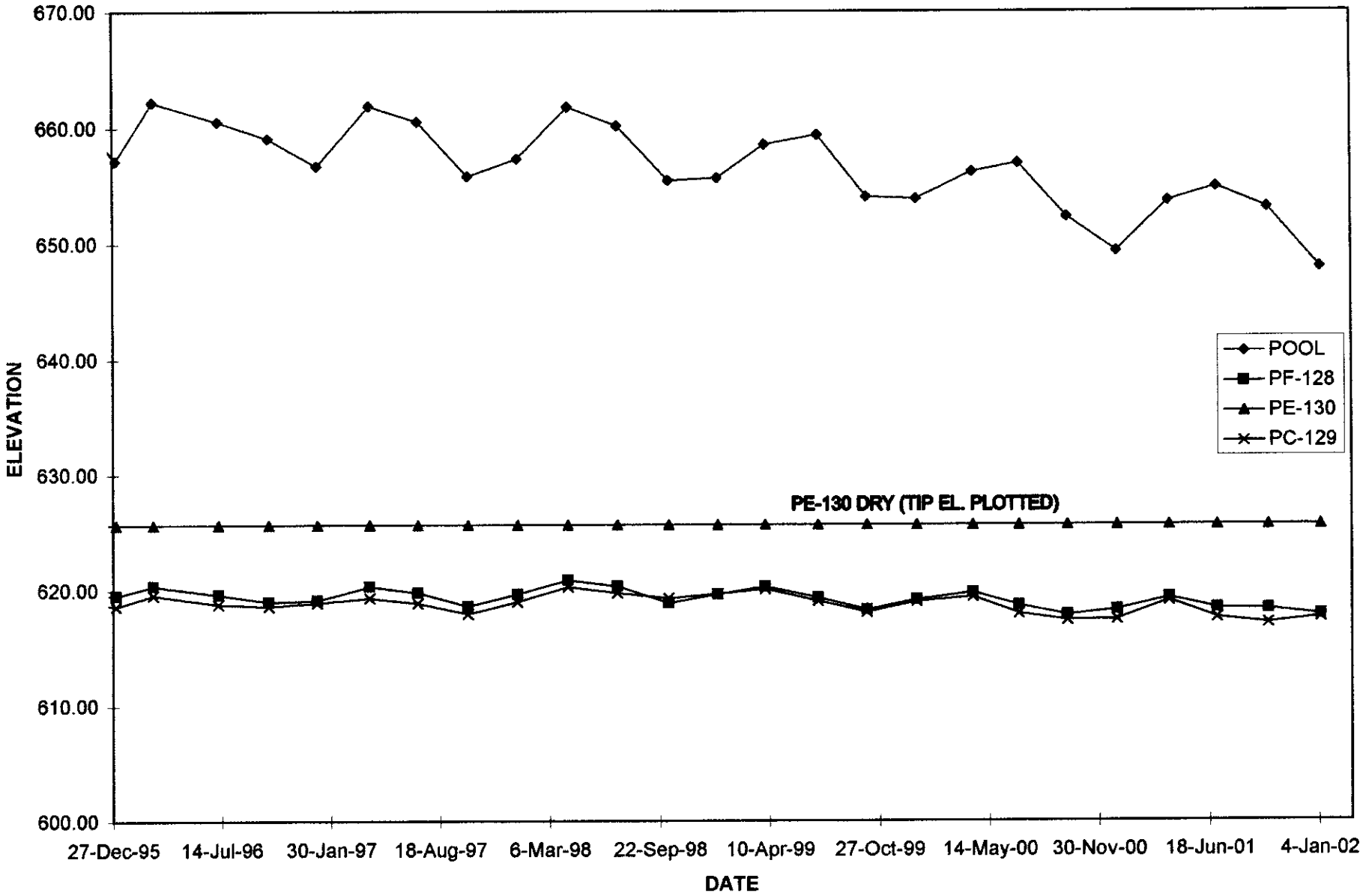
CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 14+90 DOWNSTREAM TOE



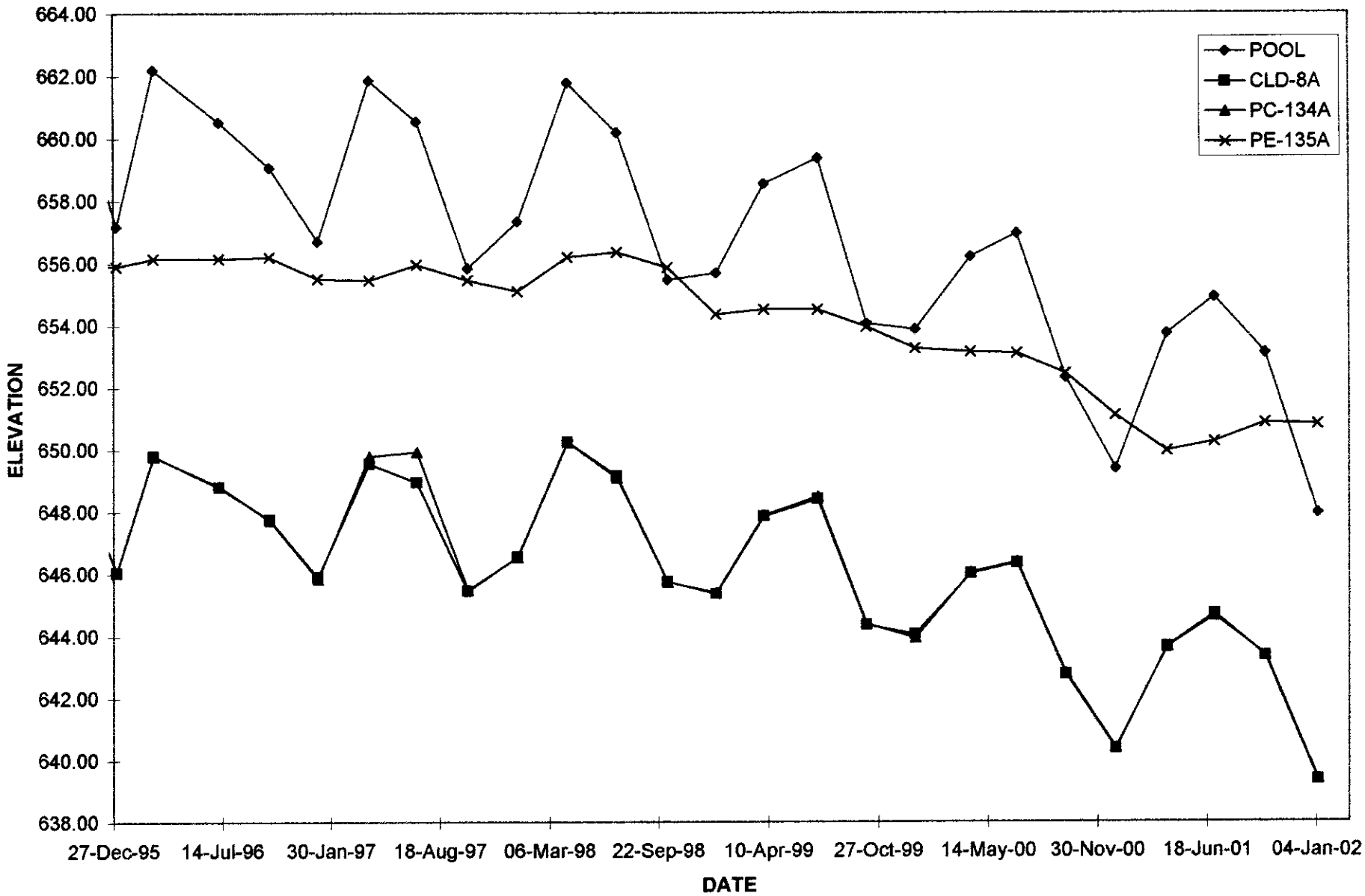
CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 15+00 DOWNSTREAM BERM



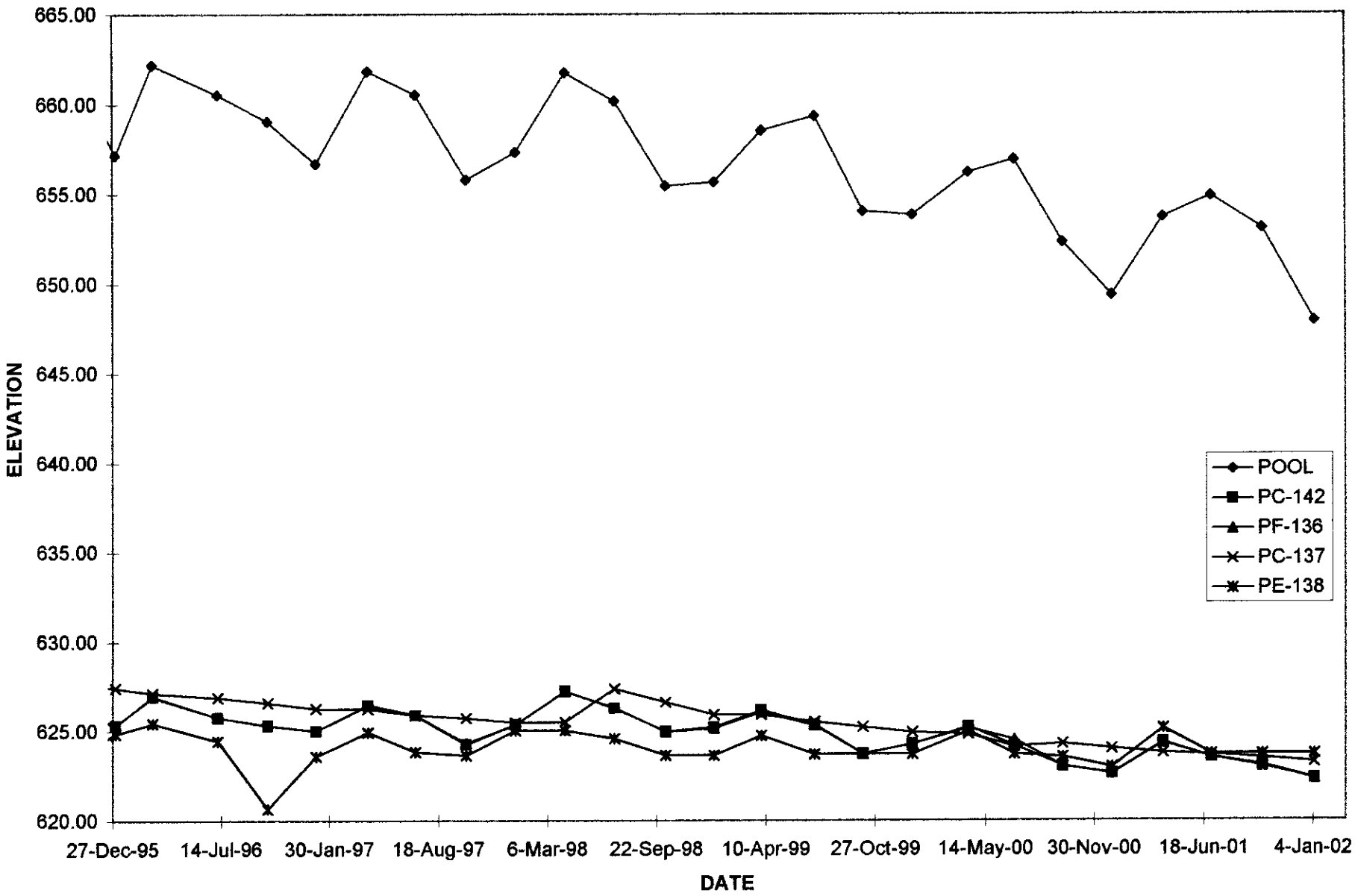
CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 22+00 UPSTREAM CREST



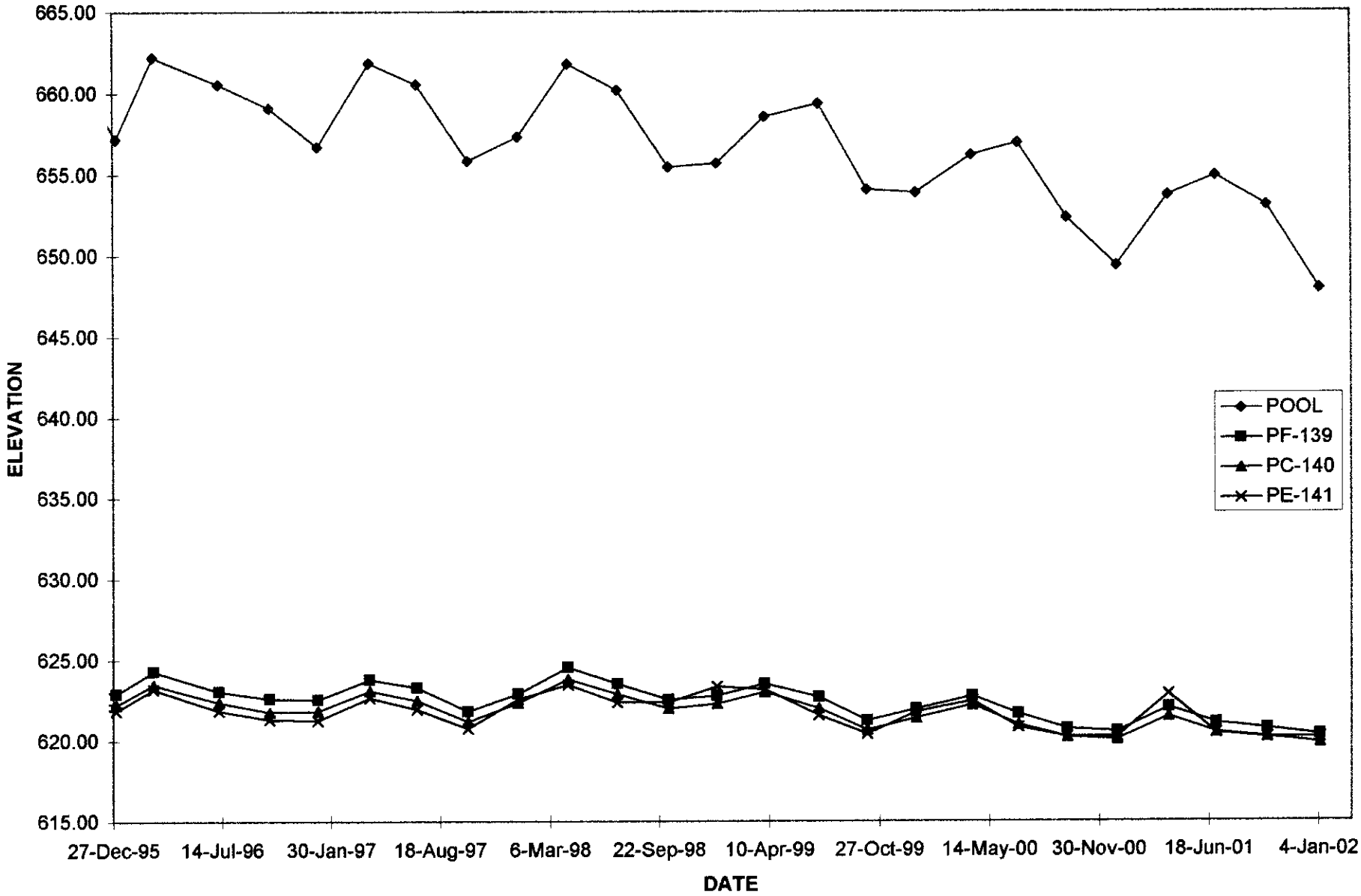
CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 22+00 DOWNSTREAM BERM



CLEMSON LOWER DAM

PIEZOMETER READINGS STATION 22+00 DOWNSTREAM TOE

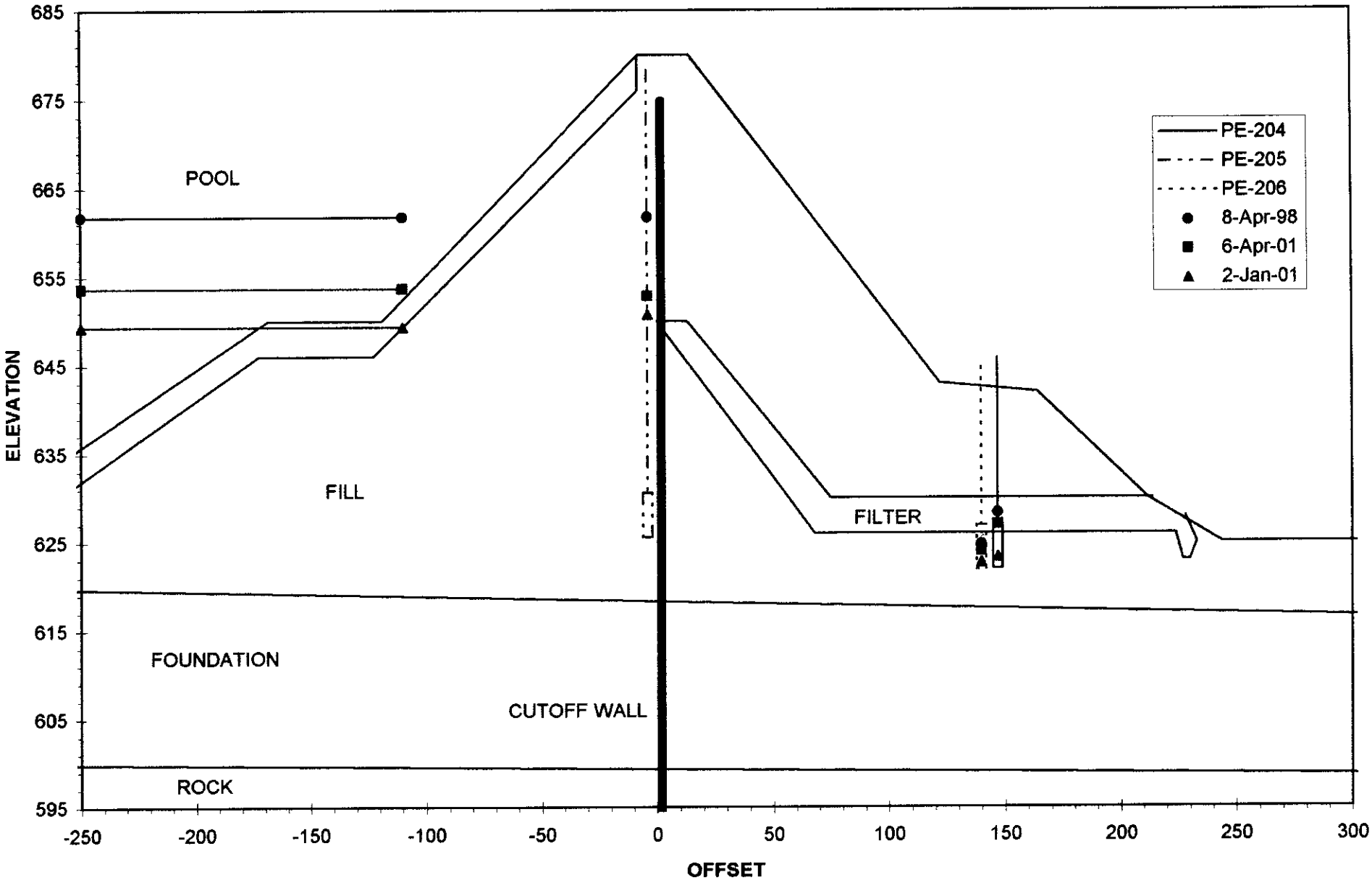


APPENDIX C

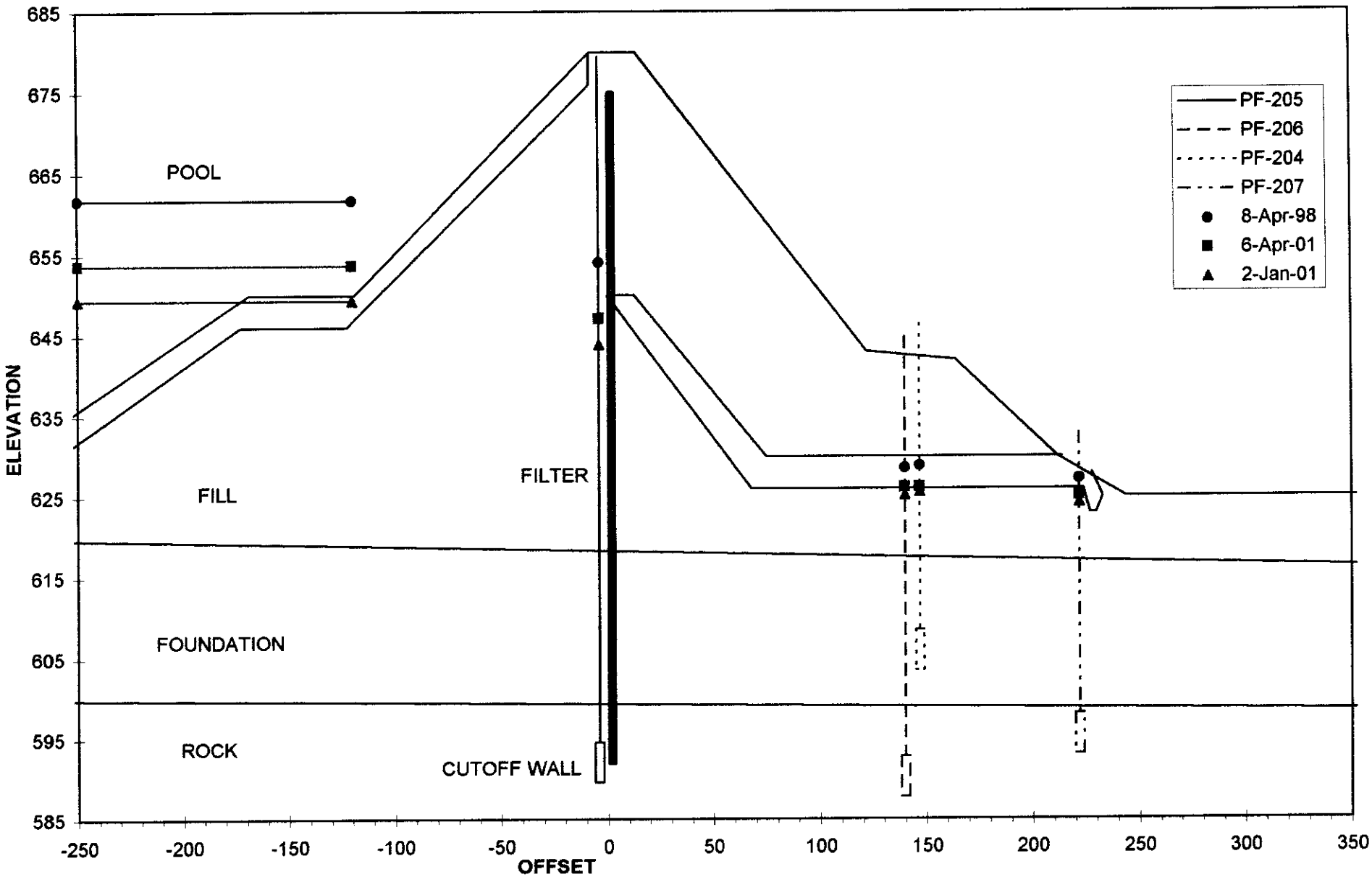
CROSS SECTION PLOTS OF PIEZOMETRIC LEVELS

CLEMSON UPPER DIVERSION DAM

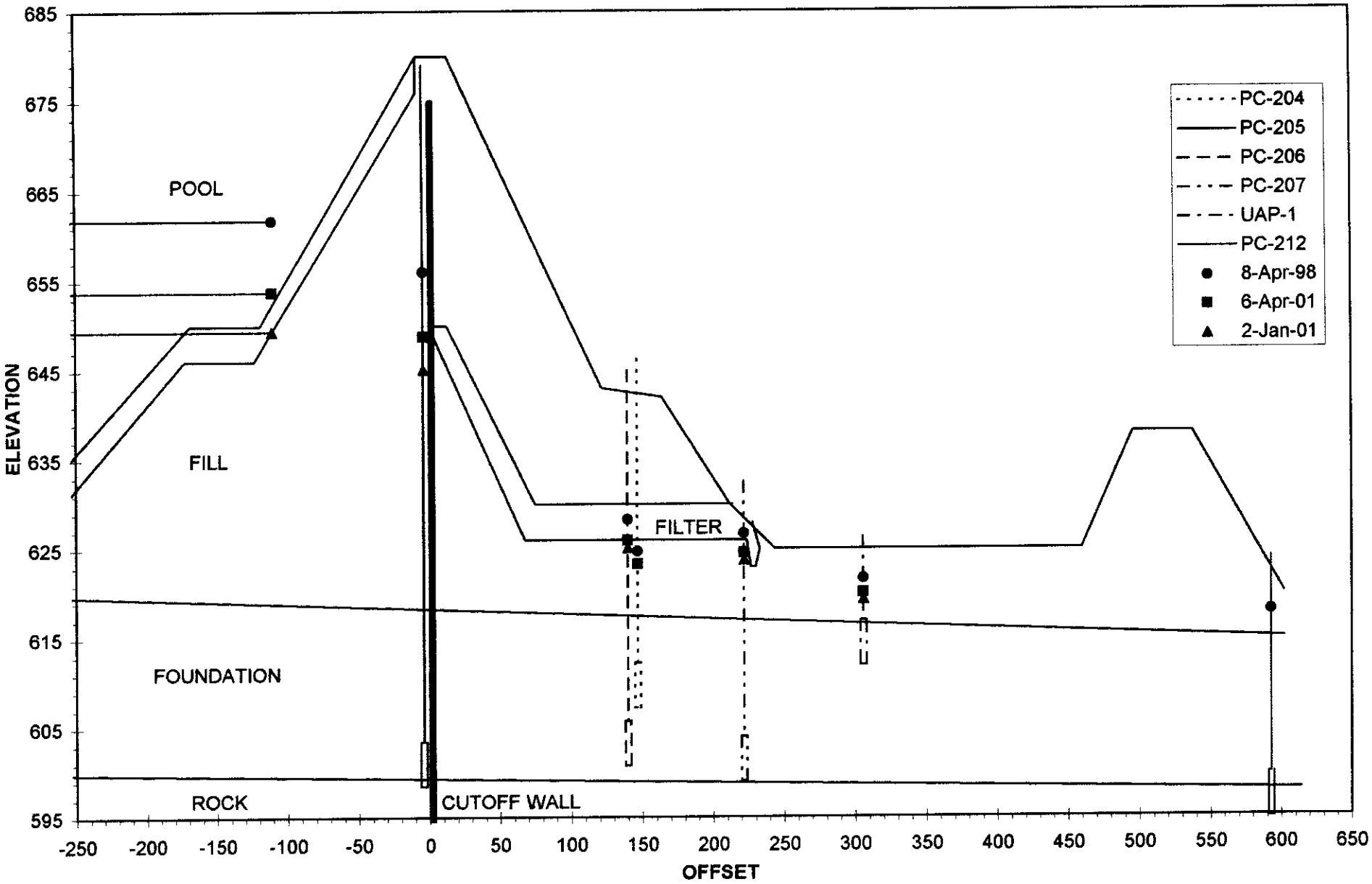
CLEMSON UPPER DAM STATION 6+00



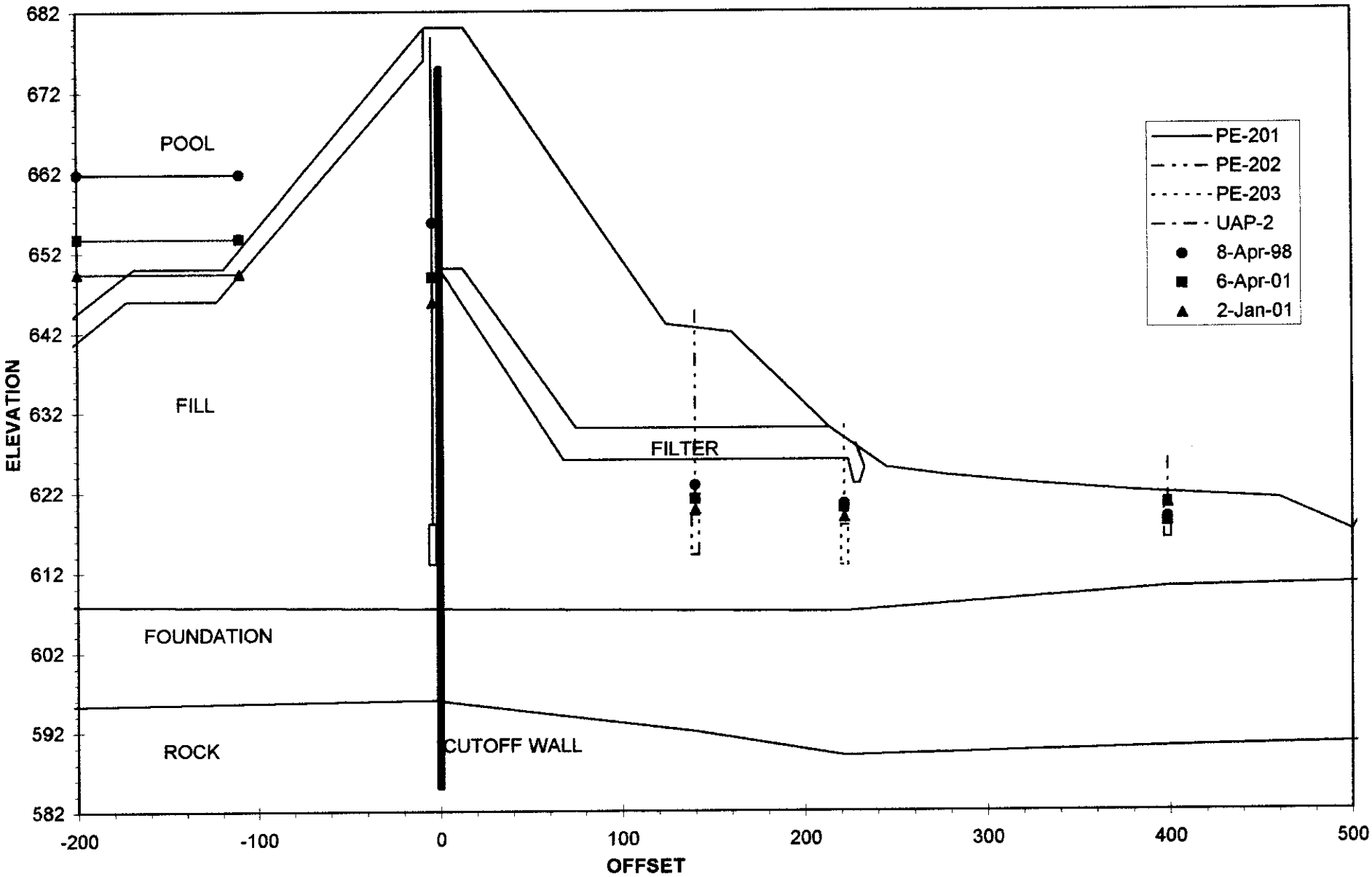
CLEMSON UPPER DAM STATION 6+00



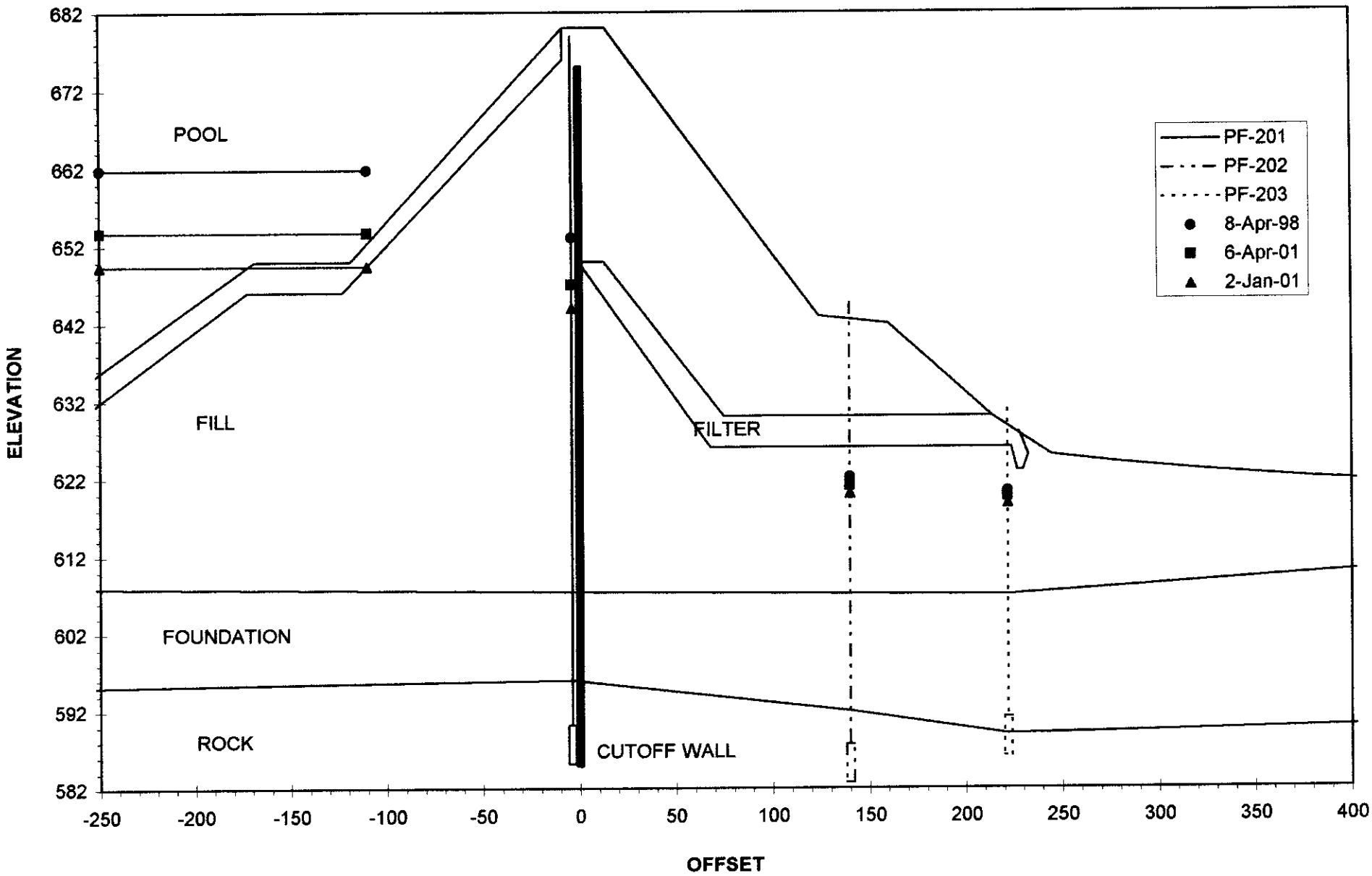
CLEMSON UPPER DAM STATION 6+00



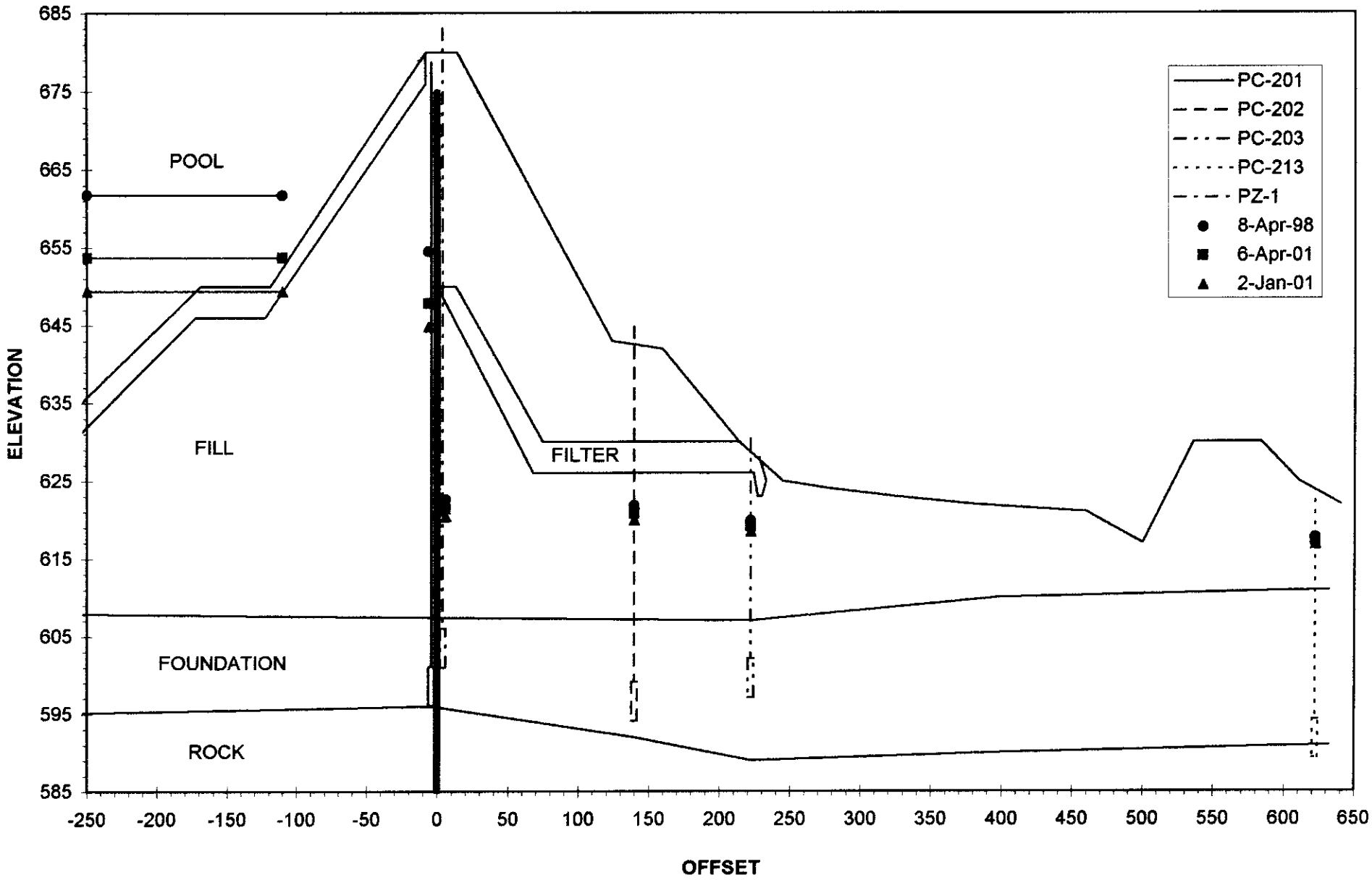
CLEMSON UPPER DAM STATION 11+00



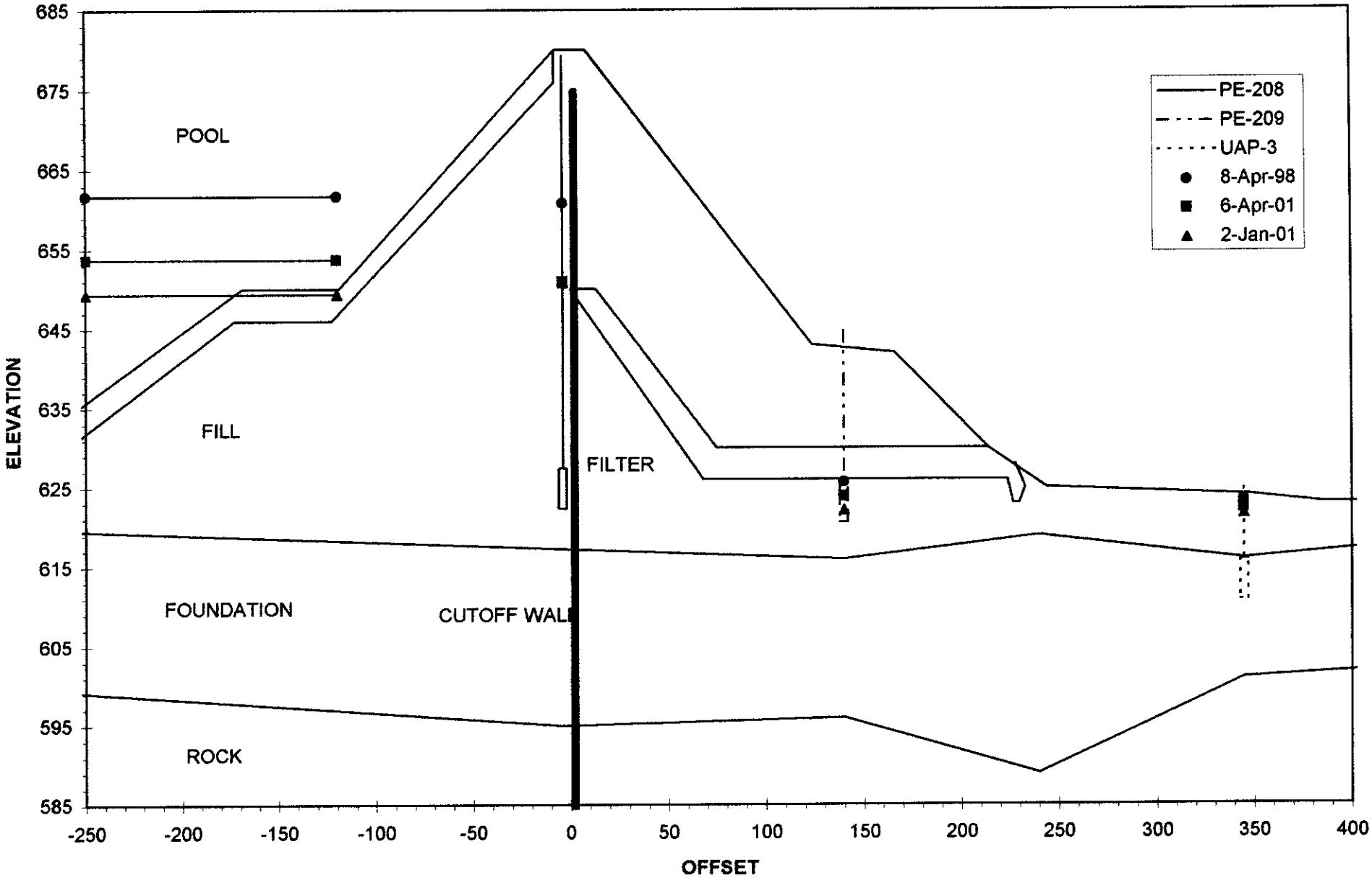
CLEMSON UPPER DAM STATION 11+00



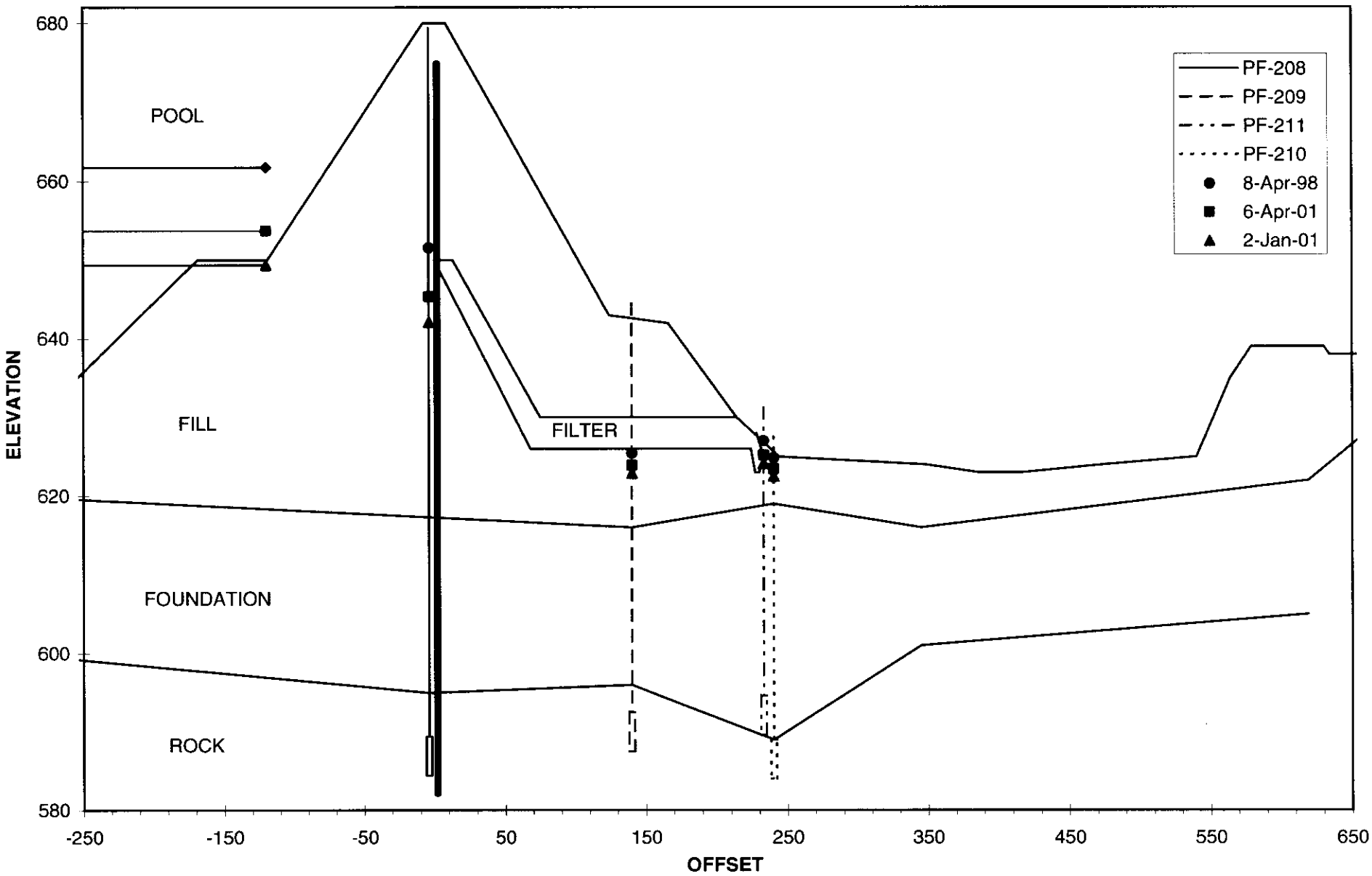
CLEMSON UPPER DAM STATION 11+00



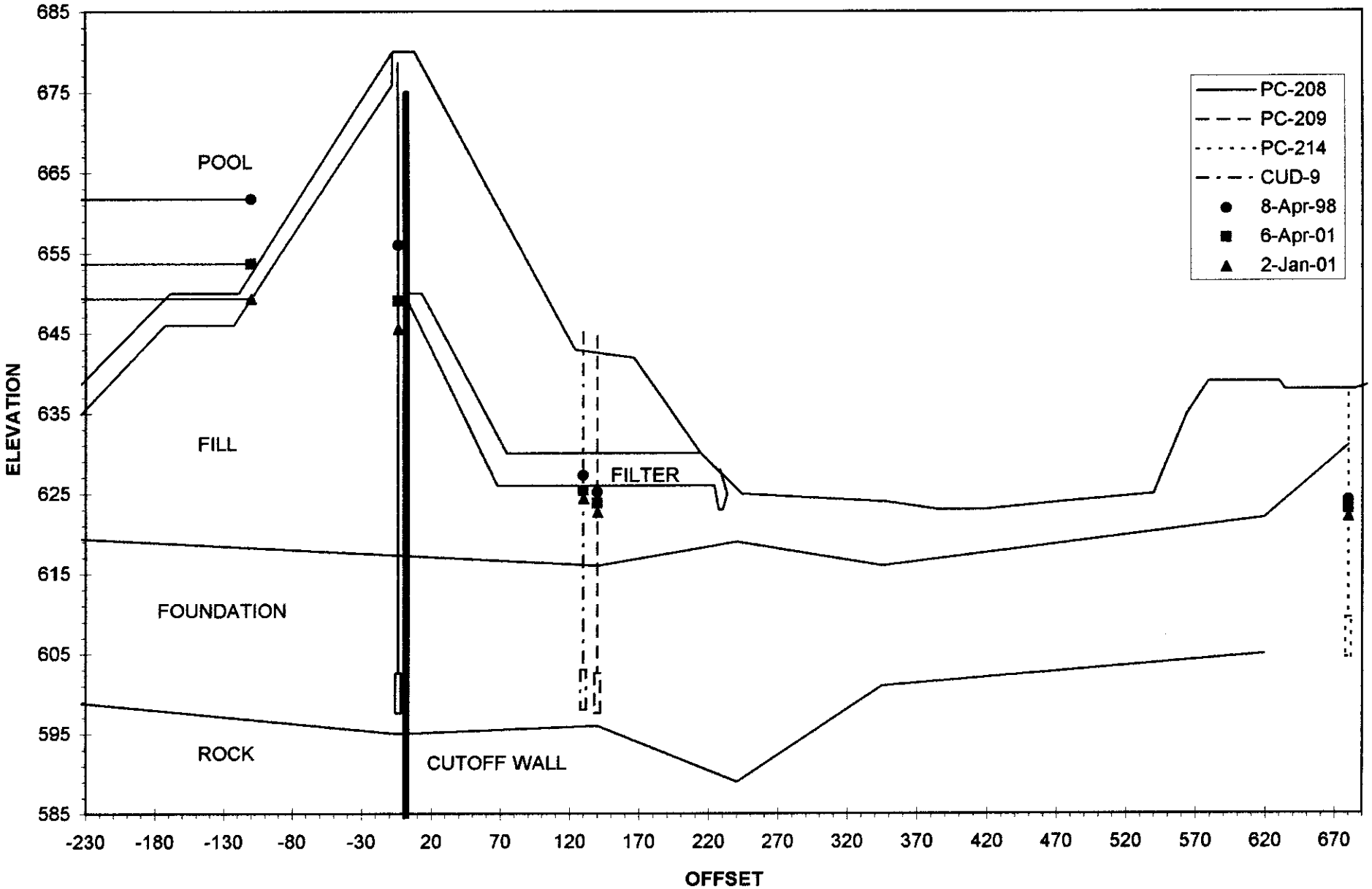
CLEMSON UPPER DAM STATION 16+04



CLEMSON UPPER DAM STATION 16+04



CLEMSON UPPER DAM STATION 16+04

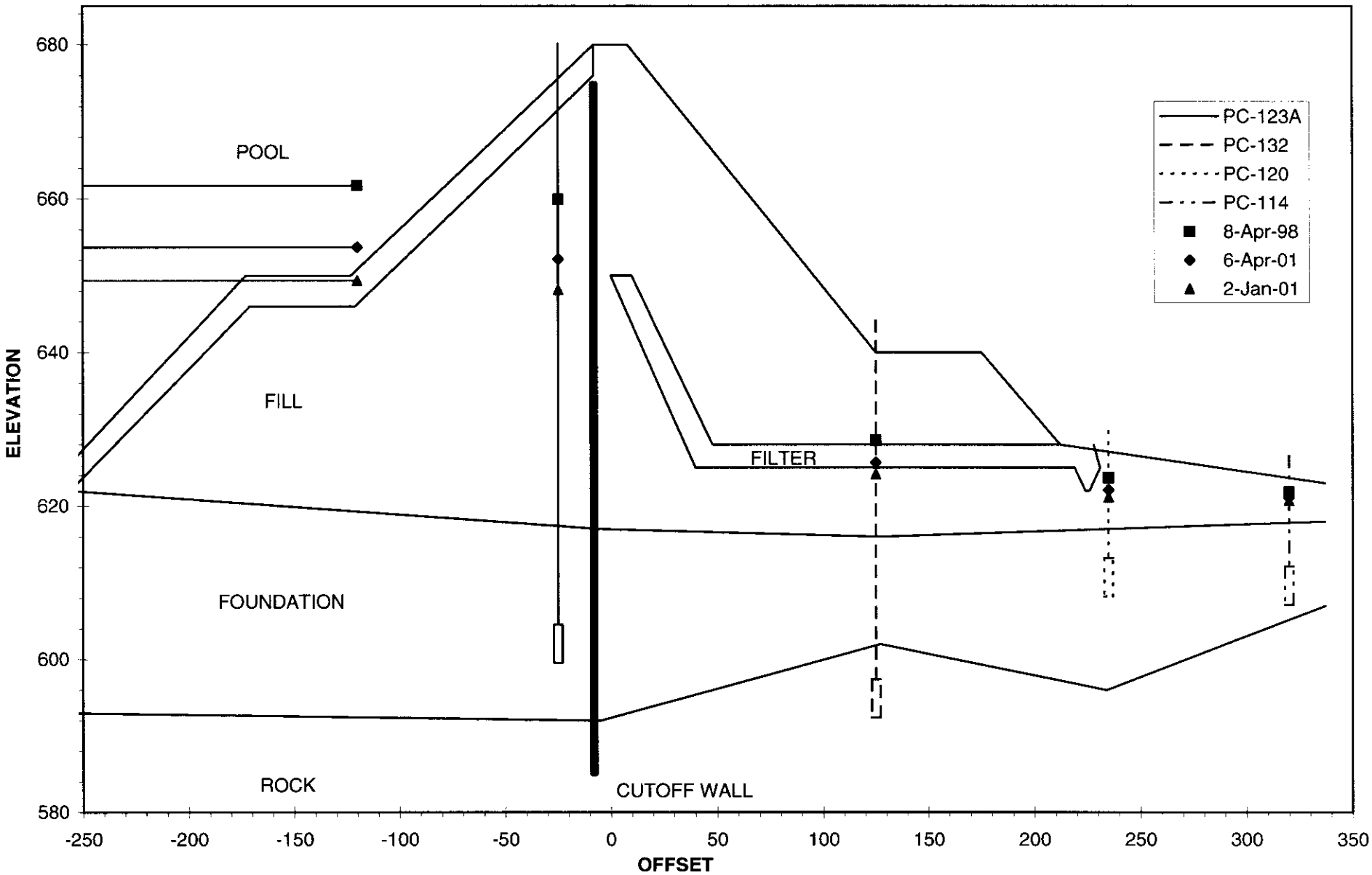


APPENDIX D

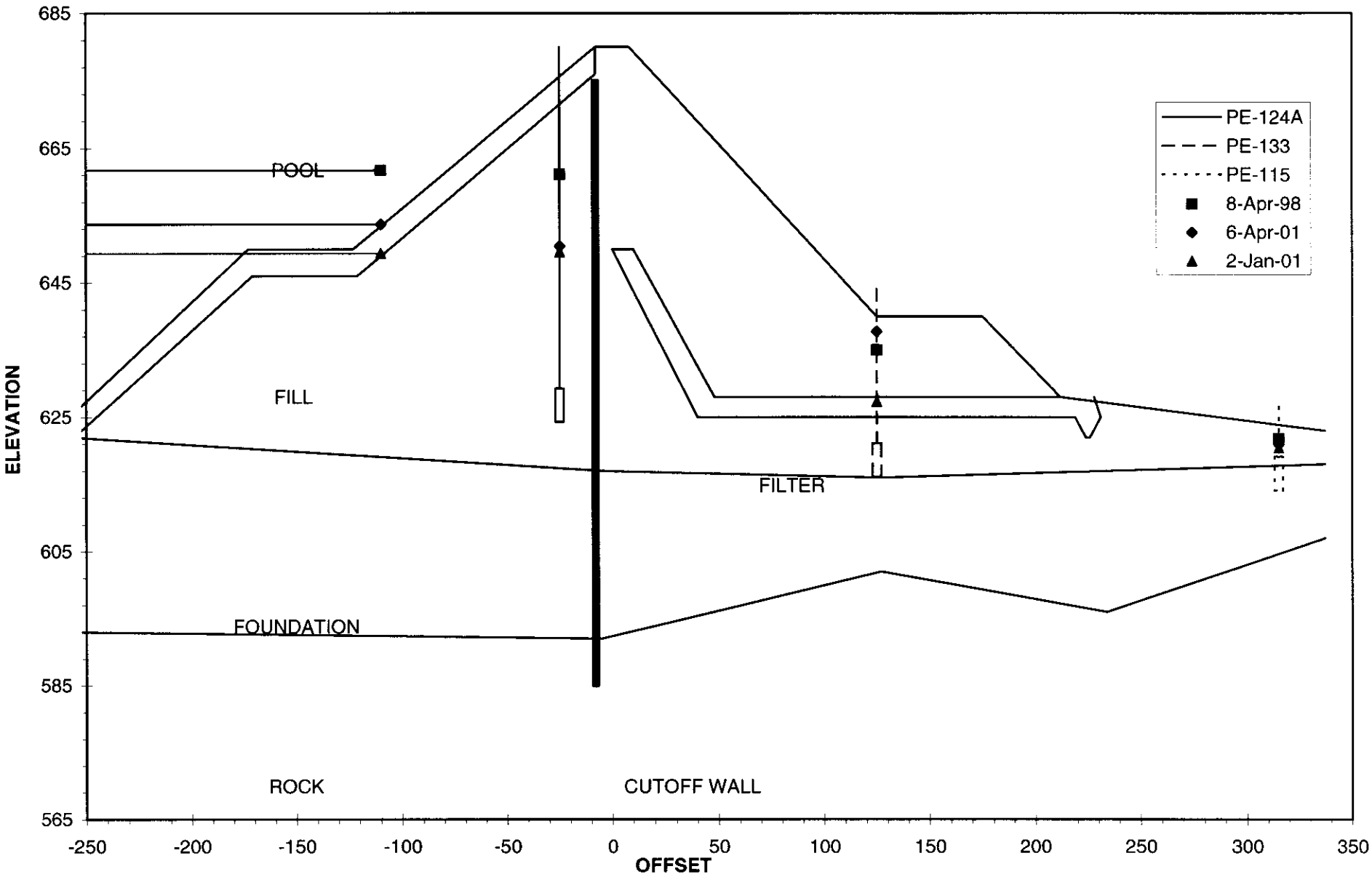
CROSS SECTION PLOTS OF PIEZOMETRIC LEVELS

CLEMSON LOWER DIVERSION DAM

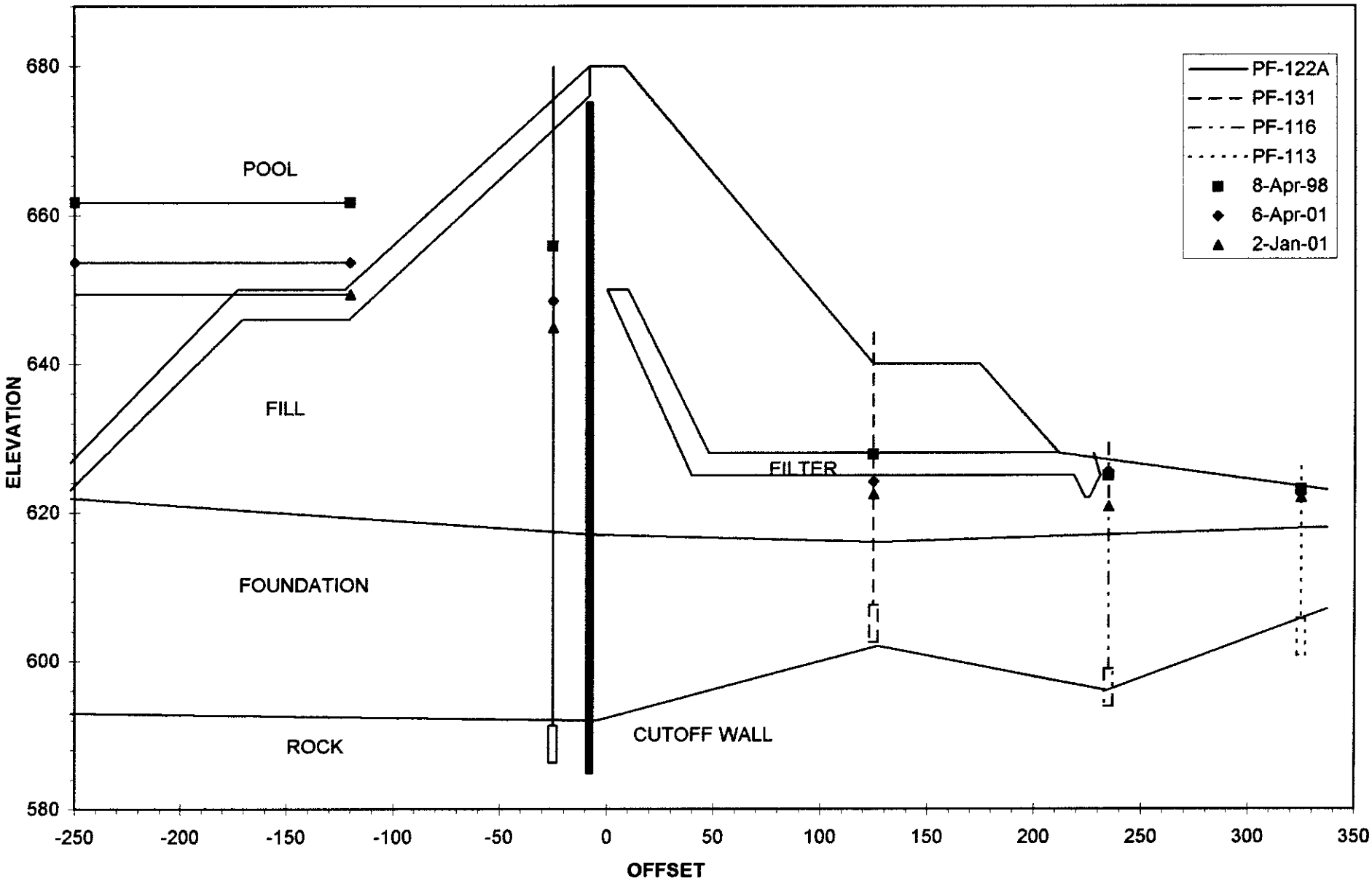
CLEMSON LOWER DAM STATION 6+77



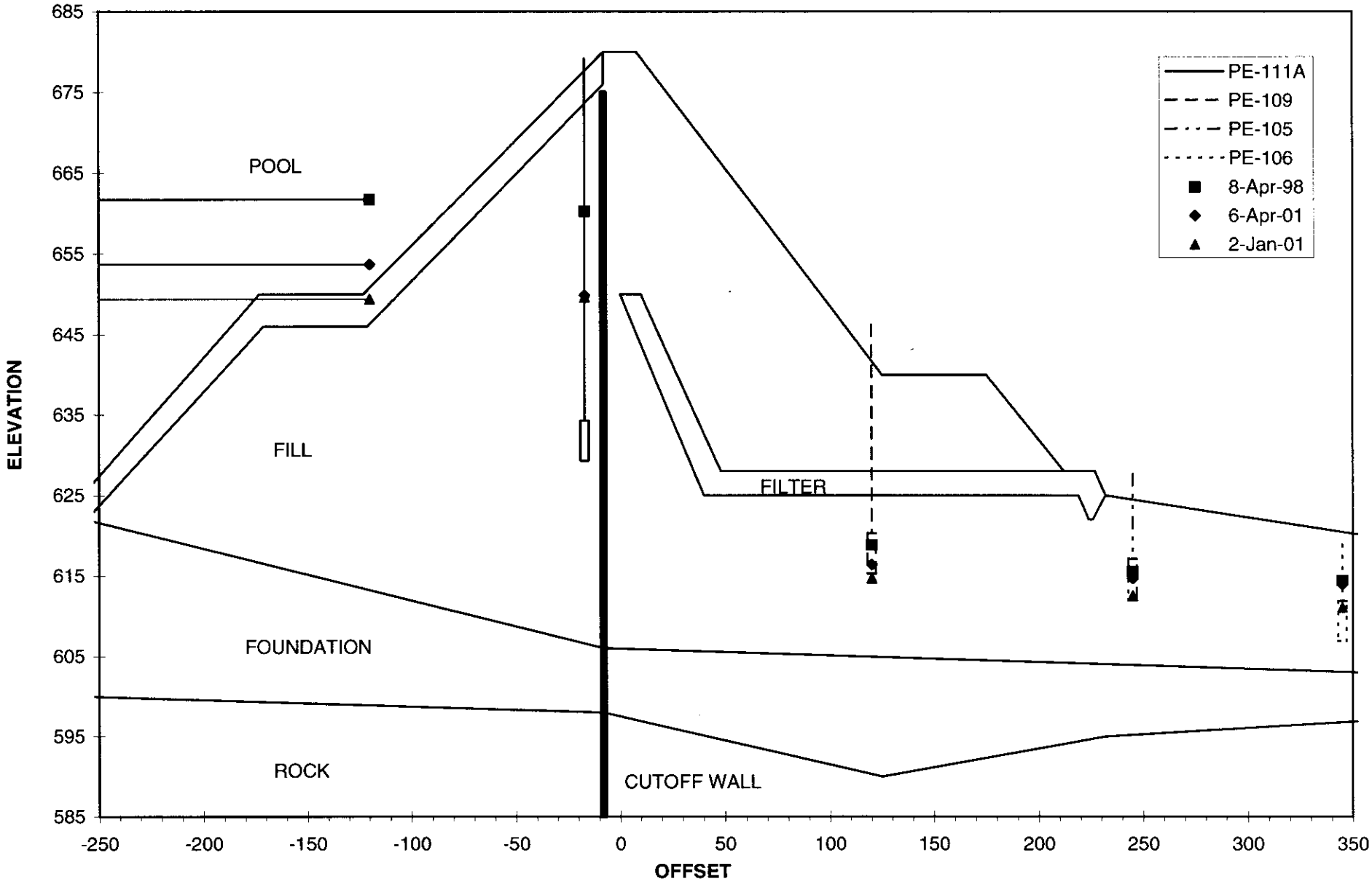
CLEMSON LOWER DAM STATION 6+77



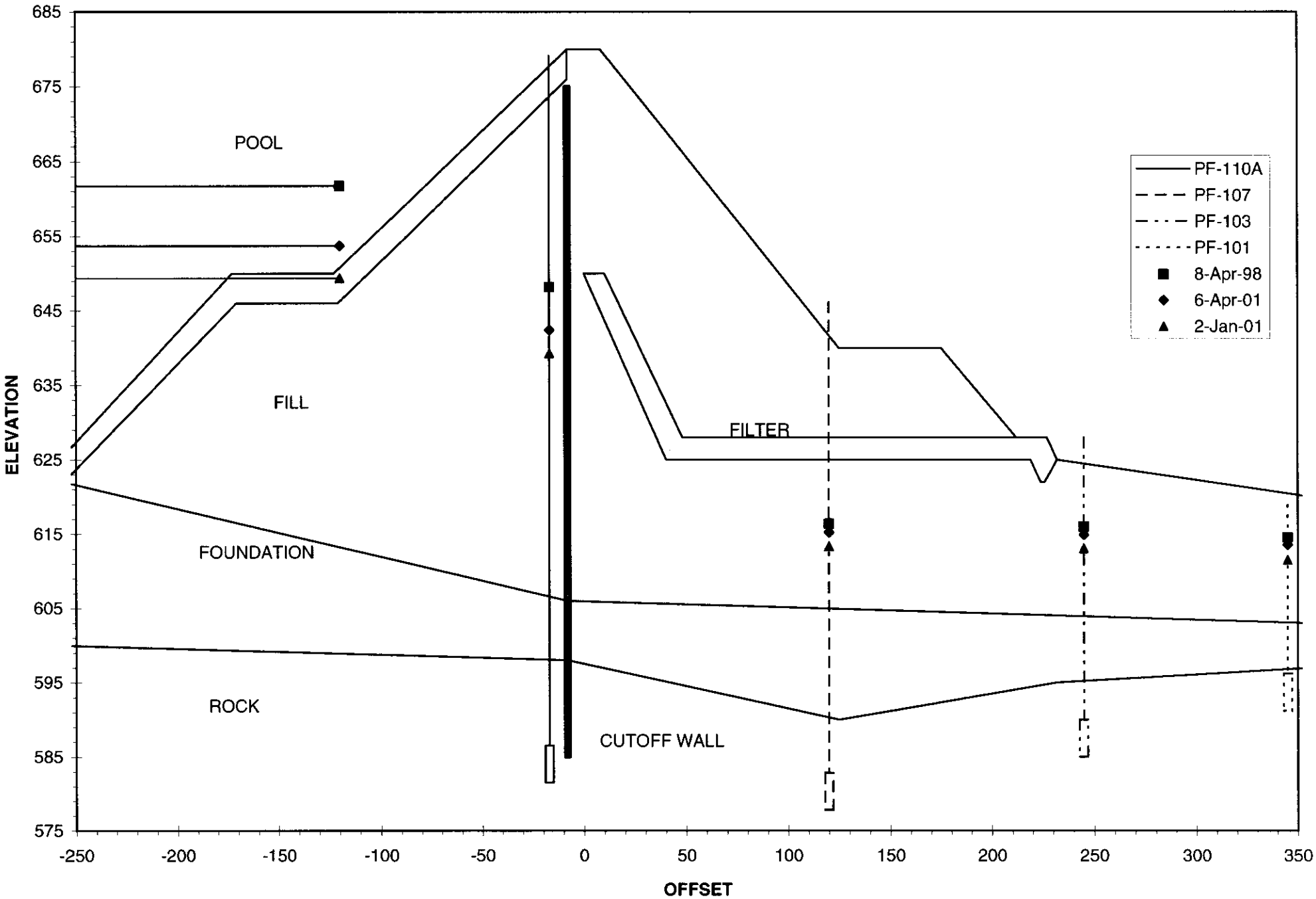
CLEMSON LOWER DAM STATION 6+77



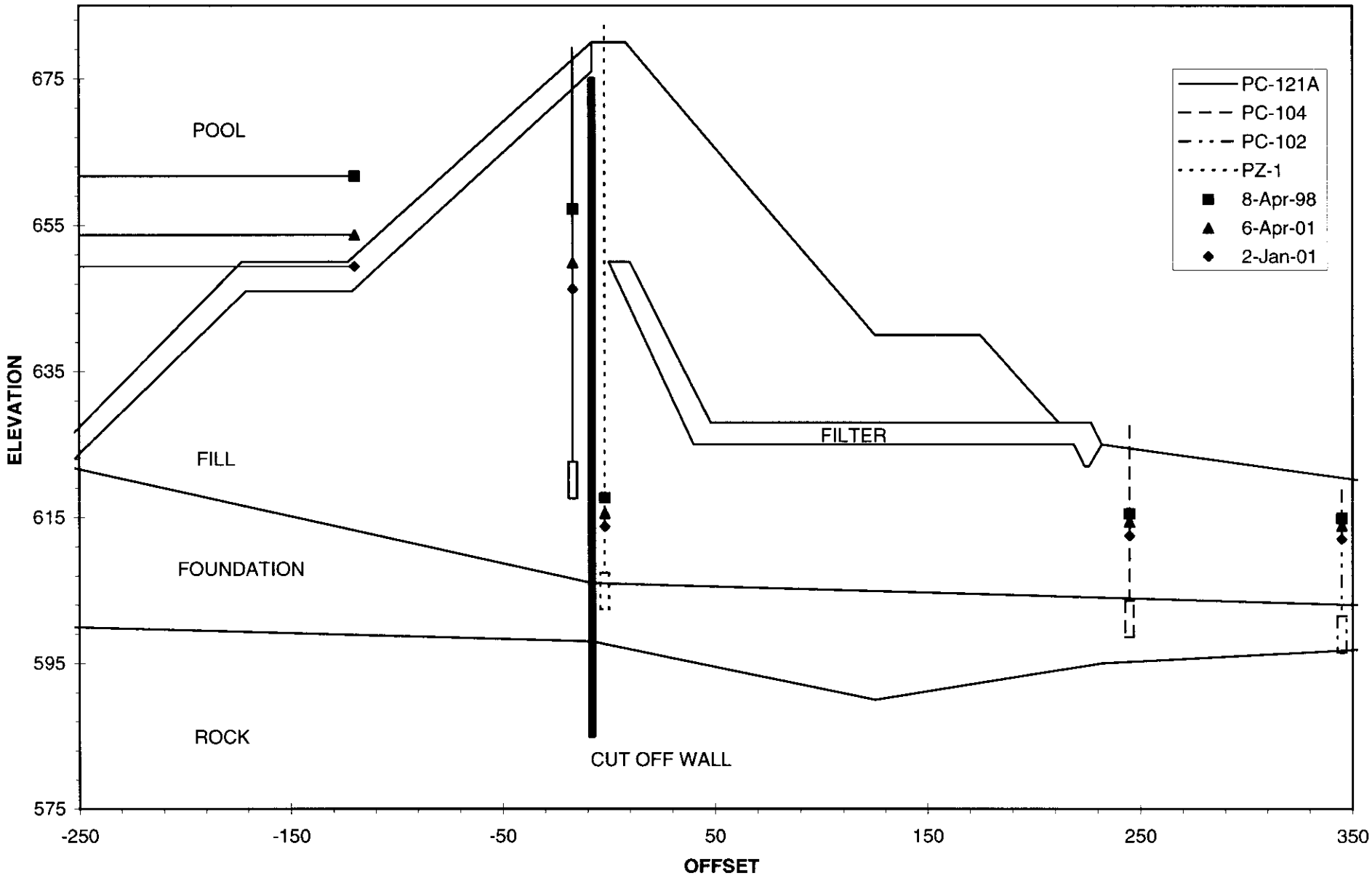
CLEMSON LOWER DAM STATION 8+90



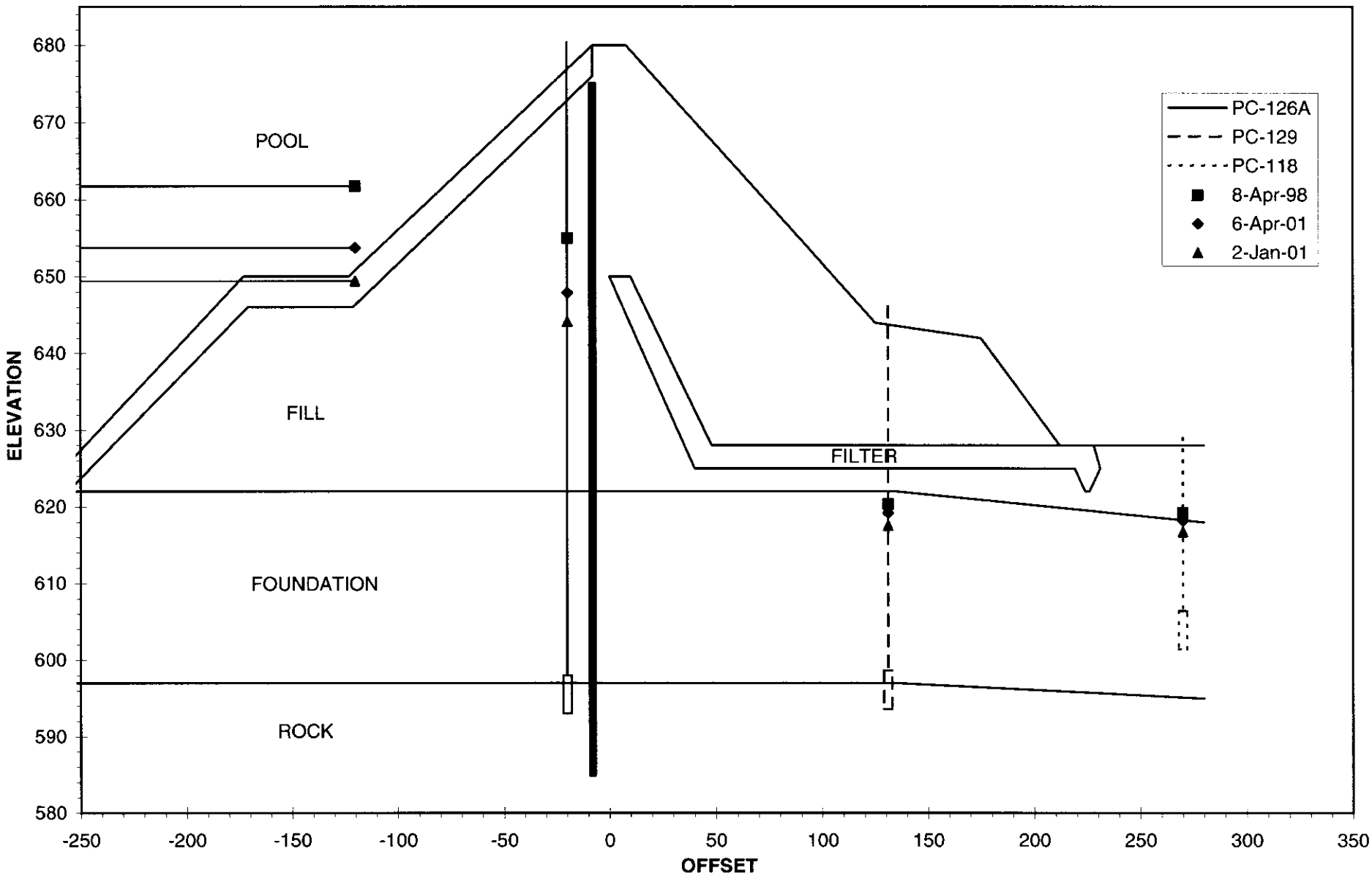
CLEMSON LOWER DAM STATION 8+90



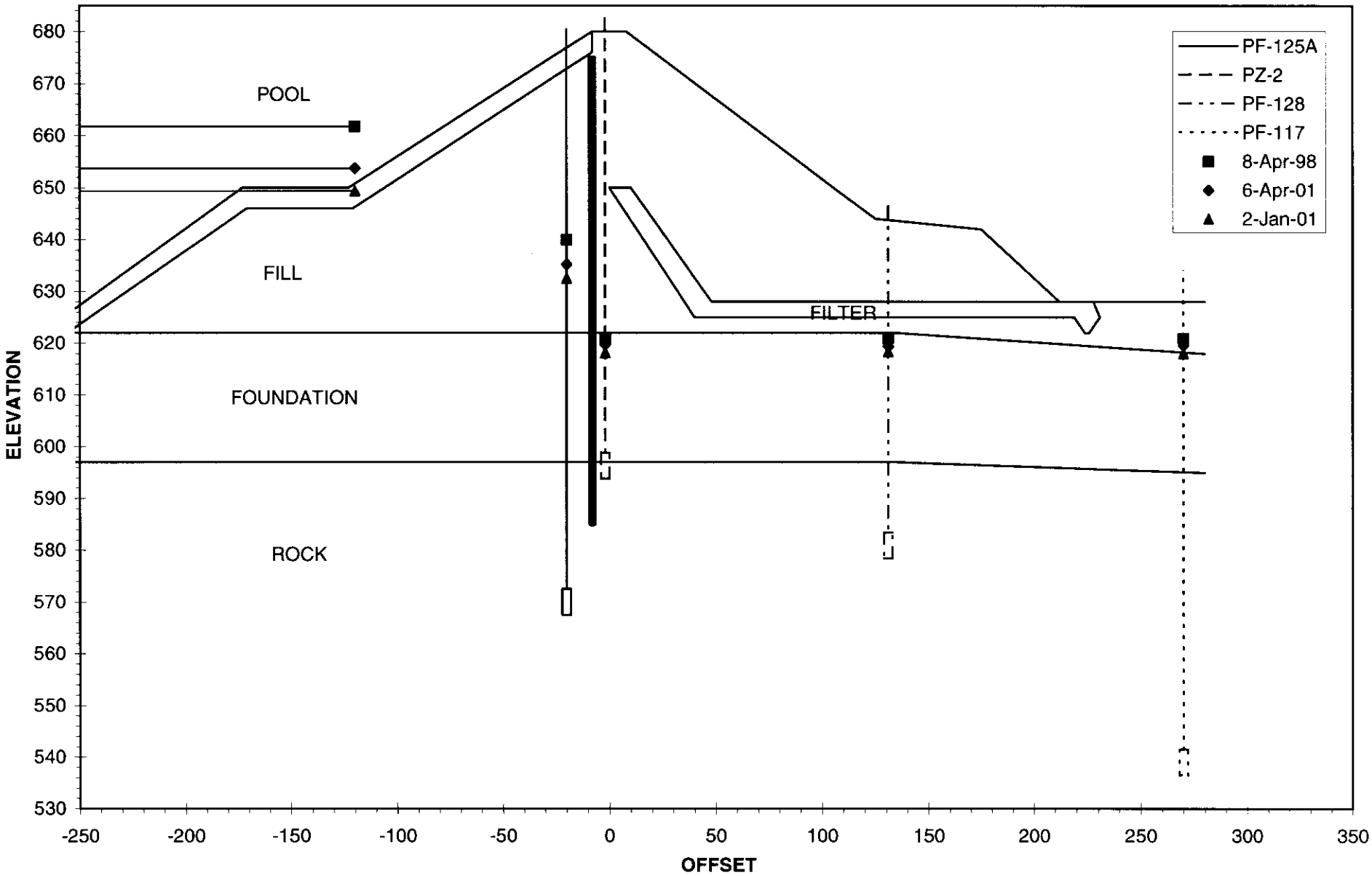
CLEMSON LOWER DAM STATION 8+90



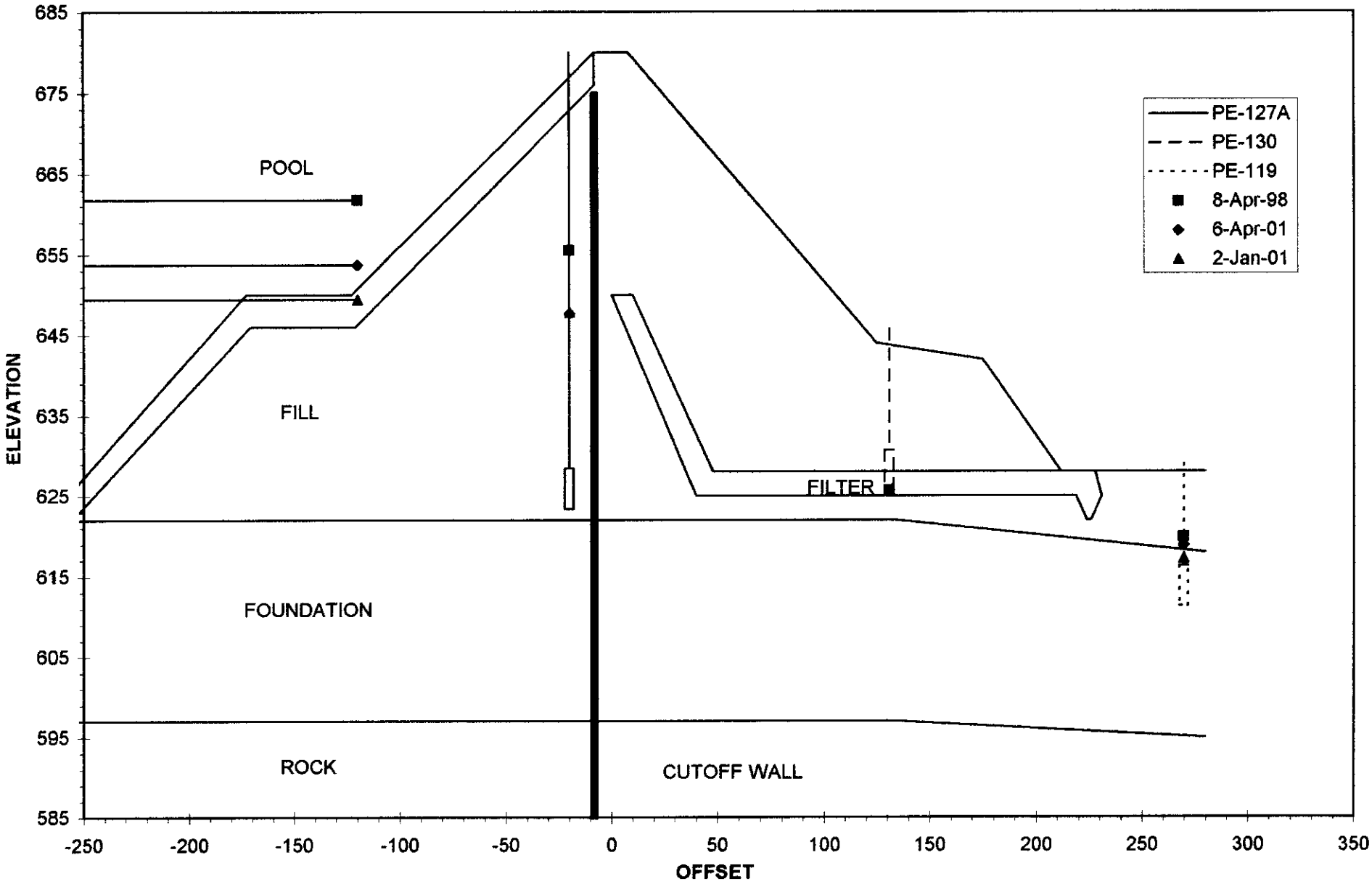
CLEMSON LOWER DAM STATION 15+08



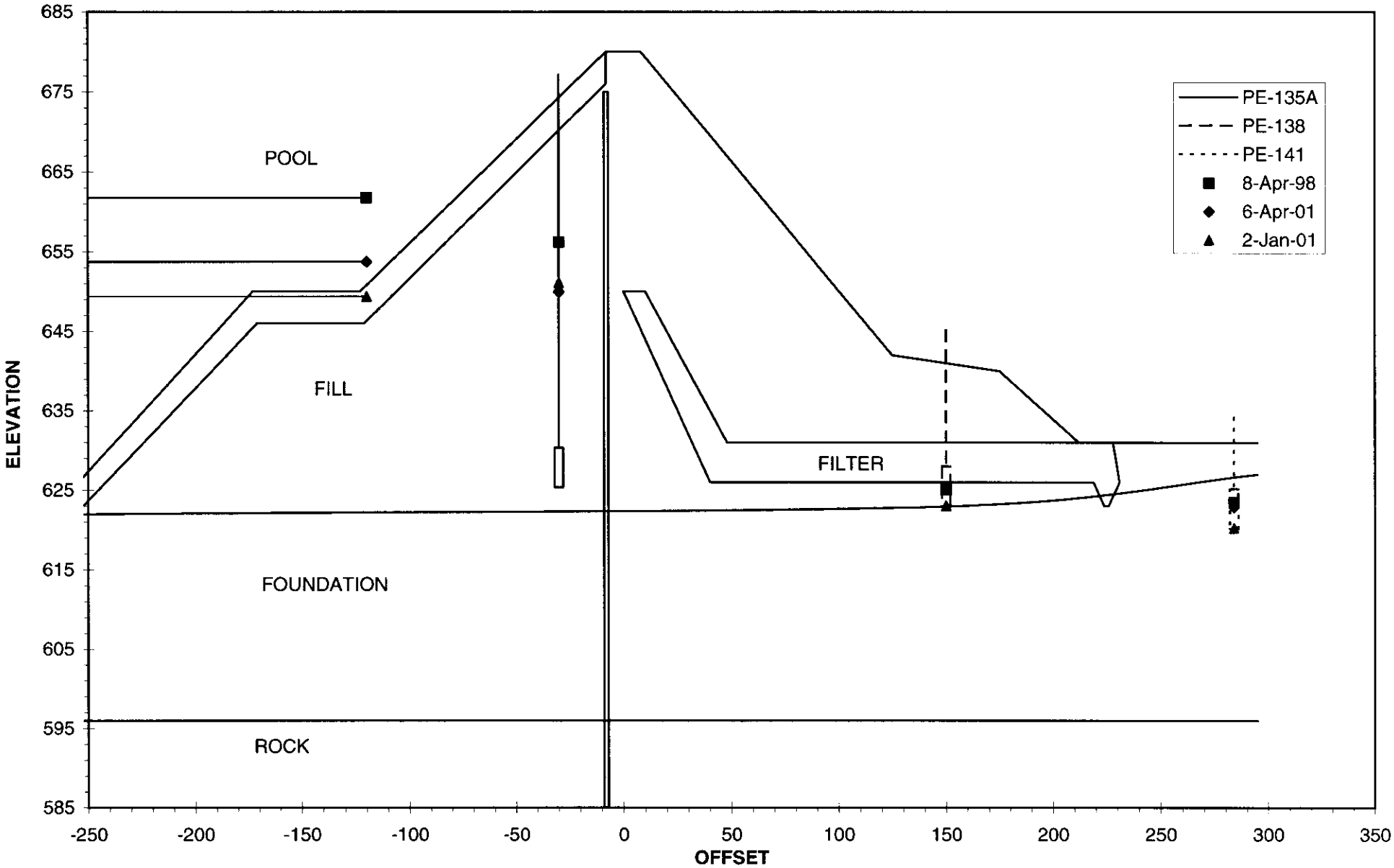
CLEMSON LOWER DAM STATION 15+08



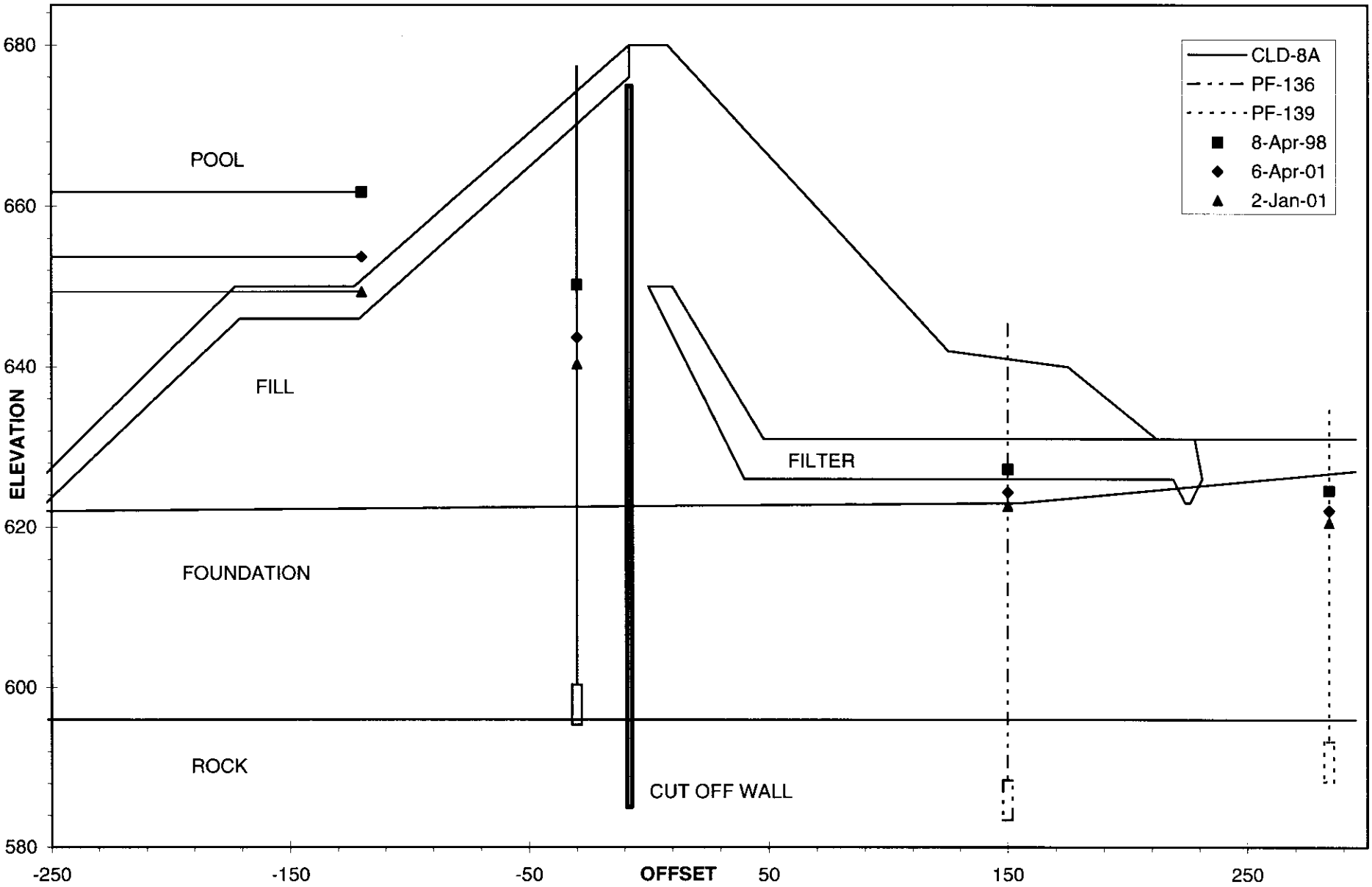
CLEMSON LOWER DAM STATION 15+08



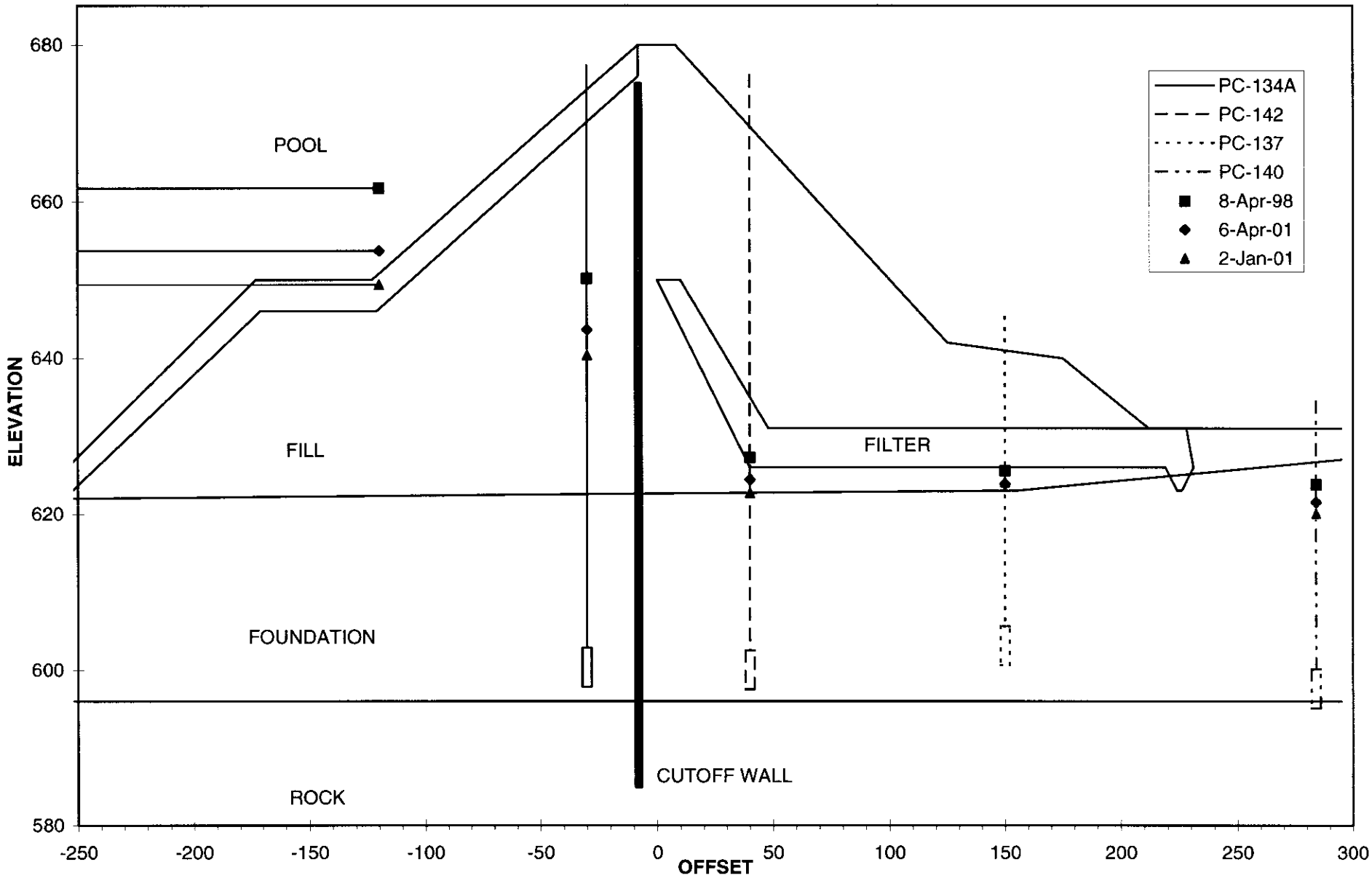
CLEMSON LOWER DAM STATION 22+00



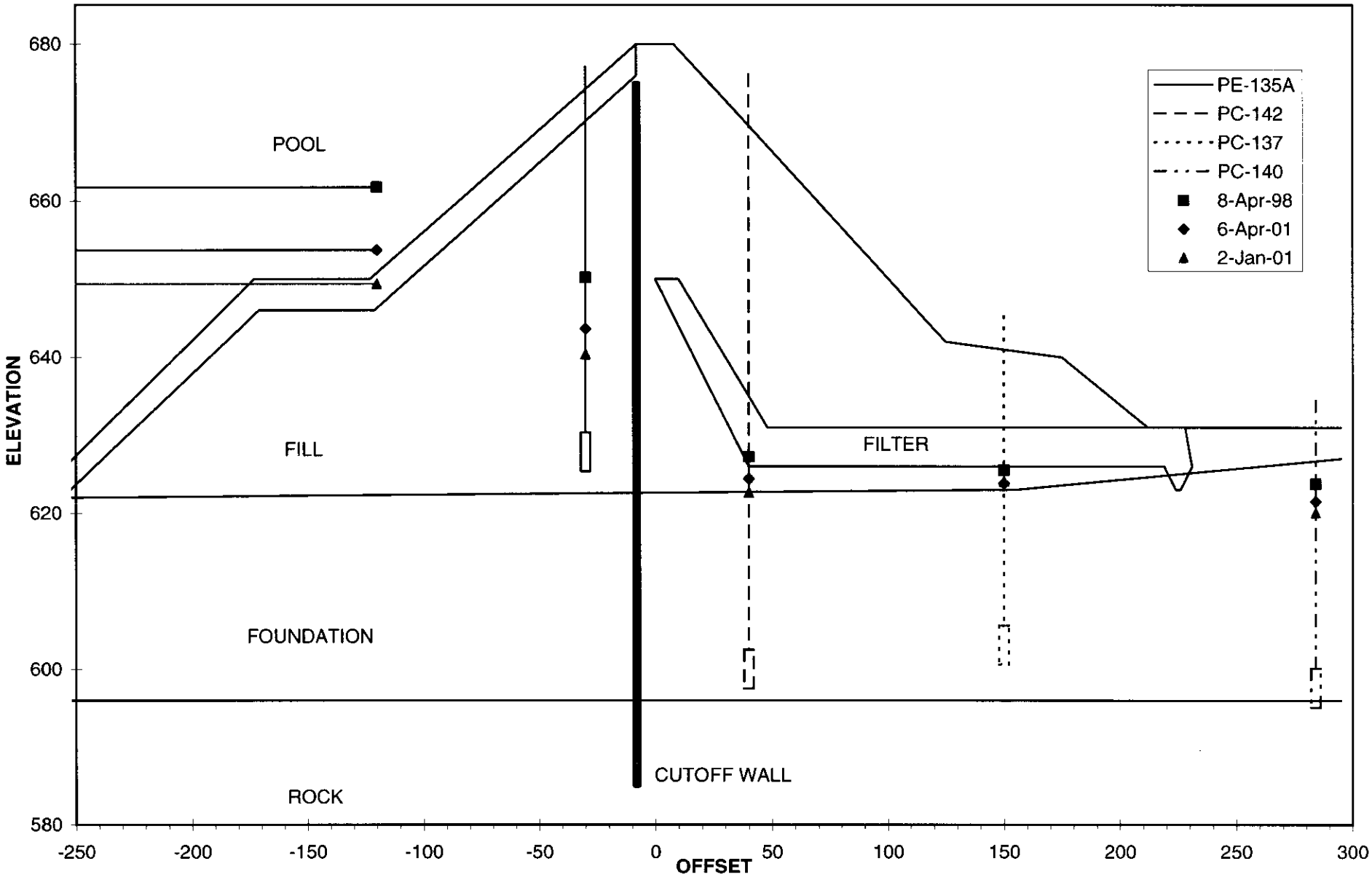
CLEMSON LOWER DAM STATION 22+00



CLEMSON LOWER DAM STATION 22+00



CLEMSON LOWER DAM STATION 22+00



APPENDIX E

PIEZOMETER LOCATION PLANS

CLEMSON UPPER DIVERSION DAM

RECENT POOL LEVELS AND WATER LEVEL READINGS FOR PIEZOMETERS

JANUARY 2002 - APRIL 2003

2002 Hartwell Project Elevation Feet-Mean Sea Level												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	648.51	648.53	648.30	651.74	652.42	652.71	651.17	648.54	646.70	648.04	647.60	649.51
2	648.42	648.56	648.40	651.69	652.44	652.70	651.05	648.38	646.69	647.91	647.54	649.44
3	648.20	648.61	648.64	651.72	652.35	652.77	650.95	648.32	646.69	648.00	647.60	649.47
4	647.96	648.57	648.75	651.78	652.54	652.59	650.80	648.32	646.56	648.00	647.56	649.45
5	647.87	648.53	648.93	651.68	652.83	652.58	650.68	648.35	646.47	647.96	647.72	649.85
6	647.93	648.63	649.03	651.86	652.98	652.63	650.55	648.19	646.40	648.04	648.14	650.06
7	647.92	648.76	648.98	651.95	652.94	652.61	650.55	648.01	646.24	648.00	648.05	650.24
8	647.73	648.78	649.01	651.97	652.93	652.50	650.58	647.88	646.25	647.98	647.82	650.35
9	647.52	648.88	649.27	652.04	652.91	652.54	650.41	647.74	646.26	647.93	647.84	650.34
10	647.51	648.96	649.35	652.11	652.91	652.55	650.27	647.63	646.14	647.93	647.91	650.56
11	647.55	648.95	649.30	652.10	652.97	652.40	650.16	647.64	646.03	647.94	648.10	650.86
12	647.57	648.92	649.41	652.09	652.97	652.37	650.06	647.64	645.86	647.89	648.38	651.02
13	647.62	648.82	649.82	652.19	652.96	652.23	649.95	647.52	645.69	647.84	648.42	651.09
14	647.61	648.72	649.91	652.30	653.17	652.17	650.00	647.41	645.74	647.80	648.38	651.41
15	647.50	648.63	649.92	652.36	653.17	652.18	650.05	647.25	646.03	647.74	648.25	651.64
16	647.36	648.73	649.97	652.34	653.13	652.19	649.96	647.20	646.83	648.12	648.35	651.64
17	647.16	648.76	650.14	652.41	653.07	652.20	649.84	647.12	646.89	648.30	648.78	651.60
18	647.10	648.77	650.30	652.54	653.13	652.07	649.65	647.12	646.90	648.24	648.84	651.53
19	647.10	648.65	650.47	652.49	653.17	651.93	649.49	647.15	646.85	648.40	648.94	651.45
20	647.48	648.63	650.60	652.46	653.22	651.83	649.36	647.03	646.79	648.40	649.23	651.61
21	647.51	648.65	650.65	652.37	653.21	651.67	649.36	646.93	646.94	648.34	649.25	651.81
22	647.57	648.60	650.60	652.39	653.18	651.54	649.38	646.82	647.07	648.39	649.28	651.97
23	647.66	648.68	650.70	652.33	653.13	651.56	649.23	646.73	647.22	648.46	649.40	652.00
24	647.73	648.75	650.81	652.33	652.98	651.61	649.18	646.61	647.33	648.32	649.52	652.11
25	648.20	648.76	650.85	652.32	652.80	651.49	649.10	646.57	647.29	648.14	649.54	652.71
26	648.41	648.73	650.94	652.30	652.82	651.42	649.00	646.65	647.30	648.11	649.55	652.80
27	648.57	648.67	651.08	652.24	652.85	651.35	648.90	646.70	647.48	648.12	649.44	652.73
28	648.62	648.43	651.12	652.30	652.83	651.21	648.92	646.74	647.80	648.17	649.40	652.79
29	648.61	n/a	651.11	652.34	652.87	651.08	648.93	646.72	647.98	648.02	649.36	652.92
30	648.63	n/a	651.24	652.38	652.78	651.11	648.78	646.64	648.08	647.93	649.41	652.94
31	648.60	n/a	651.58	n/a	652.71	n/a	648.65	646.69	n/a	647.77	n/a	652.97
Max	648.63	648.96	651.58	652.54	653.22	652.77	651.17	648.54	648.08	648.46	649.55	652.97
Min	647.10	648.43	648.30	651.68	652.35	651.08	648.65	646.57	645.69	647.74	647.54	649.44
Avg	647.86	648.70	649.97	652.17	652.92	652.06	649.84	647.36	646.75	648.07	648.59	651.32

2003 Hartwell Project Elevation Feet-Mean Sea Level												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	653.12	653.68	656.87	661.24	662.37							
2	653.25	653.77	657.03	661.23	662.16							
3	653.38	653.82	657.17	661.30	662.04							
4	653.52	653.87	657.20	661.34	662.14							
5	653.70	653.88	657.24	661.46	662.25							
6	653.76	653.77	657.60	661.63	662.42							
7	653.74	653.93	658.01	661.86	662.68							
8	653.71	654.00	658.17	662.16	663.07							
9	653.77	654.09	658.34	662.42	663.16							
10	653.92	654.18	658.45	662.23	663.14							
11	654.04	654.18	658.44	662.27	663.11							
12	654.16	654.16	658.48	662.01	663.20							
13	654.14	654.18	658.50	661.63	662.92							
14	654.04	654.21	658.57	661.35	662.70							
15	653.99	654.29	658.72	661.41	662.30							
16	653.95	654.47	658.86	661.48	662.01							
17	653.94	654.67	658.99	661.59	661.79							
18	653.87	654.71	659.12	661.66	661.99							
19	653.90	654.78	659.16	661.76	662.12							
20	653.82	654.84	660.34	661.93	662.12							
21	653.79	654.93	661.18	662.07	662.09							
22	653.85	655.08	661.41	662.26	662.39							
23	654.06	655.67	661.62	662.34	662.99							
24	653.78	655.90	661.75	662.48	662.98							
25	653.68	656.02	661.57	662.43	663.31							
26	653.55	656.02	661.41	662.45								
27	653.42	656.20	661.23	662.59								
28	653.42	656.63	660.99	662.72								
29	653.33	n/a	661.04	662.54								
30	653.54	n/a	661.24	662.33								
31	653.61	n/a	661.28									
Max	654.16	656.63	661.75	662.72	663.31	.00	.00	.00	.00	.00	.00	.00
Min	653.12	653.68	656.87	661.23	661.79	.00	.00	.00	.00	.00	.00	.00
Avg	653.73	654.64	659.35	661.94	662.54	.00	.00	.00	.00	.00	.00	.00

INPUT 03/19/2002
NR

Clemson Upper Dam
Hartwell Lake
Piezometer Readings

Inspected By: Thomas D.Smith

Date 7-Jan-02
Lake Elev 647.94

Piez No.	Station	Offset (Ft)	Top of Riser Elev (Ft)	Depth to Piez Tip (Ft)	Top of Riser to Water Surface (Ft)	Depth to Refusal (Ft)	Piez Water Surface Elev (Ft)	Remarks
PF-204	04+06	147 DS	646.35	42.85	21	43.25	625.35	
PC-204	04+06	147 DS	646.21	38.91	23.4	39.5	622.81	
PE-204	04+06	147 DS	645.87	23.87	22.65	24.6	623.22	
PF-205	06+00	4 US	679.52	89.92	36.7	91.45	642.82	
PC-205	06+00	4 US	679.05	80.55	35.2	81.5	643.85	
PE-205	06+00	4 US	768.25	52.65	28.25	53.35	740	
PF-206	06+00	140 DS	644.77	56.97	19.85	57.5	624.92	
PC-206	06+00	140 DS	644.91	44.11	20.1	44.2	624.81	
PE-206	06+00	140 DS	644.76	22.86	22.15	22.8	622.61	
PF-207	06+11	222 DS	632.84	39.74	8.75	32.9	624.09	
PC-207	06+11	222 DS	632.52	33.52	9	39.75	623.52	
UAP-1	06+11	306 DS	626.34	14.34	7.3	13.3	619.04	
PC-212	06+04	593 DS	619.13	24.33	lost	24.3	#VALUE!	#
PF-201	11+00	4 US	678.97	93.77	35.6	92.4	643.37	
PC-201	11+00	4 US	678.76	82.66	35.15	78.55	643.61	
PE-201	11+00	4 US	678.86	65.86	34.3	65	644.56	
PF-202	11+10	140 DS	644.58	61.88	24.65	61.9	619.93	
PC-202	11+10	140 DS	644.78	50.68	25.15	50.7	619.63	
PE-202	11+10	140 DS	644.54	30.44	24.65	30.9	619.89	
PF-203	11+00	222 DS	630.78	44.58	12.05	44.6	618.73	
PC-203	11+00	222 DS	630.39	33.29	12.05	33.3	618.34	
PE-203	11+00	222 DS	630.21	17.41	11.7	17.55	618.51	
UAP-2	10+00	399 DS	625.96	9.86	8.4	10.4	617.56	
PC-213	11+18	622 DS	622.41	33.11	5.6	33.95	616.81	
PF-208	16+04	4 US	679.36	94.96	38.3	95.7	641.06	
PC-208	16+04	4 US	678.66	81.06	34.35	80.9	644.31	
PE-208	16+04	4 US	679.34	56.94	28.4	56.45	650.94	
PF-209	16+00	140 DS	644.48	56.98	22.1	57.6	622.38	
PC-209	16+00	140 DS	644.64	47.04	22.35	47.4	622.29	
PE-209	16+00	140 DS	644.64	24.04	22.65	24.4	621.99	
PF-210	16+00	240 DS	627.54	43.54	5.6	44.15	621.94	
PC-210	16+00	240 DS	627.81	36.81	5.9	36.9	621.91	
UAP-3	16+00	345 DS	624.8	14	4.1	14.4	620.7	
PC-214	16+11	680 DS	637.34	32.84	16	30.9	621.34	
PF-211	18+45	233 DS	631.21	41.61	7.6	41.55	623.61	
PC-211	18+45	233 DS	631.4	37.5	7.9	34.4	623.5	
CUD-9	18+75	130 DS	645.13	47.13	21.3	47	623.83	
PZ-1	11+00				62	82		
PZ-2	16+00				PLUGGED	7.35		

Remarks: # - Couldn't locate P-212 due to construction.
All readings appear within normal variations.

Clemson Lower Dam
Hartwell Lake
Piezometer Readings

Date 7-Jan-02
Lake Elev 647.94

Inspected By: Thomas D.Smith

Piez No.	Station	Offset (Ft)	Top of Riser Elev (Ft)	Depth to Piez Tip (Ft)	Top of Riser to Water Surface (Ft)	Depth to Refusal (Ft)	Piez Water Surface Elev (Ft)	Remarks
PF-140	02+16	45 US	672.99	45.79	31.6	45.9	641.39	
PF-141	02+39	165 DS	679.86	52.76	38.5	47.6	641.36	
PF-122A	06+77	25 US	679.91		36.2	93.55	643.71	
PC-123A	06+77	25 US	680.15	80.65	33.45	80.6	646.70	
PE-124A	06+77	25 US	679.99	55.69	30.9	55.5	649.09	
PF-131	06+20	125 DS	644.13	41.63	21.2	50.7	622.93	
PC-132	06+20	125 DS	644.15	41.75	19.9	40.3	624.25	
PE-133	06+20	125 DS	644.05	27.95	17	26.5	627.05	
PF-116	06+48	235 DS	629.27	35.37	8.65	17.4	620.62	
PC-120	06+40	235 DS	629.77	21.57	8.55	21.75	621.22	
PF-113	06+70	325 DS	626.05	25.35	4	24.7	622.05	
PC-114	06+70	320 DS	626.54	19.44	5.7	19.7	620.84	
PE-115	06+70	315 DS	626.56	12.46	6.05	11.8	620.51	
PF-110A	08+90	17 US	679.11	97.61	40.4	96.7	638.71	
PC-121A	08+90	17 US	679.24	61.64	34.3	81.8	644.94	
PE-111A	08+90	17 US	679.21	49.91	30	50	649.21	
PF-107	09+20	120 DS	646.18	68.39	31.45	69	614.73	
PC-108	09+20	120 DS	646.21	49.11	31.7	51.4	614.51	##
PC-109	09+35	120 DS	646.18	30.88	31.65	31.75	614.53	
PF-103	09+20	245 DS	628	43	13.6	42.4	614.40	
PC-104	09+35	245 DS	627.47	28.87	13.15	28.9	614.32	
PE-105	09+35	245 DS	627.64	15.54	13.4	16.65	614.24	
PF-101	09+75	345 DS	618.91	27.71	5.1	27	613.81	
PC-102	09+90	345 DS	618.79	22.29	4.7	21.9	614.09	
PE-106	09+65	345 DS	618.87	11.97	6.8	11.8	612.07	
PF-125A	15+08	20 US	680.41	112.91	48.55	112.75	631.86	
PC-126A	15+08	20 US	680.41	87.41	37.5	86.8	642.91	
PE-127A	15+08	20 US	680.05	56.65	32.85	54.95	647.20	
PF-128	15+08	131 DS	646.39	67.99	28.5	68.9	617.89	
PC-129	15+08	131 DS	646.14	52.54	28.45	53.1	617.69	
PE-130	15+08	131 DS	645.75	20.05	NO WATER	22.6	#VALUE!	
PF-117	14+90	270 DS	629.04	92.54	10.8	93.3	618.24	
PC-118	14+90	270 DS	628.97	27.57	12	27.2	616.97	
PE-119	14+90	270 DS	628.96	17.66	11.7	16.9	617.26	
CLD-8A	22+00	30 US	677.38	82.01	38	82.2	639.38	
PC-134A	22+00	30 US	677.38	79.54	38	78.3	639.38	
PE-135A	22+00	30 US	677.15	51.79	26.35	51.8	650.80	
PC-142	22+00	40 DS			53.75	77.8	#VALUE!	
PF-136	22+00	150 DS	645.33	61.93	23	61.5	622.33	
PC-137	22+00	150 DS	645.26	44.66	22	48.5	623.26	
PE-138	22+00	150 DS	645.17	22.17	no water	21.45	#VALUE!	*
PF-139	22+00	284 DS	634.58	46.38	14.2	45.85	620.38	
PC-140	22=00	284 DS	634.5	38.4	14.65	38.6	619.85	
PE-141	22+00	284 DS	634.18	13.99	no water	14	#VALUE!	*
PZ-1	9+00				66.75	79		
PZ-2	15+00				64.2	86.3		

Remarks: ## PC-108 has a cracked riser pipe. It didn't affect the reading this time.
* Mud on probe at P-138 and P-141.
Readings reflect drought conditions except near old river bed.

entered 21 May 2002 SDH.

Clemson Upper Dam
Hartwell Lake
Piezometer Readings

Inspected By: Thomas D.Smith

Date 3-Apr-02
Lake Elev 651.72

Piez No.	Station	Offset (Ft)	Top of Riser Elev (Ft)	Depth to Piez Tip (Ft)	Top of Riser to Water Surface (Ft)	Depth to Refusal (Ft)	Piez Water Surface Elev (Ft)	Remarks
PF-204	04+06	147 DS	646.35	42.85	20.35	43	626	
PC-204	04+06	147 DS	646.21	38.91	22.9	39.35	623.31	
PE-204	04+06	147 DS	645.87	23.87	20.7	24.6	625.17	
PF-205	06+00	4 US	679.52	89.92	33	91.4	646.52	
PC-205	06+00	4 US	679.05	80.55	31.85	81.6	647.2	
PE-205	06+00	4 US	768.25	52.65	26.7	53.35	741.55	
PF-206	06+00	140 DS	644.77	56.97	18.8	57.5	625.97	
PC-206	06+00	140 DS	644.91	44.11	19.2	44.15	625.71	
PE-206	06+00	140 DS	644.76	22.86	20.35	22.7	624.41	
PF-207	06+11	222 DS	632.84	39.74	7.8	32.9	625.04	
PC-207	06+11	222 DS	632.52	33.52	8	39.6	624.52	
UAP-1	06+11	306 DS	626.34	14.34	6.25	13.2	620.09	
PC-212	06+04	593 DS	619.13	24.33	lost	24.3	#VALUE!	#
PF-201	11+00	4 US	678.97	93.77	33.3	92.4	645.67	
PC-201	11+00	4 US	678.76	82.66	32.35	78.5	646.41	
PE-201	11+00	4 US	678.86	65.86	31.3	65	647.56	
PF-202	11+10	140 DS	644.58	61.88	23.7	61.9	620.88	
PC-202	11+10	140 DS	644.78	50.68	24.2	50.7	620.58	
PE-202	11+10	140 DS	644.54	30.44	23.6	30.8	620.94	
PF-203	11+00	222 DS	630.78	44.58	11.2	44.5	619.58	
PC-203	11+00	222 DS	630.39	33.29	11.3	33.2	619.09	
PE-203	11+00	222 DS	630.21	17.41	10.2	17.45	620.01	
UAP-2	10+00	399 DS	625.96	9.86	7.55	10.4	618.41	
PC-213	11+18	622 DS	622.41	33.11	4.85	33.8	617.56	
PF-208	16+04	4 US	679.36	94.96	35.35	95.55	644.01	
PC-208	16+04	4 US	678.66	81.06	31.05	80.9	647.61	
PE-208	16+04	4 US	679.34	56.94	28.8	56.45	650.54	
PF-209	16+00	140 DS	644.48	56.98	21.15	57.7	623.33	
PC-209	16+00	140 DS	644.64	47.04	21.35	47.4	623.29	
PE-209	16+00	140 DS	644.64	24.04	21	24.3	623.64	
PF-210	16+00	240 DS	627.54	43.54	4.6	44.15	622.94	
PC-210	16+00	240 DS	627.81	36.81	5	36.9	622.81	
UAP-3	16+00	345 DS	624.8	14	3.65	14.3	621.15	
PC-214	16+11	680 DS	637.34	32.84	15	30.8	622.34	
PF-211	18+45	233 DS	631.21	41.61	6.6	41.5	624.61	
PC-211	18+45	233 DS	631.4	37.5	6.85	34.4	624.55	
CUD-9	18+75	130 DS	645.13	47.13	20.3	47	624.83	
PZ-1	11+00				60.4	82		
PZ-2	16+00				PLUGGED	7.35		

Remarks: # - Couldn't locate P-212 due to construction.
Annual refusal readings were conducted.

Entered 21 MAY 2002
SDH

Clemson Lower Dam
Hartwell Lake
Piezometer Readings

Inspected By: Thomas D.Smith

Date 2-Apr-02
Lake Elev 651.72

Piez No.	Station	Offset (Ft)	Top of Riser Elev (Ft)	Depth to Piez Tip (Ft)	Top of Riser to Water Surface (Ft)	Depth to Refusal (Ft)	Piez Water Surface Elev (Ft)	Remarks
PF-140	02+16	45 US	672.99	45.79	30.1	45.9	642.89	
PF-141	02+39	165 DS	679.86	52.76	38.2	47.6	641.66	
PF-122A	06+77	25 US	679.91		32.85	93.6	647.06	
PC-123A	06+77	25 US	680.15	80.65	29.75	80.6	650.40	
PE-124A	06+77	25 US	679.99	55.69	30.75	55.5	649.24	
PF-131	06+20	125 DS	644.13	41.63	20.9	50.7	623.23	
PC-132	06+20	125 DS	644.15	41.75	19.4	40.2	624.75	
PE-133	06+20	125 DS	644.05	27.95	7	26.4	637.05	
PF-116	06+48	235 DS	629.27	35.37	3.6	17.4	625.67	
PC-120	06+40	235 DS	629.77	21.57	7.6	21.45	622.17	
PF-113	06+70	325 DS	626.05	25.35	3.8	24.5	622.25	
PC-114	06+70	320 DS	626.54	19.44	5.6	19.7	620.94	
PE-115	06+70	315 DS	626.56	12.46	5.8	11.65	620.76	
PF-110A	08+90	17 US	679.11	97.61	37.7	96.6	641.41	
PC-121A	08+90	17 US	679.24	61.64	30.9	81.8	648.34	
PE-111A	08+90	17 US	679.21	49.91	30.1	50	649.11	
PF-107	09+20	120 DS	646.18	68.39	31.5	69	614.68	
PC-108	09+20	120 DS	646.21	49.11	31.5	51.4	614.71	##
PC-109	09+35	120 DS	646.18	30.88	30.45	31.8	615.73	
PF-103	09+20	245 DS	628	43	13.6	42.4	614.40	
PC-104	09+35	245 DS	627.47	28.87	13.6	28.9	613.87	
PE-105	09+35	245 DS	627.64	15.54	13.4	16.5	614.24	
PF-101	09+75	345 DS	618.91	27.71	6	27	612.91	
PC-102	09+90	345 DS	618.79	22.29	5.4	21.9	613.39	
PE-106	09+65	345 DS	618.87	11.97	5.3	11.7	613.57	*
PF-125A	15+08	20 US	680.41	112.91	46	112.75	634.41	
PC-126A	15+08	20 US	680.41	87.41	36	86.7	644.41	
PE-127A	15+08	20 US	680.05	56.65	33.2	54.9	646.85	*
PF-128	15+08	131 DS	646.39	67.99	27.6	68.9	618.79	
PC-129	15+08	131 DS	646.14	52.54	27.25	53.1	618.89	
PE-130	15+08	131 DS	645.75	20.05	NO WATER	22.6	#VALUE!	*
PF-117	14+90	270 DS	629.04	92.54	9.7	92.7	619.34	
PC-118	14+90	270 DS	628.97	27.57	11	27	617.97	*
PE-119	14+90	270 DS	628.96	17.66	10.3	16.8	618.66	*
CLD-8A	22+00	30 US	677.38	82.01	35	82.3	642.38	
PC-134A	22+00	30 US	677.38	79.54	35.05	78.3	642.33	
PE-135A	22+00	30 US	677.15	51.79	27.5	51.8	649.65	
PC-142	22+00	40 DS			52.3	77.7	#VALUE!	
PF-136	22+00	150 DS	645.33	61.93	21.5	61.4	623.83	
PC-137	22+00	150 DS	645.26	44.66	22.05	48.4	623.21	
PE-138	22+00	150 DS	645.17	22.17	20.15	21.45	625.02	
PF-139	22+00	284 DS	634.58	46.38	12.89	45.75	621.69	
PC-140	22=00	284 DS	634.5	38.4	13.3	38.6	621.20	
PE-141	22+00	284 DS	634.18	13.99	11.6	14	622.58	
PZ-1	9+00				66.85	79		
PZ-2	15+00				62	86.2		

Remarks: ## PC-108 has a cracked riser pipe. It didn't affect the reading this time.
*Noted mud-silt on probe at sites PE-106, PE-127A, PE-130, PC-118 and PE-119.
Annual refusal readings were conducted with minor changes noted.
Readings are varied but appear within limits.

Clemson Upper Dam
Hartwell Lake
Piezometer Readings

Inspected By: Thomas D.Smith

Date 3-Jul-02
Lake Elev 651.15

Piez No.	Station	Offset (Ft)	Top of Riser Elev (Ft)	Depth to Piez Tip (Ft)	Top of Riser to Water Surface (Ft)	Depth to Refusal (Ft)	Piez Water Surface Elev (Ft)	Remarks
PF-204	04+06	147 DS	646.35	42.85	20.5	43	625.85	
PC-204	04+06	147 DS	646.21	38.91	23.2	39.35	623.01	
PE-204	04+06	147 DS	645.87	23.87	22.45	24.6	623.42	
PF-205	06+00	4 US	679.52	89.92	34.1	91.4	645.42	
PC-205	06+00	4 US	679.05	80.55	32.4	81.6	646.65	
PE-205	06+00	4 US	768.25	52.65	26.1	53.35	742.15	
PF-206	06+00	140 DS	644.77	56.97	19.4	57.5	625.37	
PC-206	06+00	140 DS	644.91	44.11	19.65	44.15	625.26	
PE-206	06+00	140 DS	644.76	22.86	22	22.7	622.76	
PF-207	06+11	222 DS	632.84	39.74	8.5	32.9	624.34	
PC-207	06+11	222 DS	632.52	33.52	8.7	39.6	623.82	
UAP-1	06+11	306 DS	626.34	14.34	7.5	13.2	618.84	
PC-212	06+04	593 DS	619.13	24.33	Lost	24.3	#VALUE!	#
PF-201	11+00	4 US	678.97	93.77	33.65	92.4	645.32	
PC-201	11+00	4 US	678.76	82.66	32.6	78.5	646.16	
PE-201	11+00	4 US	678.86	65.86	31.7	65	646.26	
PF-202	11+10	140 DS	644.58	61.88	24.6	61.9	612.88	
PC-202	11+10	140 DS	644.78	50.68	25.05	50.7	620.18	
PE-202	11+10	140 DS	644.54	30.44	24.1	30.8	619.49	
PF-203	11+00	222 DS	630.78	44.58	12.1	44.5	606.68	
PC-203	11+00	222 DS	630.39	33.29	12.15	33.2	618.29	
PE-203	11+00	222 DS	630.21	17.41	11.6	17.45	618.06	
UAP-2	10+00	399 DS	625.96	9.86	8.7	10.4	614.36	
PC-213	11+18	622 DS	622.41	33.11	5.8	33.8	613.71	
PF-208	16+04	4 US	679.36	94.96	36	95.55	673.56	
PC-208	16+04	4 US	678.66	81.06	31.7	80.9	642.66	
PE-208	16+04	4 US	679.34	56.94	27.15	56.45	647.64	
PF-209	16+00	140 DS	644.48	56.98	21.8	57.7	617.33	
PC-209	16+00	140 DS	644.64	47.04	22.15	47.4	622.84	
PE-209	16+00	140 DS	644.64	24.04	21.6	24.3	622.49	
PF-210	16+00	240 DS	627.54	43.54	5.7	44.15	605.94	
PC-210	16+00	240 DS	627.81	36.81	5.3	36.9	622.11	
UAP-3	16+00	345 DS	624.8	14	4	14.3	619.5	
PC-214	16+11	680 DS	637.34	32.84	15.75	30.8	633.34	
PF-211	18+45	233DS	631.21	4161	7.3	41.5	623.91	
PC-211	18+45	233 DS	631.4	37.5	7.55	34.4	623.85	
CUD-9	18+75	130 DS	645.13	47.13	21	47	624.13	
PZ-1	11+00				62.6	82		
PZ-2	16+00				PLUGGED	7.35		

notes: # couldn't locate P-212 due to construction.

Clemson Lower Dam
Hartwell Lake
Piezometer Readings

Date ~~4-Apr-00~~ 3 Jul 02
Lake Elev ~~656.2~~ 651.15

Inspected By: Thomas D.Smith

Piez No.	Station	Offset (Ft)	Top of Riser Elev (Ft)	Depth to Piez Tip (Ft)	Top of Riser to Water Surface (Ft)	Depth to Refusal (Ft)	Piez Water Surface Elev (Ft)	Remarks
PF-140	02+16	45 US	672.99	45.79	28.7	45.9	644.29	
PF-141	02+39	165 DS	679.86	52.76	36.7	47.6	643.16	
PF-122A	06+77	25 US	679.91		33.4	93.6	646.51	
PC-123A	06+77	25 US	680.15	80.65	30.35	80.6	649.8	
PE-124A	06+77	25 US	679.99	55.69	28.55	55.5	651.44	
PF-131	06+20	125 DS	644.13	41.63	21.65	50.7	622.48	
PC-132	06+20	125 DS	644.15	41.75	20	40.2	624.15	
PE-133	06+20	125 DS	644.05	27.95	17	26.4	627.05	
PF-116	06+48	235 DS	629.27	35.37	6.5	17.4	622.77	
PC-120	06+40	235 DS	629.77	21.57	8.3	21.45	621.47	
PF-113	06+70	325 DS	626.05	25.35	4	24.5	622.05	
PC-114	06+70	320 DS	626.54	19.44	5.8	19.7	620.74	
PE-115	06+70	315 DS	626.56	12.46	6.15	11.65	620.41	
PF-110A	08+90	17 US	679.11	97.61	38.4	96.6	640.71	
PC-121A	08+90	17 US	679.24	61.64	31.25	81.8	647.99	
PE-111A	08+90	17 US	679.21	49.91	28.2	50	651.01	
PF-107	09+20	120 DS	646.18	68.39	33	69	613.18	
PC-108	09+20	120 DS	646.21	49.11	33.4	51.4	612.81	##
PC-109	09+35	120 DS	646.18	30.88	31.45	31.8	614.73	
PF-103	09+20	245 DS	628	43	15.15	42.4	612.85	
PC-104	09+35	245 DS	627.47	28.87	15	28.9	612.47	
PE-105	09+35	245 DS	627.64	15.54	15.2	16.5	612.44	
PF-101	09+75	345 DS	618.91	27.71	7.8	27	611.11	
PC-102	09+90	345 DS	618.79	22.29	7	21.9	611.79	
PE-106	09+65	345 DS	618.87	11.97	4.8	11.7	614.07	
PF-125A	15+08	20 US	680.41	112.91	47	112.75	633.41	
PC-126A	15+08	20 US	680.41	87.41	34.55	86.7	645.86	
PE-127A	15+08	20 US	680.05	56.65	32.3	54.9	647.75	
PF-128	15+08	131 DS	646.39	67.99	28.1	68.9	618.29	
PC-129	15+08	131 DS	646.14	52.54	28.7	53.1	617.44	
PE-130	15+08	131 DS	645.75	20.05	NO WATER	22.6	#VALUE!	
PF-117	14+90	270 DS	629.04	92.54	11.05	92.7	617.99	
PC-118	14+90	270 DS	628.97	27.57	12.45	27	616.52	
PE-119	14+90	270 DS	628.96	17.66	11.85	16.8	617.11	
CLD-8A	22+00	30 US	677.38	82.01	35.45	82.3	641.93	
PC-134A	22+00	30 US	677.38	79.54	35.5	78.3	641.88	
PE-135A	22+00	30 US	677.15	51.79	27.35	51.8	649.8	
PC-142	22+00	40 DS			53.25	77.7	#VALUE!	
PF-136	22+00	150 DS	645.33	61.93	22.5	61.4	622.83	
PC-137	22+00	150 DS	645.26	44.66	22.3	48.4	622.96	
PE-138	22+00	150 DS	645.17	22.17	21.5	21.45	623.67	*
PF-139	22+00	284 DS	634.58	46.38	14	45.75	620.58	
PC-140	22=00	284 DS	634.5	38.4	14.5	38.6	620	
PE-141	22+00	284 DS	634.18	13.99	13.9	14	620.28	
PZ-1	9+00				68.45	79		
PZ-2	15+00				64.4	86.2		

Remarks: ## PC-108 has a cracked riser pipe. It didn't affect reading this time .
* Noted mud/silt on probe at site PE-138

Clemson Upper Dam
Hartwell Lake
Piezometer Readings

Inspected By: Thomas D.Smith

Date 1-Oct-02
Lake Elev 647.91

Piez No.	Station	Offset (Ft)	Top of Riser Elev (Ft)	Depth to Piez Tip (Ft)	Top of Riser to Water Surface (Ft)	Depth to Refusal (Ft)	Piez Water Surface Elev (Ft)	Remarks
PF-204	04+06	147 DS	646.35	42.85	21.15	43	625.2	
PC-204	04+06	147 DS	646.21	38.91	23.4	39.35	622.81	
PE-204	04+06	147 DS	645.87	23.87	22.2	24.6	623.67	
PF-205	06+00	4 US	679.52	89.92	36.6	91.4	642.92	
PC-205	06+00	4 US	679.05	80.55	35.1	81.6	643.95	
PE-205	06+00	4 US	768.25	52.65	29.75	53.35	738.5	
PF-206	06+00	140 DS	644.77	56.97	19.8	57.5	624.97	
PC-206	06+00	140 DS	644.91	44.11	20.1	44.15	624.81	
PE-206	06+00	140 DS	644.76	22.86	22	22.7	622.76	
PF-207	06+11	222 DS	632.84	39.74	8.7	32.9	624.14	
PC-207	06+11	222 DS	632.52	33.52	8.9	39.6	623.62	
UAP-1	06+11	306 DS	626.34	14.34	6.75	13.2	619.59	
PC-212	06+04	593 DS	619.13	24.33	lost	24.3	#VALUE!	#
PF-201	11+00	4 US	678.97	93.77	35.25	92.4	643.72	
PC-201	11+00	4 US	678.76	82.66	35.3	78.5	643.46	
PE-201	11+00	4 US	678.86	65.86	34.25	65	643.56	
PF-202	11+10	140 DS	644.58	61.88	24.55	61.9	610.33	
PC-202	11+10	140 DS	644.78	50.68	25	50.7	620.23	
PE-202	11+10	140 DS	644.54	30.44	24.6	30.8	619.54	
PF-203	11+00	222 DS	630.78	44.58	11.95	44.5	606.18	
PC-203	11+00	222 DS	630.39	33.29	11.9	33.2	618.44	
PE-203	11+00	222 DS	630.21	17.41	11.2	17.45	618.31	
UAP-2	10+00	399 DS	625.96	9.86	8.2	10.4	614.76	
PC-213	11+18	622 DS	622.41	33.11	5.5	33.8	614.21	
PF-208	16+04	4 US	679.36	94.96	38.25	95.55	673.86	
PC-208	16+04	4 US	678.66	81.06	34.15	80.9	640.41	
PE-208	16+04	4 US	679.34	56.94	30.2	56.45	645.19	
PF-209	16+00	140 DS	644.48	56.98	21.9	57.7	614.28	
PC-209	16+00	140 DS	644.64	47.04	22.2	47.4	622.74	
PE-209	16+00	140 DS	644.64	24.04	21.9	24.3	622.44	
PF-210	16+00	240 DS	627.54	43.54	5.4	44.15	605.64	
PC-210	16+00	240 DS	627.81	36.81	5.8	36.9	622.41	
UAP-3	16+00	345 DS	624.8	14	4	14.3	619	
PC-214	16+11	680 DS	637.34	32.84	15.35	30.8	633.34	
PF-211	18+45	233DS	631.21	4161	7.15	41.5	624.06	
PC-211	18+45	233 DS	631.4	37.5	7.65	34.4	623.75	
CUD-9	18+75	130 DS	645.13	47.13	21.1	47	624.03	
PZ-1	11+00				62.5	82		
PZ-2	16+00				PLUGGED	7.35		

notes: # couldn't locate P-212 due to construction.

Clemson Lower Dam
Hartwell Lake
Piezometer Readings

Date 2-Oct-02
Lake Elev 647.91

Inspected By: Thomas D.Smith

Piez No.	Station	Offset (Ft)	Top of Riser Elev (Ft)	Depth to Piez Tip (Ft)	Top of Riser to Water Surface (Ft)	Depth to Refusal (Ft)	Piez Water Surface Elev (Ft)	Remarks
PF-140	02+16	45 US	672.99	45.79	31.8	45.9	641.19	
PF-141	02+39	165 DS	679.86	52.76	39.3	47.6	640.56	
PF-122A	06+77	25 US	679.91		36.15	93.6	643.76	
PC-123A	06+77	25 US	680.15	80.65	33.25	80.6	646.9	
PE-124A	06+77	25 US	679.99	55.69	33	55.5	646.99	
PF-131	06+20	125 DS	644.13	41.63	22.5	50.7	621.63	
PC-132	06+20	125 DS	644.15	41.75	20.9	40.2	623.25	
PE-133	06+20	125 DS	644.05	27.95	17.1	26.4	626.95	
PF-116	06+48	235 DS	629.27	35.37	4.2	17.4	625.07	
PC-120	06+40	235 DS	629.77	21.57	8.5	21.45	621.27	
PF-113	06+70	325 DS	626.05	25.35	4.45	24.5	621.6	
PC-114	06+70	320 DS	626.54	19.44	6.25	19.7	620.29	
PE-115	06+70	315 DS	626.56	12.46	6.5	11.65	620.06	
PF-110A	08+90	17 US	679.11	97.61	40.45	96.6	638.66	
PC-121A	08+90	17 US	679.24	61.64	34.3	81.8	644.94	
PE-111A	08+90	17 US	679.21	49.91	32.2	50	647.01	
PF-107	09+20	120 DS	646.18	68.39	33	69	613.18	
PC-108	09+20	120 DS	646.21	49.11	33.35	51.4	612.86	##
PC-109	09+35	120 DS	646.18	30.88	31.2	31.8	614.98	
PF-103	09+20	245 DS	628	43	15.2	42.4	612.8	
PC-104	09+35	245 DS	627.47	28.87	15	28.9	612.47	
PE-105	09+35	245 DS	627.64	15.54	15.1	16.5	612.54	
PF-101	09+75	345 DS	618.91	27.71	7.65	27	611.26	
PC-102	09+90	345 DS	618.79	22.29	6.9	21.9	611.89	
PE-106	09+65	345 DS	618.87	11.97	8.7	11.7	610.17	
PF-125A	15+08	20 US	680.41	112.91	48.4	112.75	632.01	
PC-126A	15+08	20 US	680.41	87.41	37.25	86.7	643.16	
PE-127A	15+08	20 US	680.05	56.65	34.75	54.9	645.3	
PF-128	15+08	131 DS	646.39	67.99	28.45	68.9	617.94	
PC-129	15+08	131 DS	646.14	52.54	28.76	53.1	617.38	
PE-130	15+08	131 DS	645.75	20.05	22.6	22.6	623.15	
PF-117	14+90	270 DS	629.04	92.54	11	92.7	618.04	
PC-118	14+90	270 DS	628.97	27.57	12.2	27	616.77	
PE-119	14+90	270 DS	628.96	17.66	11.6	16.8	617.36	
CLD-8A	22+00	30 US	677.38	82.01	37.9	82.3	639.48	
PC-134A	22+00	30 US	677.38	79.54	37.9	78.3	639.48	
PE-135A	22+00	30 US	677.15	51.79	28.4	51.8	648.75	
PC-142	22+00	40 DS			53.8	77.7	#VALUE!	
PF-136	22+00	150 DS	645.33	61.93	23	61.4	622.33	
PC-137	22+00	150 DS	645.26	44.66	22.45	48.4	622.81	
PE-138	22+00	150 DS	645.17	22.17	21.45	21.45	623.72	
PF-139	22+00	284 DS	634.58	46.38	14.25	45.75	620.33	
PC-140	22=00	284 DS	634.5	38.4	14.65	38.6	619.85	
PE-141	22+00	284 DS	634.18	13.99	12	14	622.18	
PZ-1	9+00				68.5	79		
PZ-2	15+00				64.35	86.2		

Remarks: ## PC-108 has a cracked riser pipe. It didn't affect reading this time .

Clemson Upper Dam
Hartwell Lake
Piezometer Readings

Inspected By: Thomas D.Smith

Date 3-Jan-03
Lake Elev 653.31

Piez No.	Station	Offset (Ft)	Top of Riser Elev (Ft)	Depth to Piez Tip (Ft)	Top of Riser to Water Surface (Ft)	Depth to Refusal (Ft)	Piez Water Surface Elev (Ft)	Remarks
PF-204	04+06	147 DS	646.35	42.85	20	43	626.35	
PC-204	04+06	147 DS	646.21	38.91	22.6	39.35	623.61	
PE-204	04+06	147 DS	645.87	23.87	19.4	24.6	626.47	
PF-205	06+00	4 US	679.52	89.92	32.2	91.4	647.32	
PC-205	06+00	4 US	679.05	80.55	30.35	81.6	648.7	
PE-205	06+00	4 US	768.25	52.65	25.3	53.35	742.95	
PF-206	06+00	140 DS	644.77	56.97	18.4	57.5	626.37	
PC-206	06+00	140 DS	644.91	44.11	18.75	44.15	626.16	
PE-206	06+00	140 DS	644.76	22.86	20.35	22.7	624.41	
PF-207	06+11	222 DS	632.84	39.74	7.85	32.9	624.99	
PC-207	06+11	222 DS	632.52	33.52	7.45	39.6	625.07	
UAP-1	06+11	306 DS	626.34	14.34	5.65	13.2	620.69	
PC-212	06+04	593 DS	619.13	24.33	lost	24.3	#VALUE!	#
PF-201	11+00	4 US	678.97	93.77	32.2	92.4	646.77	
PC-201	11+00	4 US	678.76	82.66	31.1	78.5	647.66	
PE-201	11+00	4 US	678.86	65.86	30	65	647.76	
PF-202	11+10	140 DS	644.58	61.88	23.55	61.9	614.58	
PC-202	11+10	140 DS	644.78	50.68	24.1	50.7	621.23	
PE-202	11+10	140 DS	644.54	30.44	23	30.8	620.44	
PF-203	11+00	222 DS	630.78	44.58	11.1	44.5	607.78	
PC-203	11+00	222 DS	630.39	33.29	11.2	33.2	619.29	
PE-203	11+00	222 DS	630.21	17.41	9.75	17.45	619.01	
UAP-2	10+00	399 DS	625.96	9.86	7.7	10.4	616.21	
PC-213	11+18	622 DS	622.41	33.11	5	33.8	614.71	
PF-208	16+04	4 US	679.36	94.96	34.1	95.55	674.36	
PC-208	16+04	4 US	678.66	81.06	29.65	80.9	644.56	
PE-208	16+04	4 US	679.34	56.94	28	56.45	649.69	
PF-209	16+00	140 DS	644.48	56.98	20.8	57.7	616.48	
PC-209	16+00	140 DS	644.64	47.04	21	47.4	623.84	
PE-209	16+00	140 DS	644.64	24.04	18.2	24.3	623.64	
PF-210	16+00	240 DS	627.54	43.54	4.35	44.15	609.34	
PC-210	16+00	240 DS	627.81	36.81	4.75	36.9	623.46	
UAP-3	16+00	345 DS	624.8	14	3.2	14.3	620.05	
PC-214	16+11	680 DS	637.34	32.84	14	30.8	634.14	
PF-211	18+45	233DS	631.21	4161	6.3	41.5	624.91	
PC-211	18+45	233 DS	631.4	37.5	6.55	34.4	624.85	
CUD-9	18+75	130 DS	645.13	47.13	19.95	47	625.18	
PZ-1	11+00				61.5	82		
PZ-2	16+00				PLUGGED	7.35		

notes: # - couldn't locate P-212 due to construction.

Clemson Lower Dam
Hartwell Lake
Piezometer Readings

Inspected By: Thomas D.Smith

Date 3-Jan-03
Lake Elev 653.31

Piez No.	Station	Offset (Ft)	Top of Riser Elev (Ft)	Depth to Piez Tip (Ft)	Top of Riser to Water Surface (Ft)	Depth to Refusal (Ft)	Piez Water Surface Elev (Ft)	Remarks
PF-140	02+16	45 US	672.99	45.79	28	45.9	644.99	
PF-141	02+39	165 DS	679.86	52.76	37	47.6	642.86	
PF-122A	06+77	25 US	679.91		31.2	93.6	648.71	
PC-123A	06+77	25 US	680.15	80.65	28.1	80.6	652.05	
PE-124A	06+77	25 US	679.99	55.69	29.35	55.5	650.64	
PF-131	06+20	125 DS	644.13	41.63	19.6	50.7	624.53	
PC-132	06+20	125 DS	644.15	41.75	18.6	40.2	625.55	
PE-133	06+20	125 DS	644.05	27.95	7	26.4	637.05	
PF-116	06+48	235 DS	629.27	35.37	3.25	17.4	626.02	
PC-120	06+40	235 DS	629.77	21.57	6.9	21.45	622.87	
PF-113	06+70	325 DS	626.05	25.35	3.45	24.5	622.6	
PC-114	06+70	320 DS	626.54	19.44	5.4	19.7	621.14	
PE-115	06+70	315 DS	626.56	12.46	5.4	11.65	621.16	
PF-110A	08+90	17 US	679.11	97.61	36.25	96.6	642.86	
PC-121A	08+90	17 US	679.24	61.64	29.2	81.8	650.04	
PE-111A	08+90	17 US	679.21	49.91	29	50	650.21	
PF-107	09+20	120 DS	646.18	68.39	30	69	616.18	
PC-108	09+20	120 DS	646.21	49.11	30.4	51.4	615.81	##
PC-109	09+35	120 DS	646.18	30.88	28	31.8	618.18	
PF-103	09+20	245 DS	628	43	12.15	42.4	615.85	
PC-104	09+35	245 DS	627.47	28.87	12	28.9	615.47	
PE-105	09+35	245 DS	627.64	15.54	12	16.5	615.64	
PF-101	09+75	345 DS	618.91	27.71	4.2	27	614.71	
PC-102	09+90	345 DS	618.79	22.29	3.75	21.9	615.04	
PE-106	09+65	345 DS	618.87	11.97	6.5	11.7	612.37	
PF-125A	15+08	20 US	680.41	112.91	44.9	112.75	635.51	
PC-126A	15+08	20 US	680.41	87.41	32.35	86.7	648.06	
PE-127A	15+08	20 US	680.05	56.65	32.5	54.9	647.55	
PF-128	15+08	131 DS	646.39	67.99	26.8	68.9	619.59	
PC-129	15+08	131 DS	646.14	52.54	26.75	53.1	619.39	
PE-130	15+08	131 DS	645.75	20.05	22.6	22.6	623.15	
PF-117	14+90	270 DS	629.04	92.54	9.1	92.7	619.94	
PC-118	14+90	270 DS	628.97	27.57	10.5	27	618.47	
PE-119	14+90	270 DS	628.96	17.66	9.9	16.8	619.06	
CLD-8A	22+00	30 US	677.38	82.01	33.55	82.3	643.83	
PC-134A	22+00	30 US	677.38	79.54	33.6	78.3	643.78	
PE-135A	22+00	30 US	677.15	51.79	27.35	51.8	649.8	
PC-142	22+00	40 DS			51.45	77.7	#VALUE!	
PF-136	22+00	150 DS	645.33	61.93	20.7	61.4	624.63	
PC-137	22+00	150 DS	645.26	44.66	22.6	48.4	622.66	
PE-138	22+00	150 DS	645.17	22.17	20	21.45	625.17	
PF-139	22+00	284 DS	634.58	46.38	12.2	45.75	622.38	
PC-140	22=00	284 DS	634.5	38.4	12.65	38.6	621.85	
PE-141	22+00	284 DS	634.18	13.99	11.2	14	622.98	
PZ-1	9+00				65.6	79		
PZ-2	15+00				62.5	86.2		

Remarks: ## PC-108 has a cracked riser pipe. It didn't affect reading this time .

Clemson Upper Dam
Hartwell Lake
Piezometer Readings

Inspected By: Thomas D.Smith

Date 2-Apr-03
Lake Elev 661.25

Piez No.	Station	Offset (Ft)	Top of Riser Elev (Ft)	Depth to Piez Tip (Ft)	Top of Riser to Water Surface (Ft)	Depth to Refusal (Ft)	Piez Water Surface Elev (Ft)	Remarks
PF-204	04+06	147 DS	646.35	42.85	18.5	43	627.85	
PC-204	04+06	147 DS	646.21	38.91	21.9	39.35	624.31	
PE-204	04+06	147 DS	645.87	23.87	18.8	24.6	627.07	
PF-205	06+00	4 US	679.52	89.92	25.6	91.4	653.92	
PC-205	06+00	4 US	679.05	80.55	23.35	81.6	655.7	
PE-205	06+00	4 US	768.25	52.65	18.5	53.3	749.75	
PF-206	06+00	140 DS	644.77	56.97	16.9	57.5	627.87	
PC-206	06+00	140 DS	644.91	44.11	17.3	44.15	627.61	
PE-206	06+00	140 DS	644.76	22.86	20	22.7	624.76	
PF-207	06+11	222 DS	632.84	39.74	6.2	32.9	626.64	
PC-207	06+11	222 DS	632.52	33.52	6.4	39.6	626.12	
UAP-1	06+11	306 DS	626.34	14.34	5.6	13.2	620.74	
PC-212	06+04	593 DS	619.13	24.33	lost	24.3	#VALUE!	#
PF-201	11+00	4 US	678.97	93.77	25.8	92.4	653.17	
PC-201	11+00	4 US	678.76	82.66	24.4	78.5	654.36	
PE-201	11+00	4 US	678.86	65.86	23.45	65	654.46	
PF-202	11+10	140 DS	644.58	61.88	22.8	61.9	621.13	
PC-202	11+10	140 DS	644.78	50.68	23.3	50.7	621.98	
PE-202	11+10	140 DS	644.54	30.44	22.2	30.8	621.24	
PF-203	11+00	222 DS	630.78	44.58	10.7	44.5	608.58	
PC-203	11+00	222 DS	630.39	33.29	10.85	33.2	619.69	
PE-203	11+00	222 DS	630.21	17.41	10	17.45	619.36	
UAP-2	10+00	399 DS	625.96	9.86	7.5	9.5	615.96	
PC-213	11+18	622 DS	622.41	33.11	4.9	33.8	614.91	
PF-208	16+04	4 US	679.36	94.96	28	95.55	674.46	
PC-208	16+04	4 US	678.66	81.06	22.8	80.9	650.66	
PE-208	16+04	4 US	679.34	56.94	23.2	56.45	656.54	
PF-209	16+00	140 DS	644.48	56.98	19.7	57.7	621.28	
PC-209	16+00	140 DS	644.64	47.04	20	47.4	624.94	
PE-209	16+00	140 DS	644.64	24.04	18.3	24.3	624.64	
PF-210	16+00	240 DS	627.54	43.54	3.4	44	609.24	
PC-210	16+00	240 DS	627.81	36.81	3.8	36.9	624.41	
UAP-3	16+00	345 DS	624.8	14	2.95	14.3	621	
PC-214	16+11	680 DS	637.34	32.84	14.4	30.8	634.39	
PF-211	18+45	233DS	631.21	4161	5	41.5	626.21	
PC-211	18+45	233 DS	631.4	37.5	5.3	34.4	626.1	
CUD-9	18+75	130 DS	645.13	47.13	18.6	47	626.53	
PZ-1	11+00				60.75	82		
PZ-2	16+00				PLUGGED	7.35		

notes: # - couldn't locate P-212 due to construction.

Clemson Lower Dam
Hartwell Lake
Piezometer Readings

Inspected By: Thomas D.Smith

Date 2-Apr-03
Lake Elev 661.25

Piez No.	Station	Offset (Ft)	Top of Riser Elev (Ft)	Depth to Piez Tip (Ft)	Top of Riser to Water Surface (Ft)	Depth to Refusal (Ft)	Piez Water Surface Elev (Ft)	Remarks
PF-140	02+16	45 US	672.99	45.79	21	45.9	651.99	
PF-141	02+39	165 DS	679.86	52.76	31.8	47.6	648.06	
PF-122A	06+77	25 US	679.91		24.4	93.6	655.51	
PC-123A	06+77	25 US	680.15	80.65	20.45	80.6	659.7	
PE-124A	06+77	25 US	679.99	55.69	22.3	55.5	657.69	
PF-131	06+20	125 DS	644.13	41.63	19	50.7	625.13	
PC-132	06+20	125 DS	644.15	41.75	17.55	40.2	626.6	
PE-133	06+20	125 DS	644.05	27.95	9.4	26.4	634.65	
PF-116	06+48	235 DS	629.27	35.37	3.65	17.4	625.62	
PC-120	06+40	235 DS	629.77	21.57	6.7	21.35	623.07	
PF-113	06+70	325 DS	626.05	25.35	3	24.5	623.05	
PC-114	06+70	320 DS	626.54	19.44	5.25	19.7	621.29	
PE-115	06+70	315 DS	626.56	12.46	5.4	11.65	621.16	
PF-110A	08+90	17 US	679.11	97.61	31.2	96.6	647.91	
PC-121A	08+90	17 US	679.24	61.64	22.15	81.8	657.09	
PE-111A	08+90	17 US	679.21	49.91	22.75	50	656.46	
PF-107	09+20	120 DS	646.18	68.39	31.8	69	614.38	
PC-108	09+20	120 DS	646.21	49.11	32.15	51.4	614.06	##
PC-109	09+35	120 DS	646.18	30.88	27.8	31.8	618.38	
PF-103	09+20	245 DS	628	43	14	42.3	614	
PC-104	09+35	245 DS	627.47	28.87	14	28.9	613.47	
PE-105	09+35	245 DS	627.64	15.54	14	16.5	613.64	
PF-101	09+75	345 DS	618.91	27.71	6.85	26.9	612.06	
PC-102	09+90	345 DS	618.79	22.29	6.1	21.9	612.69	
PE-106	09+65	345 DS	618.87	11.97	4.75	11.7	614.12	*
PF-125A	15+08	20 US	680.41	112.91	40.85	112.6	639.56	
PC-126A	15+08	20 US	680.41	87.41	25.6	86.6	654.81	
PE-127A	15+08	20 US	680.05	56.65	28.8	54.9	651.25	
PF-128	15+08	131 DS	646.39	67.99	25.7	68.9	620.69	*
PC-129	15+08	131 DS	646.14	52.54	26.5	53.1	619.64	*
PE-130	15+08	131 DS	645.75	20.05	22.6	22.6	623.15	
PF-117	14+90	270 DS	629.04	92.54	8.75	92.7	620.29	
PC-118	14+90	270 DS	628.97	27.57	10.35	27	618.62	
PE-119	14+90	270 DS	628.96	17.66	9.6	16.8	619.36	
CLD-8A	22+00	30 US	677.38	82.01	27.35	82.3	650.03	
PC-134A	22+00	30 US	677.38	79.54	27.35	78.3	650.03	
PE-135A	22+00	30 US	677.15	51.79	26.2	51.8	650.95	
PC-142	22+00	40 DS			49.6	77.7	#VALUE!	
PF-136	22+00	150 DS	645.33	61.93	18.9	61.1	626.43	
PC-137	22+00	150 DS	645.26	44.66	22.3	48.4	622.96	
PE-138	22+00	150 DS	645.17	22.17	19.85	21.45	625.32	*
PF-139	22+00	284 DS	634.58	46.38	10.9	45.75	623.68	
PC-140	22=00	284 DS	634.5	38.4	11.4	38.6	623.1	
PE-141	22+00	284 DS	634.18	13.99	10.5	14	623.68	
PZ-1	9+00				67.15	79		*
PZ-2	15+00				62	86.2		

Remarks: ## PC-108 has a cracked riser pipe. It didn't affect reading this time .
* Mud on PE-106, PF-128, PC-129, PE-138 and PZ-1.

*4

WATER LEVEL READINGS FOR PIEZOMETERS INSTALLED IN JUNE 2003

(Added by Amendment No. 0004)

READINGS OF PIEZOMETERS INSTALLED IN JUNE 2003

Piezometer No.	Station	Offset feet	Approximate Ground Elevation feet	Approx. Top Riser Elevation feet	Tip Elev. feet	June 4, 2003		June 10, 2003		June 19, 2003		July 14, 2003	
						Top Riser to Water feet	Elevation Water feet	Top Riser to Water feet	Elevation Water feet	Top Riser to Water feet	Elevation Water feet	Top Riser to Water feet	Elevation Water feet
					UPPER DAM								
		From Baseline "B"											
1	4+00	27.5 U.S.	643.5	645.2	615.1	20.9	624.3	21.1	624.1	21.0	624.2	21.0	624.2
2	6+00	29.0 U.S.	644.3	645.8	615.7	21.7	624.1	21.9	623.9	22.0	623.8	21.7	624.1
3	8+00	23.3 U.S.	643.2	646.4	616.3	25.7	620.7	25.9	620.5	25.9	620.5	25.7	620.7
4	10+00	22.5 U.S.	643.9	647.4	617.3	25.0	622.4	25.3	622.1	25.5	621.9	25.0	622.4
5	12+00	27.7 U.S.	644.0	647.2	614.1	26.7	620.5	26.8	620.4	26.7	620.5	26.7	620.5
6	14+00	26.5 U.S.	643.7	645.6	615.5	22.9	622.7	22.9	622.7	22.8	622.8	22.8	622.8
7	16+00	22.0 U.S.	643.2	645.0	614.9	21.0	624.0	21.4	623.6	21.3	623.7	21.4	623.6
8	18+00	27.5 U.S.	643.5	645.1	615.0	20.9	624.2	21.2	623.9	21.1	624.0	21.2	623.9
9	20+00	31.7 U.S.	645.5	647.1	617.0	22.1	625.0	18.9	628.2	19.4	627.7	20.2	626.9
					LOWER DAM								
		From Baseline "D"											
1	5+60	0	642.2	644.0	618.9	8.6	635.4	9.0	635.0	8.7	635.3	8.6	635.4
2	7+60	6.0 U.S.	643.7	647.5	612.4	28.9	618.6	29.1	618.4	29.0	618.5	29.0	618.5
3	10+00	19.0 U.S	643.6	647.4	612.3	29.4	618.0	29.1	618.3	30.1	617.3	30.7	616.7
4	12+00	20.5 U.S.	643.1	647.3	612.2	29.7	617.6	29.9	617.4	29.7	617.6	29.9	617.4
5	14+00	32.3 U.S.	644.5	647.7	614.6	29.3	618.4	29.2	618.5	29.5	618.2	28.1	619.6
6	16+00	33.0 U.S.	646.2	648.8	618.7	26.8	622.0	27.7	621.1	27.4	621.4	27.3	621.5
7	18+00	28.8 U.S.	645.2	648.4	618.3	28.3	620.1	28.3	620.1	28.6	619.8	28.4	620.0
8	20+00	22.7 U.S.	644.4	647.8	617.5	26.4	621.4	25.7	622.1	25.4	622.4	25.3	622.5
9	22+00	28.0 U.S.	645.5	648.2	618.1	23.5	624.7	23.6	624.6	23.6	624.6	23.4	624.8
				LAKE LEVEL →		662.2		662.2		661.7		662.0	

*4

WATER LEVEL READINGS OF SELECTED PIEZOMETERS, WELLS, AND MONITOR WELLS LOCATED ON BERMS OF UPPER AND LOWER DAMS

(Added by Amendment No. 0004)

ADDITIONAL READINGS OF SELECTED PIEZOMETERS, WELLS AND MONITOR WELLS

Instrument Number	Top of Riser Elevation feet	Depth to Refusal feet	June 4, 2003		June 10, 2003		June 19, 2003	
			Top Riser to Water feet	Elevation Water feet	Top Riser to Water feet	Elevation Water feet	Top Riser to Water feet	Elevation Water feet
UPPER DAM								
CUD-9	645.1	47.0	18.4	626.7				
PE-209	644.6	24.3	18.3	626.3				
PE-202	644.5	30.8	21.7	622.8				
PE-206	644.8	22.7	20.0	624.8				
PE-204	645.9	24.6	19.3	626.6				
PE-203	630.2	17.5	10.0	620.2				
MW-9	643.5 +/-	49.0			22.6	620.9	22.5	621.0
MW-10	643.5 +/-	48.9			21.4	622.1	21.3	622.2
MW-11	642.6 +/-	20.0			19.7	622.9	19.6	623.0
MW-12	643 +/-	43.9			20.8	622.2	20.7	622.3
LOWER DAM								
PE-138	645.2	21.5	19.7	625.5				
PW-2	643 +/-	49.0	23.5	619.5	23.7	619.3	23.4	619.6
MW-5	644.5+/-		24.5	620.0				
PE-109	646.2	31.8	27.2	619.0				
MW-1	644 +/-	48.0			29.9	614.1	27.2	616.8
MW-2	644.5 +/-	45.2			30.4	614.1	27.8	616.7
MW-3	644 +/-	46.7			29.7	614.3	27.2	616.8
MW-4	644 +/-	45.1			28.9	615.1	26.9	617.1
MW-5	644.3 +/-	45.0			24.7	619.6	24.4	619.9
MW-6	644.7 +/-	46.7			25.2	619.5	24.9	619.8
MW-A	644.9 +/-	49.8			25.6	619.3	25.3	619.6
MW-C	644.7 +/-	49.9			25.4	619.3	25.0	619.7
MW-D	644.5 +/-	50.1			25.1	619.4	24.8	619.7
MW-7	643.8 +/-	41.6			24.5	619.3	24.6	619.2
MW-8	643.8 +/-	45.8			24.6	619.2	23.9	619.9
LAKE LEVEL →			662.2		662.2		661.7	

★ Note: For Locations of Instruments, See Plates B-2 thru B-6