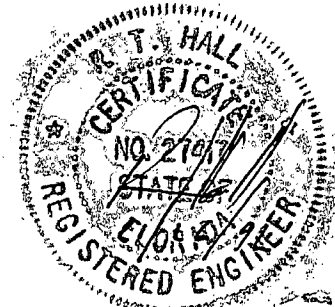


**DATA FOR LENA ROAD LANDFILL
MONITORING WELLS
AND PIEZIOMETER WELLS**

Inorganic
Analysis

THE FOLLOWING IS A SUMMARY OF THE LABORATORY INORGANIC ANALYTICAL
RESULTS FOR EACH WELL. WELLS HAVE BEEN GROUPED BY THEIR
ASSOCIATION WITH THE SEVERAL STAGES OF LANDFILL DEVELOPMENT

D.E.R.
JUN 26 1992
SOUTHWEST DISTRICT
TAMPA



INORGANIC DATA FOR WELLS SURROUNDING STAGE I LENA ROAD LAND FILL

DATE	WELL IDENT.	pH	CONDUCT.	TURB.	NITRITE	NITRATE	TKN	CHLORIDE	TDS	TRUE COLOR	SULFATE	TOC
2/92	MW 1	4.8	122	12	<0.01	0.43	0.6	19.2	143	60	50.3	19.2
2/92	MW 2	6.3	176	55	<0.01	0.02	1.2	43.2	288	250	18.2	26.8
2/92	MW 3	5.5	217	21	<0.01	0.03	3.6	129	401	20	86.8	39.8
2/92	MW 6	5.6	275	8.4	<0.01	<0.01	2.9	20.8	199	20	59.7	17.0
2/92	CW 4	6.6	262	22	<0.01	0.02	0.6	158	844	35	166	15.7
2/92	CW 5	5.7	131	6.2	<0.01	0.01	1.2	32.4	165	35	22.2	14.0
12/91	MW 1	5.3	79.3	4.0	< 0.01	0.02	1.8	8.5	75.0	0	4.06	8.9
12/91	MW 2	6.4	708	50	< 0.01	0.08	11.4	87.4	431	130	11.4	20.8
12/91	MW 3	5.9	687	8.0	< 0.01	0.01	1.6	137	108	195	77.3	10.6
12/91	MW 6	5.4	304	8.9	< 0.01	0.01	1.3	32.6	193	250	58.4	9.6
12/91	CW 4	6.7	1180	50	< 0.01	< 0.01	1.9	161	857	110	153	12.4
12/91	CW 5	5.7	254	4.8	< 0.01	< 0.01	1.9	34.9	182	35	22.0	14.8
8/91	MW 1	5.0	133	8.7	<0.01	<0.01	1.7	16.2	93.0	30	14.1	8.4
8/91	MW 2	6.4	549	44	<0.01	0.01	1.9	81.8	389	120	15.7	21.3
8/91	MW 3	5.8	517	7.0	<0.01	0.01	1.5	117	359	60	61.1	18.0
8/91	MW 6	5.5	210	1.81	<0.01	<0.01	1.1	30.8	174	300	39.7	9.6
8/91	CW 4	6.8	995	30	<0.01	0.01	2.2	161	845	80	153	16.4
8/91	CW 5	5.7	239	2.7	<0.01	0.02	0.7	36.7	198	20	32.6	16.6
5/91	MW 1	5.3	80.5	4.3	< 0.01	0.04	6.0	7.1	70.0	40	1.4	13.3
5/91	MW 2	6.2	684	28	< 0.01	0.02	9.8	109	475	120	23.5	31.4
5/91	MW 3	5.9	530	37	< 0.01	0.01	1.2	122	398	200		#
5/91	MW 6	6.6	1095	31	< 0.01	0.07	1.7	178	1050	70	202	23.4
5/91	CW 4	5.6	235	8.3	< 0.01	0.02	1.6	35.9	190	50	30.8	11.2
5/91	CW 5	7.1	143	19	< 0.01	0.03	1.3	5.2	142	70		8.5
3/91	MW 1	5.6	65.5	9.9	0.01	0.01	1.3	6.6	81		3.3	15.1
3/91	MW 2	6.5	753	46	0.01	0.02	10.5	123	541		20.2	41.6
3/91	MW 3	6.0	511	65	0.01	0.03	1.6	121	384		43.5	20.5
3/91	MW 6	5.8	196	20	0.01	0.01	1.4	8.9	170		61.6	13.6
3/91	CW 4	6.7	1000	8.6	<0.01	0.03	1.6	164	976		33.9	19.4
3/91	CW 5	5.7	255	20	<0.01	0.01	1.8	42.7	182		25.7	12.7
12/90	MW1	6.0	101	9.4	< 0.01	0.01	1.6	13.5	82.0	40	3.7	11.0
12/90	MW2	6.5	840	37	< 0.01	0.06	11.8	137	572	200	16.6	41.9
12/90	MW3	6.0	621	19.00	< 0.01	< 0.01	1.6	174	460	120	33.6	19.7
12/90	MW6	5.5	180	38	< 0.01	0.01	1.7	5.76	169	160	49.7	16.9
12/90	CW4	6.8	1030	22	< 0.01	< 0.01	1.2	172	868	40	179	18.9
12/90	CW5	5.8	215	3.9	< 0.01	< 0.01	1.7	34.3	147	30	21.9	10.9

INORGANIC DATA FOR WELLS SURROUNDING STAGE I LENA ROAD LAND FILL

DATE	WELL IDENT.	pH	CONDUCT.	TURB.	NITRITE	NITRATE	TKN	CHLORIDE	TDS	TRUE COLOR	SULFATE	TOC	BICARB. ALKALINITY
8/90	MW 1	5.6	96.8	40	0.3	0.03	0.9	16.4	79	12.7			
8/90	MW 2	6.2	999	24	0.03	0.05	11.7	135	662	45.3			
8/90	MW 3	6.0	666	4.4	0.03	0.03	1.4	176	505	21.4			
8/90	MW 6	5.7	181	8.7	0.02	0.02	1.1	15.6	152	16.6			
8/90	CW 4	6.8	1014	5.7	0.02	0.02	1.3	134	834	18.8			
8/90	CW 5	5.9	202	2.9	0.02	0.02	1.5	27.363	153	13.3			
6/90	MW 1	5.4	81.8	8.2	<0.01	0.03	0.8	13	87	50	4.63	8.2	28
6/90	MW 2	6.4	1010	18.2	<0.01	0.03	12.7	17.3	709	280	12.1	44.4	365
6/90	MW 3	5.5	3310	20	<0.01	0.02	3.3	48.5	200	80	27.6	16.4	30
6/90	MW 6	5.6	339	2.6	<0.01	0.04	1.2	80.3	425	60	1.4	12.6	39
6/90	CW 3	6.5	1500	93	<0.01	0.04	39.1	147	823	150	16.4	68.3	658
6/90	CW 4	6.8	986	20	<0.01	0.02	0.9	110	810	120	176	15.1	279
3/90	MW-1	5.4	118	27	<0.01	0.01	0.7	18.4	84	40	8	9.8	14
3/90	MW-2	6.4	840	120	<0.01	0.02	10.9	143	623	200	17	46.8	293
3/90	MW-3	6.2	729	61	<0.01	0.02	1.6	144	453	100	9	25.6	116
3/90	MW-6	5.7	487	34	<0.01	0.01	0.5	82.9	304	100	3	13.6	54
3/90	CW-3	6.5	2230	205	<0.01	0.03	98.9	229	1050	160	< 1	65.3	835
3/90	CW-4	6.8	1140	43	<0.01	<0.01	1.6	115	848	80	167	18.1	282
8/89	MW-1	5.5	133	3.9	< 0.01	0.01	0.7	22.5	106	20	9	10.0	30
8/89	MW-2	6.4	1390	11	< 0.01	< 0.01	13.2	230	820	120	31	49.5	342
8/89	MW-3	6.3	988	2.1	< 0.01	< 0.01	1.7	239	604	60	4	37.9	196
8/89	MW-6	5.7	603	3.1	< 0.01	0.03	1.1	137	477	40	3	19.9	68
8/89	CW-4	6.7	1190	16	< 0.01	< 0.01	1.1	145	810	80	183	18.8	283
8/89	CW-5	6.2	299	2.7	< 0.01	< 0.01	0.5	22.2	178	20	63	6.6	36
4/89	MW-1	5.6	92	10	< 0.01	0.02	0.6	16.4	86	60	5	12.4	19
4/89	MW-2	6.3	1510	22	< 0.01	< 0.01	17.9	253	944	500	18	64.8	383
4/89	MW-3	6.1	1360	3.2	< 0.01	< 0.01	1.8	179	894	800	220	35.0	179
4/89	MW-6	5.7	672	7.5	< 0.01	0.05	1.1	154	526	100	3	17.3	76
4/89	CW-4	6.9	1070	15	< 0.01	< 0.01	1.1	108	776	50	162	17.7	290
4/89	CW-5	5.8	234	2.7	< 0.01	< 0.01	0.8	19.7	154	20	54	7.8	24
3/89	MW-1	5.1	83	8.4	< 0.01	0.01	1.3	8.6	60	60	4	12.5	11
3/89	MW-2	6.5	1600	80	0.01	0.03	15.0	253	958	120	16	63.0	409
3/89	MW-3	6.5	1610	14	0.02	0.06	2.0	152	1280	80	532	28.4	169
3/89	MW-6	5.8	650	13	< 0.01	0.04	2.2	159	510	50	3	15.7	72
3/89	CW-4	5.7	227	3.0	< 0.01	< 0.01	0.8	17.0	144	10	54	7.2	17
3/89	CW-5	5.7	250	3.5	< 0.01	< 0.01	1.1	20.3	146	10	51	6.4	28

INORGANIC DATA FOR WELLS SURROUNDING STAGE I LENA ROAD LAND FILL

DATE	WELL IDENT.	pH	CONDUCT.	TURB.	NITRITE	NITRATE	TKN	CHLORIDE	TDS	TRUE COLOR	SULFATE	TOC	BICARB. ALKALINITY
12/88	MW-1	5.3	65	17	< 0.01	< 0.01	0.4	5.3	80	30	2	14.3	9
12/88	MW-2	5.8	836	4.3	< 0.01	< 0.01	9.0	183	480	60	95	38.4	68
12/88	MW-3	6.2	569	17	< 0.01	0.03	2.5	66.2	328	30	24	8.5	28
12/88	MW-6	6.1	574	36	< 0.01	< 0.01	0.5	151	484	50	4	14.6	70
12/88	CW-4	6.8	1210	19	< 0.01	< 0.01	0.8	98.1	878	40	202	20.6	268
12/88	CW-5	5.4	245	0.34	< 0.01	< 0.01	0.2	19.3	150	5	51	5.0	20

INORGANIC DATA FOR WELLS SURROUNDING STAGE II LENA ROAD LAND FILL

DATE	WELL IDENT.	pH	CONDUCT.	TURB.	NITRITE	NITRATE	TKN	CHLORIDE	TDS	TRUE COLOR	SULFATE	TOC	BICARB. ALKALINITY
2/92	LRII 1	6.3	571	60	0.12	0.02	2.1	27.0	374	250	115	10.8	107
2/92	LRII 2	6.1	160	3.6	<0.01	<0.01	1.0	7.15	94	70	6.52	2.8	52
2/92	LRII 3	5.4	59.8	1.2	<0.01	0.06	0.6	5.6	36.0	30	6.66	2.3	4.2
2/92	LRII 4	6.7	321	6.4	<0.01	<0.01	0.6	7.0	165	60	0.76	3.1	153
2/92	SA 5	7.4	662	0.71	<0.01	<0.01	1.9	71.0	427	10	34.6	8.4	214
2/92	SA 6	7.5	884	0.26	<0.01	<0.01	0.4	51.4	622	10	176	6.7	180
2/92	SA 7	7.7	496	0.9	<0.01	<0.01	1.1	54.4	309	30	8.81	3.6	156
2/92	SA 8	10.5	372	110	<0.01	0.03	0.8	55.2	216	20	10.3	4.4	4.2
12/91	LRII 1	6.2	635	150	< 0.01	0.02	0.4	32.8	363	150	90.4	12.5	87.6
12/91	LRII 2	6.0	148	4.4	< 0.01	0.01	1.3	8.6	95.0	60	92.0	3.5	46.4
12/91	LRII 3	5.0	122	0.85	< 0.01	0.04	0.4	8.0	30	10	6.06	3.5	3.9
12/91	LRII 4	6.5	317	13	< 0.01	< 0.01	<0.2	10.4	160	20	0.97	3.8	153
12/91	SA 5	7.4	738	2.6	< 0.01	< 0.01	1.2	62.4	414	30	34.6	9.4	225
12/91	SA 6	7.3	878	1.9	< 0.01	< 0.01	0.8	58.2	597	30	182	5.8	166
12/91	SA 7	7.6	587	3.4	< 0.01	< 0.01	0.5	58.8	311	10	8.2	7.4	154
12/91	SA 8	8.3	538	0.40	< 0.01	< 0.01	0.5	58.5	293	10	11.1	5.8	141
8/91	LRII 1	6.3	495	155	0.03	0.05	1.4	31.7	396	500	143	13.5	81.2
8/91	LRII 2	5.9	116	3.1	<0.01	0.01	1.3	7.20	73.0	120	7.58		37.2
8/91	LRII 3	4.9	48.0	0.55	<0.01	0.01	1.4	7.65	29.0	60	5.16	2.8	7.6
8/91	LRII 4	7.6	227	21	<0.01	<0.01	1.4	9.10	145	30	1.06	2.8	126
8/91	SA 5	7.4	549	0.65	<0.01	0.01	1.5	60.2	425	10	57.3	9.4	224
8/91	SA 6	7.5	695	5.8	<0.01	<0.01	1.2	54.0	589	40	180	6.4	173
8/91	SA 7	8.5	405	21	<0.01	<0.01	1.6	60.0	274	50	9.49	3.8	131
8/91	SA 8	7.8	374	6.0	<0.01	<0.01	1.9	58.2	302	30	16.2	3.5	156
5/91	LRII-1	6.4	462	22	< 0.01	0.01	1.1	27.8	279	80		6.45	
5/91	LRII-2	7.6	426	4.1	< 0.01	0.01	0.9	56.6	300	0		4.44	
5/91	LRII-3	8.1	421	0.85	< 0.01	0.01	1.1	54.9	308	0		4.12	
5/91	LRII-4	6.7	237	34	< 0.01	0.01	1.0	8.0	137	10		2.98	
5/91	SA 5	6.1	527	100	< 0.01	0.02	2.4	38.0	578	300		8.98	
5/91	SA 6	7.4	710	0.75	< 0.01	0.01	1.4	50.6	618	0		6.70	
5/91	SA 7	6.1	133	3	< 0.01	0.03	1.3	7.2	91	40		2.99	
5/91	SA 8	5.1	48.4	0.20	< 0.01	0.01	1.1	13.0	32	0		1.70	

INORGANIC DATA FOR WELLS SURROUNDING STAGE II LENA ROAD LAND FILL

DATE	WELL IDENT.	pH	CONDUCT.	TURB.	NITRITE	NITRATE	TKN	CHLORIDE	TDS	TRUE COLOR	SULFATE	TOC	BICARB. ALKALINITY
3/90	LR-II-1	6.5	527	30	<0.01	0.02	1.8	26.4	333	40	104	11.1	103
3/90	LR-II-2	6.5	164	16	<0.01	0.01	0.2	6.9	97	20	5	3.5	64
3/90	LR-II-3	5.0	85.5	12	<0.01	0.01	0.2	10.9	38	20	2	2.1	5
3/90	LR-II-4	6.6	359	14	<0.01	0.01	0.7	10	159	30	< 1	3.5	141
3/90	SA-5	7.4	697	28	<0.01	0.01	1.8	66.9	429	20	38	8.6	221
3/90	SA-6	7.4	847	25	<0.01	<0.01	1.4	54.6	604	20	196	7.6	175
3/90	SA-7	7.6	597	20	<0.01	0.01	0.9	59.9	313	10	5	3.7	158
3/90	SA-8	7.7	602	17	<0.01	0.01	0.7	58.9	302	10	8	4.2	156
8/89	LR-II-1	6.2	582	190	< 0.01	0.03	1.4	28.3	304	240	86	10.5	116
8/89	LR-II-2	6.3	183	11	< 0.01	< 0.01	0.3	6.9	106	20	5	3.5	8
8/89	LR-II-3	5.2	68	1.3	< 0.01	< 0.01	0.6	12.4	34	5	2	1.6	4
8/89	LR-II-4	6.4	325	50	< 0.01	< 0.01	0.5	10.4	152	30	1	4.6	138
8/89	SA-5	7.2	790	31	< 0.01	0.01	0.2	66.7	424	20	44	12.8	220
8/89	SA-6	6.9	900	45	< 0.01	< 0.01	1.5	54.3	566	5	169	5.1	158
8/89	SA-7	8.7	478	110	< 0.01	0.03	1.2	64.9	256	10	7	4.2	107
8/89	SA-8	8.6	479	75	< 0.01	< 0.01	0.7	59.1	258	10	7	8.2	130
4/89	LR-II-1	6.2	520	250	< 0.01	0.07	0.9	28.6	292	140	72	11.0	132
4/89	LR-II-2	6.2	197	18	< 0.01	0.01	0.7	9.1	94	50	5	4.1	82
4/89	LR-II-3	6.3	66	1.6	< 0.01	0.03	< 0.2	12.4	22	5	2	2.6	4
4/89	LR-II-4	6.4	304	31	< 0.01	0.02	0.4	11.2	154	60	1	5.1	134
4/89	SA-5	7.2	694	40	0.01	0.01	0.8	66.6	422	40	40	10.6	214
4/89	SA-6	7.6	839	60	< 0.01	0.01	0.7	67.0	566	30	131	8.3	185
4/89	SA-7	8.3	443	75	< 0.01	0.03	0.8	62.8	262	10	6	5.3	164
4/89	SA-8	8.3	458	80	< 0.01	0.02	1.6	62.3	286	10	7	6.8	158
3/89	LR II-1	6.4	466	150	0.01	< 0.01	0.6	29.2	296	50	72	12.1	135
3/89	LR II-2	6.7	247	34	< 0.01	1.00	< 0.2	5.0	128	20	7	2.7	107
3/89	LR II-3	5.4	72	22	< 0.01	< 0.01	0.2	11.8	14	5	2	1.0	15
3/89	LR II-4	6.9	337	34	< 0.01	< 0.01	0.6	7.3	186	40	< 2	2.7	154
3/89	SA-5	8.9	568	6.80	< 0.01	0.57	0.8	74.0	336	20	27	5.3	151
3/89	SA-6	11.6	1270	6.5	< 0.01	< 0.01	1.3	22.4	550	10	147	6.4	< 1
3/89	SA-7	12.2	3900	0.68	< 0.01	< 0.01	1.5	68.8	940	10	6	2.4	< 1
3/89	SA-8	9.8	405	30	< 0.01	< 0.01	1.2	54.2	248	< 1	8	2.8	67

INORGANIC DATA FOR WELLS SURROUNDING STAGE II LENA ROAD LAND FILL

DATE	WELL IDENT.	pH	CONDUCT.	TURB.	NITRITE	NITRATE	TKN	CHLORIDE	TDS	TRUE COLOR	SULFATE	TOC	BICARB. ALKALINITY
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12/88	LR II-1	6.3	478	70	0.01	0.03	0.7	28.2	298	40	67	10.7	121
12/88	LR II-2	6.4	586	28	0.01	0.02	< 0.2	6.6	162	40	8	3.7	116
12/88	LR II-3	5.6	90	17	0.01	< 0.01	< 0.2	11.1	58	30	1	1.1	24
12/88	LR II-4	6.8	349	27	< 0.01	0.02	< 0.2	11.0	204	5	3	4.9	157
12/88	SA-5	8.3	557	1.00	0.01	< 0.01	< 0.2	67.4	340	5	25	6.0	161
12/88	SA-6	8.8	703	3.3	< 0.01	< 0.01	< 0.2	50.5	448	5	112	6.5	95
12/88	SA-7	11.8	4060	2.9	0.01	0.02	1.5	118	996	10	3	3.4	< 1
12/88	SA-8	9.6	412	8.4	< 0.01	0.01	1.2	47.8	256	5	16	3.9	34

INORGANIC DATA FOR WELLS SURROUNDING STAGE III LENA ROAD LAND FILL

DATE	WELL IDENT.	pH	CONDUCT.	TURB.	NITRITE	NITRATE	TKN	CHLORIDE	TDS	TRUE COLOR	SULFATE	TOC	BICARB. ALKALINITY
2/92	GC 1	6.4	1140	100	0.01	<0.01	1.9	116	726	80	0.43	19.5	479
2/92	GC 2	6.1	592	39	0.02	<0.01	1.7	58.4	390	300	50.4	13.2	151
2/92	GC 3	6.7	474	27	<0.01	0.02	1.4	29.9	306	70	30.9	15.0	181
2/92	GC 4	6.7	494	75	<0.01	0.06	0.4	31.3	318	20	63.4	6.8	151
2/92	GC 5	5.6	302	24	<0.01	<0.01	2.7	26.7	205	50	38.7	24.2	53
2/92	GC 6	5.5	487	7.6	<0.01	<0.01	4.8	40.6	307	50	102	16.5	74.0
12/91	GC 1	6.4	1030	130	< 0.01	0.07	1.4	145.0	685	225	2.31	17.6	363
12/91	GC 2	6.2	571	150	< 0.01	0.04	1.3	75.0	387	700	44.5	13.0	122
12/91	GC 3	6.6	566	45	< 0.01	< 0.01	0.7	28.3	294	65	33.2	8.3	199
12/91	GC 4	6.5	551	90	< 0.01	0.03	1.3	28.9	319	220	55.8	7.9	153
12/91	GC 5	6.5	531	11	< 0.01	< 0.01	2.5	20.0	344	165	38.3	21.7	205
12/91	GC 6	5.8	520	5.8	< 0.01	< 0.01	4.8	40.7	330	65	83.3	14.0	121
8/91	GC 1	6.3	931	210	0.02	0.01	1.5	145	687	350	4.21	18.5	353
8/91	GC 2	6.2	493	106	0.02	0.06	1.4	64.2	395	500	30.9	21.3	132
8/91	GC 3	6.5	424	42	<0.01	<0.01	1.1	28.7	277	300	31.6	8.0	186
8/91	GC 4	6.6	482	151	0.03	0.05	1.3	29.3	332	150	74.9	5.4	158
8/91	GC 5	5.8	226	7.2	<0.01	0.03	2.9	3.35	150	120	5.60	33.4	48.8
8/91	GC 6	5.6	377	21	<0.01	0.02	4.9	37.1	251	60	81.0	11.9	61.3
5/91	GC 1	7.3	567	5.6	< 0.01	< 0.01	2.1	22.6	380	10		11.6	
5/91	GC 2	7.1	552	2.0	< 0.01	0.01	1.1	29.5	341	10		9.19	
5/91	GC 3	6.0	624	90	0.01	0.10	0.9	87.5	423	300		11.2	
5/91	GC 4	6.5	868	7.2	0.01	< 0.01	1.3	129	693	70		15.4	
5/91	GC 5	5.5	234	20	< 0.01	0.01	2.4	30.8	191	50		9.12	
3/91	GC 2	6.2	561	85	<0.01	0.18	0.2	87.3	442		45.5	16.7	
3/91	GC 3	6.6	424	80	<0.01	0.02	1.4	28.6	305		36.4	9.9	
3/91	GC 5	6.3	502	22	<0.01	0.02	1.7	28.1	344		60.6	16.6	
3/91	GC 6	5.7	494	10	<0.01	0.02	4.2	59.2	347		122	10.0	
12/90	GC1	6.3	1170	120	0.02	0.03	2.1	162	687	500	1.7	19.9	
12/90	GC2	6.3	588	38	< 0.01	< 0.01	1.0	88.0	421	40	61.6	15.1	
12/90	GC3	6.6	505	26	< 0.01	0.01	1.5	29.3	294	140	37.7	8.9	
12/90	GC4	6.3	519	30	< 0.01	0.03	1.0	31.9	343	120	79.2	5.0	
12/90	GC5	6.7	444	19	< 0.01	< 0.01	3.6	33.6	324	120	59.7	17.9	
12/90	GC6	5.5	501	19	< 0.01	< 0.01	3.6	54.3	330	120	131	12.5	

INORGANIC DATA FOR WELLS SURROUNDING STAGE III LENA ROAD LAND FILL

DATE	WELL IDENT.	pH	CONDUCT.	TURB.	NITRITE	NITRATE	TKN	CHLORIDE	TDS	TRUE COLOR	SULFATE	TOC	BICARB. ALKALINITY
8/90	GC 1	6.3	1130	90	0.02	0.04	1.5	151	760	19.2			
8/90	GC 2	6.2	599	160	0.02	0.1	1.1	94	469	17			
8/90	GC 3	6.6	457	39	0.02	0.04	1.4	27.9	676	8.6			
8/90	GC 4	6.5	621	70.00	0.02	0.03	0.7	32	355	5			
8/90	GC 5	6.1	603	12	0.02	0.04	2.3	31.4	371	15.4			
8/90	GC 6	5.7	553	7.8	0.02	0.04	4.3	111	330	13.3			
6/90	GC 1	6.5	936	140	<0.01	0.05	0.7	152	784	300	2.2	15.6	366
6/90	GC 2	6.4	639	380	<0.01	0.06	1.0	97.6	596	800	24.2	15.2	157
6/90	GC 3	6.7	470	35	<0.01	0.03	0.8	30.5	316	200	30	7.5	186
6/90	GC 4	6.8	513	120	<0.01	0.02	0.8	34.2	380	300	81	3.3	171
6/90	GC 5	5.6	282	23	<0.01	0.03	3.0	35.4	196	50	39.3	13.4	42
6/90	GC 6	6.2	530	7	<0.01	0.06	3.8	107.0	392	100	73.9	9.8	73
3/90	GC-1	6.5	593	52	<0.01	<0.01	1.6	152	705	300	< 1	18.8	375
3/90	GC-2	6.2	731	55	<0.01	0.01	2.2	89.5	430	100	26	18.2	194
3/90	GC-3	6.7	473	31	<0.01	0.01	0.9	26.2	289	160	33	9.0	285
3/90	GC-4	6.6	574	21	<0.01	0.04	0.6	26.8	356	160	58	6.0	167
3/90	GC-5	5.7	309	35	<0.01	<0.01	2.9	31	210	80	48	14.4	49
3/90	GC-6	5.9	551	26	<0.01	<0.01	3.7	95.5	351	80	59	11.6	51
8/89	GC-1	6.3	1420	280	< 0.01	0.01	1.1	82.6	769	200	1	21.5	386
8/89	GC-2	6.0	872	180	< 0.01	< 0.01	1.6	116	525	200	27	18.4	247
8/89	GC-3	6.4	522	40	< 0.01	0.03	2.2	29.9	367	100	25	8.4	183
8/89	GC-4	6.5	445	19	< 0.01	< 0.01	1.0	26.8	264	30	84	7.1	85
8/89	GC-5	5.4	361	27	< 0.01	0.01	1.9	53.3	232	160	40	14.9	34
8/89	GC-6	6.0	616	4.0	< 0.01	< 0.01	3.9	84.0	301	200	81	11.2	45
4/89	GC-1	6.3	1210	30	< 0.01	0.04	1.2	201	776	300	2	21.7	386
4/89	GC-2	6.1	770	300	< 0.01	0.02	1.6	89.8	454	280	15	21.0	200
4/89	GC-3	6.2	476	70	0.03	< 0.01	0.9	34.3	296	40	33	8.6	191
4/89	GC-4	6.6	632	190	0.02	< 0.01	0.3	36.9	352	20	73	5.9	185
4/89	GC-5	5.7	329	9.9	< 0.01	0.03	0.7	29.3	204	100	59	13.6	58
4/89	GC-6	6.1	551	6.8	< 0.01	0.02	3.3	64.5	320	200	69	12.3	104
3/89	GC-1	6.6	1160	140	< 0.01	0.06	1.8	168	760	100	< 2	19.5	382
3/89	GC-2	6.5	680	900	0.02	0.03	2.5	90.2	442	200	17	18.0	187
3/89	GC-3	6.7	521	90	< 0.01	0.01	0.6	29.1	304	60	29	6.4	189
3/89	GC-4	6.4	552	40	0.01	0.01	0.8	25.8	316	20	87	5.1	138
3/89	GC-5	6.1	319	14	< 0.01	0.04	1.5	19.7	186	40	30	12.1	90
3/89	GC-6	6.3	527	38	< 0.01	0.02	2.8	59.7	284	80	55	10.7	100

INORGANIC DATA FOR WELLS SURROUNDING STAGE III LENA ROAD LAND FILL

DATE	WELL IDENT.	pH	CONDUCT.	TURB.	NITRITE	NITRATE	TKN	CHLORIDE	TDS	TRUE COLOR	SULFATE	TOC	BICARB. ALKALINITY
12/88	GC-1	6.5	1110	150	< 0.01	0.07	1.1	157	682	20	1	19.1	347
12/88	GC-2	6.6	790	50	0.05	< 0.01	1.6	75.8	466	20	59	16.3	198
12/88	GC-3	6.6	548	55	< 0.01	< 0.01	0.2	26.8	294	20	27	8.6	198
12/88	GC-4	6.4	596	110	0.02	0.01	< 0.2	29.6	370	20	21	4.7	169
12/88	GC-5	6.2	374	33	< 0.01	0.04	0.9	11.9	246	60	31	19.2	127
12/88	GC-6	6.9	551	29	< 0.01	0.05	1.6	56.3	320	80	21	13.3	86

INORGANIC DATA FOR WELLS OUTSIDE THE SLURRY WALL LENA ROAD LAND FILL

DATE	WELL IDENT.	pH	CONDUCT.	TURB.	NITRITE	NITRATE	TKN	CHLORIDE	TDS	TRUE COLOR	SULFATE	TOC	BICARB. ALKALINITY
2/92	LR11 1	6.3	571	60	0.12	0.02	2.1	27.0	374	250	115	10.8	107
2/92	SMR 1	5.6	266	2.6	<0.01	<0.01	0.8	28.6	178	80	32.3	15.6	38
2/92	SMR 2	7.5	719	0.2	<0.01	<0.01	0.6	97.2	410	0	2.6	6.4	203
2/92	SA 2	7.2	638	1.9	<0.01	<0.01	1.8	29.2	346	50	64.7	11.5	240
2/92	SA 3	7.4	590	5.5	<0.01	0.02	1.8	23.1	380	10	16.3	11.6	273
2/92	SA 4	7.5	662	0.25	<0.01	0.06	1.6	60.4	460	5	59.4	14.1	195
12/91	LR11 1	6.2	635	150	< 0.01	0.02	0.4	32.8	363	150	90.4	12.5	87.6
12/91	SMR 1	5.7	131	5.2	< 0.01	< 0.01	0.2	35.4	169	100	21.3	4.1	41.0
12/91	SMR 2	7.4	172	0.20	< 0.01	< 0.01	1.4	106	406	10	6.07	4.7	204
12/91	SA 2	7.3	567	18	< 0.01	< 0.01	1.0	34.2	340	40	19.7	7.8	235
12/91	SA 3	7.3	636	55	< 0.01	< 0.01	1.9	31.8	224	55	54.1	10.4	252
12/91	SA 4	7.4	661	0.55	< 0.01	< 0.01	2.2	68.7	442	15	56.4	8.0	195
8/91	LR11 5	6.2	205	2.7	<0.01	0.01	1.4	8.45	143	40	3.96	6.4	105
8/91	SMR I	6.7	213	30	<0.01	<0.01	1.6	8.10	162	40	2.90	3.9	124
8/91	SMR II	6.7	375	0.25	<0.01	<0.01	1.6	59.2	315	20	9.38		170
8/91	SA 2	7.4	442	8.0	<0.01	0.01	1.4	29.7	335	20	11.0	11.4	238
8/91	SA 3	7.1	526	0.85	<0.01	<0.01	0.5	27.7	379	30	34.3	11.2	287
8/91	SA 4	7.4	589	1.10	<0.01	<0.01	1.7	65.7	433	40	62.8	7.0	203
5/91	LR11-5	6.6	509	5.3	0.01	< 0.01	1.8	26.2	344	70		4.96	
5/91	SMR 1	7.4	571	0.80	< 0.01	< 0.01	2.0	99.7	411	5		3.34	
5/91	SMR 2	5.6	196	2.6	< 0.01	< 0.01	1.6	33.1	171	60		12.3	
5/91	SA 2	7.4	625	0.90	< 0.01	0.01	0.7	66.3	413	0		7.00	
5/91	SA 3	6.6	300	6.4	< 0.01	< 0.01	2.0	7.6	200	50		10.5	
5/91	SA 4	8.2	566	36	< 0.01	0.37	1.7	63.2	441	10		9.99	
3/91	LR11-5	6.1	170	37	<0.01	0.01	1.1	16.0	135		17.8	10.4	
3/91	SMR 1	5.7	258	20	<0.01	0.01	1.4	28.6	221		32.7	17.0	
3/91	SMR 2	7.4	605	0.60	<0.01	0.01	0.6	79.2	413		8.2	5.0	
3/91	SA 2	7.4	477	3.0	<0.01	0.02	0.6	30.1	359		24.9	13.1	
3/91	SA 3	7.3	548	12	<0.01	<0.01	1.0	29.3	426		57.5	12.8	
12/90	LR11-5	6.5	343	5.5	< 0.01	0.02	1.5	13.3	246	160	4.6		
12/90	SMR I	5.9	234	17	0.01	0.04	1.9	103	188	60	41.1	14.5	
12/90	SMR II	8.2	560	25	0.01	0.03	1.1	65.9	394	30	6.8	4.5	
12/90	SA2	7.1	575	25	< 0.01	0.01	1.5	34.2	371	50	25.3	11.6	
12/90	SA3	7.1	625	4.2	< 0.01	< 0.01	1.0	3.30	385	40	71.8	11.0	
12/90	SA4	8.2	594	2200	< 0.01	< 0.01	1.7	31.9	216	30	70.9	9.5	

INORGANIC DATA FOR WELLS OUTSIDE THE SLURRY WALL LENA ROAD LAND FILL

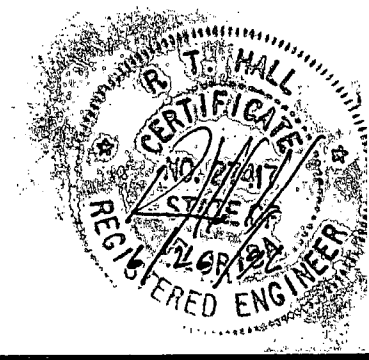
DATE	WELL IDENT.	pH	CONDUCT.	TURB.	NITRITE	NITRATE	TKN	CHLORIDE	TDS	TRUE COLOR	SULFATE	TOC	BICAR ALKALIN
8/90	LR II 5	6.0	157	30	0.02	0.02	0.8	16.7	115	9.6			
8/90	SMR 1	5.7	239	12	0.02	0.03	0.5	30.4	201	13.6			
8/90	SMR 2	7.5	561	1.5	0.02	0.02	0.5	95.8	422	4.6			
8/90	SA 2	7.4	504	12	0.02	0.04	1.2	28.8	341	11.8			
8/90	SA 3	7.2	591	1.5	0.02	0.02	1.0	25		10.6			
8/90	SA 4	7.4	664	5	0.02	0.03	0.9	732	452	7			
6/90	LR II 5	6.7	311	32	<0.01	0.02	0.6	9.17	209	100	2.6	10.8	161
6/90	SMR 1	5.9	275	11	<0.01	0.26	0.9	37.3	179	100	20.3	7.9	56
6/90	SMR 2	7.5	628	1	<0.01	0.2	0.5	162	409	20	5.5	3.4	200
6/90	SA 2	6.4	502	9	<0.01	0.02	1.2	35.2	380	40	20.7	9.0	249
6/90	SA 3	7.4	537	2.2	<0.01	0.04	28.0		616	30	38.7	8.8	279
6/90	SA 4	7.4	596	4	<0.01	0.02	1.0	75.6	424	30	60	6.6	206
3/90	LR-II-5	6.6	446	29	<0.01	0.01	0.6	10.2	251	120	1	10.7	175
3/90	SMR-1	5.6	330	35	<0.01	0.01	1.3	30.6	180	50	33	14.9	46
3/90	SMR-2	7.2	779	19	<0.01	0.01	1.0	104.0	424	20	4	4.2	195
3/90	SA-2	7.3	615	32	0.02	0.07	2.3	29	352	30	22	11.6	242
3/90	SA-3	7.3	620	29	<0.01	<0.01	2.3	10.0	413	40	46	11.8	264
3/90	SA-4	7.6	667	24	<0.01	<0.01	1.5	67.7	422	40	44	9.0	254
8/89	LR II-5	6.6	440	10	< 0.01	< 0.01	2.1	12.5	262	40	2	11.1	197
8/89	SMR-1	5.6	276	4.5	< 0.01	0.01	1.1	30.0	184	30	34	14.4	51
8/89	SMR-2	6.6	705	3.0	< 0.01	0.03	1.3	108	402	10	5	6.4	195
8/89	SA-2	6.7	546	40	< 0.01	< 0.01	2.0	22.8	319	10	2	14.9	241
8/89	SA-3	6.9	670	14	< 0.01	0.04	1.1	29.8	284	30	26	11.3	293
8/89	SA-4	7.3	669	36	< 0.01	0.03	1.0	67.5	472	20	82	13.0	201

INORGANIC DATA FOR WELLS OUTSIDE THE SLURRY WALL LENA ROAD LAND FILL

DATE	WELL IDENT.	pH	CONDUCT.	TURB.	NITRITE	NITRATE	TKN	CHLORIDE	TDS	TRUE COLOR	SULFATE	TOC	BICARB. ALKALINITY
12/88	LR II-5	6.8	454	55	< 0.01	0.06	0.8	12.9	334	50	17	16.9	219
12/88	SMR-1	6.2	409	360	< 0.01	< 0.01	1.3	28.0	376	500	21	18.5	92
12/88	SMR-2	7.1	618	2.4	< 0.01	0.02	0.3	79.6	368	5	1	3.1	174
12/88	SA-2	7.3	545	1.5	< 0.01	< 0.01	0.6	23.3	288	20	5	10.1	227
12/88	SA-3	8.9	328	4.3	< 0.01	< 0.01	1.1	20.1	184	20	9	13.1	115
12/88	SA-4	11.0	938	7.4	0.03	1.07	0.9	45.2	358	10	18	4.1	< 1

Groundwater
Elevations Table

STATISTICS FOR EACH WELL NVGD OVER THE PERIOD OF THIS STUDY.
THESE RESULTS SUGGEST ONLY MARGINAL FLUCUATIONS FOR EACH CITE
OVER TIME



ACCUMULATED NVGD DATA FOR ALL WELLS

	2/92	12/91	8/91	5/91	3/91	12/90	8/90	6/90	3/90	8/89	4/89	3/89	12/88
WELL IDENT.	NVGD	NVGD	NVGD	NVGD	NVGD	NVGD	NVGD	NVGD	NVGD	NVGD	NVGD	NVGD	NVGD
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
MW 1	30.22	29.47	32.93	31.35	29.35	29.55	29.93	29.43	32.18	36.35	32.22	32.85	33.01
MW 2	32.61	30.6	31.1	31.1	30.69	30.77	31.19	30.27	31.02	30.02	30.48	30.69	34.6
MW 3	32.07	29.74	33.32	30.15	29.65	30.74	29.24	32.99	32.82	32.4	30.78	32.15	34.72
CW 4	35.62	31.54	32.54	33.01	33.79	32.46	29.87	30.29	33.79	32.91	30.96	30.83	32.29
CW 5	37.25	35.42	38	36.5	36.25	36.33	34.33	34.25	38.48	38.46	34.17	36	35.5
GC 1	27.11	26.11	26.94	27.78	31.36	27.03	26.19	24.28	26.61	26.2	26.36	27.03	26.86
GC 3	30.87	28.45	32.08	31.08	31.12	31.25	30.58	27.83	30.75	27.91	29.41	31.08	29.87
GC 4	28.31	26.31	28.81	29.48	33.98	27.48	27.19	25.35	28.22	28.98	27.48	28.9	27.81
SA 3	13.12	13.66	18.62	14.54	20.2	13.79	14.62	5.37	13.62	12.54	8.12	10.87	14.12
SA 4	9.78	14.61	19.03	12.53	31.28	13.2	8.28	15.58	11.58	12.2	6.28	9.28	11.78
GC 2	33.51	30.77	33.73	32.98	32.81	33.73	33.23	30.81	33.65	30.15	32.6	33.4	33.42
GC 6	31.56	30.77	31.35	32.85	32.18	30.85	30.77	30.85	31.52	31.35	31.1	30.77	31.1
SA 2	19.77	21.27	21.22	18.97	20.22	20.55	20.97	30.6	30.07	19.72	11.97	16.95	20.14
SA 5	16.42	19.32	21.84	15	15.92	16.67	13.92	8.17	26.12	14.34	8.42	11.76	14.92
LR11 1	33.39	30.96	34.27	33.52	33.5	34.27	32.77	30.86	33.27	32.77	32.06	33.9	32.77
LR11 3	26.63	25.26	28.09	29.01	25.34	27.01	25.26	24.51	26.93	27.84	25.68	27.38	27.34
LR11 4	26.94	25.82	28.82	29.65	26.65	27.24	25.9	24.73	27.23	28.4	26.52	28.07	28.36
LR11 5	31.6	28.99	32.28	32.78	31.2	30.45	29.45	27.53	30.72	31.78	29.11	30.45	30.15
SA 7	12.17	16.17	18.27	9.1	11.35	11.85	13.94	3.02	10.02	5.1	4.77	10.15	9.27
SA 8	12.88	15.78	18.31	8.31	21.98	34.48	14.15	4.4	11.4	9.73	6.23	10.18	12.85
SMR 1	31.4	29.48	30.3	32.15	31.31	31.23	29.48	29.81	30.73	31.08	28.56	29.9	29.48
SMR 2	16.4	19.3	20.18	15.02	15.18	15.27	24.68	9.35	15.18	11.8	11.22	15.47	15.6
SA 6	15.14	18.74	19.12	13.79	14.29	15.21	27.71	7.29	14.94	11.04	10.96	12.54	12.04
LR11 2	30.37	29.2	32.45	32.86	30.45	30.78	29.61	28.2	30.74	30.28	28.36	30.03	30.03
MW 6	33.19	32.22	34.02	33.49	33.24	32.9	32.74	31.86	33.24	32.99	31.65	33.24	33.03
GC 5	29.19	27.94	29.02	30.27	28.44	28.27	28.27	27.81	28.89	29.02	28.52	29.02	28.52

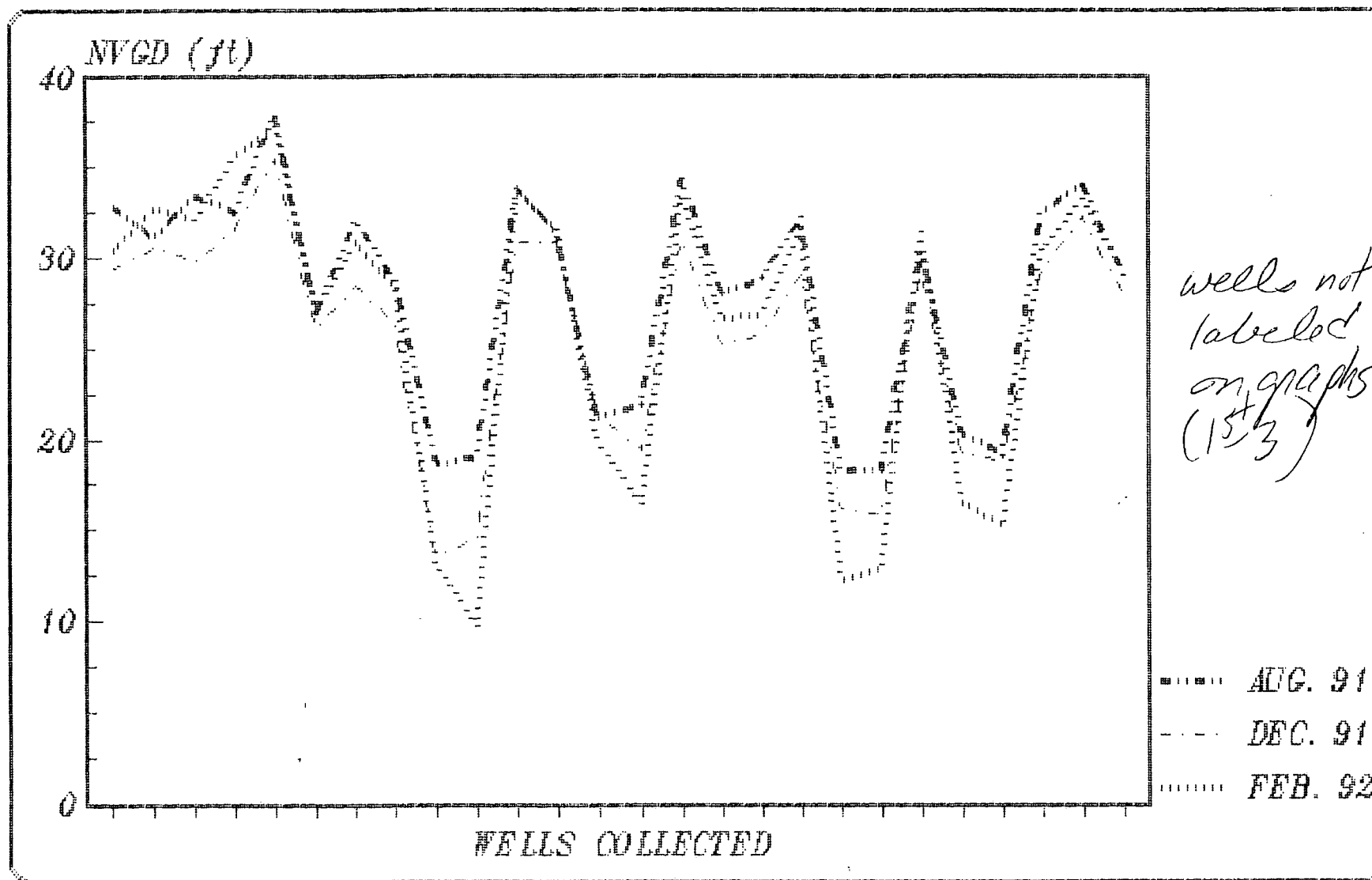
STATISTICS FOR COLLECTIONS FROM DEC. 1988 THRU FEB. 1992

WELL IDENT.	MEAN NVGD	STANDARD DEVIATION	% COEFFICIENT VARIANCE
=====	=====	=====	=====
MW 1	31.449	1.992	6.333
MW 2	31.165	1.158	3.715
MW 3	31.598	1.608	5.090
CW 4	32.300	1.542	4.773
CW 5	36.226	1.449	4.001
GC 1	26.912	1.509	5.607
GC 3	30.175	1.318	4.367
GC 4	28.331	1.965	6.937
SA 3	13.322	3.685	27.663
SA 4	13.493	6.030	44.688
GC 2	32.676	1.205	3.686
GC 6	31.309	0.596	1.905
SA 2	20.955	4.652	22.198
SA 5	15.602	4.740	30.383
LRII 1	32.947	1.057	3.209
LRII 3	26.637	1.282	4.814
LRII 4	27.256	1.320	4.844
LRII 5	30.499	1.415	4.638
SA 7	10.398	4.218	40.567
SA 8	13.898	7.503	53.984
SMR 1	30.378	0.988	3.251
SMR 2	15.742	3.833	24.348
SA 6	14.832	4.807	32.413
LRII 2	30.258	1.289	4.261
MW 6	32.908	0.632	1.920
GC 5	28.706	0.615	2.143

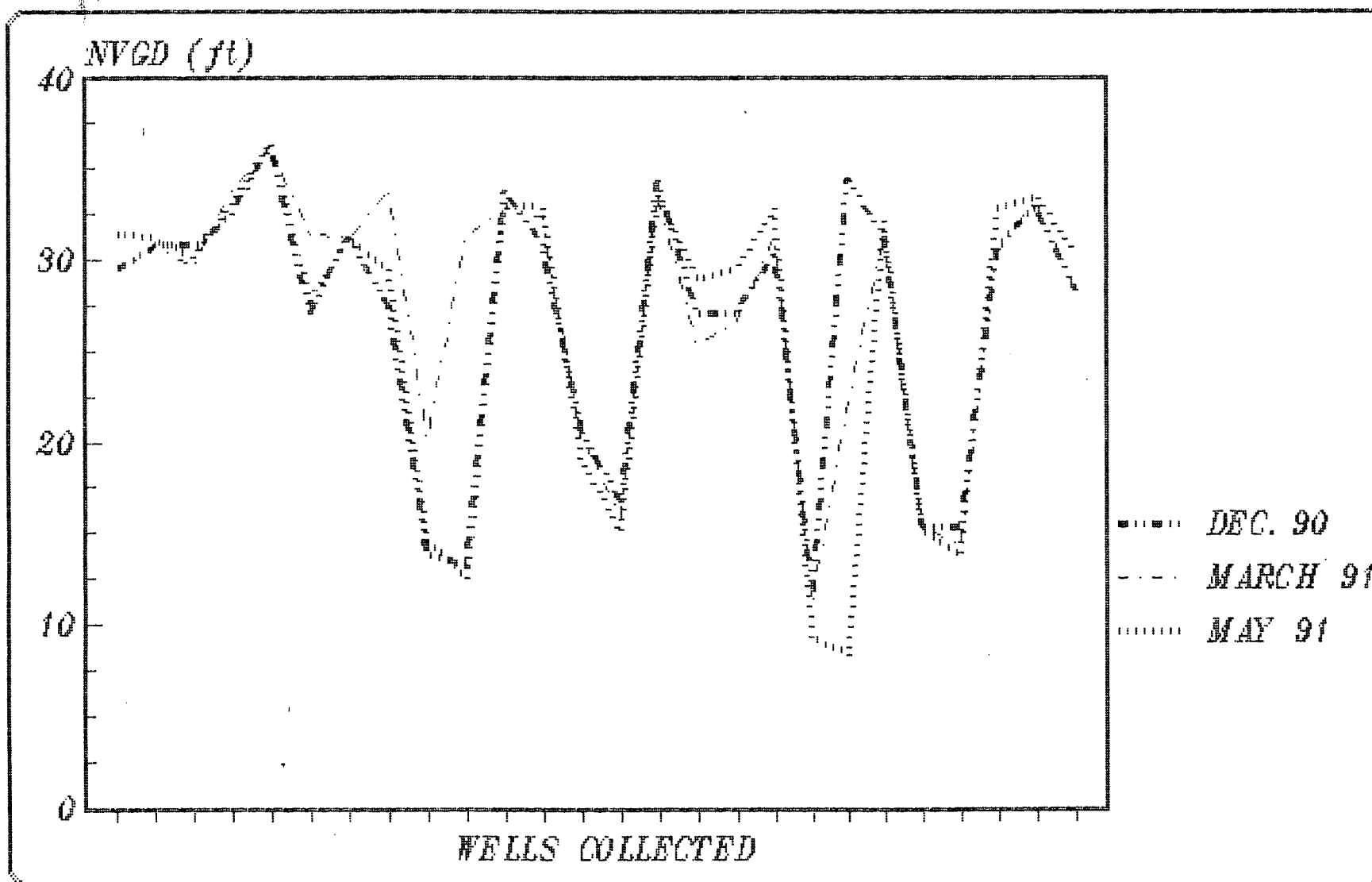
Groundwater
Comparison Graph

THESE MARGINAL FLUCTUATIONS IN EACH WELL NVGD ARE GRAPHICALLY
DEPICTED OVER THE STUDY PERIOD. AGAIN SUGGESTING NO APPRECIABLE
TRENDS OR TENDENCIES

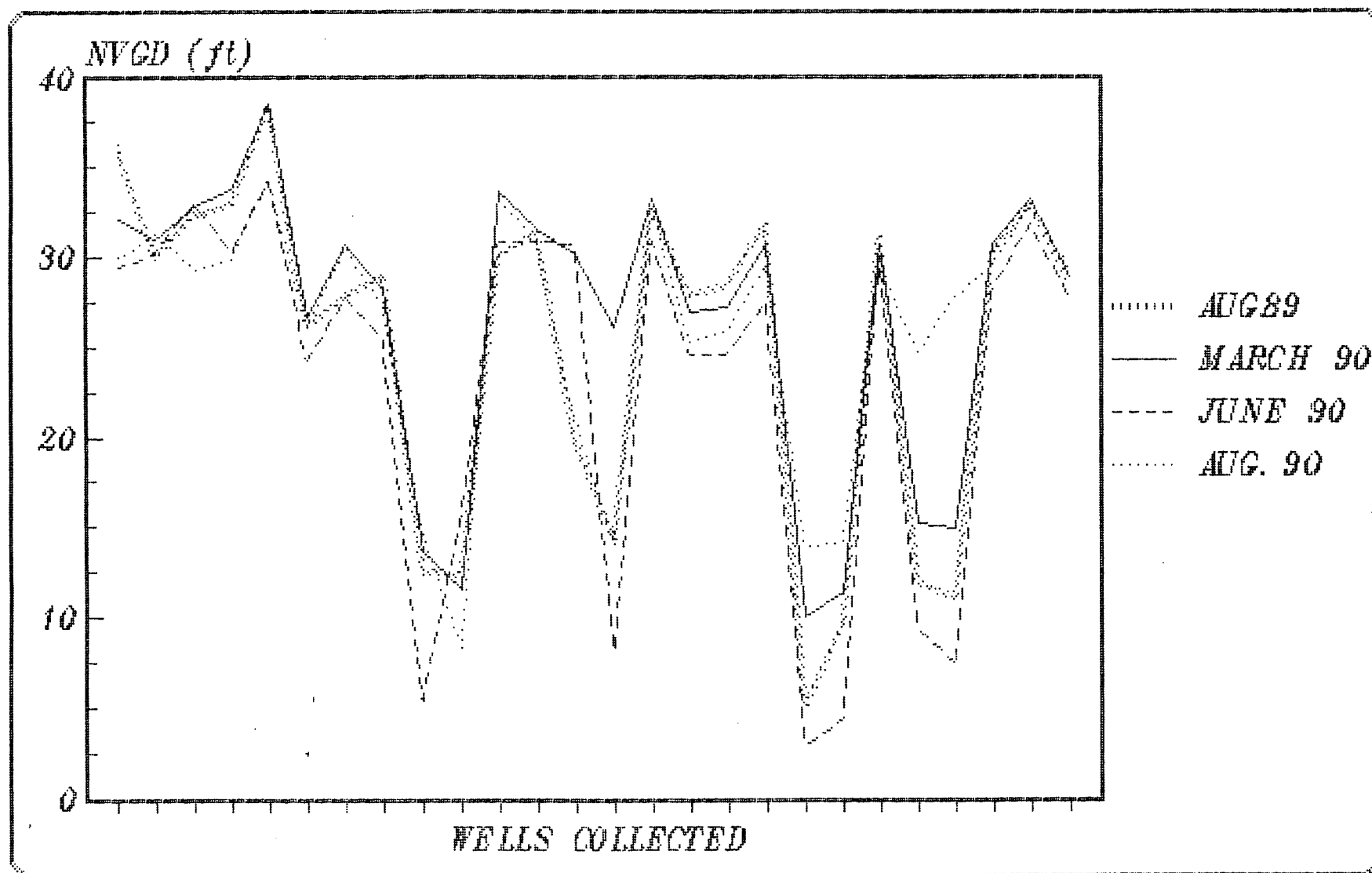




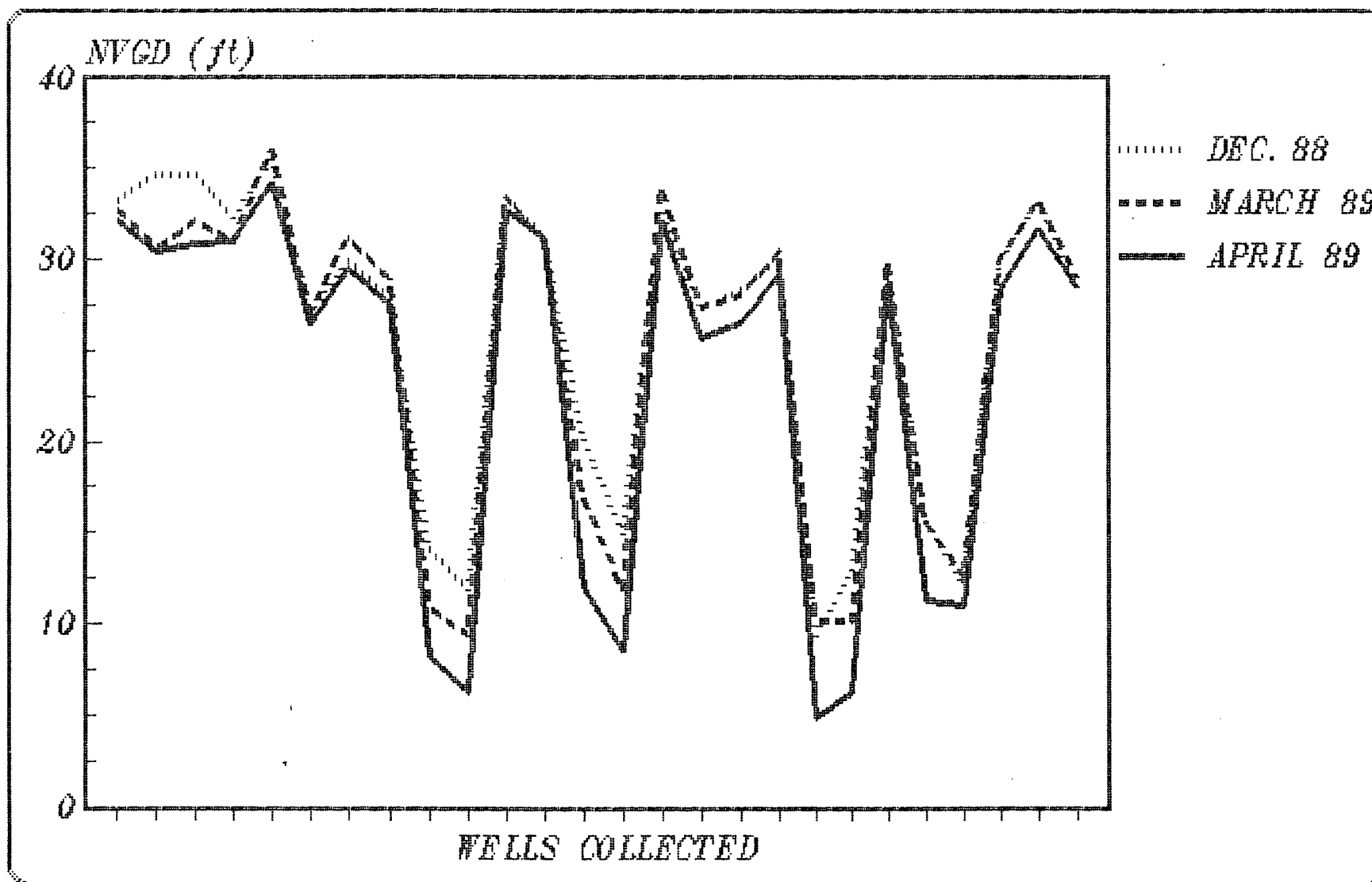
Graph-in-the-Box EXECUTIVE



Graph-in-the-Bar EXECUTIVE

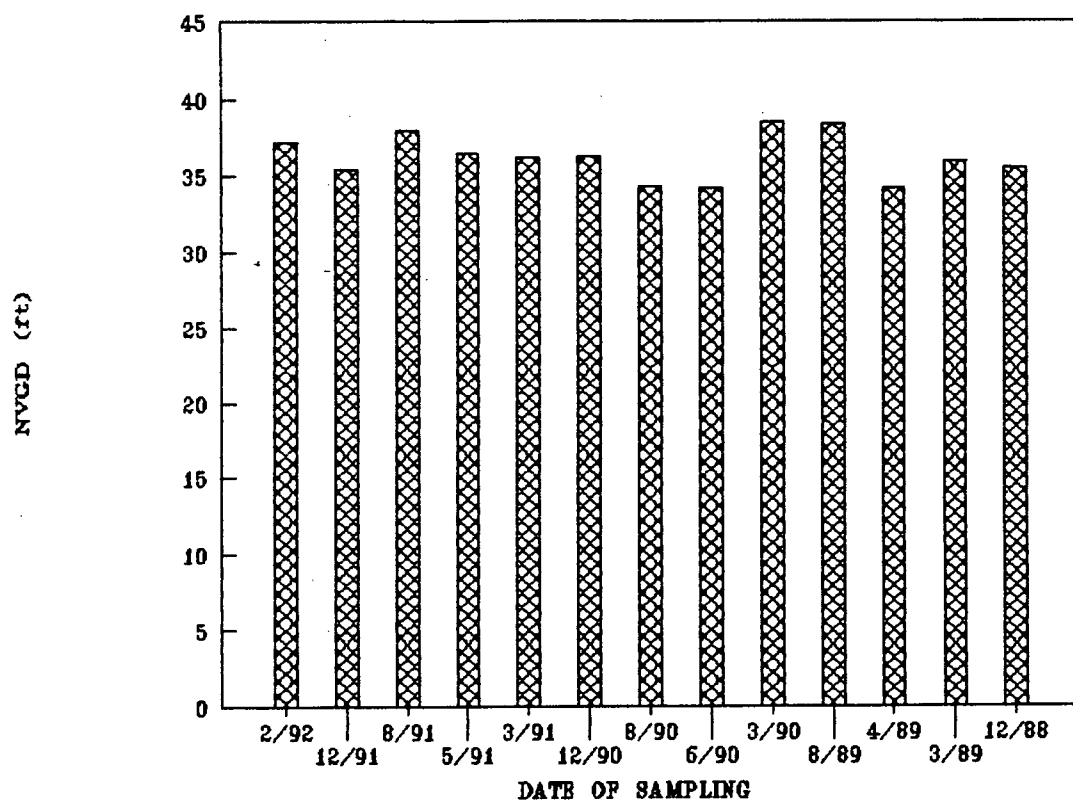


Graph-in-the-Box EXECUTIVE

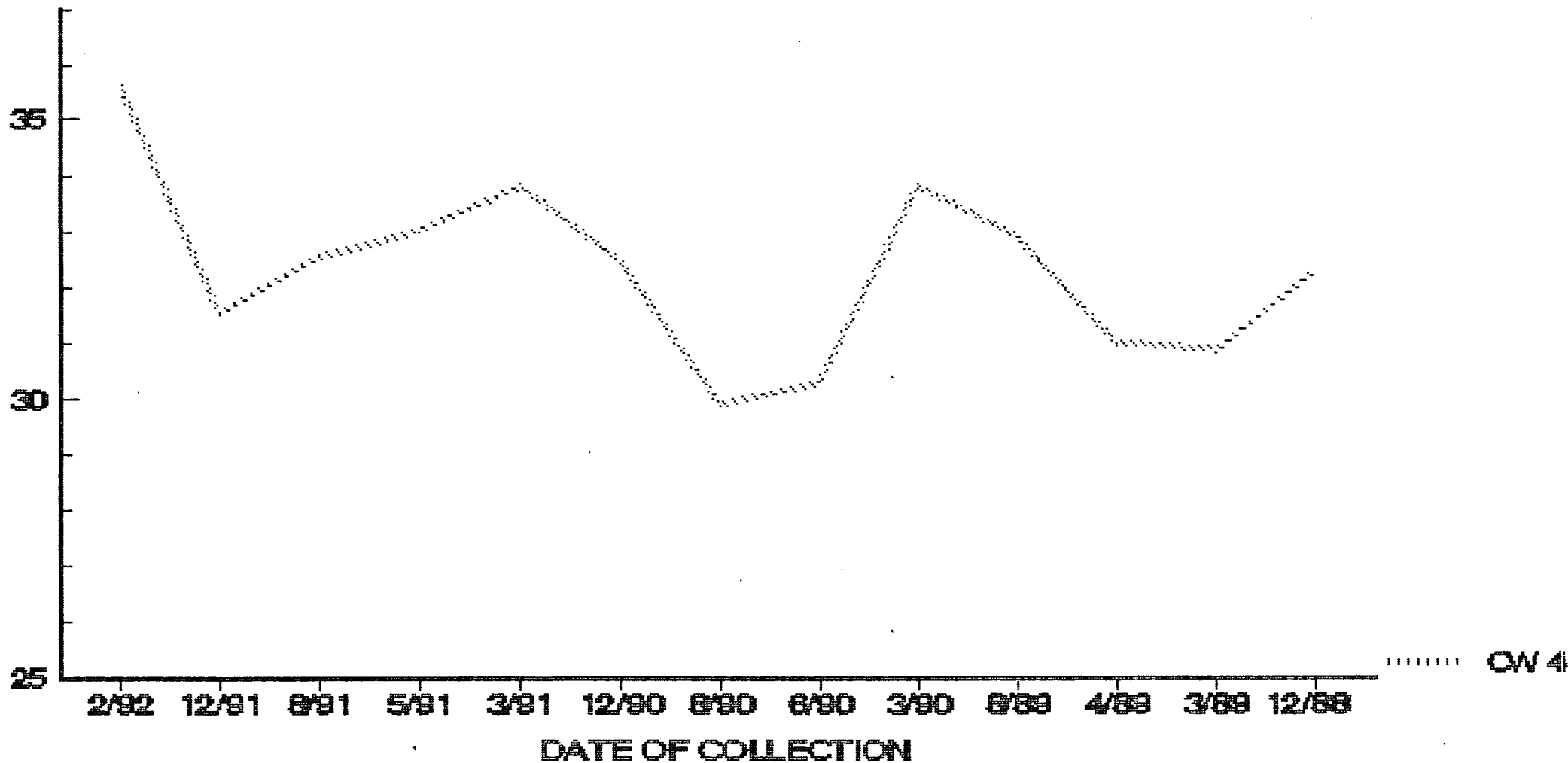


Graph-in-the-Bar EXECUTIVE

ACCUMULATED NVGD FOR CW5

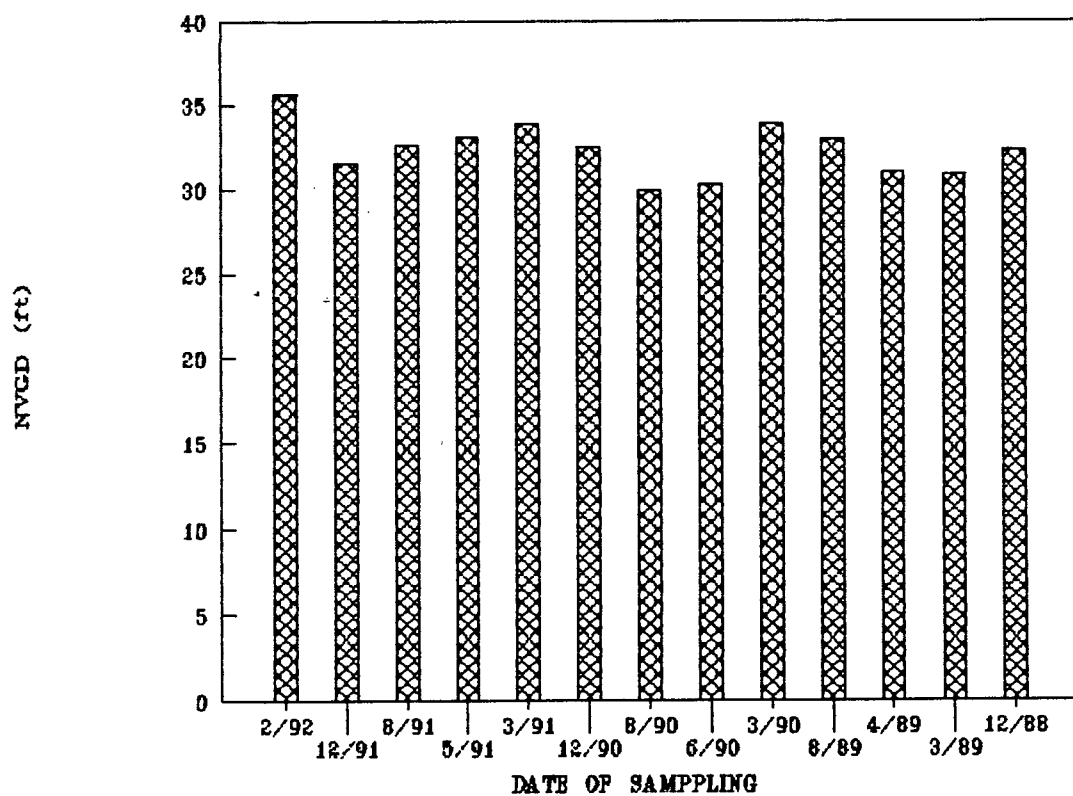


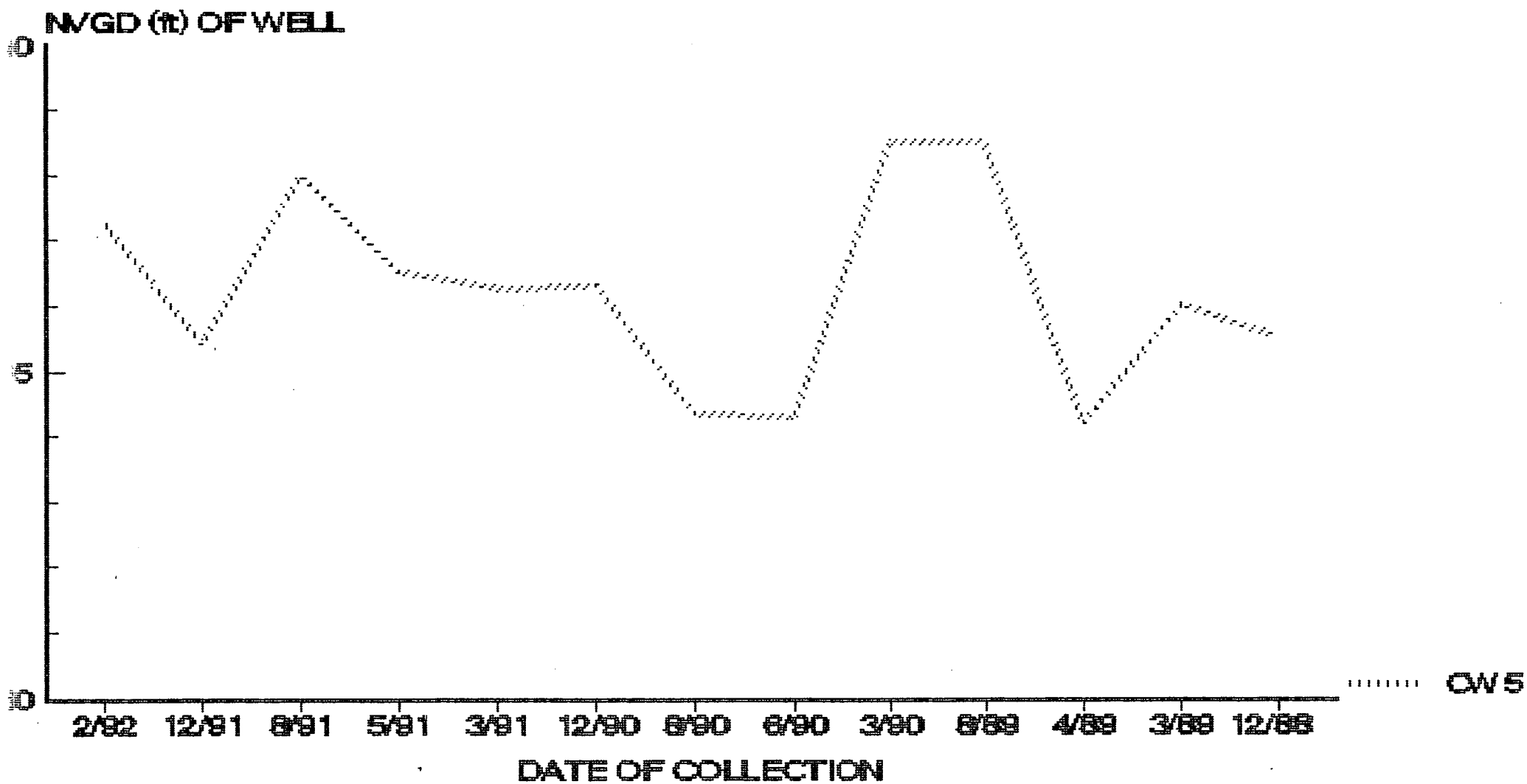
NVGD (ft) OF WELL



LANDFILL NVGD FOR WELL 2

DATE

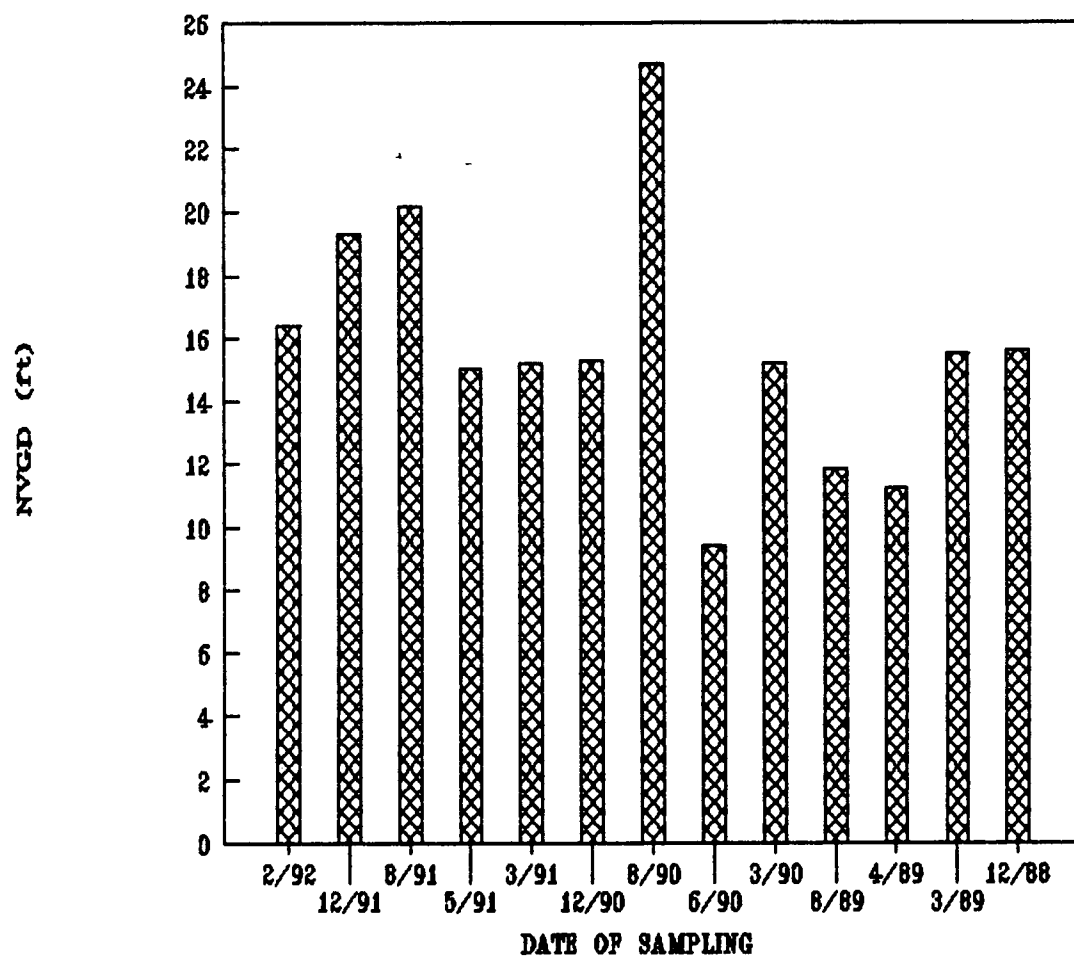
ACCUMULATED NVGD FOR CW4

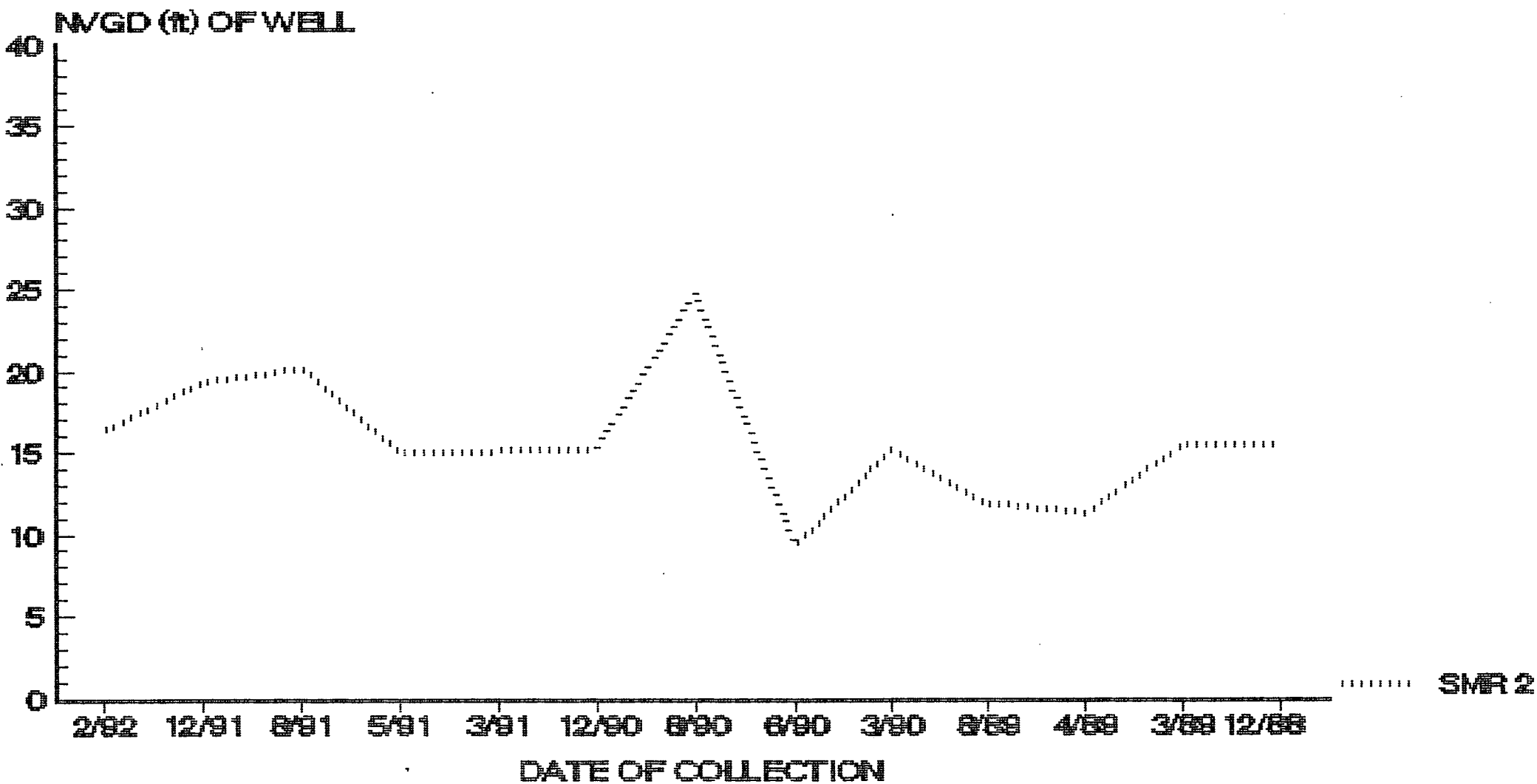


LANDFILL NVGD FOR WELLS

8/82

ACCUMULATED NVGD FOR SMR 2

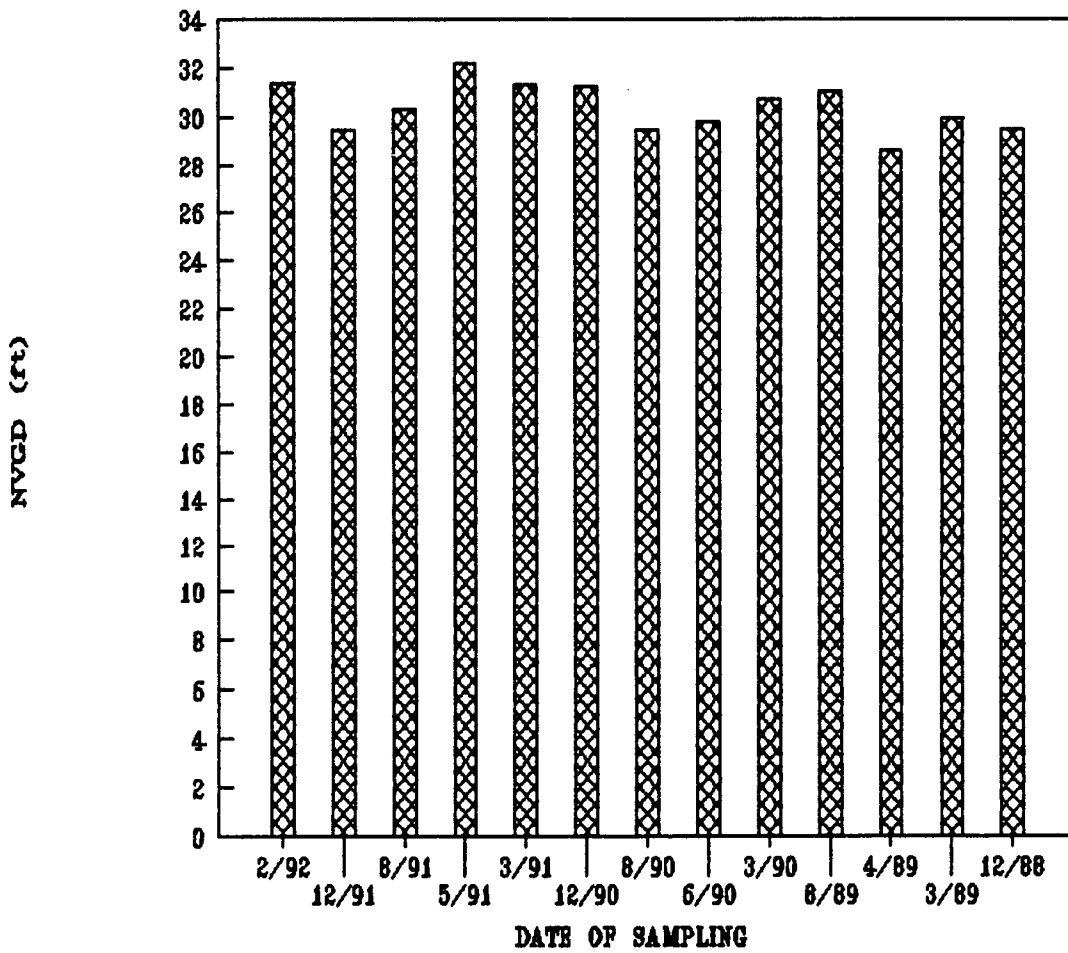


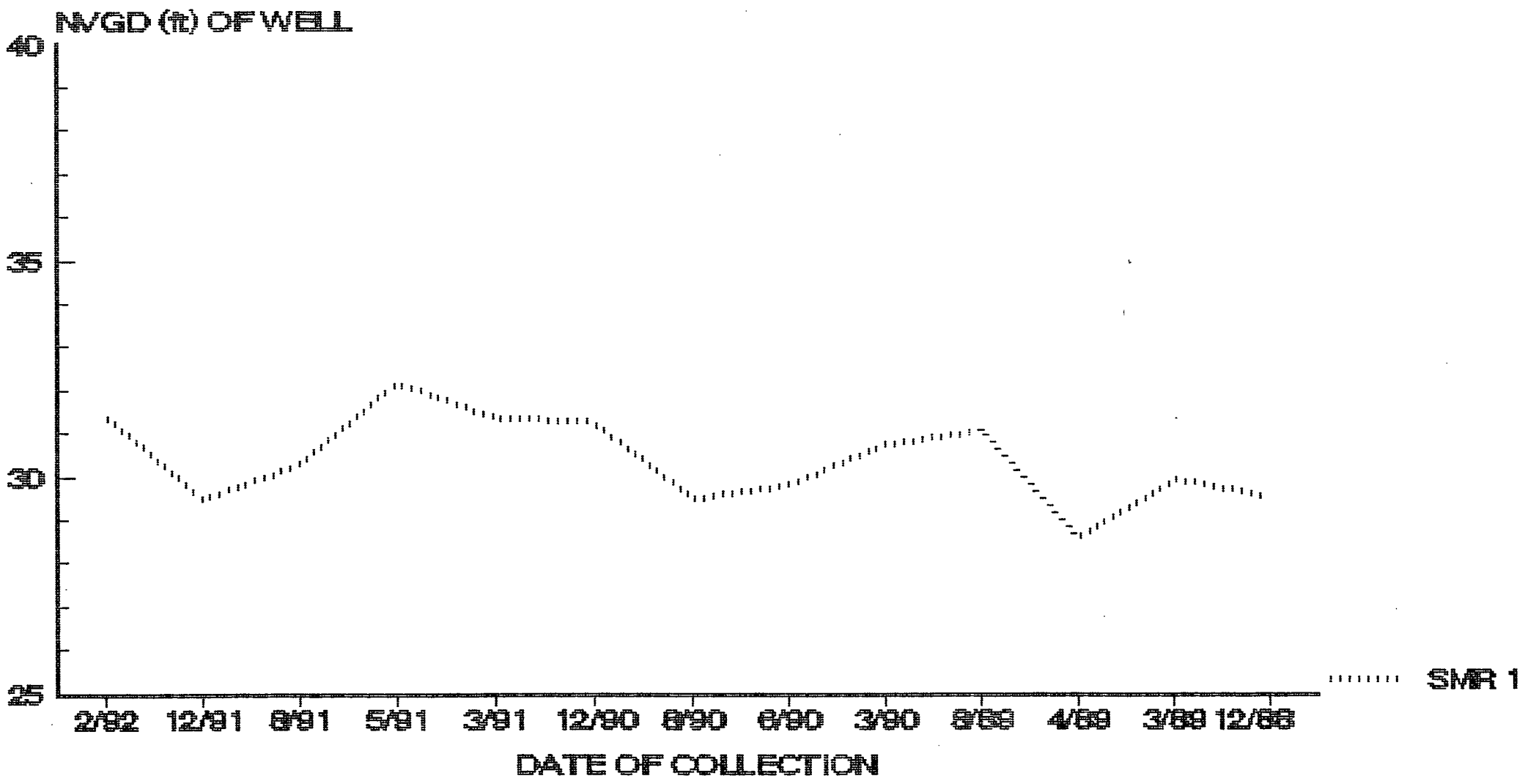


UNDEVELOPED FOR WELLS

SAFE

ACCUMULATED NVGD FOR SMR 1

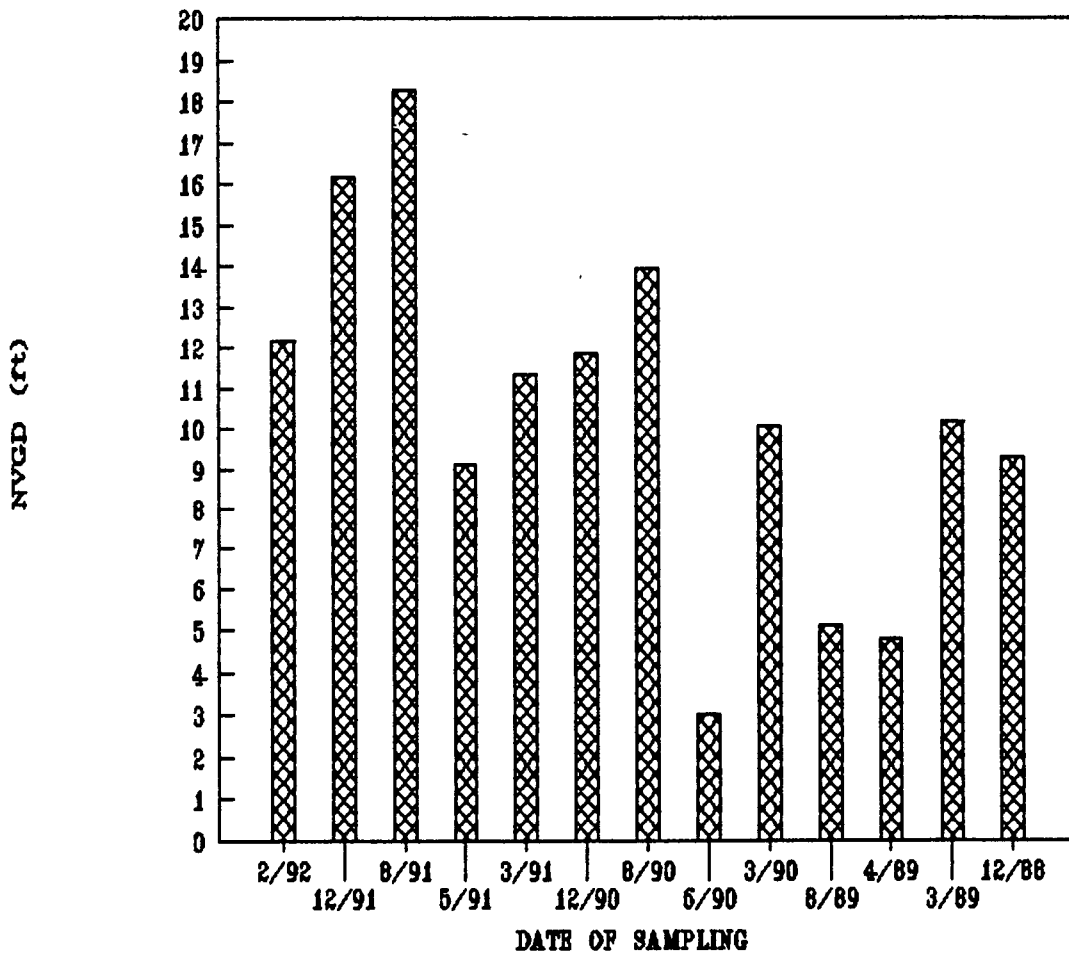




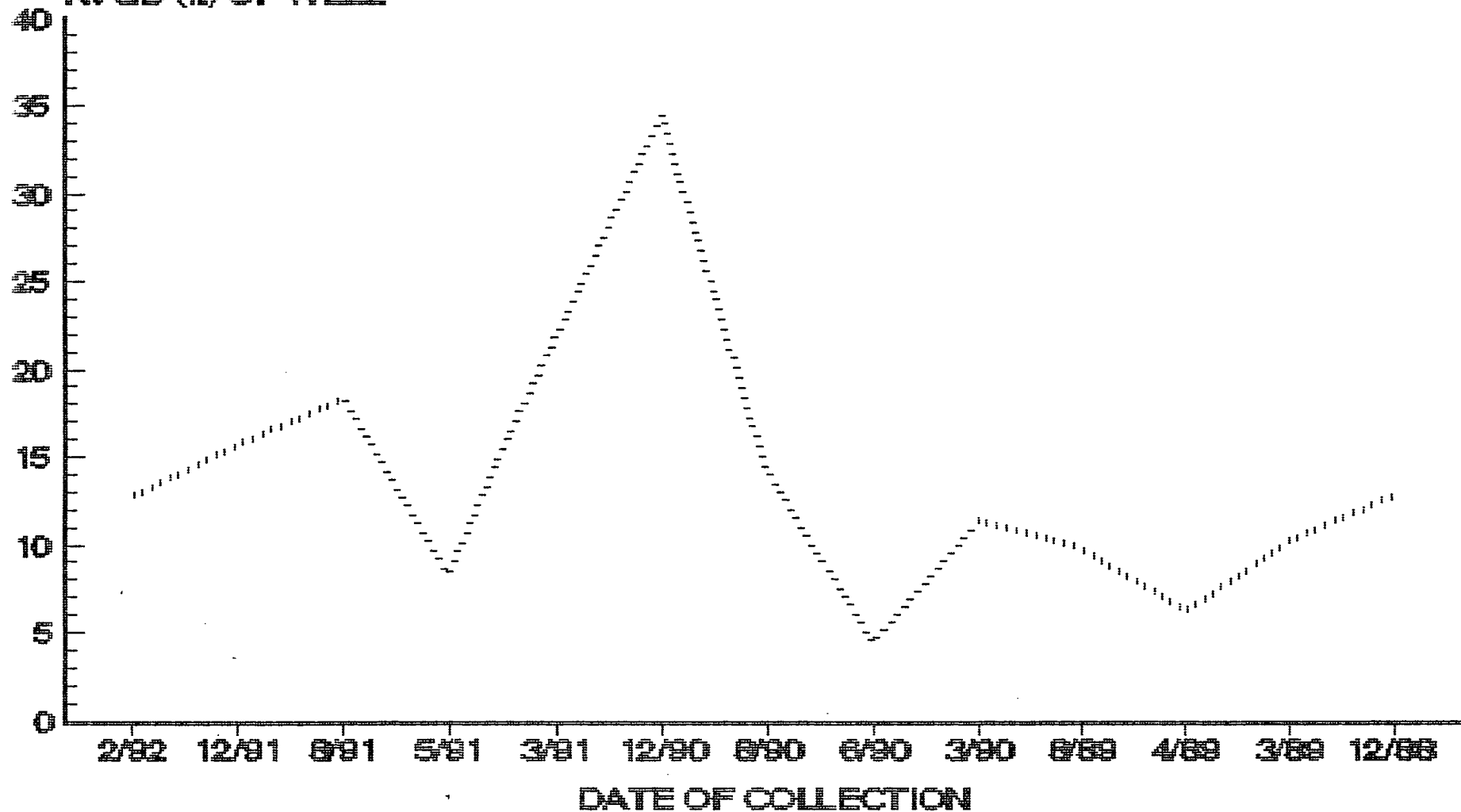
LANDFILL NVGD FOR WELL 8

SMR 1

ACCUMULATED NVGD FOR SA 7



INVD (ft) OF WELL

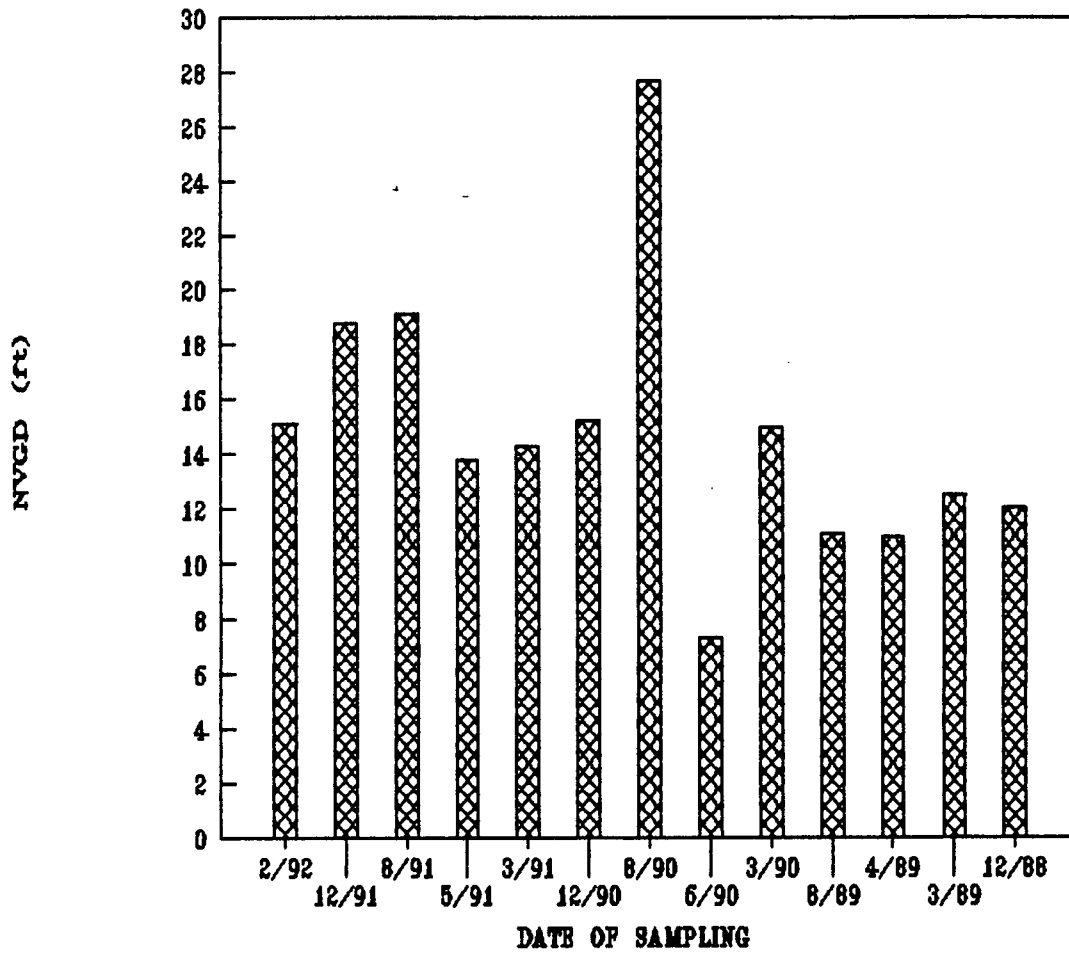


..... SA 7

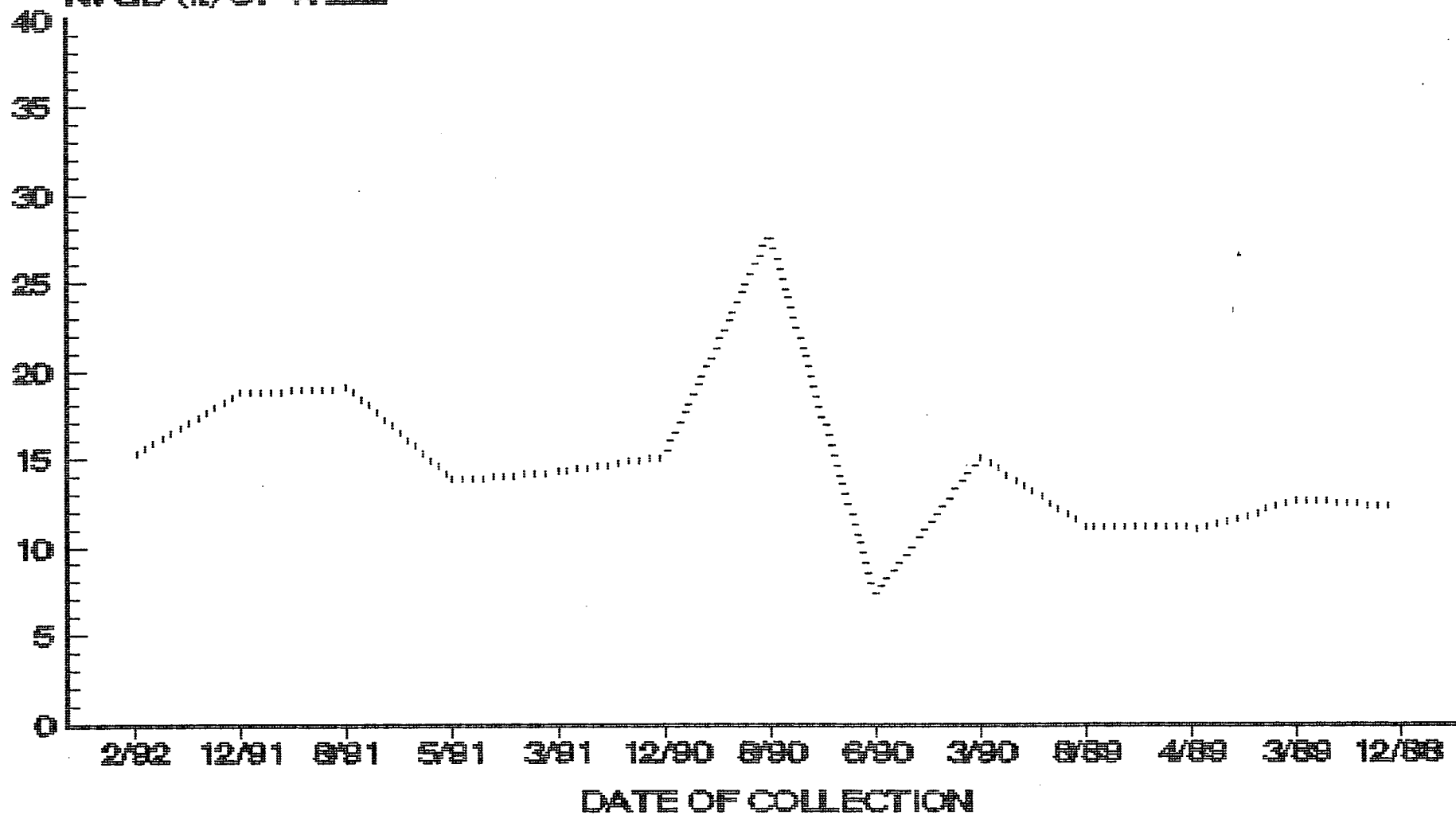
LANDFILL INVD FOR WELL 13

045

ACCUMULATED NVGD FOR SA 6



NVGD (ft) OF WELL

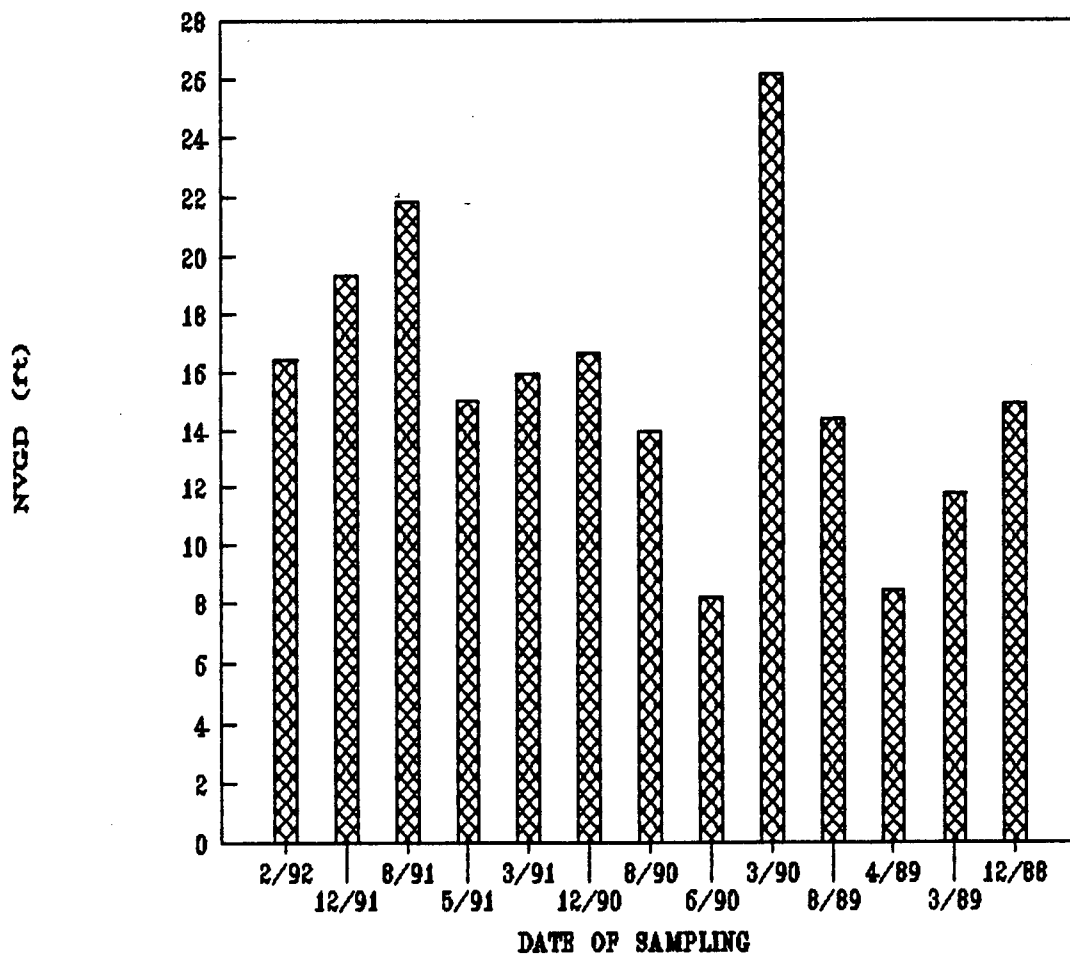


SA 6

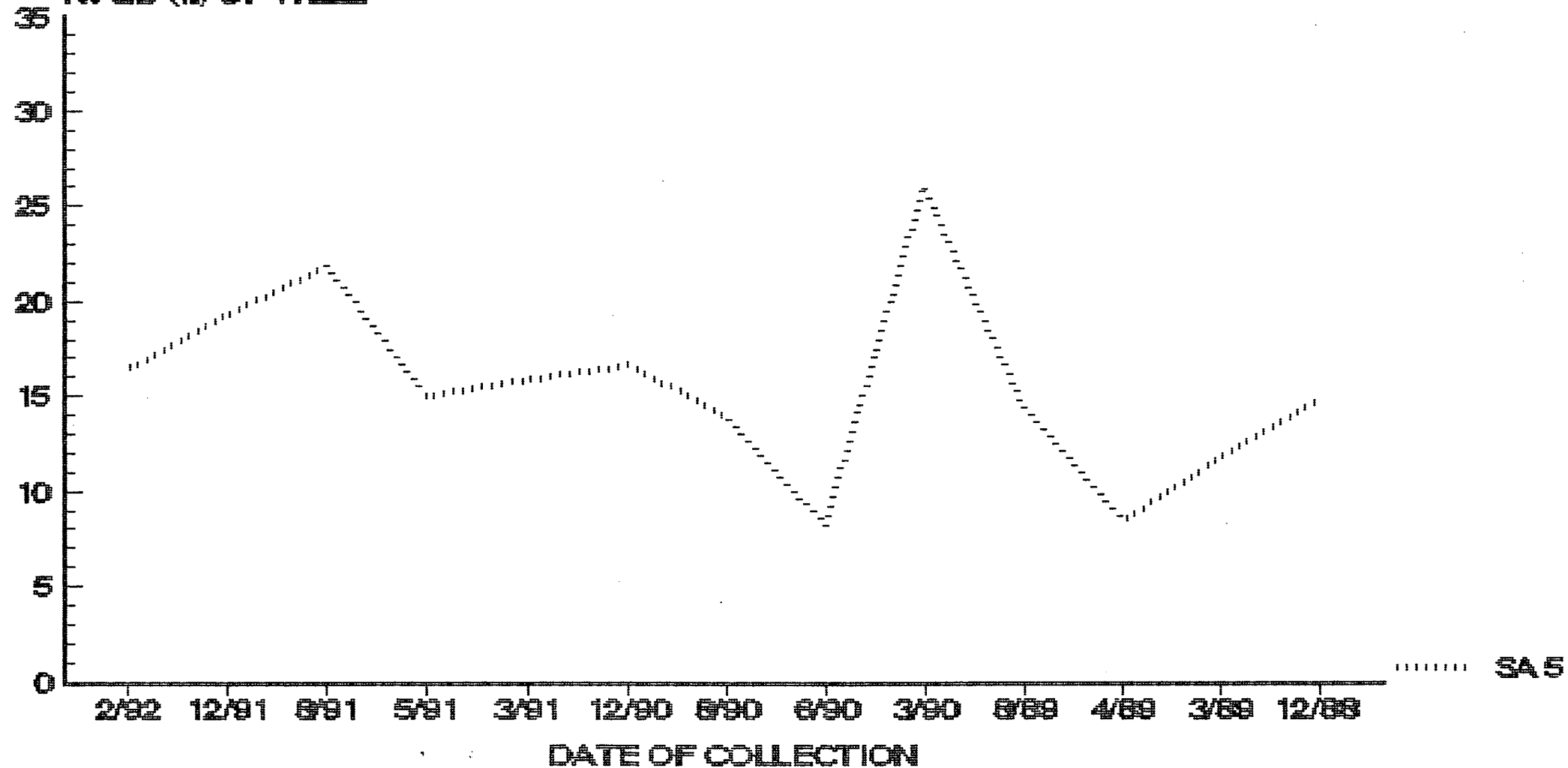
LANDFILL NVGD FOR WELLS

048

ACCUMULATED NVGD FOR SA5



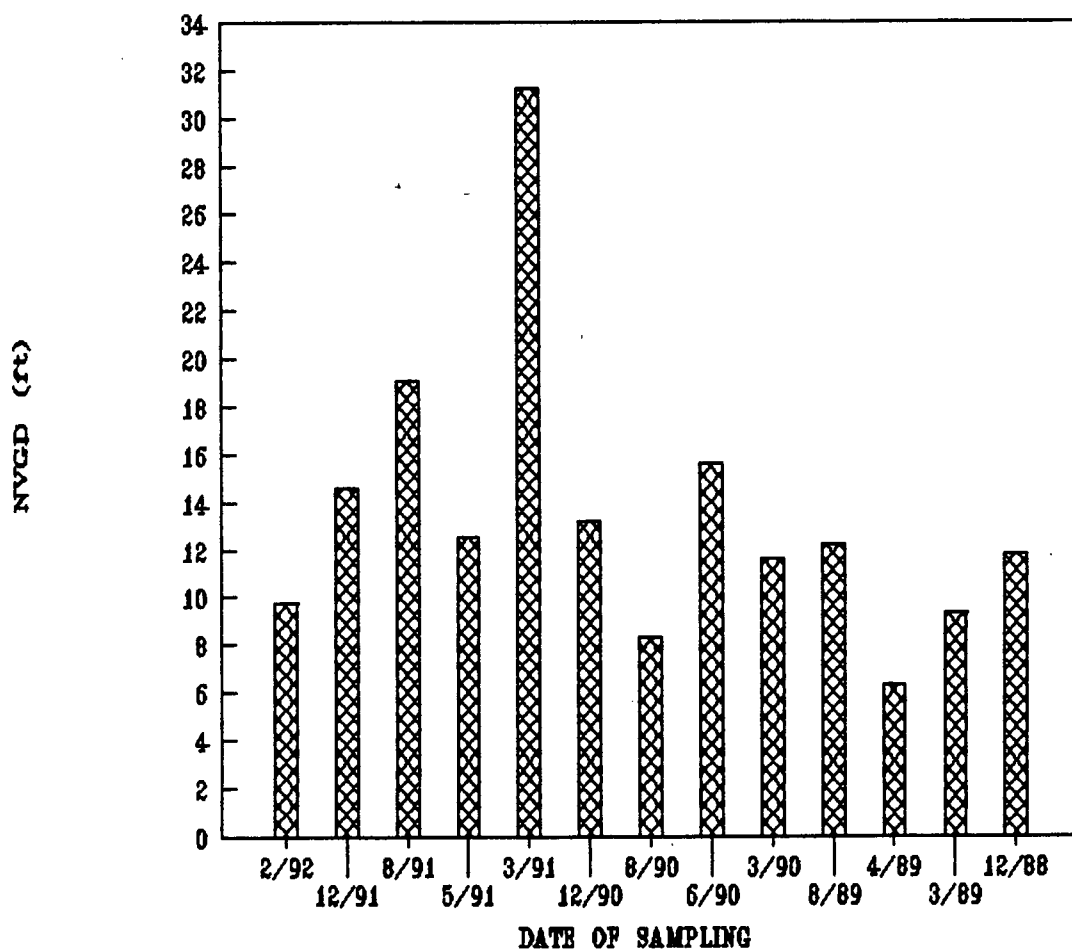
NVGD (ft) OF WELL

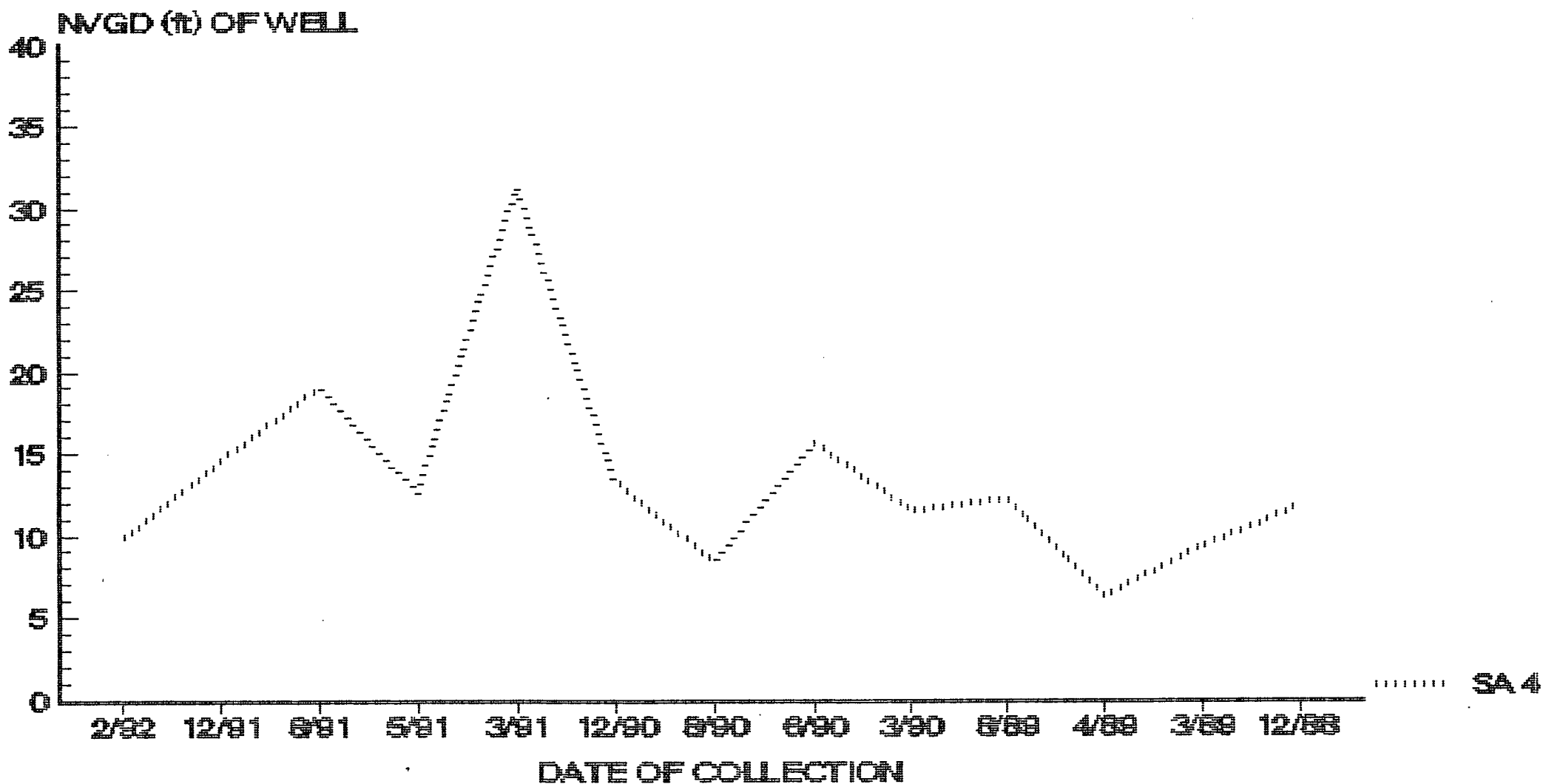


LANDFILL NVGD FOR WELLS

845

ACCUMULATED NVGD FOR SA4

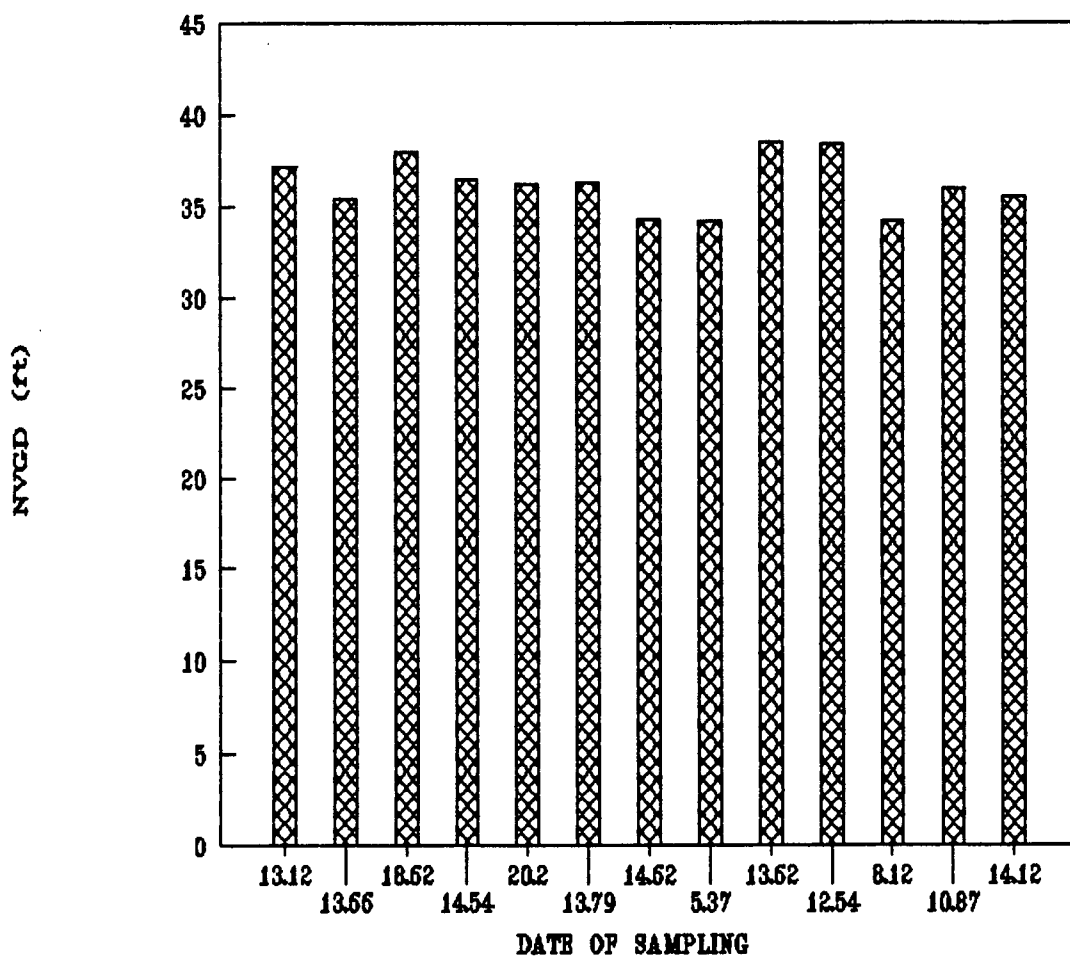


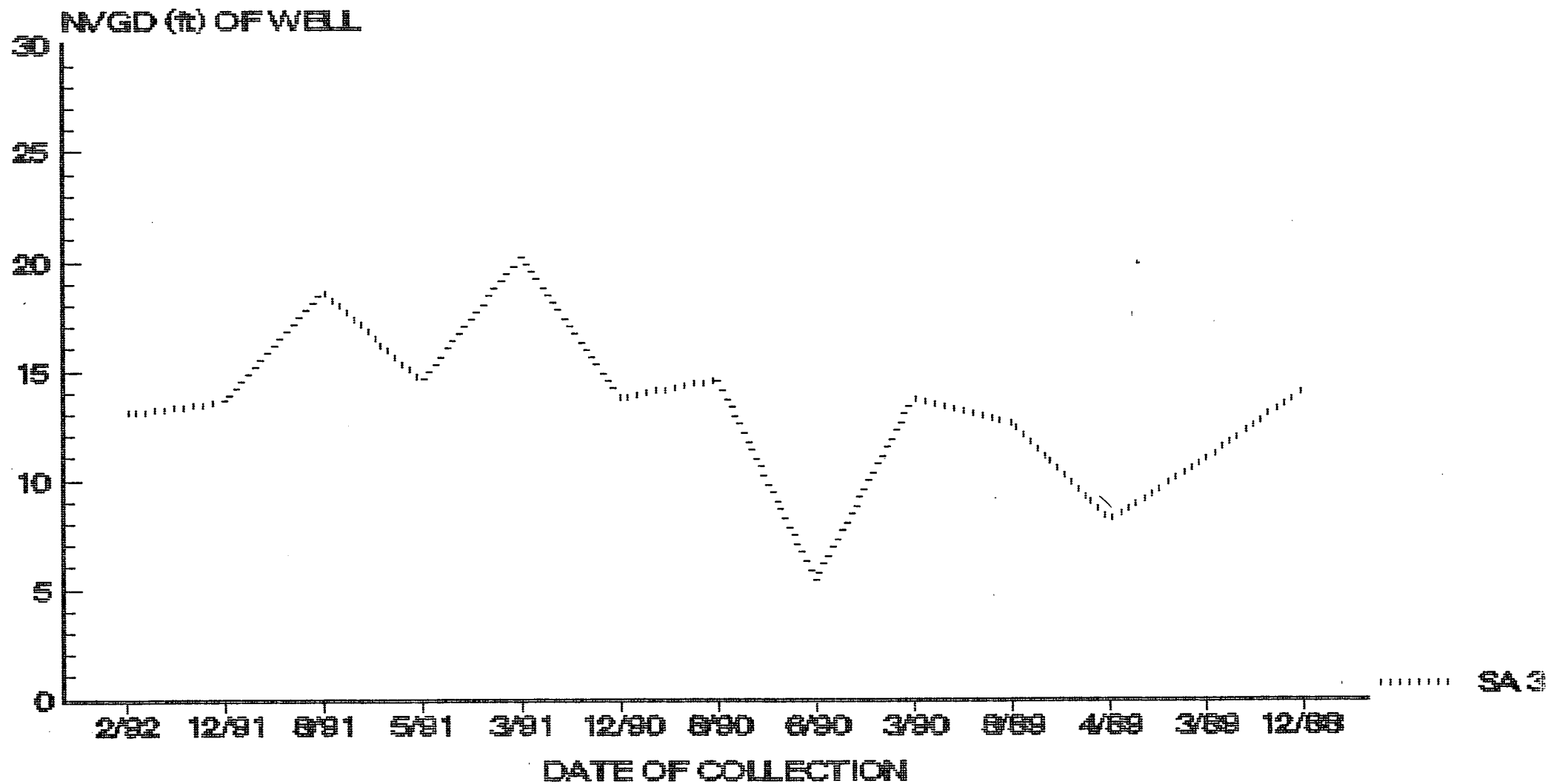


WIDE-FLIGHT NVGD FOR WELLS

SA 4

ACCUMULATED NVGD FOR SA3

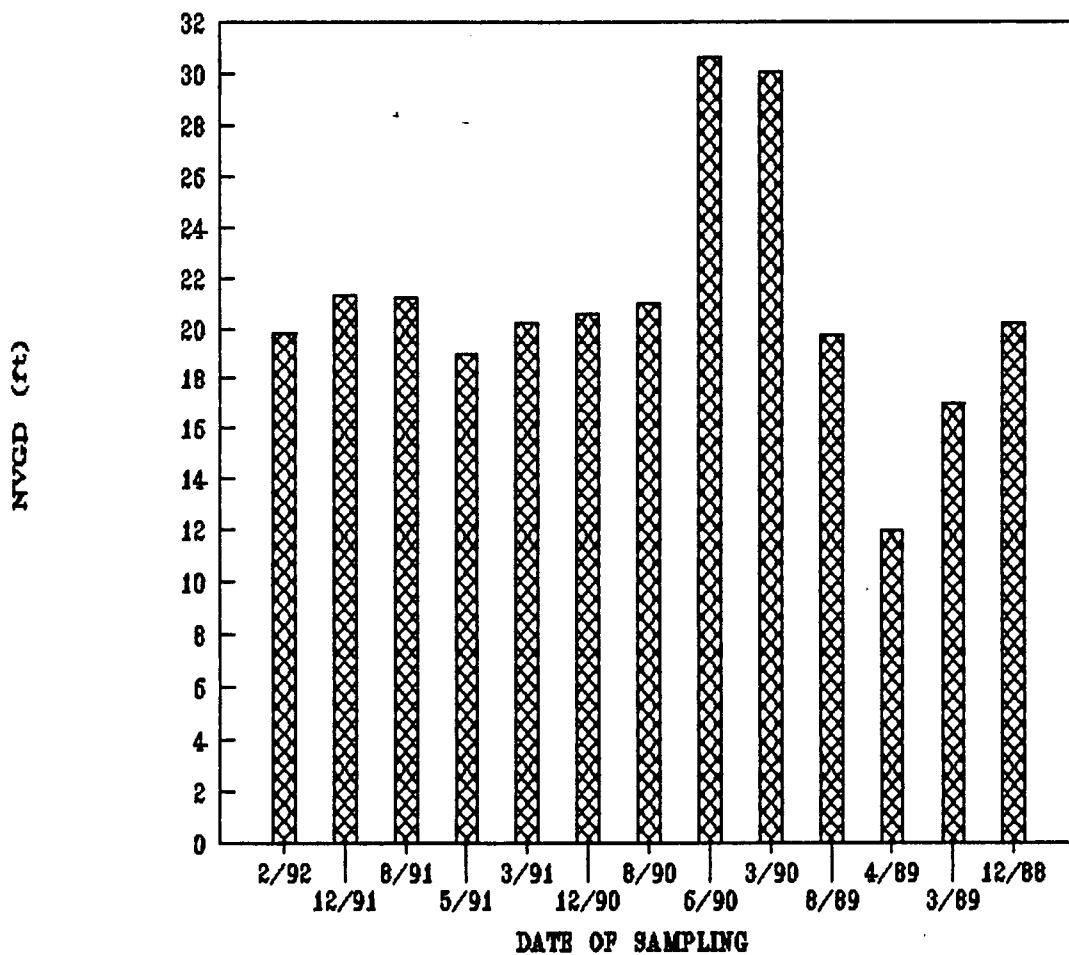




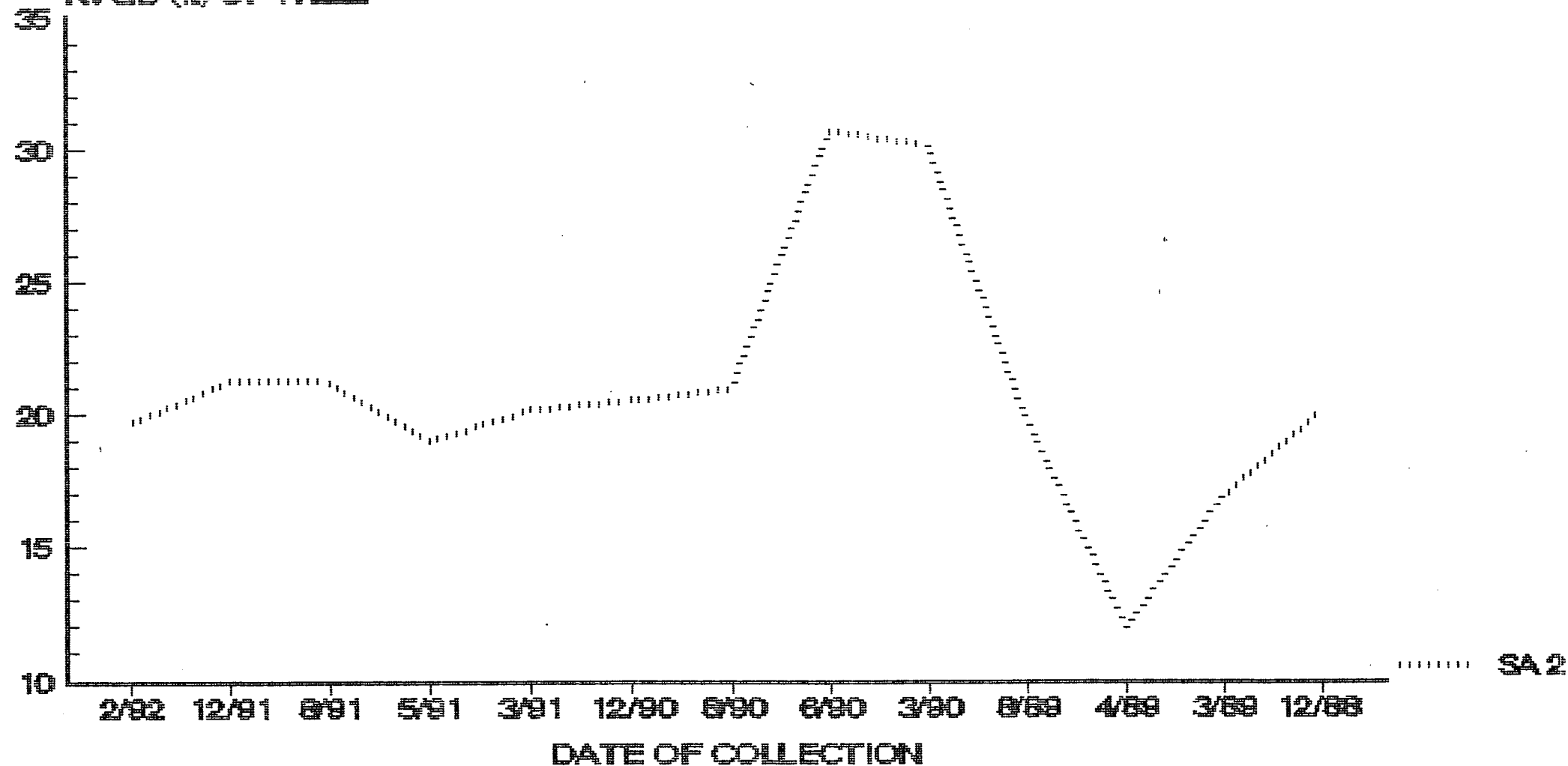
LANDFILL NVGD FOR WELL 12

843

ACCUMULATED NVGD FOR SA2

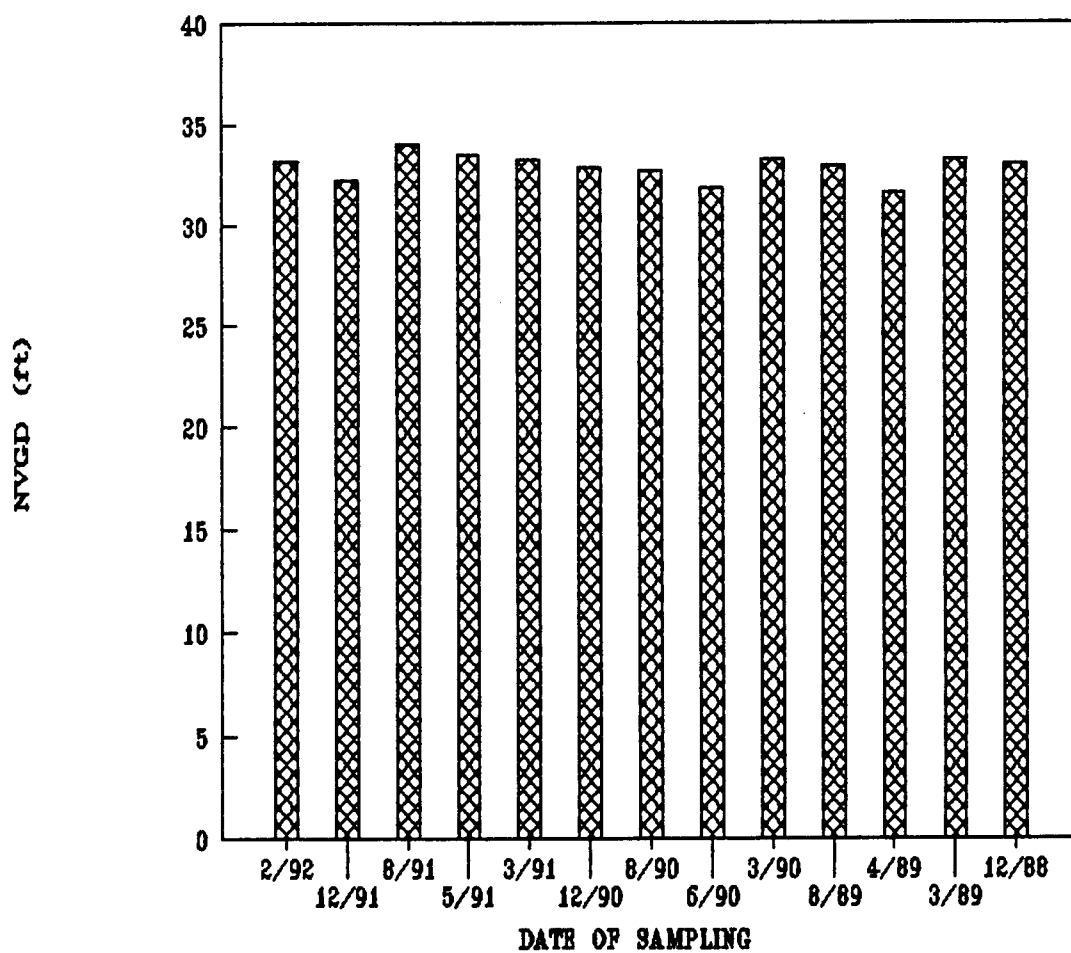


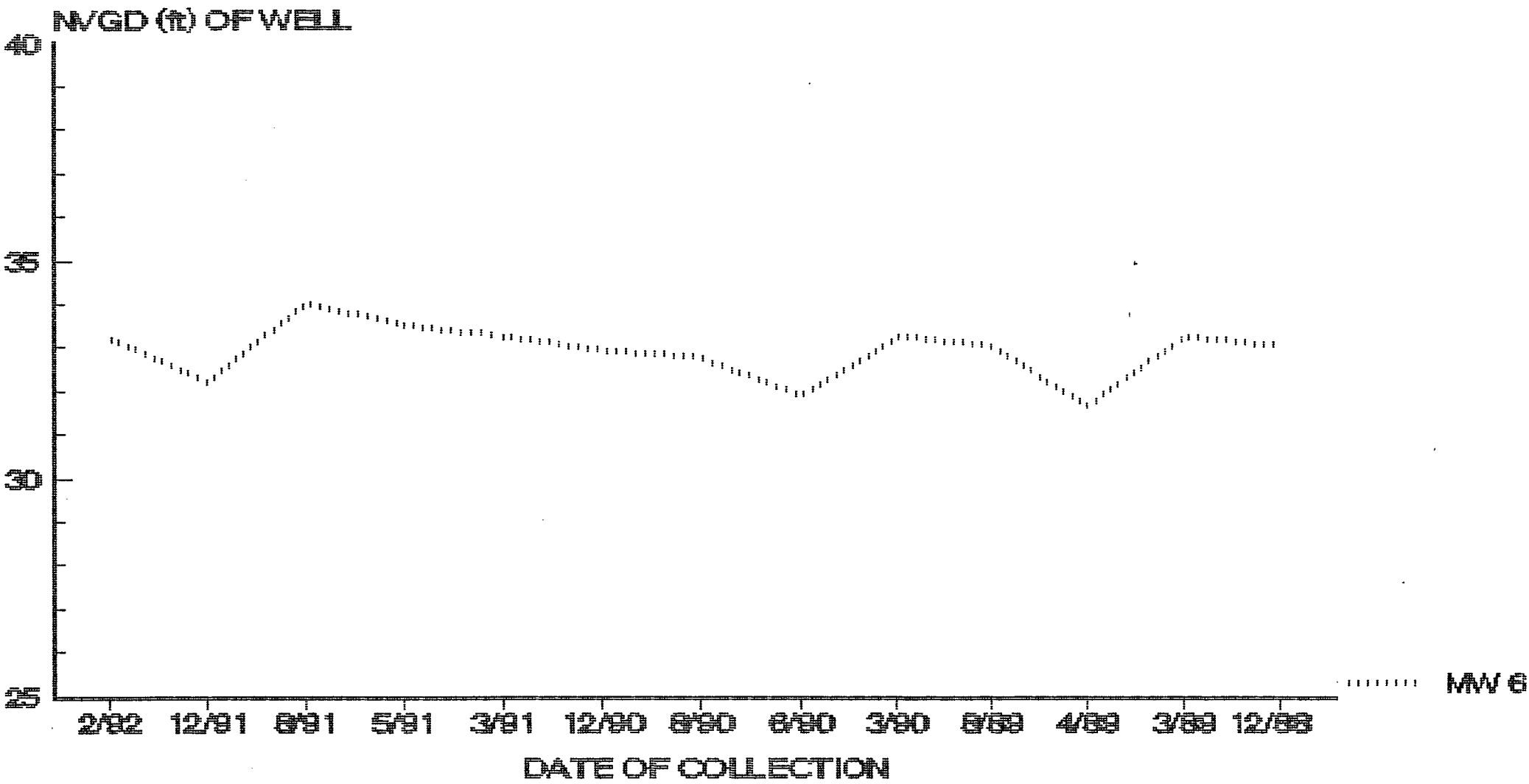
NVGD (ft) OF WELL



LANDFILL NVGD FOR WELL 2

ACCUMULATED NVGD FOR MW 6

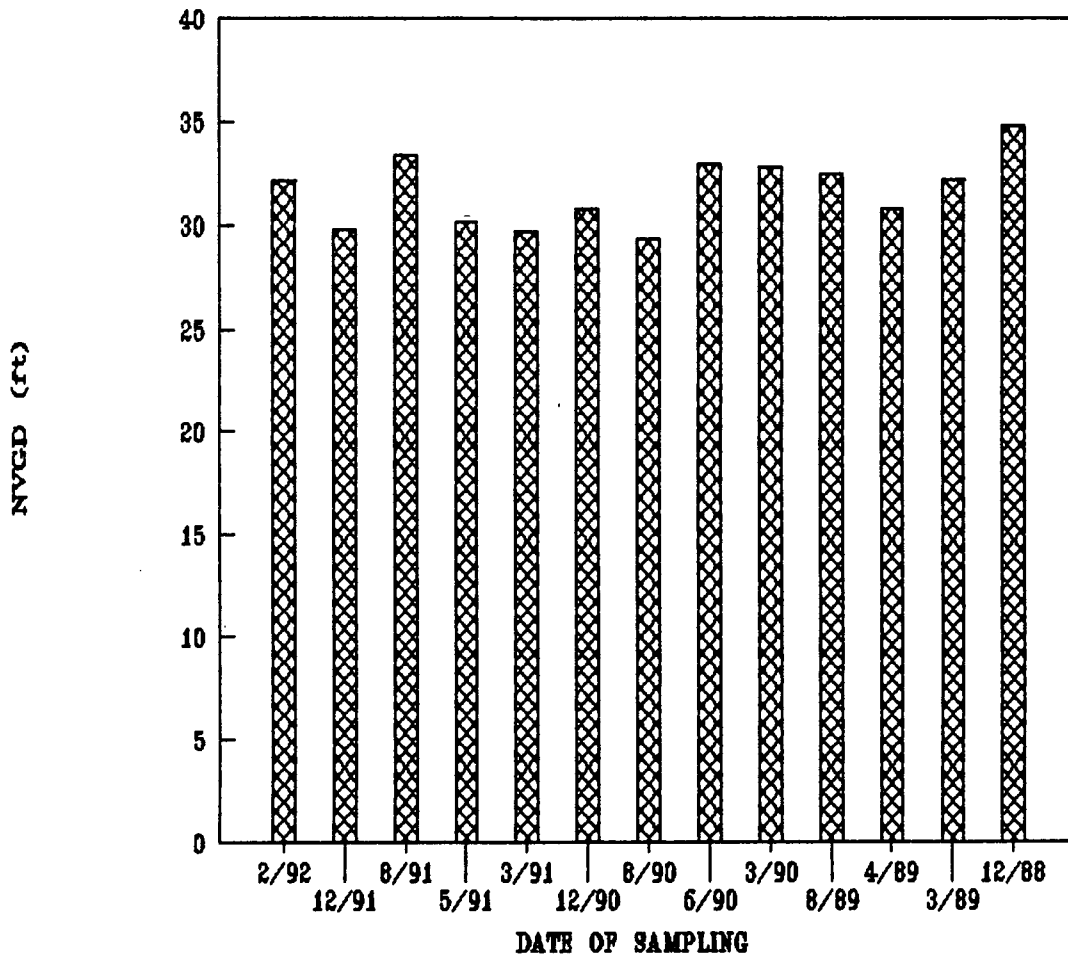


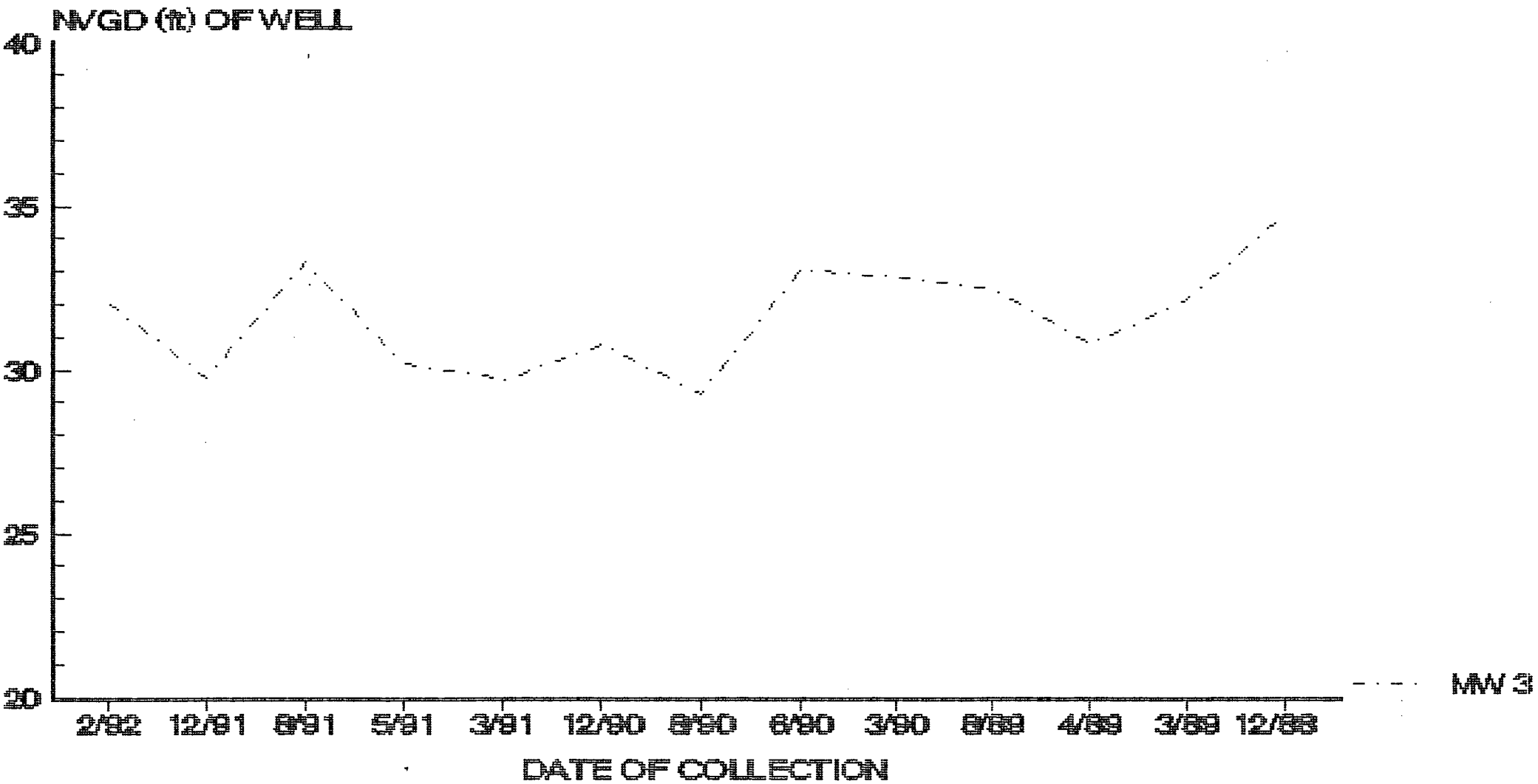


LANDFILL NVGD FOR WELLS

MW 6

ACCUMULATED NVGD FOR MW 3

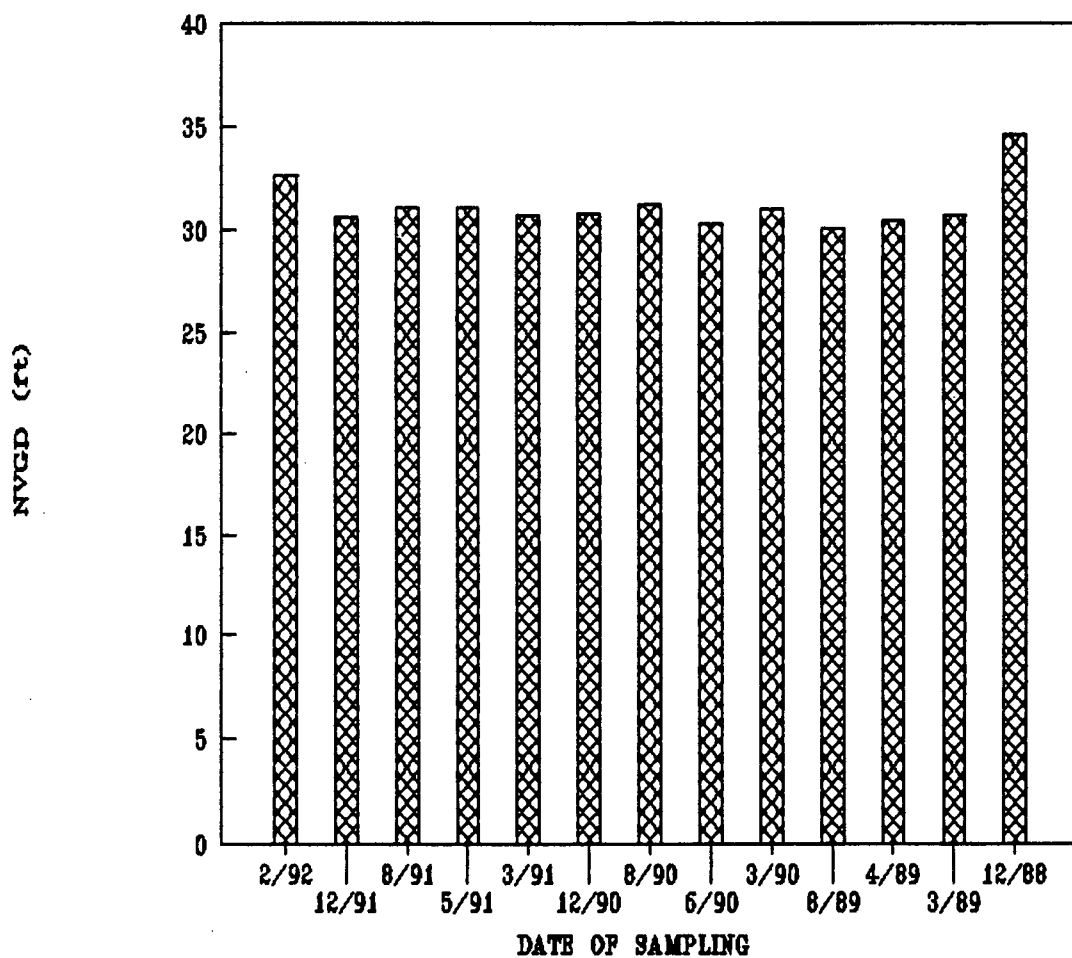


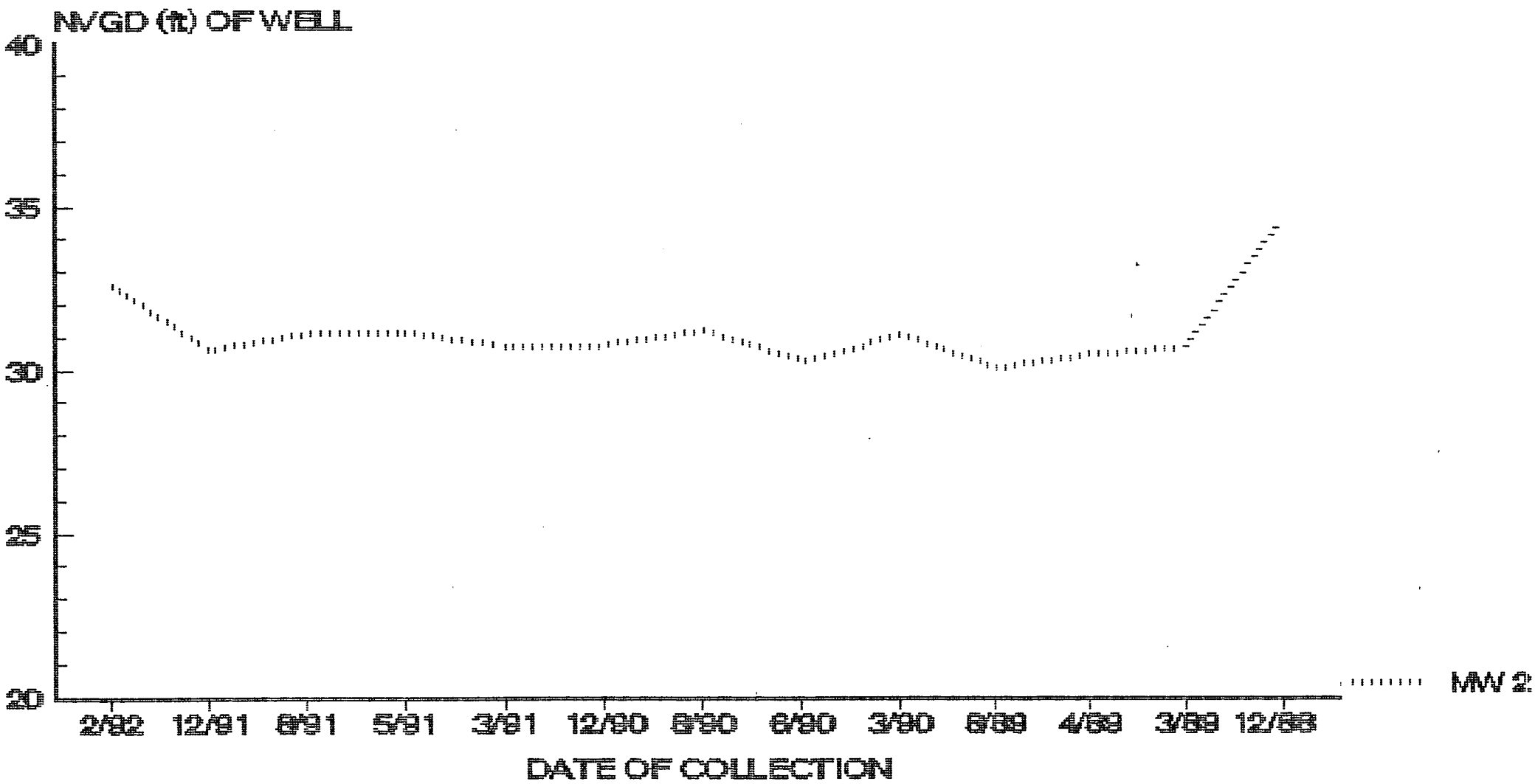


LANDFILL NVGD FOR WELLS

MW 3

ACCUMULATED NVGD FOR MW 2



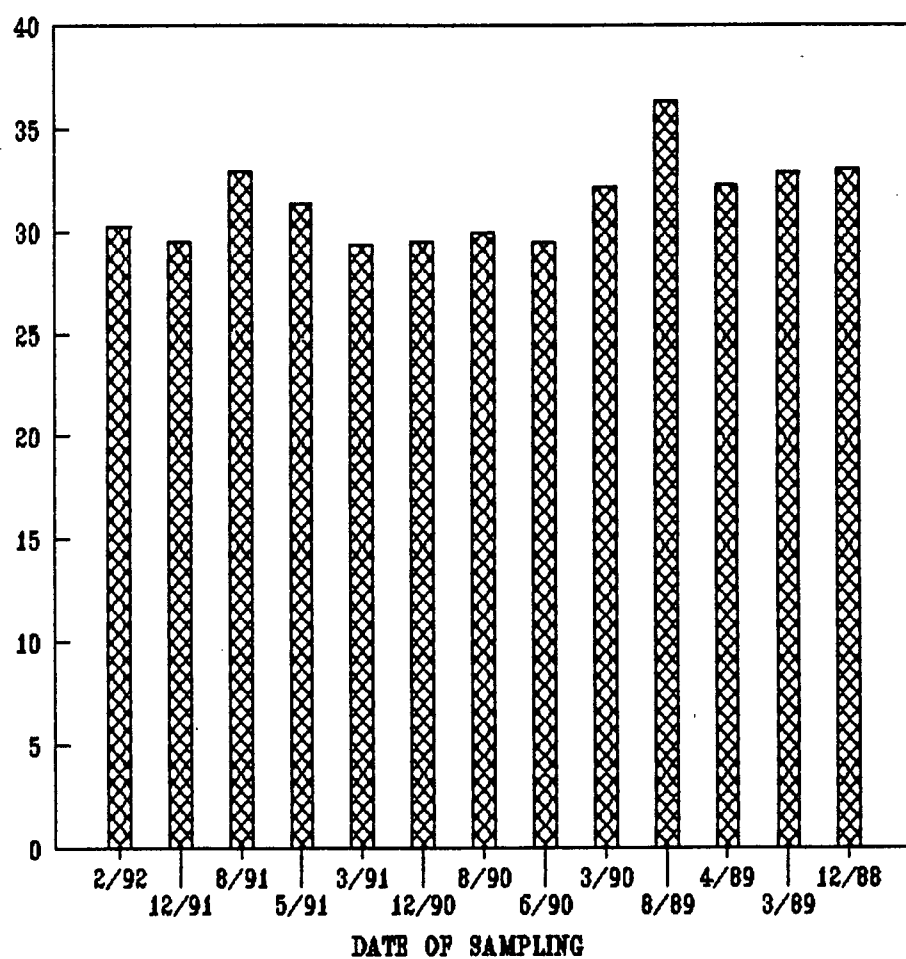


LANDFILL NVGD FOR WELLS

MW 2

ACCUMULATED NVGD FOR MW 1

NVGD (ft)



INVD (ft) OF WELL

40
35
30
25
20

2/92 12/91 8/91 5/91 3/91 12/90 8/90 6/90 3/90 8/89 4/89 3/89 12/88

DATE OF COLLECTION

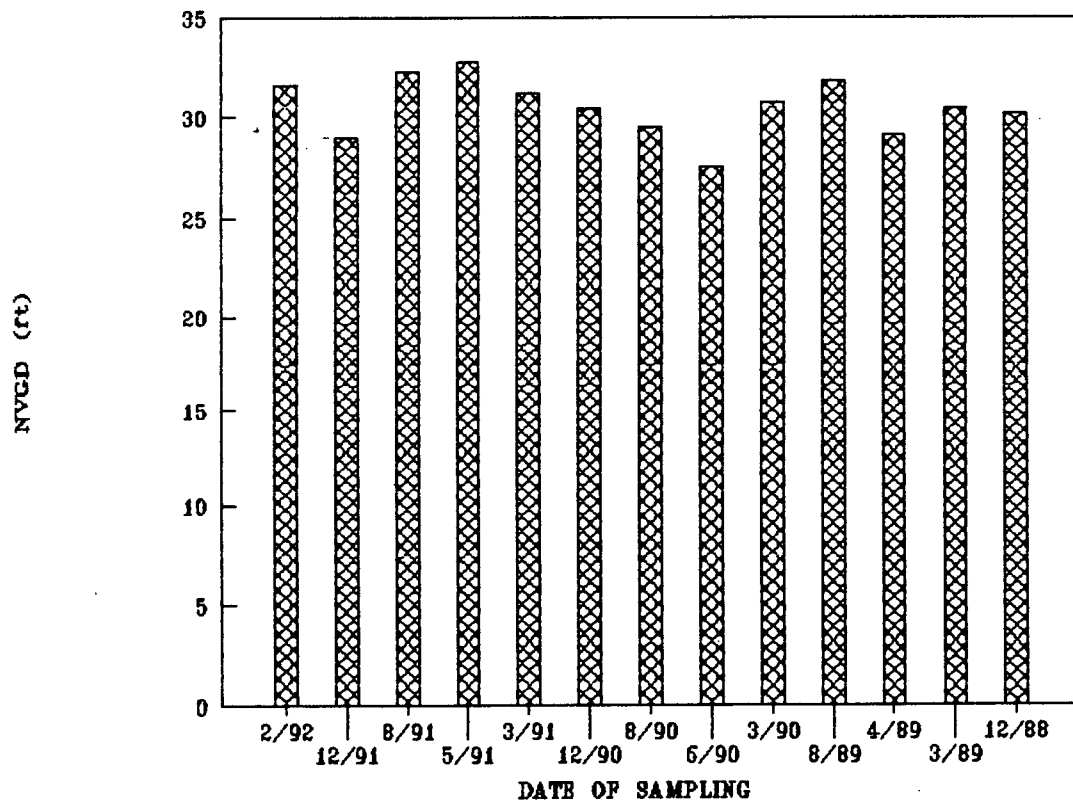
..... MW 1

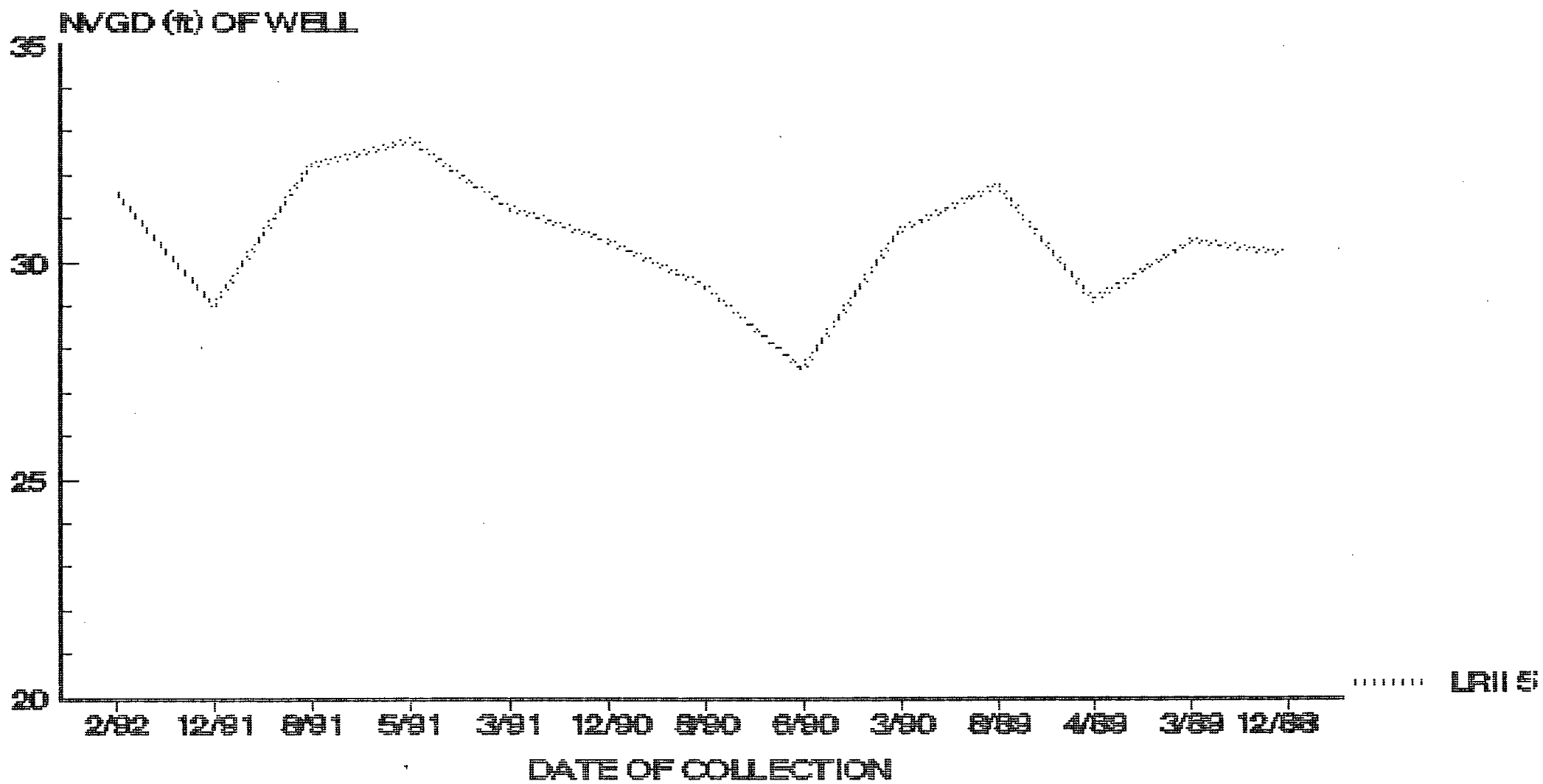
UNDRILL INVD FOR WELLS

MW1



ACCUMULATED NVGD FOR LR11-5

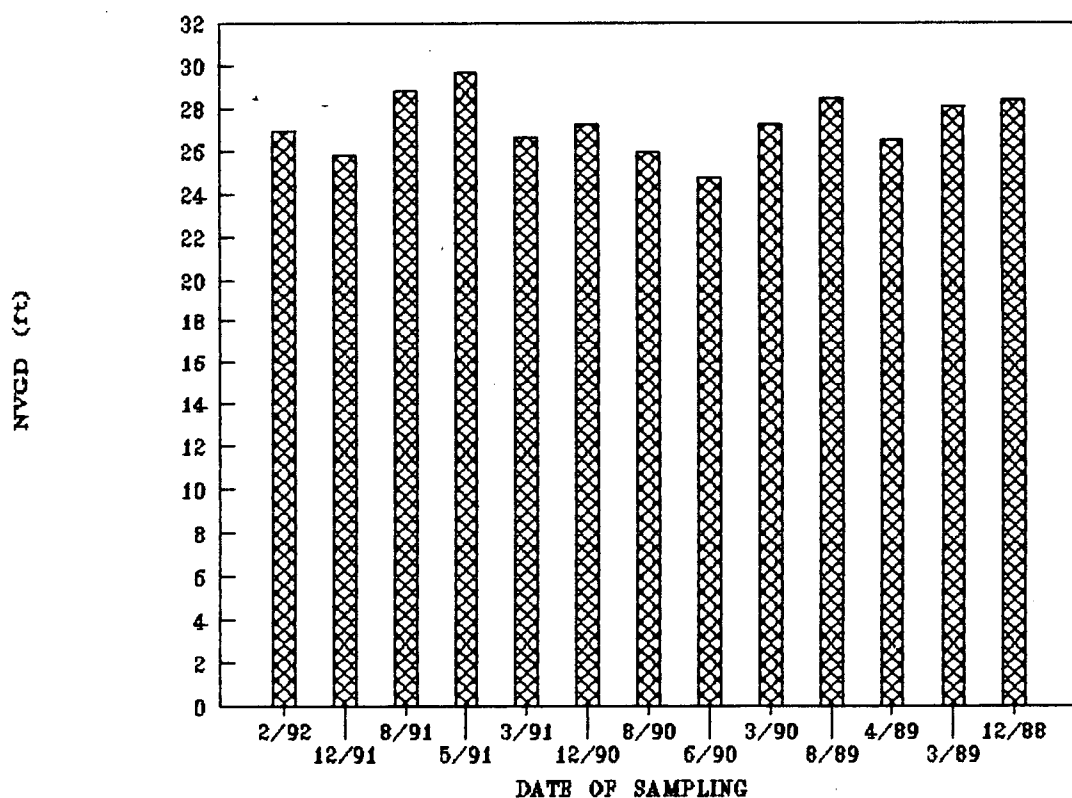


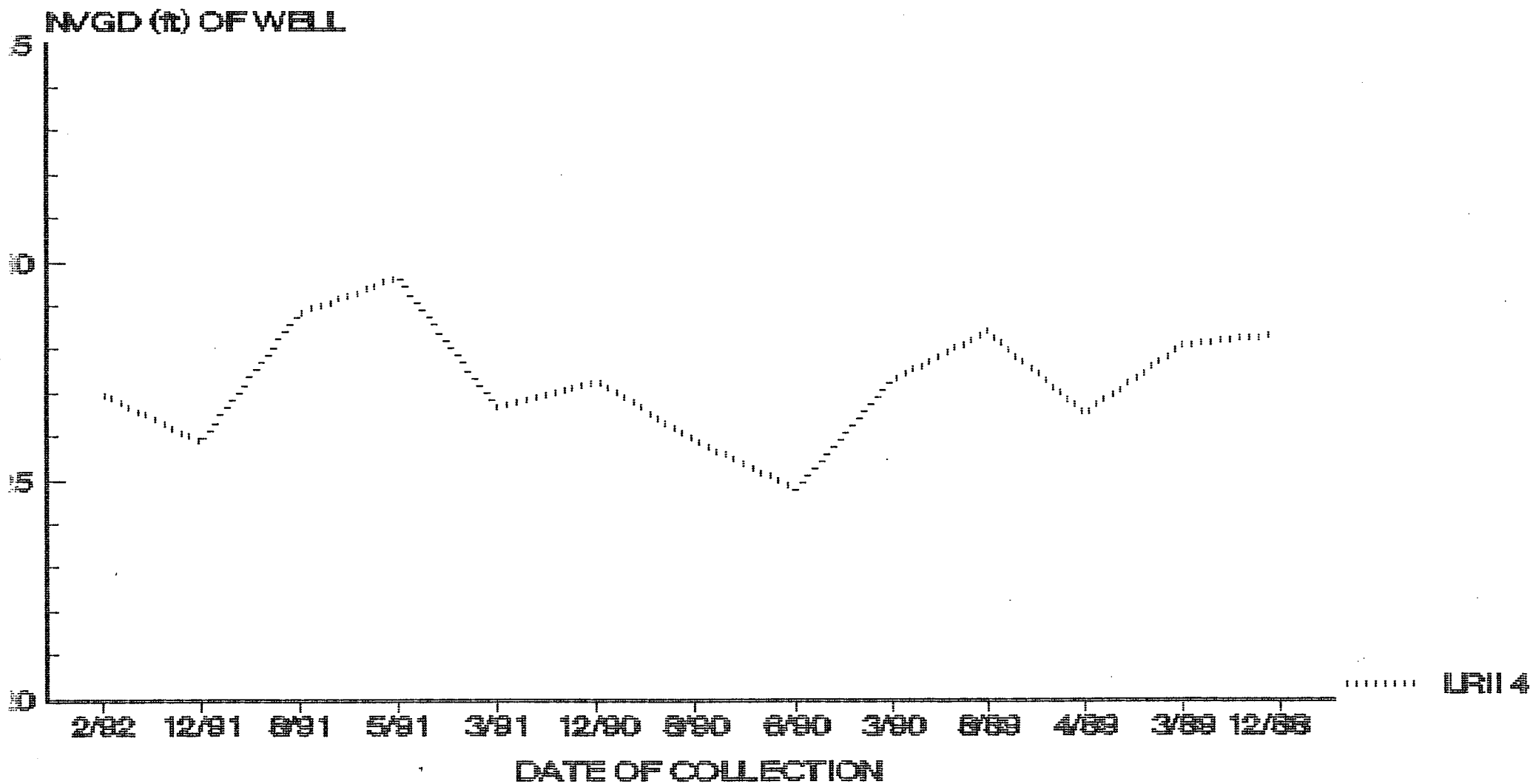


LANDFILL INVG D FOR WELL 2

END

ACCUMULATED NVGD FOR LR11-4

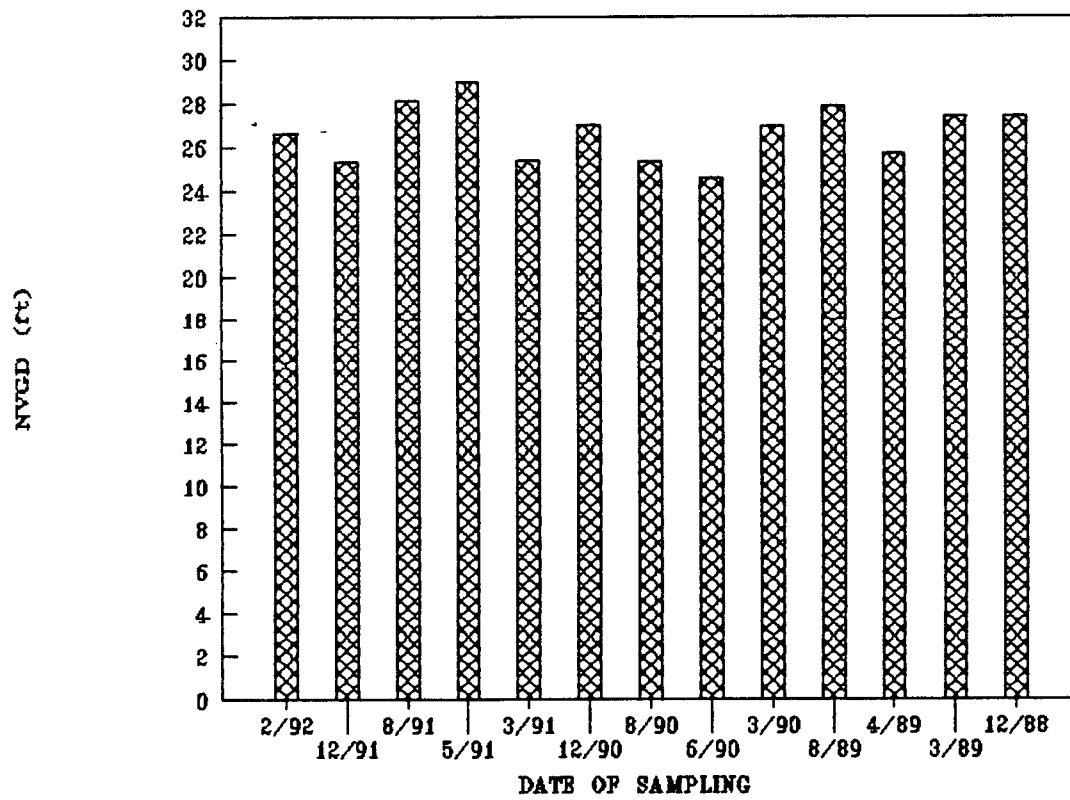


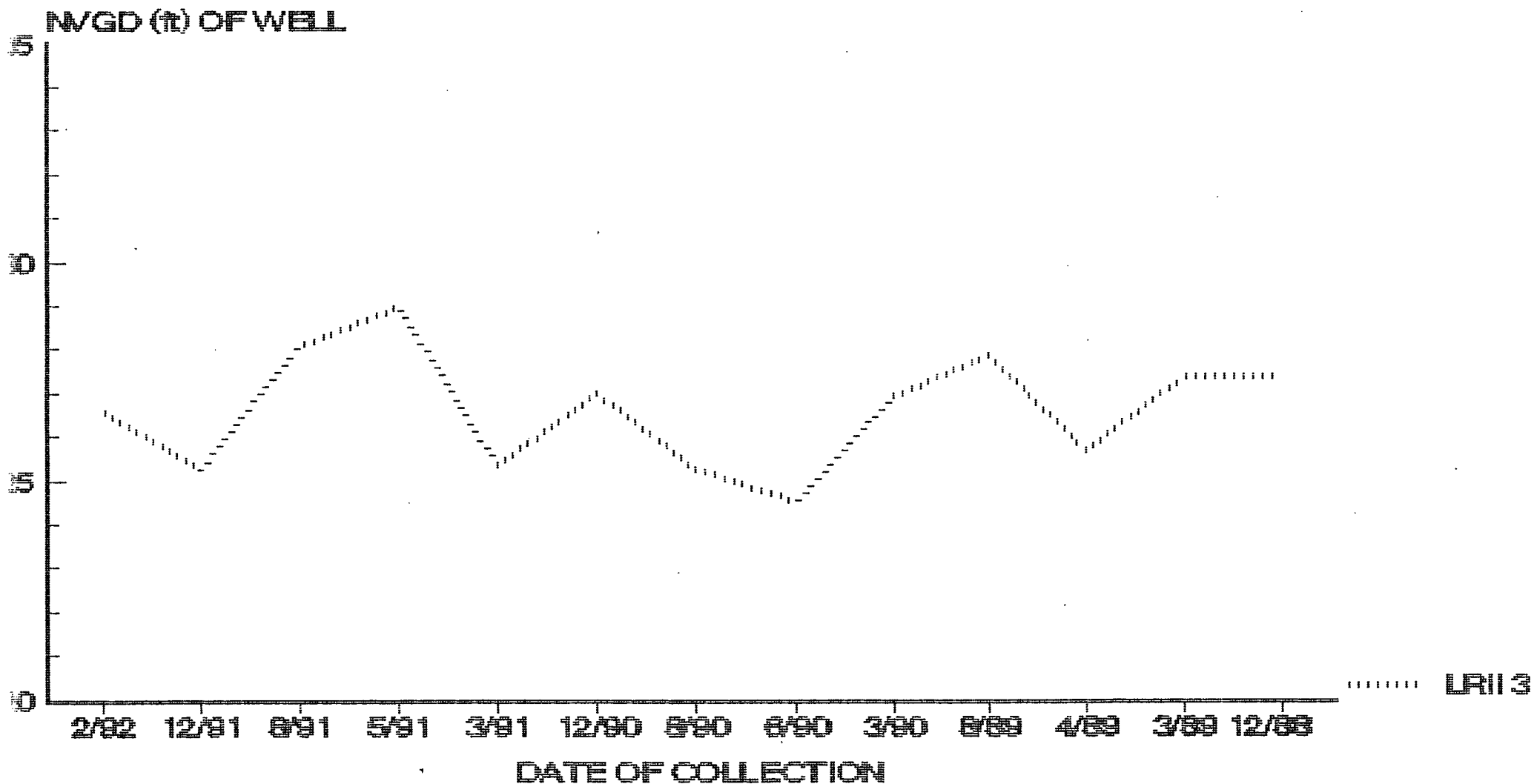


LANDFILL NVGD FOR WELLS

END

ACCUMULATED NVGD FOR LR11-3

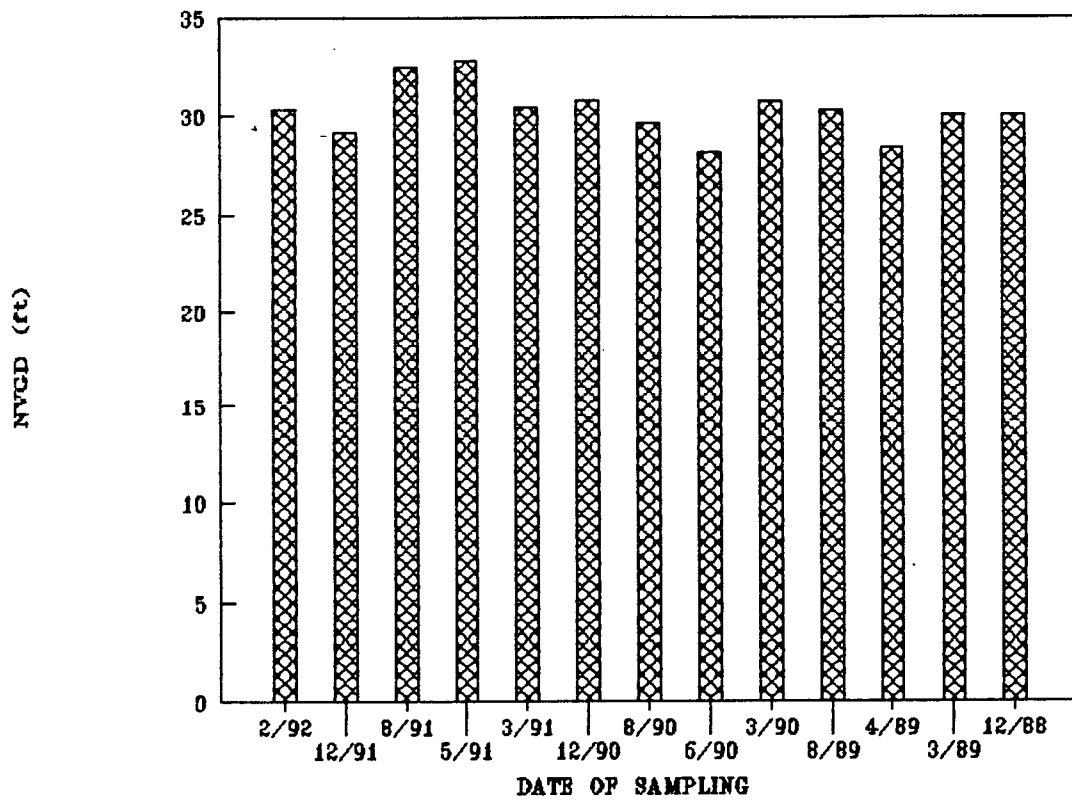


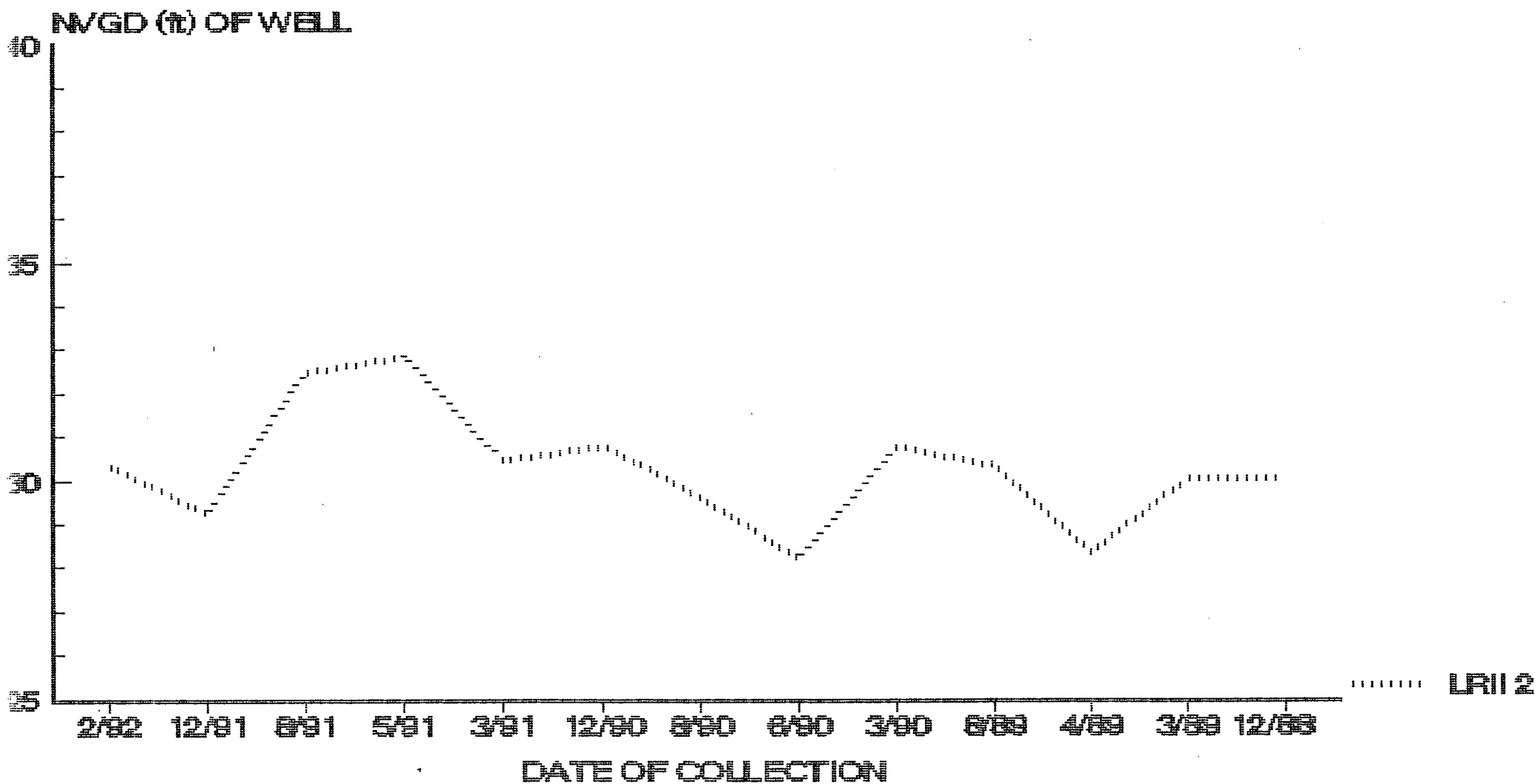


LANDFILL IN/VD FOR WELLS

END

ACCUMULATED NVGD FOR LR11-2

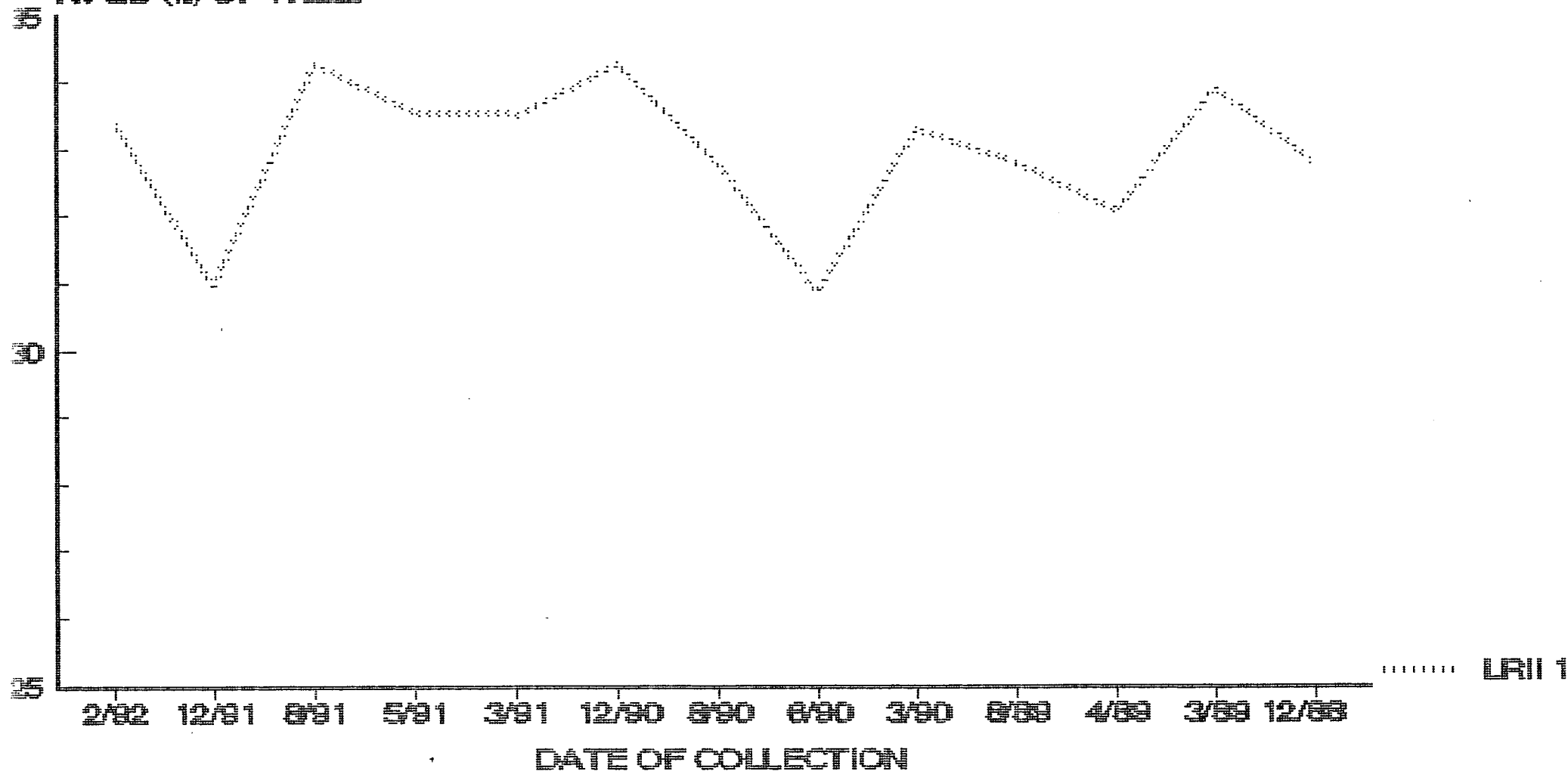




LANDFILL NVGD FOR WELLS

END

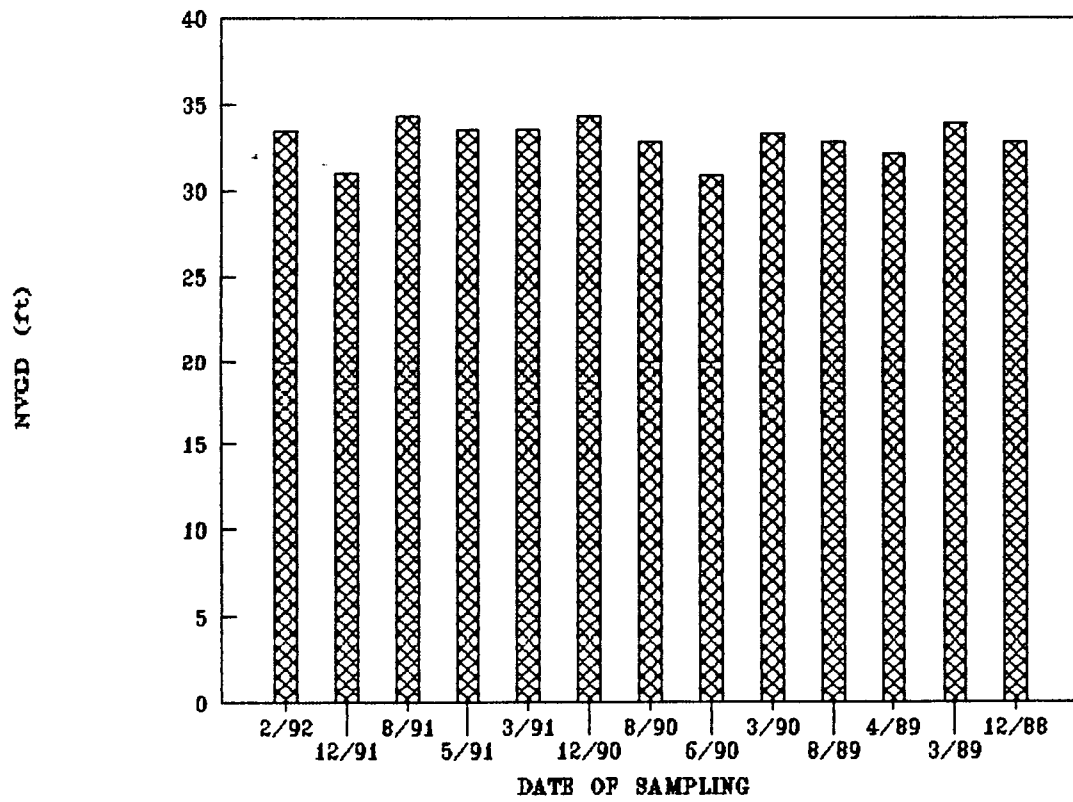
WELL NVGD (ft) OF WELL

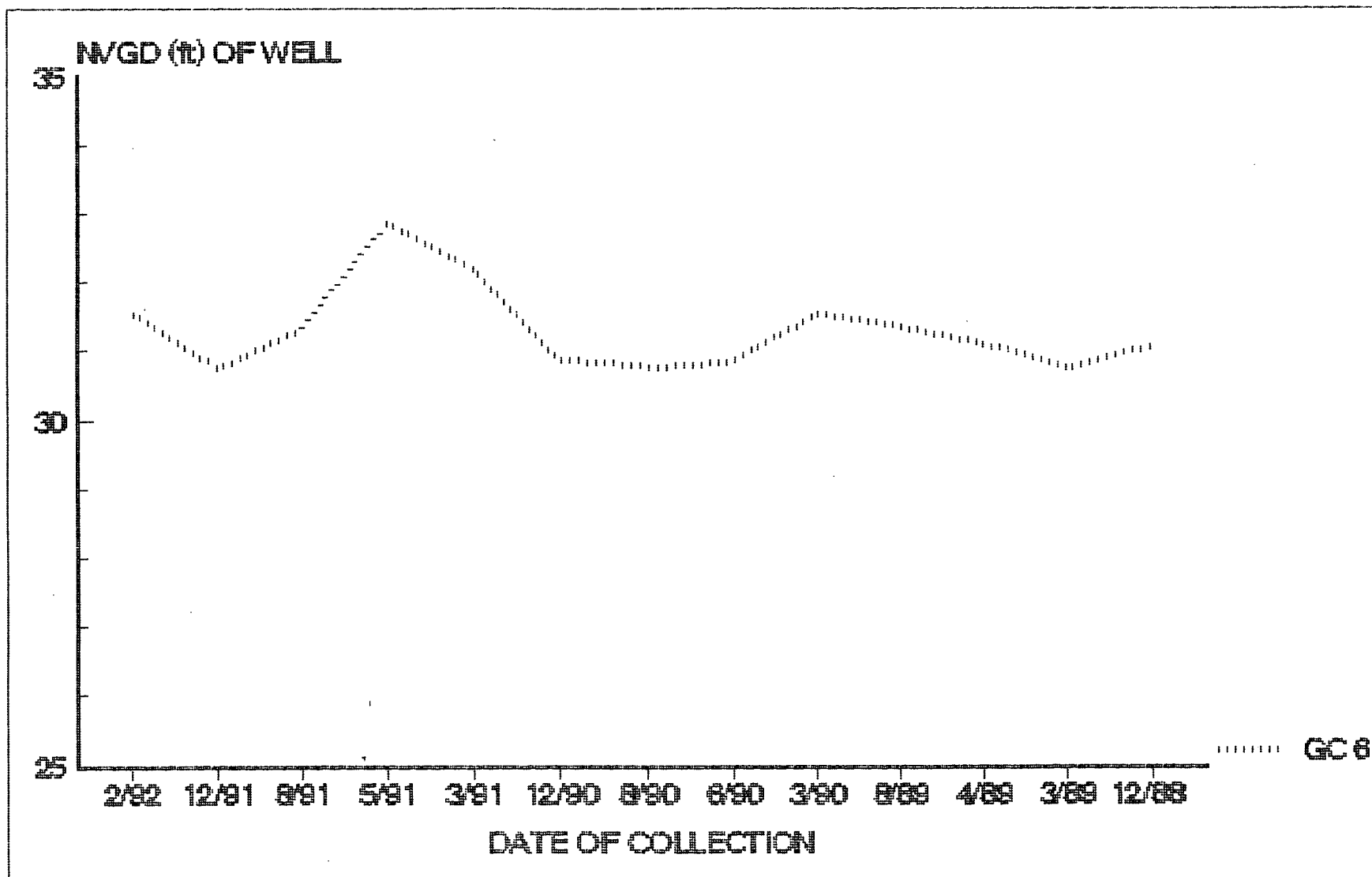


WELL NVGD FOR WELL

END

ACCUMULATED NVGD FOR LR11-1

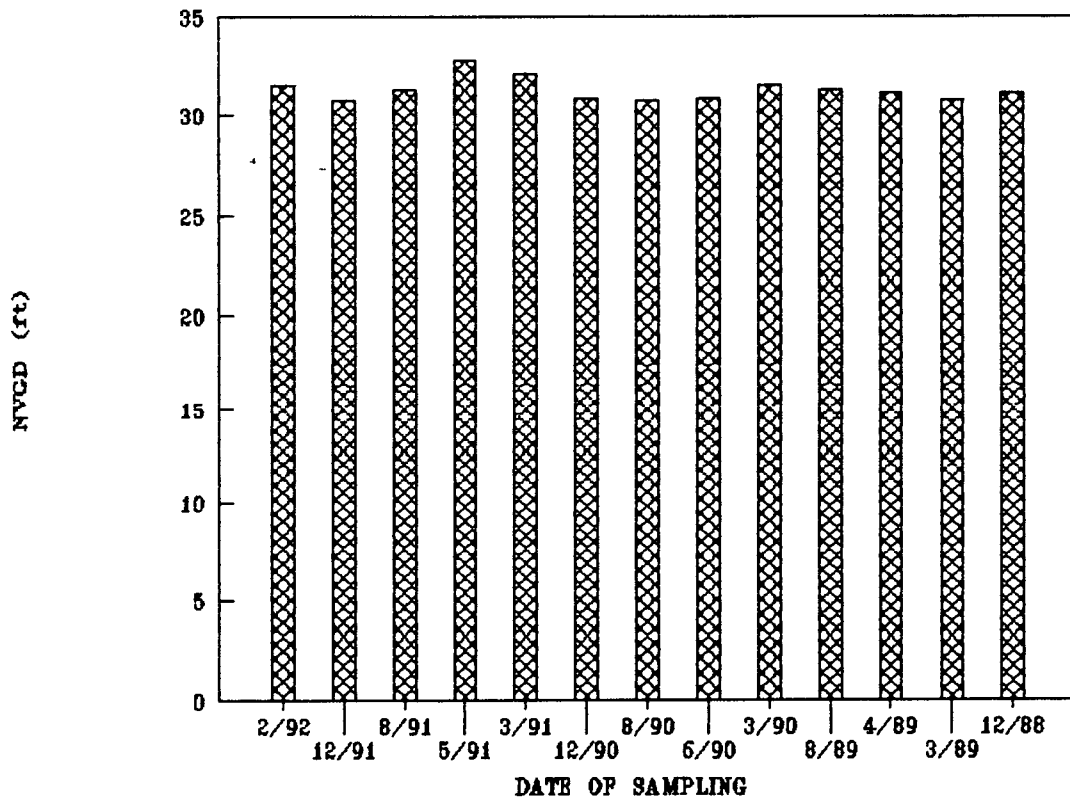


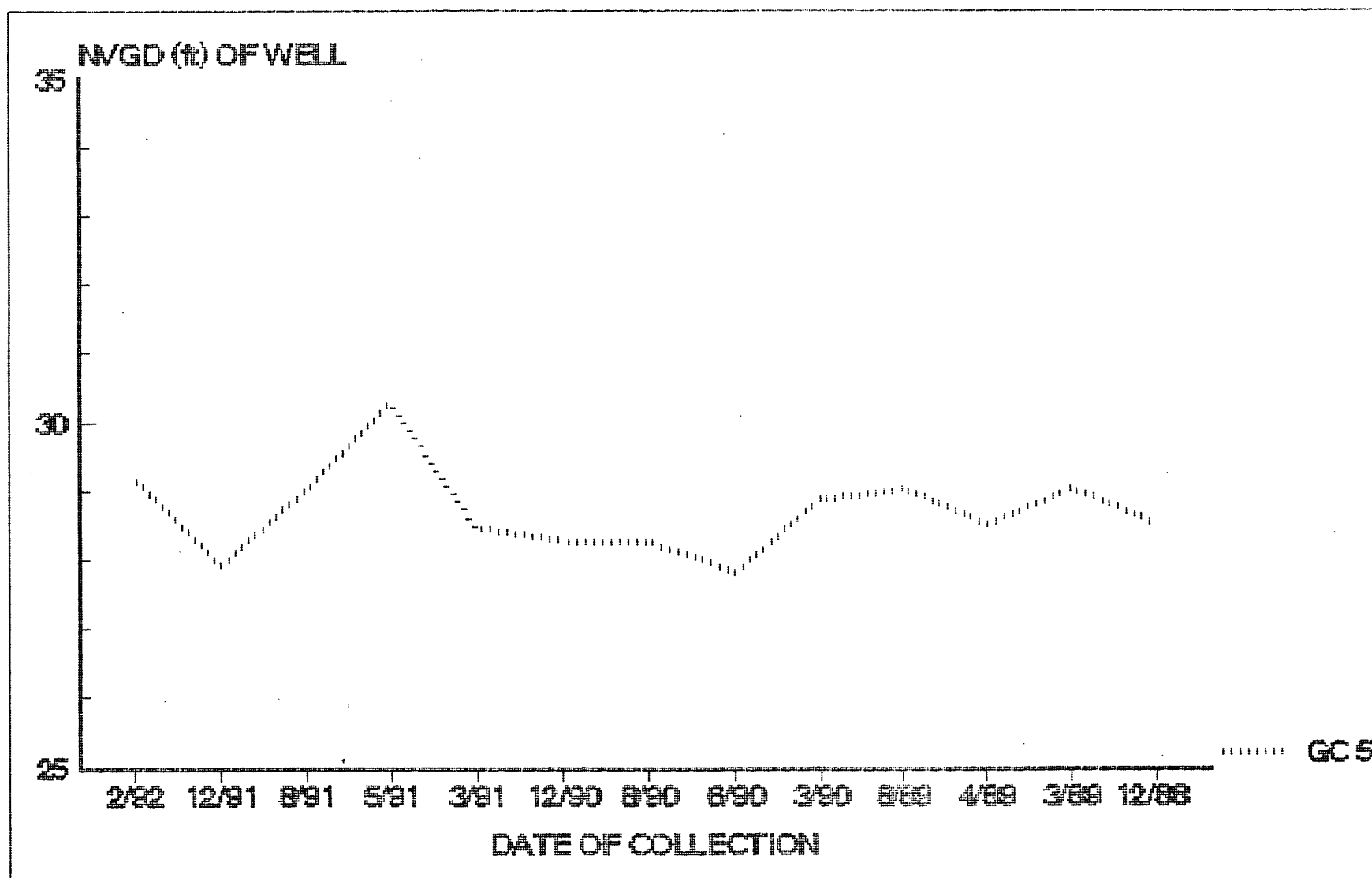


Graph in the Box EXECUTIVE

GC 6

ACCUMULATED NVGD FOR GC6

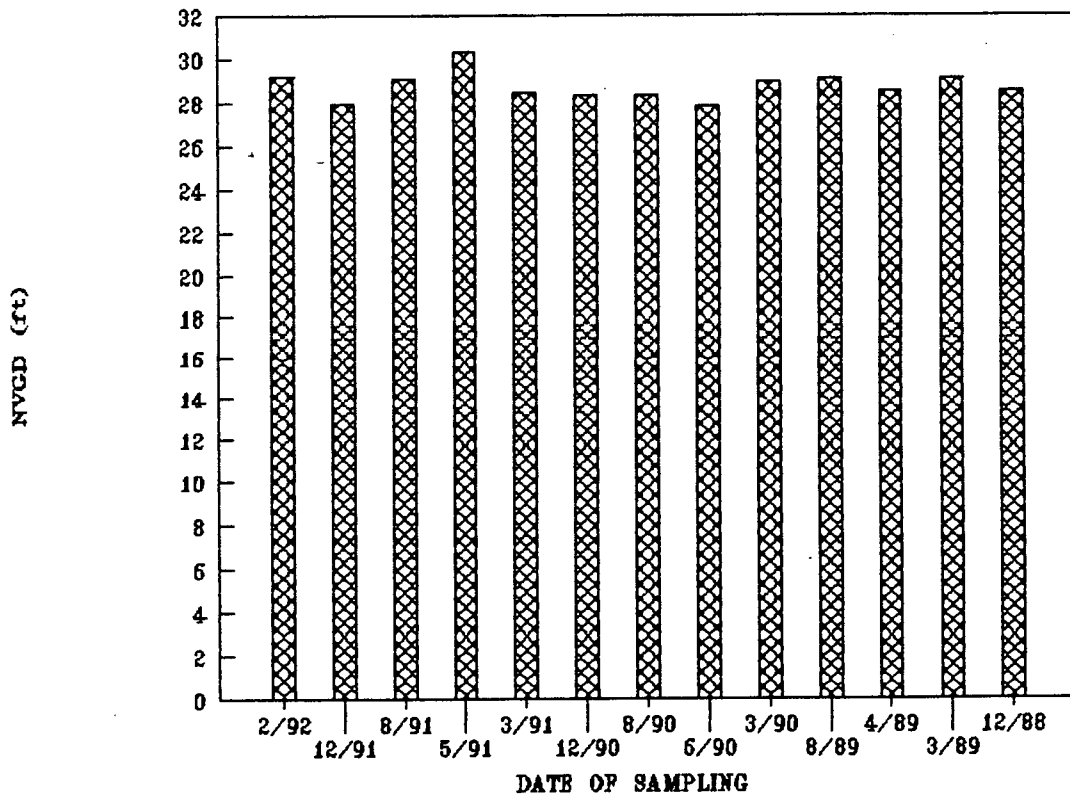


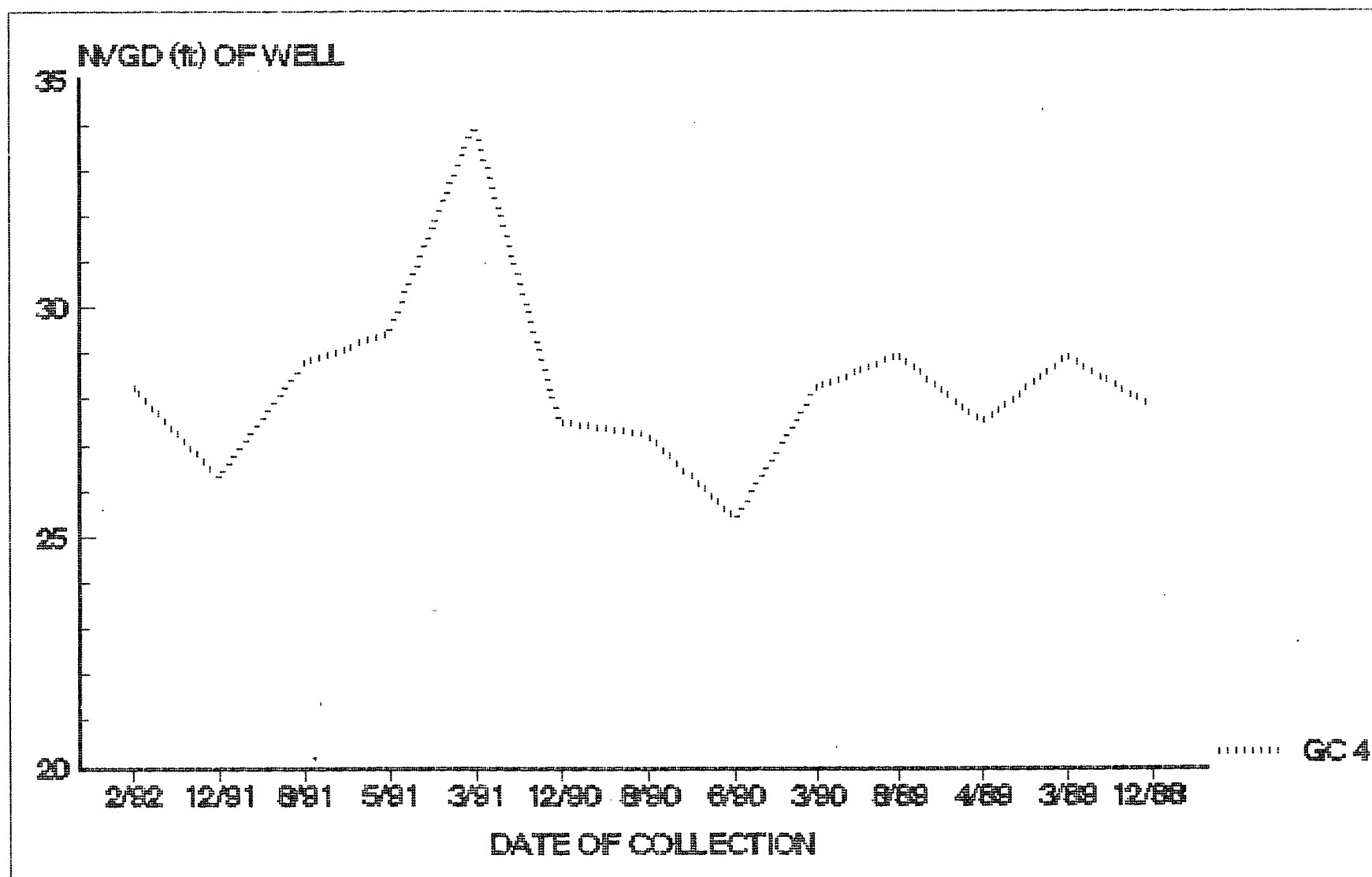


Graph-In-the-Box EXECUTIVE

GC5

ACCUMULATED NVGD FOR GC 5

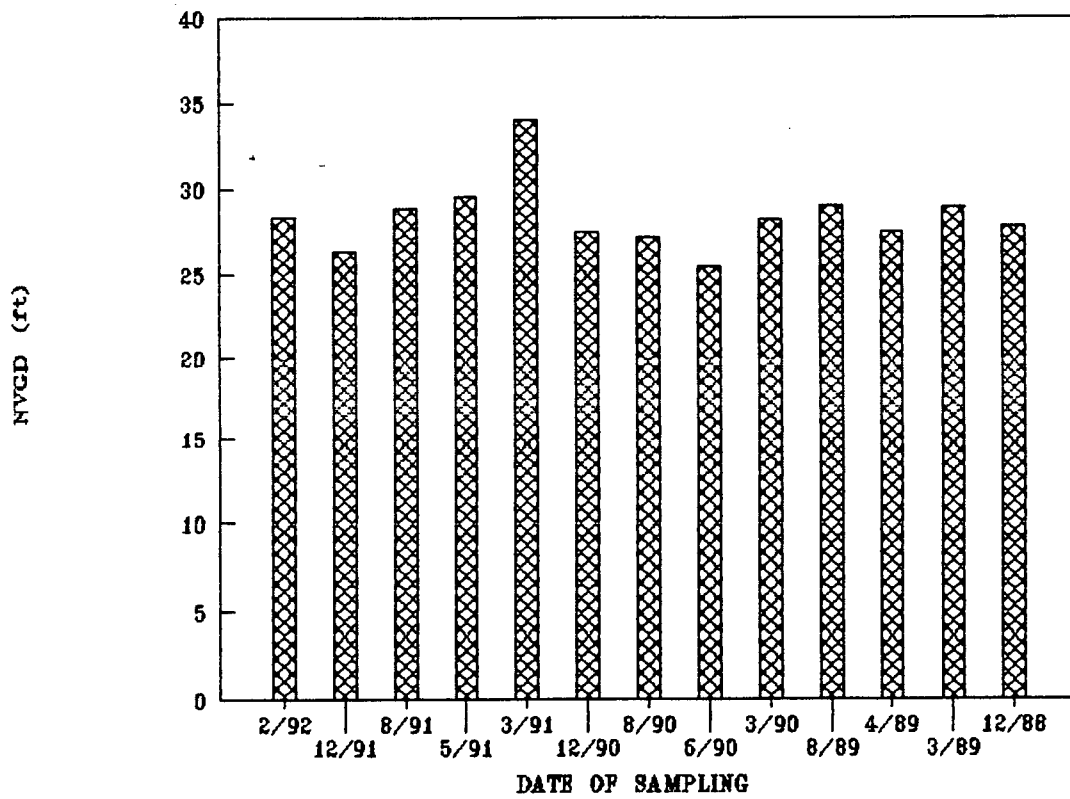


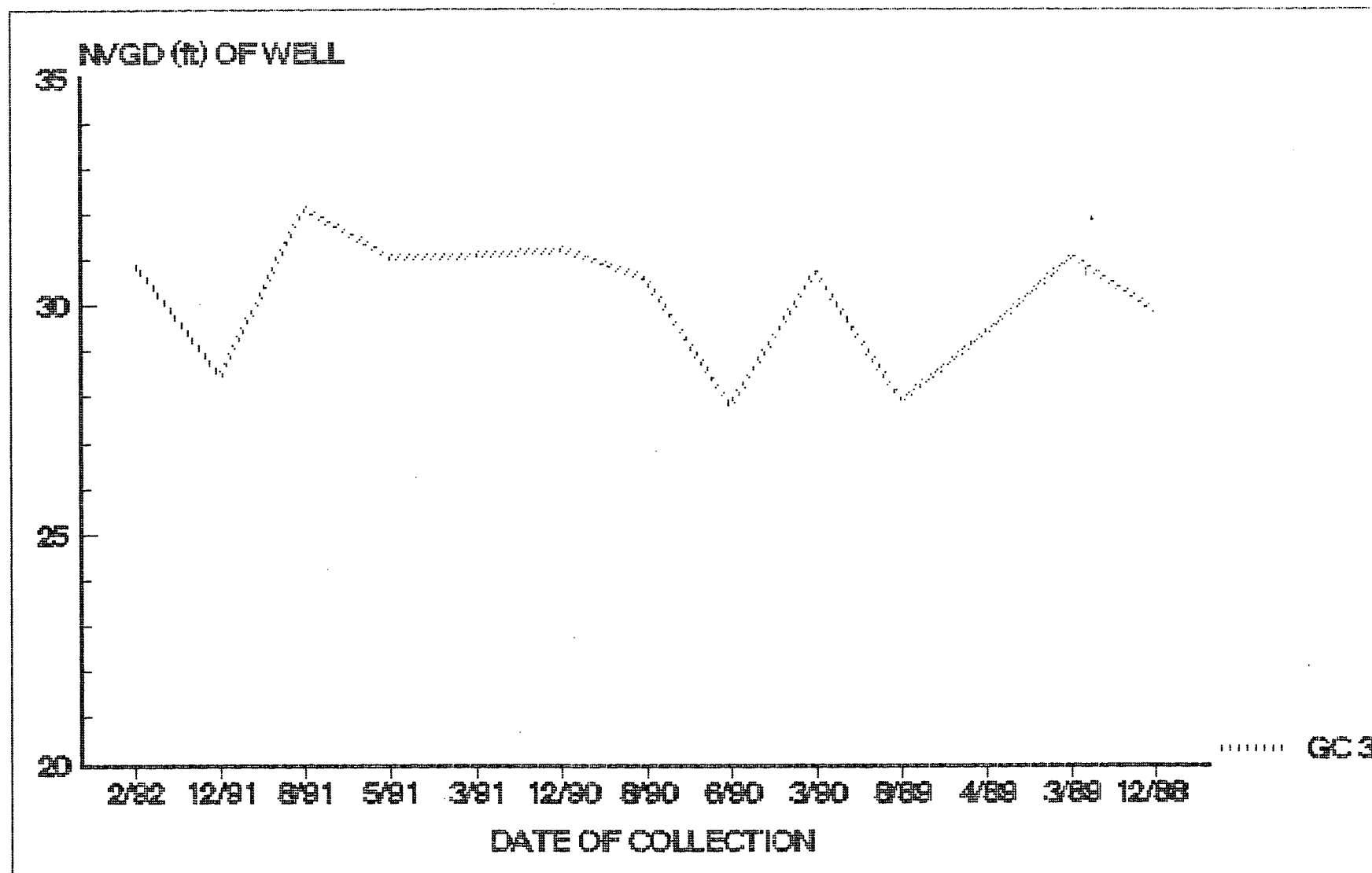


Graph in the Box EXECUTIVE

GC4

ACCUMULATED NVGD FOR GC4

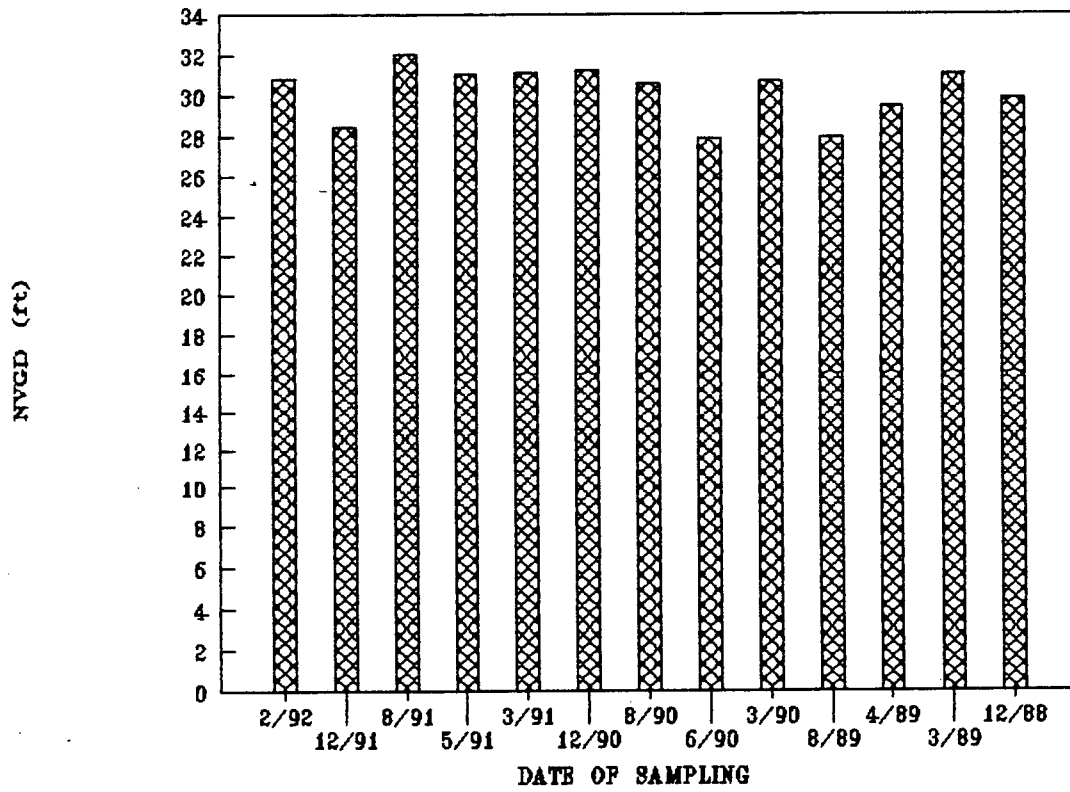


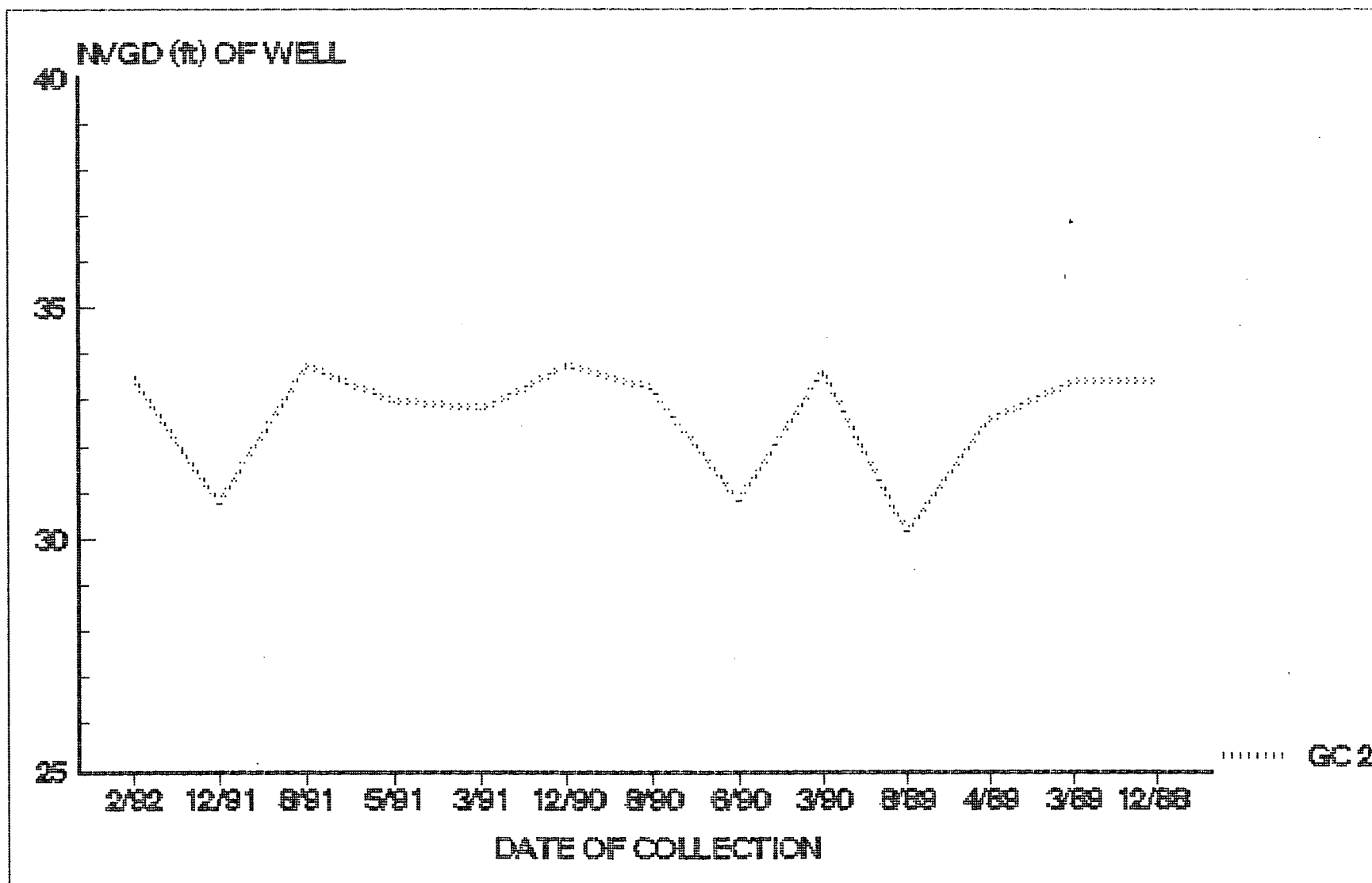


Graph-In-the-Box EXECUTIVE

GC-3

ACCUMULATED NVGD FOR GC3

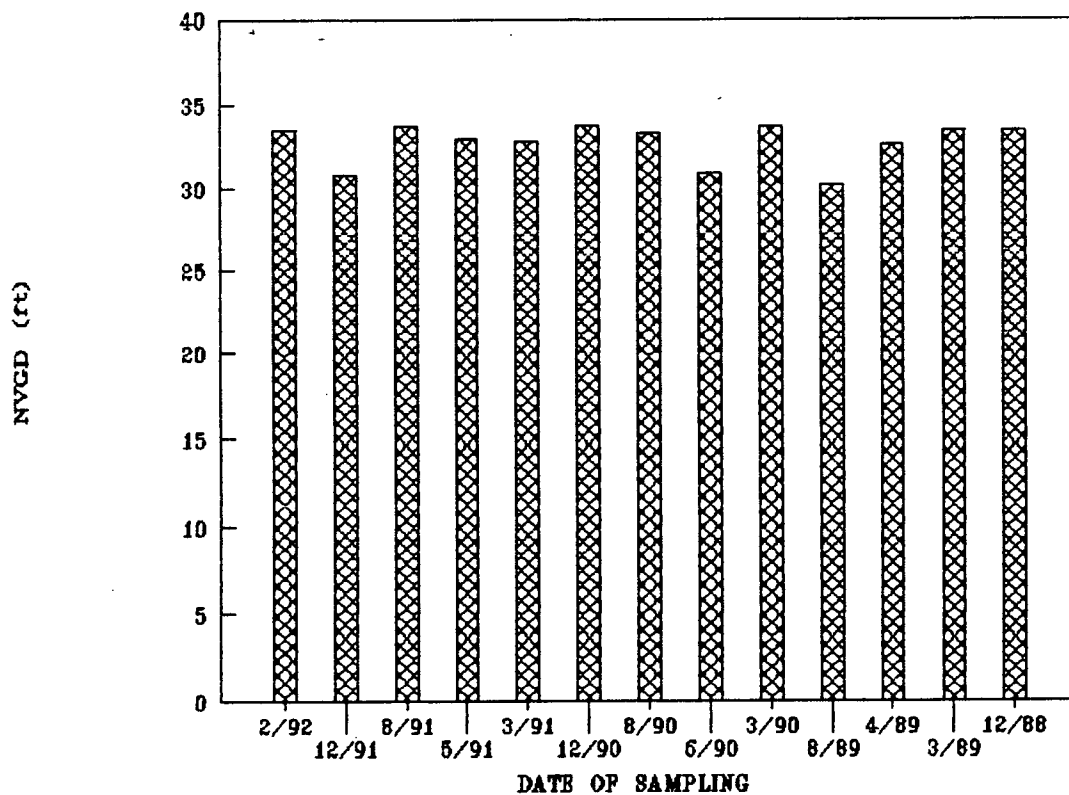


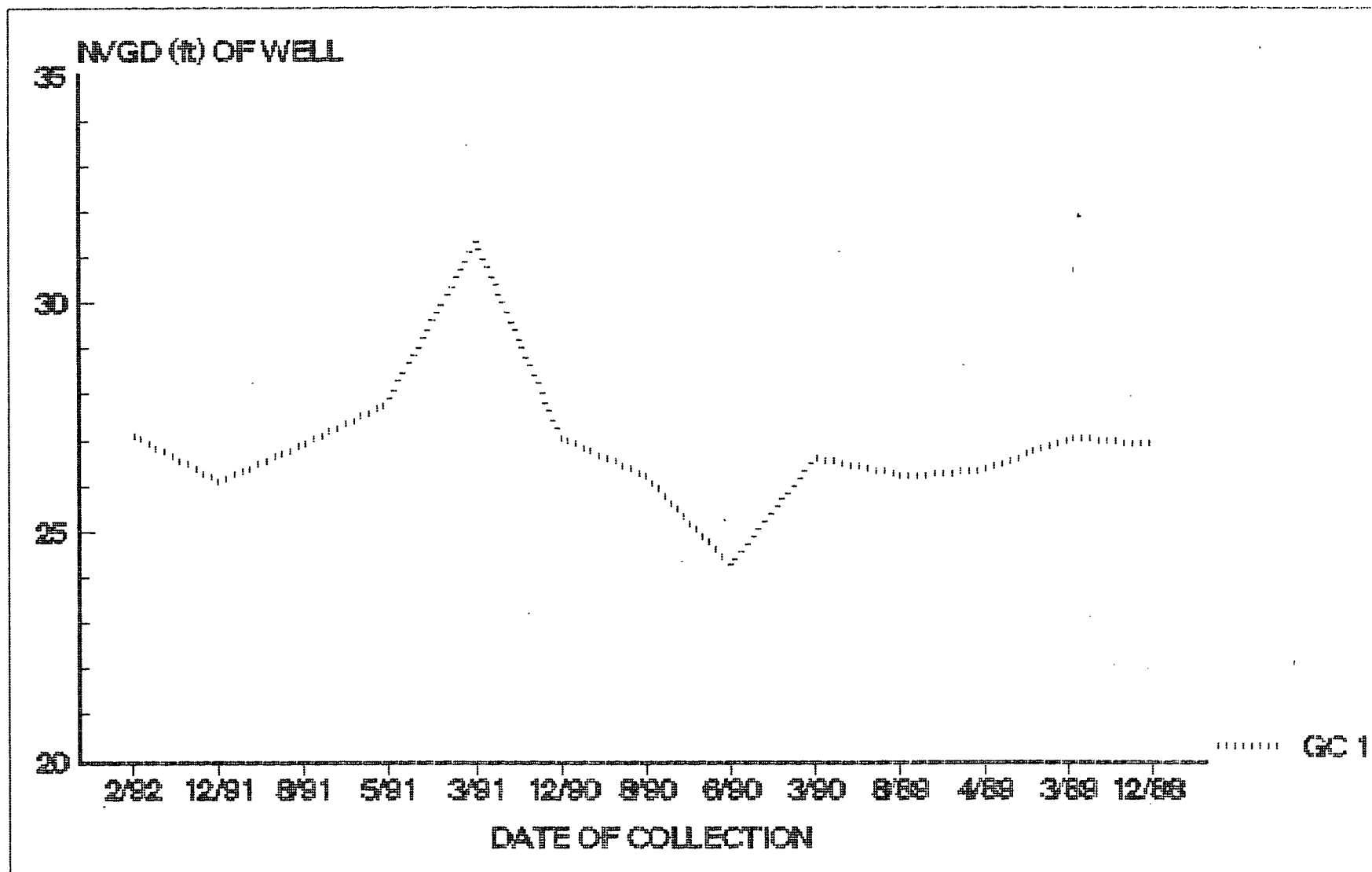


Graph in the Box EXECUTIVE

GC2

ACCUMULATED NVGD FOR GC2

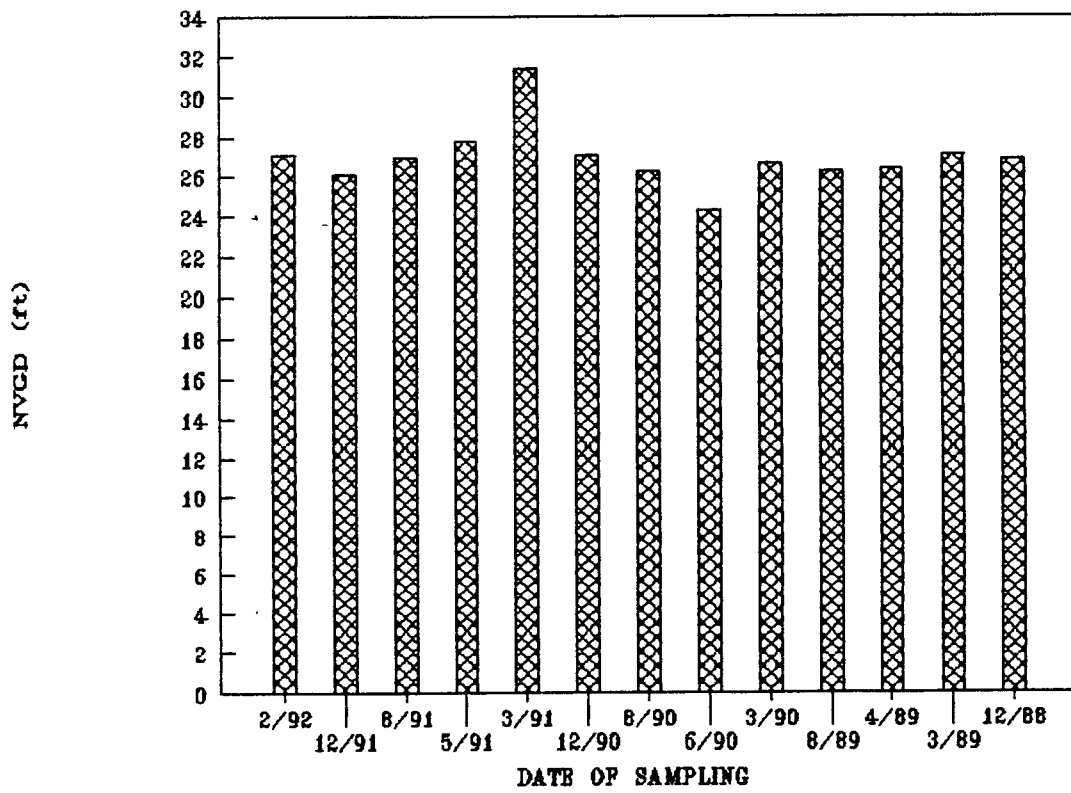




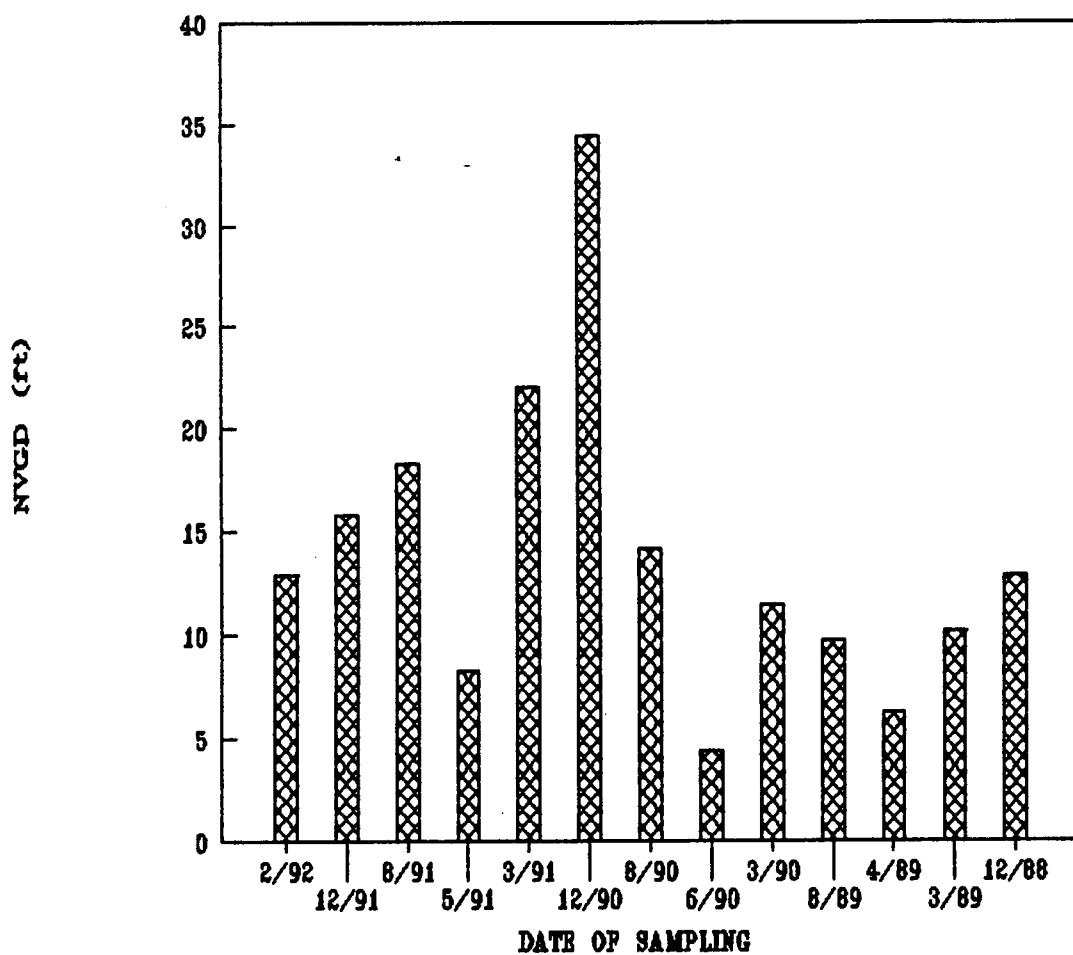
Graph-In-the-Box EXECUTIVE

GC1

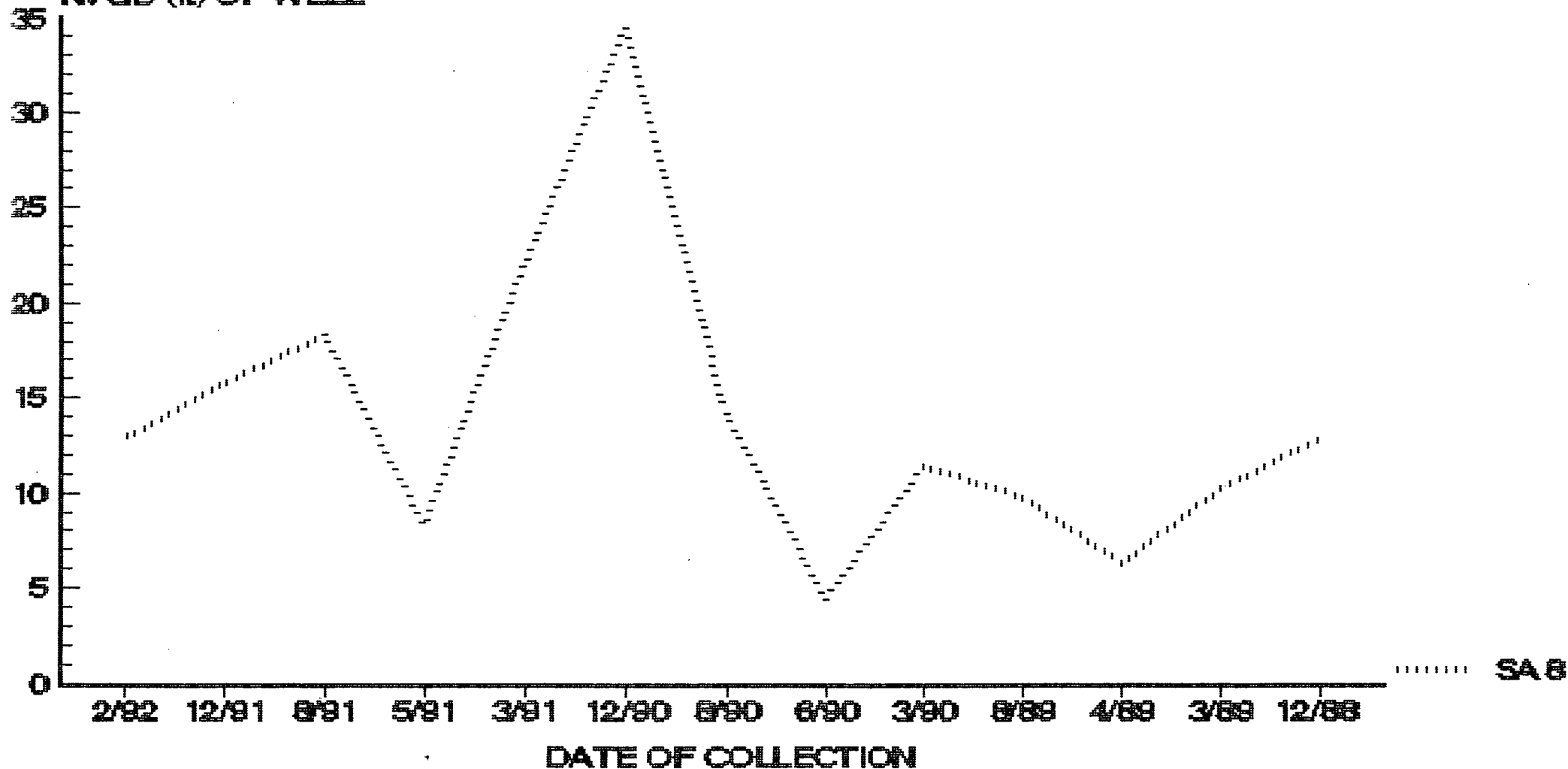
ACCUMULATED NVGD FOR GC1



ACCUMULATED NVGD FOR SA 8



NVGD (ft) OF WELL



LANDFILL NVGD FOR WELLS

SAFE

Piezometer Water
Elevations Table

RECENT INSTALLATIONS OF PIEZIOMETERS HAS RESULTED IN COLLECTION
OF NVGD DATA.



LENA ROAD LANDFILL PIEZOMETER DATA

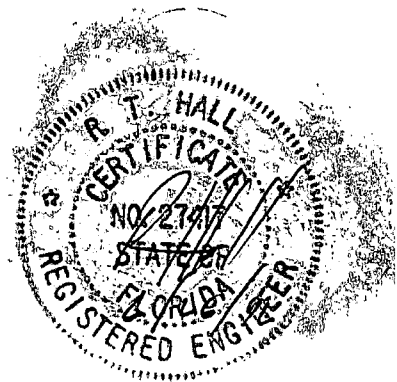
PIEZOMETER NUMBER	(TOC) PIEZOMETER ELEVATION (ft)	DEPTH TO WATER SURFACE (ft)							
		5/91	6/91	7/91	8/91	9/91	10/91	12/91	3/92
1	41.52	12.21	11.92	12.13	12.08	11.96	11.96	12.19	12.00
2	42.53	12.38	12.33	12.25	12.25	12.13	12.29	9.25	12.25
3	44.93	14.58	12.63	12.50	12.50	12.50	15.96	11.63	13.67
4	45.04	13.92	14.83	15.00	14.71	14.92	14.67	14.75	14.71
5	43.71	13.33	13.17	13.33	13.33	13.25	13.08	13.46	13.15
6	44.33	13.00	12.83	13.04	13.00	12.83	12.92	13.25	12.92
7	44.69	11.04	10.67	11.08	11.13	11.21	11.33	11.50	11.21
12	38.39	9.08	8.37	9.21	8.13	9.17	9.50	6.79	9.37
13	35.09	7.25	6.33	7.50	6.83	7.50	7.88	11.04	7.58
14	33.47	5.83	2.70	6.71	5.75	6.83	7.25	7.41	6.65
15	33.20	4.92	4.41	5.21	5.00	5.33	5.04	6.54	5.42
16	34.63	6.87	6.50	6.42	6.25	6.33	6.50	7.08	6.29
17	40.82	11.58	11.08	11.66	11.46	11.58	11.28	12.21	11.83

PIEZIOMETER NVGD DATA

PIEZOMETER NUMBER	5/91	6/91	7/91	8/91	9/91	10/91	12/91	3/92
=====	=====	=====	=====	=====	=====	=====	=====	=====
1	29.31	29.6	29.39	29.44	29.56	29.56	29.33	29.52
2	30.15	30.2	30.28	30.28	30.4	30.24	33.28	30.28
3	30.35	32.3	32.43	32.43	32.43	28.97	33.3	31.26
4	31.12	30.21	30.04	30.33	30.12	30.37	30.29	30.33
5	30.38	30.54	30.38	30.38	30.46	30.63	30.25	30.56
6	31.33	31.5	31.29	31.33	31.5	31.41	31.08	31.41
7	33.65	34.02	33.61	33.56	33.48	33.36	33.19	33.48
12	29.31	30.02	29.18	30.26	29.22	28.89	31.6	29.02
13	27.84	28.76	27.59	28.26	27.59	27.21	24.05	27.51
14	27.64	30.77	26.76	27.72	26.64	26.22	26.06	26.82
15	28.28	28.79	27.99	28.2	27.87	28.16	26.66	27.78
16	27.76	28.13	28.21	28.38	28.3	28.13	27.55	28.34
17	29.24	29.74	29.16	29.36	29.24	29.54	28.61	28.99

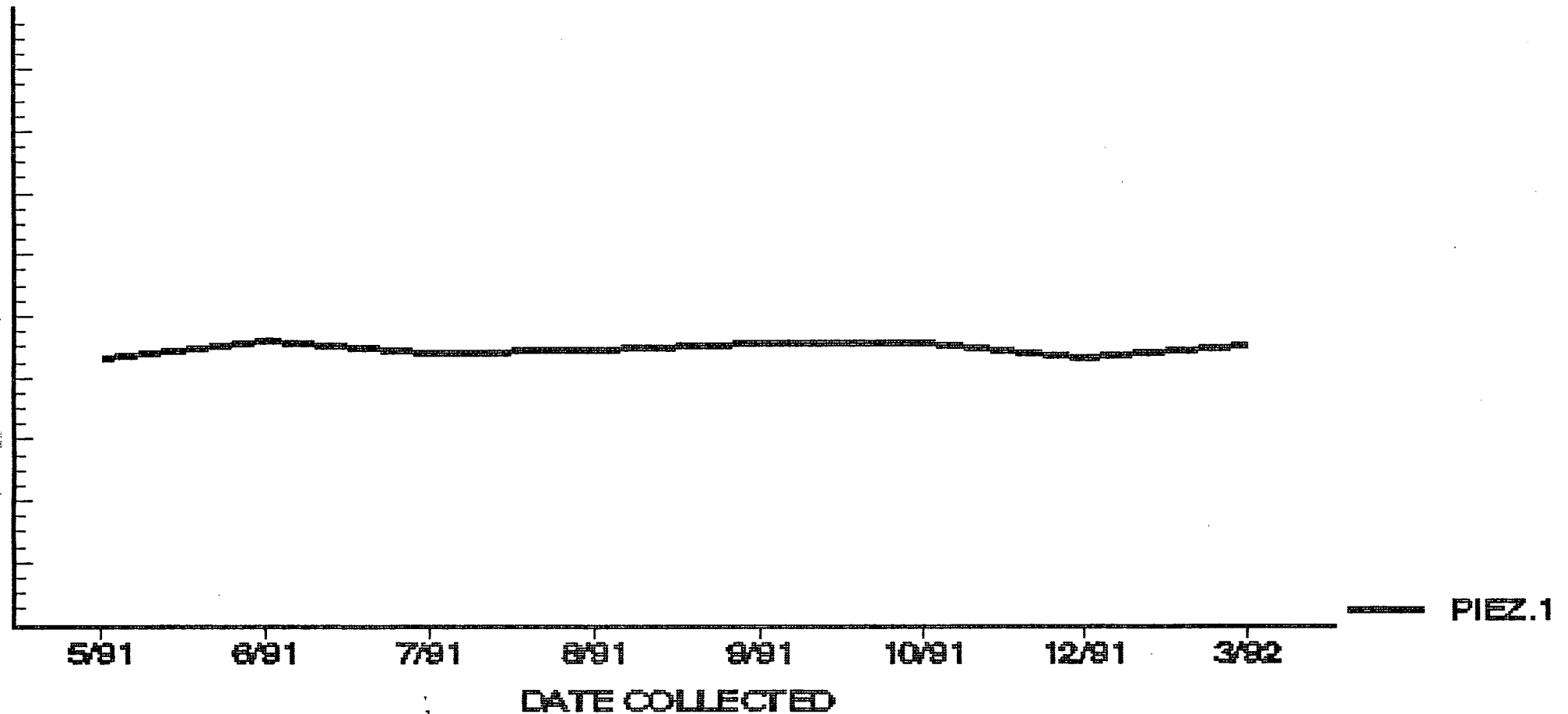
Piezometer Water
Elevations Graphs

GRAPHICAL DEPICTION OF EACH PIEZOMETER NVGD FOR TIME



PIEZIOMETER NVGD

PIEZIOMETER NVGD

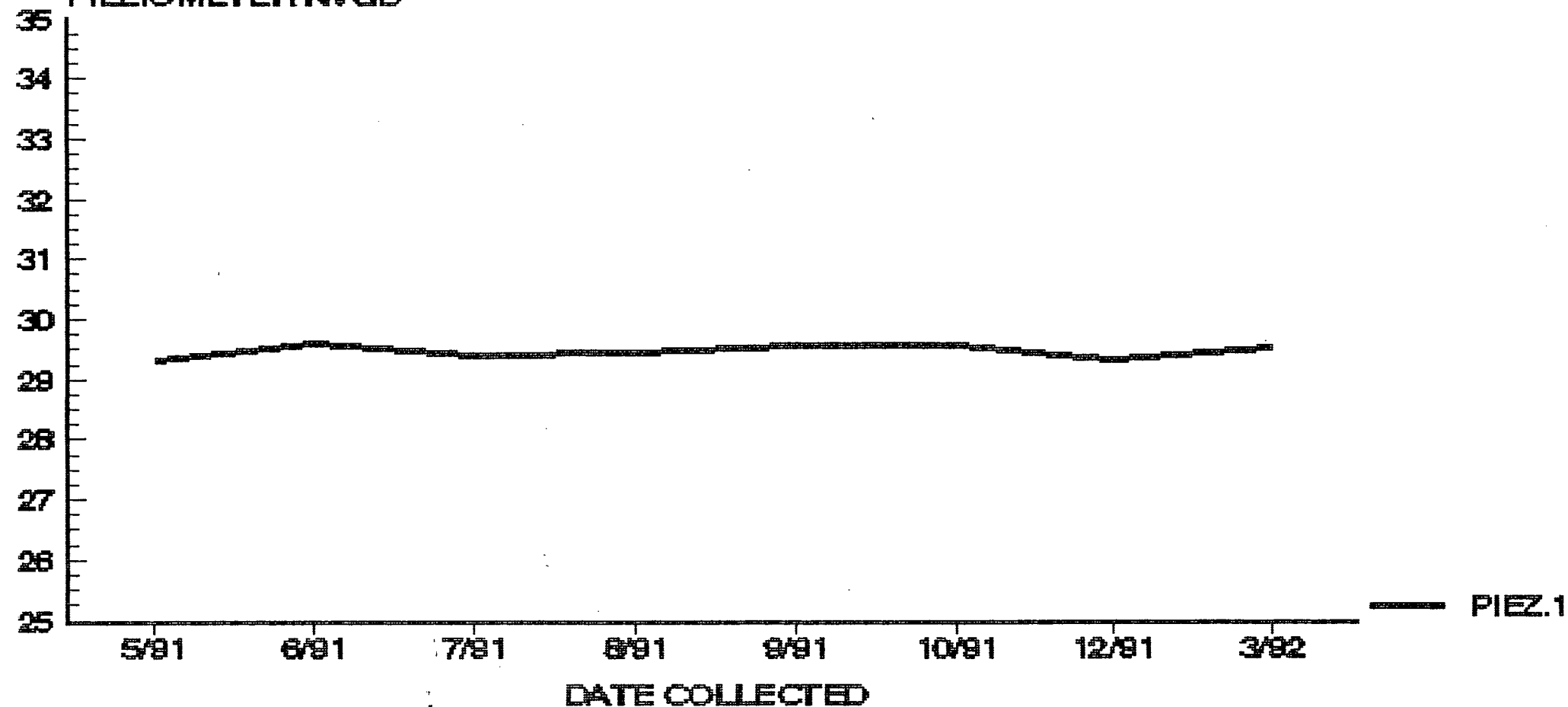


ORGANIC DATA



PIEZIOMETER NVGD

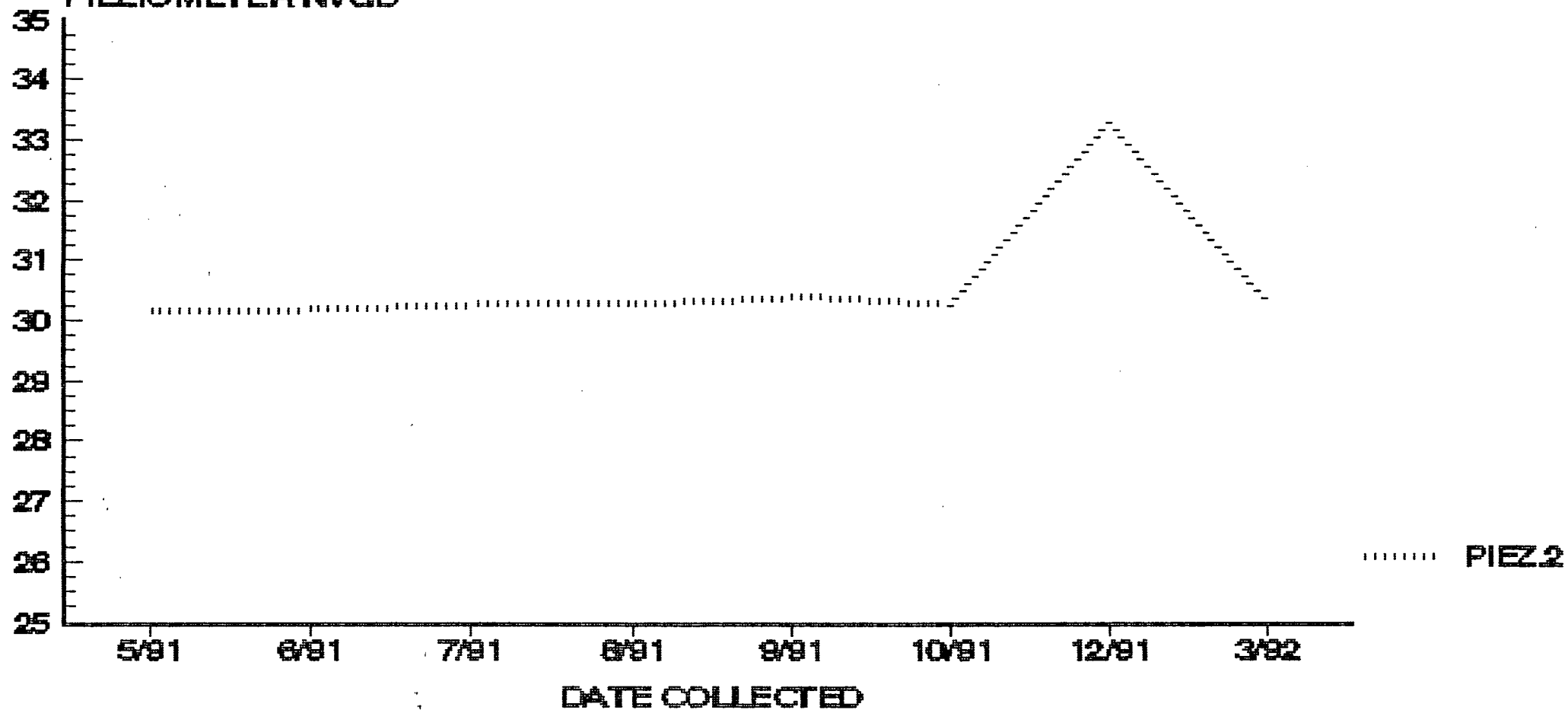
PIEZIOMETER NVGD



NOORGANIC DATA

PIEZIOMETER NVGD

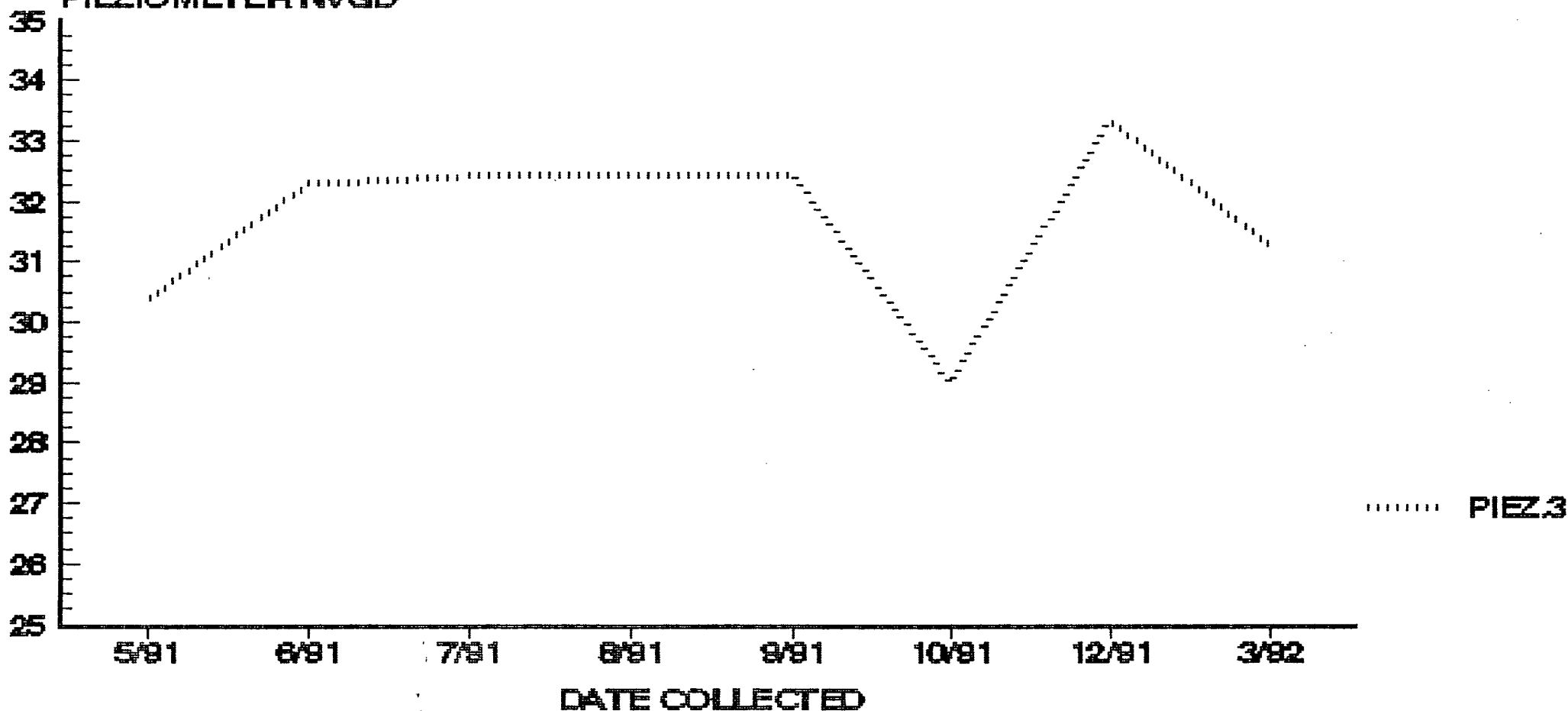
PIEZIOMETER NVGD



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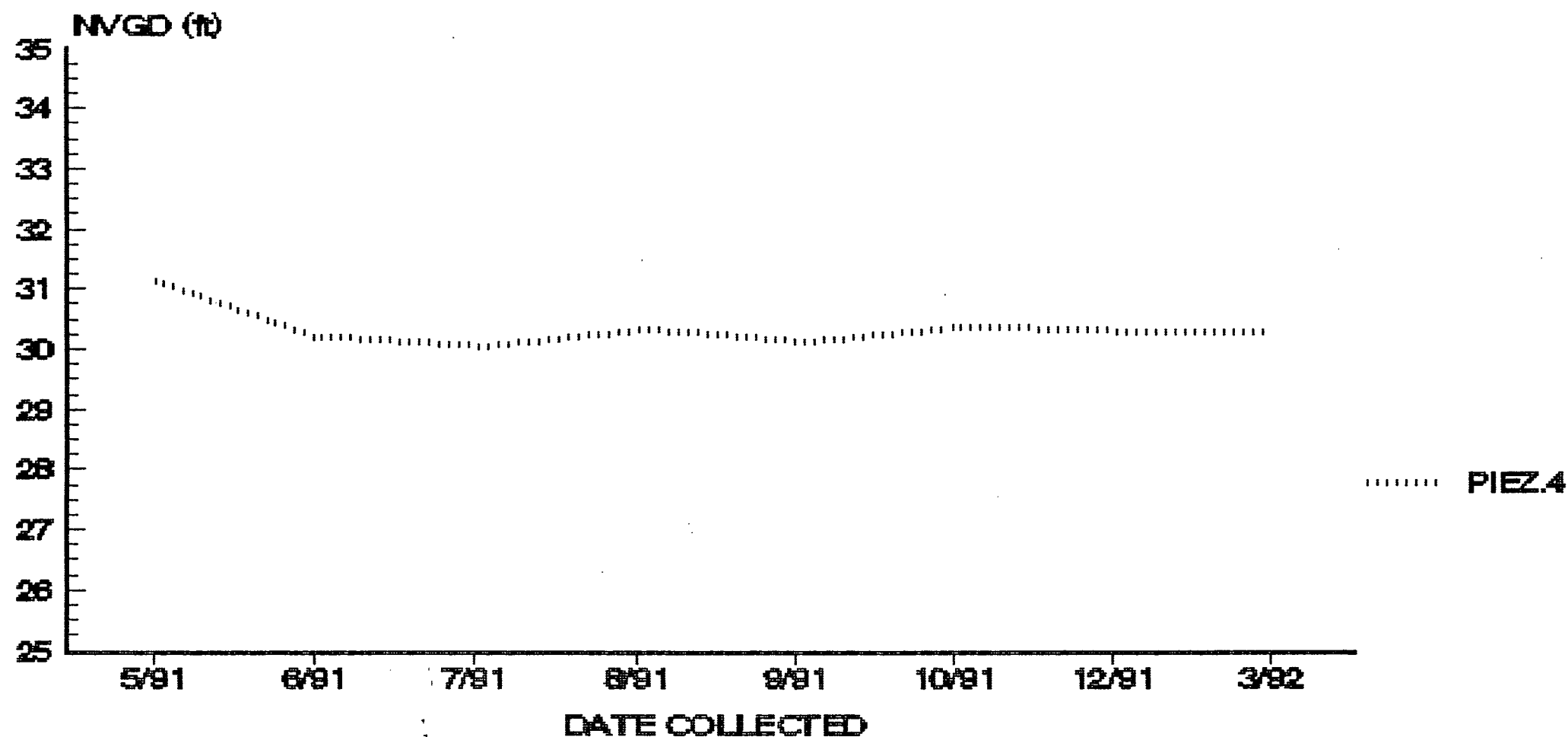
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PIEZIOMETER NVGD



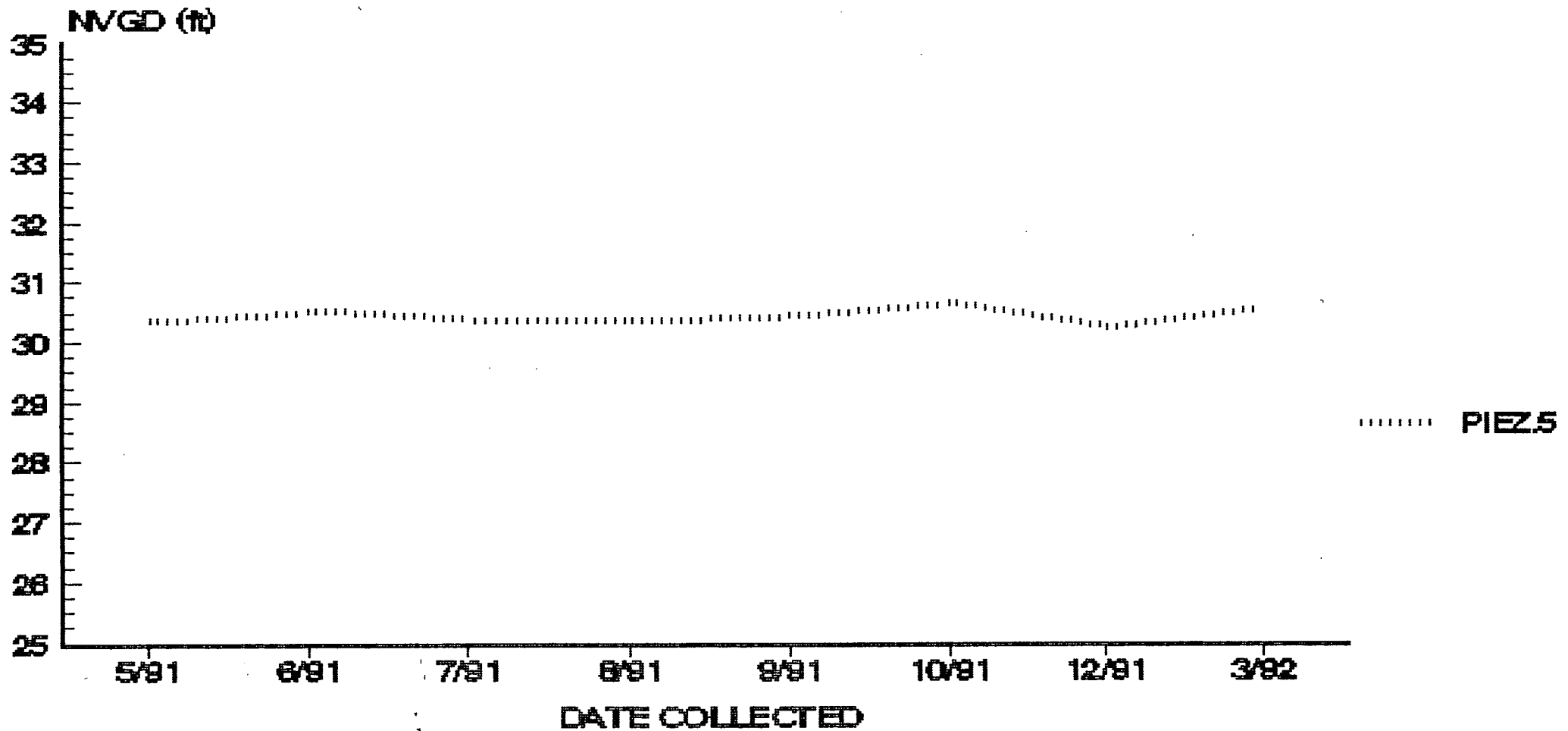
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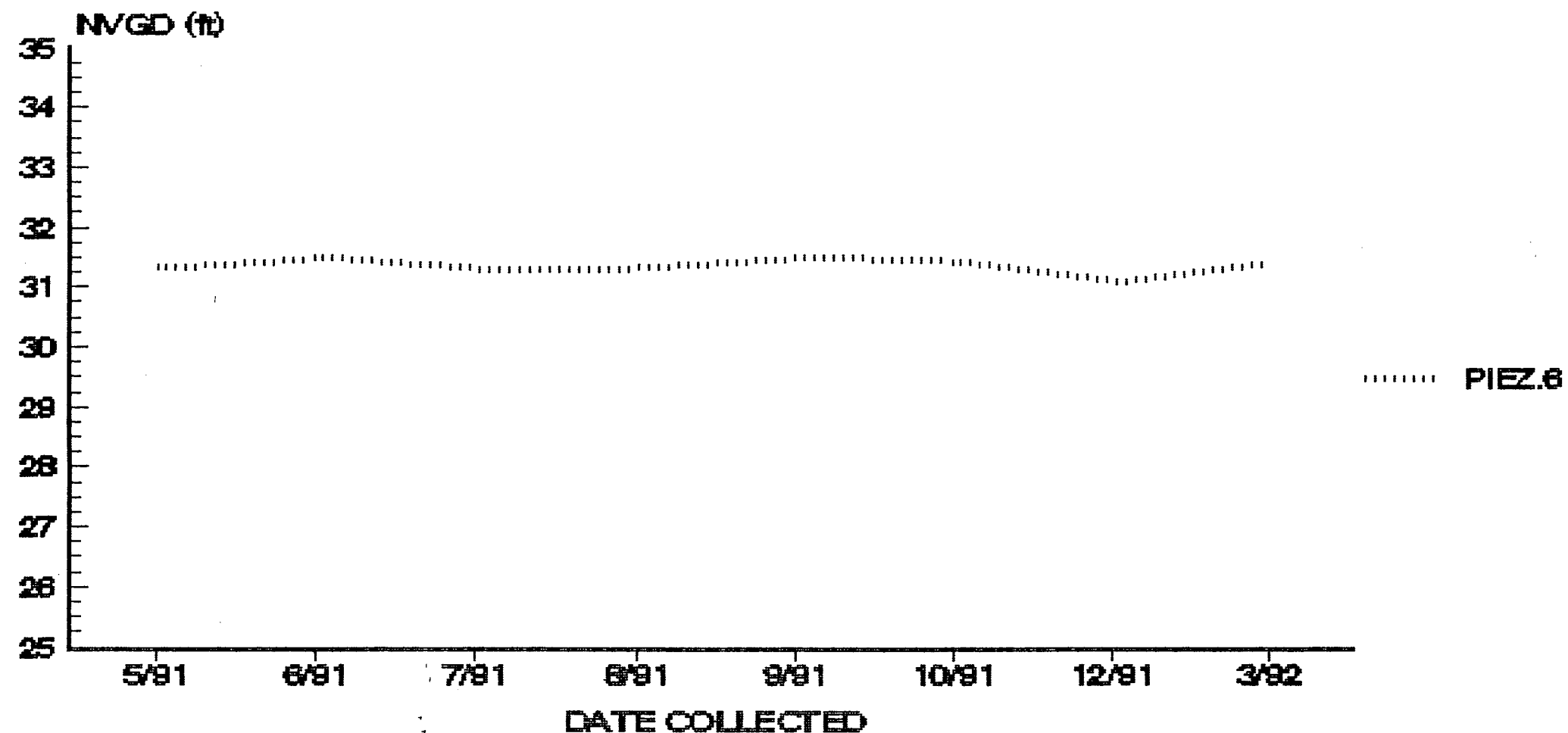
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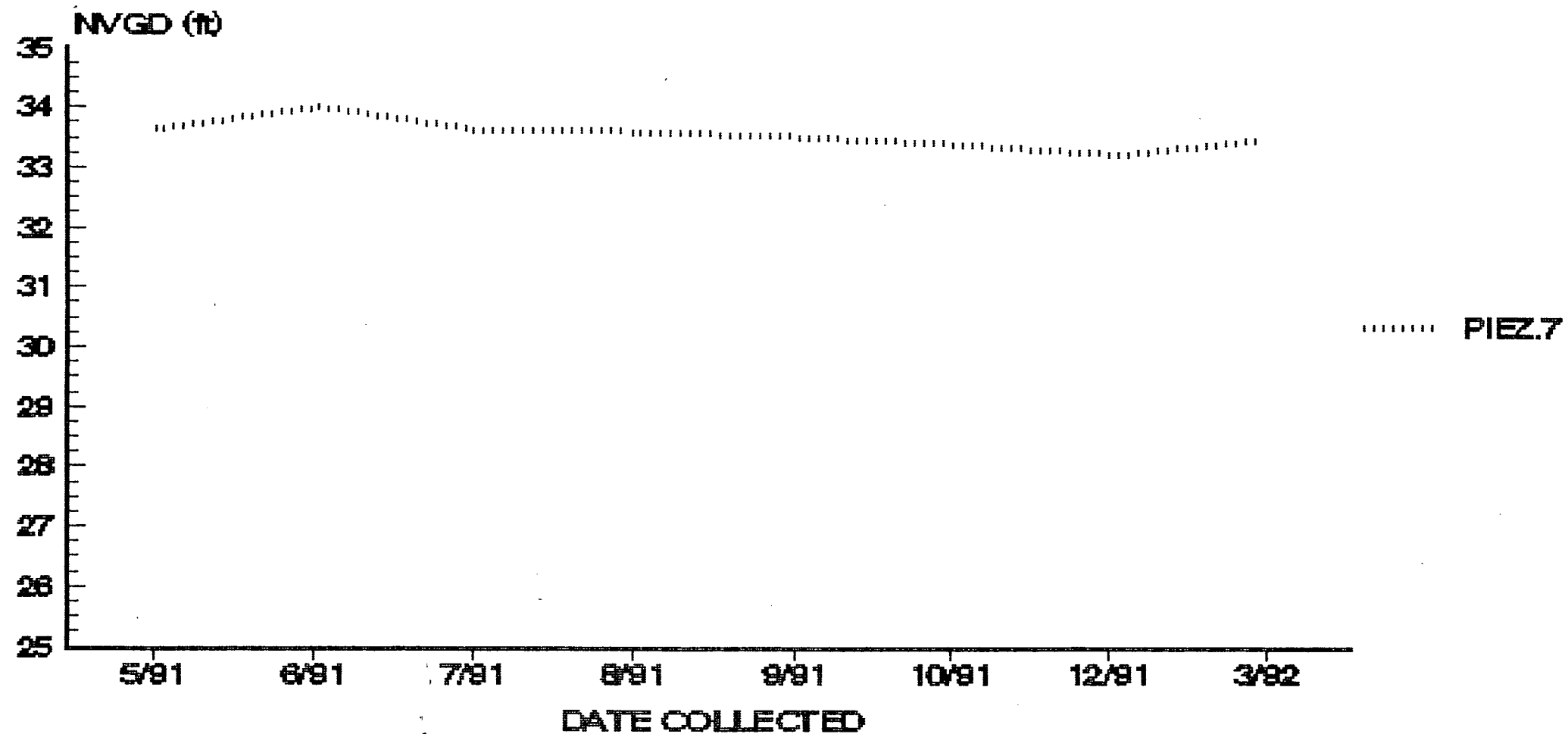


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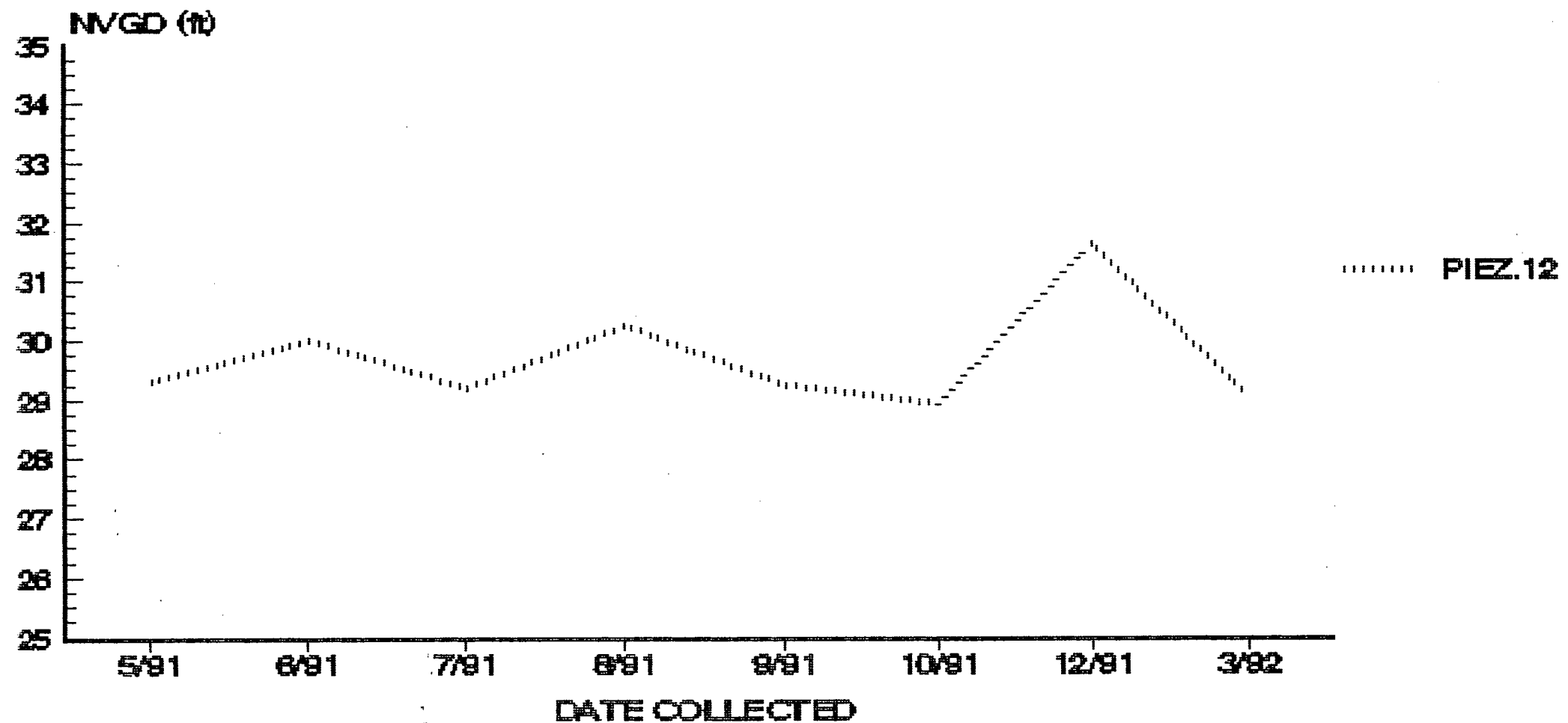
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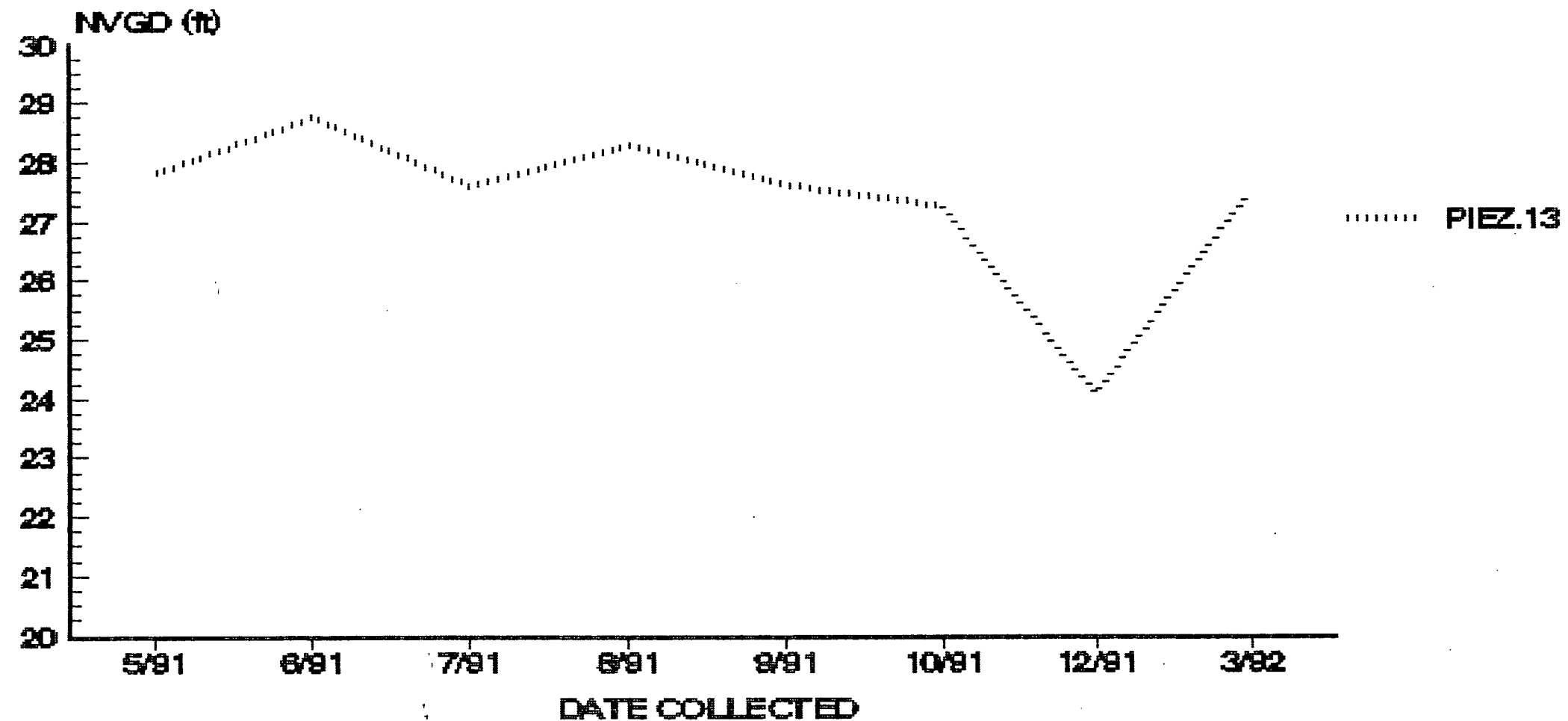
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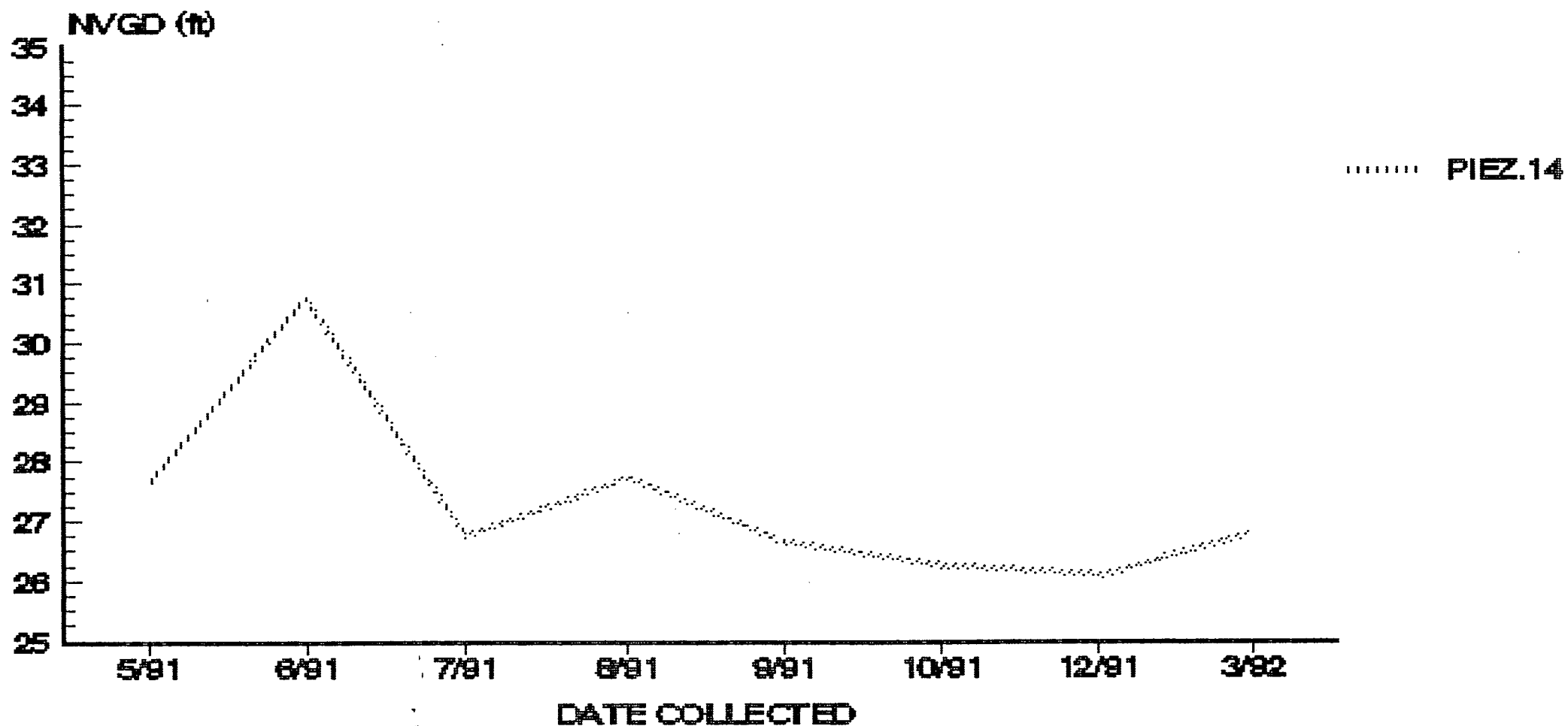
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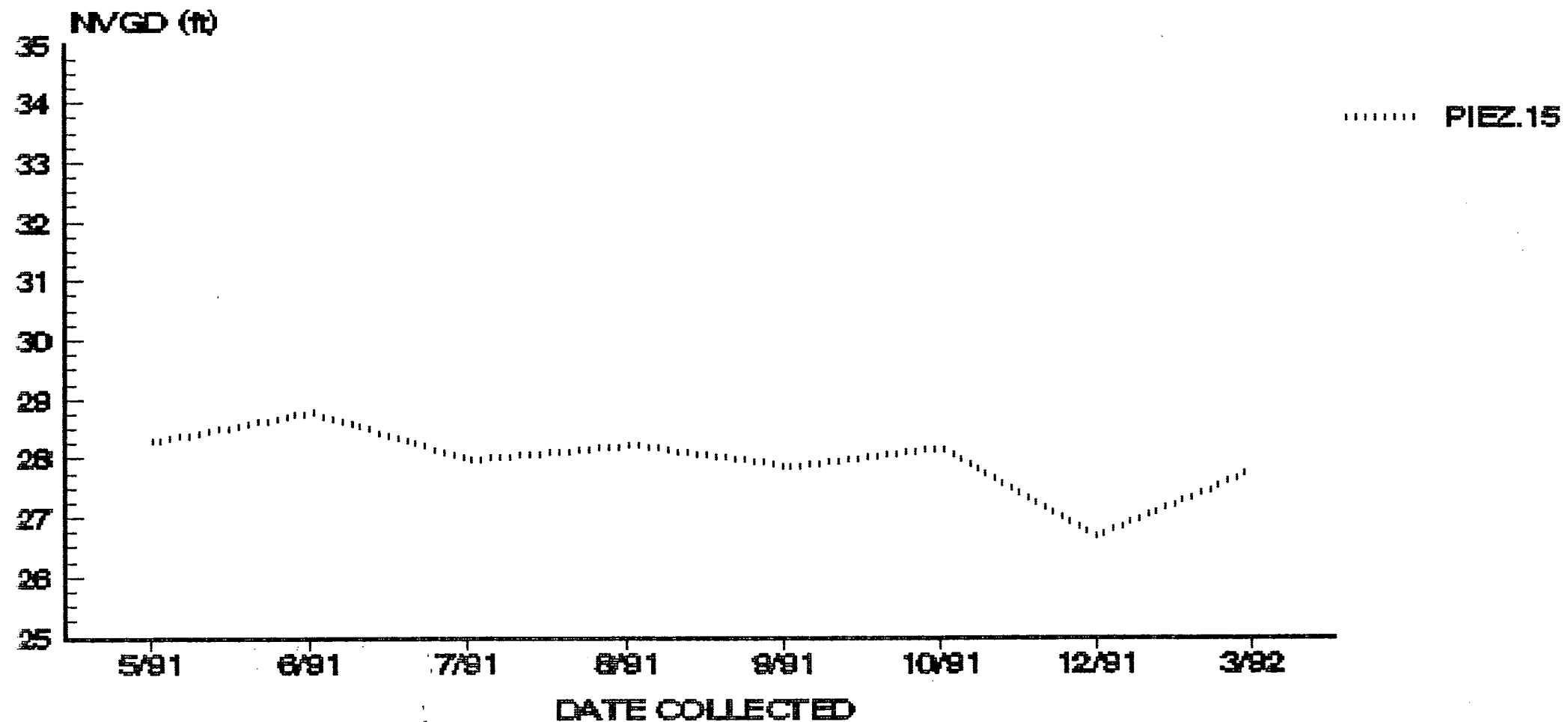
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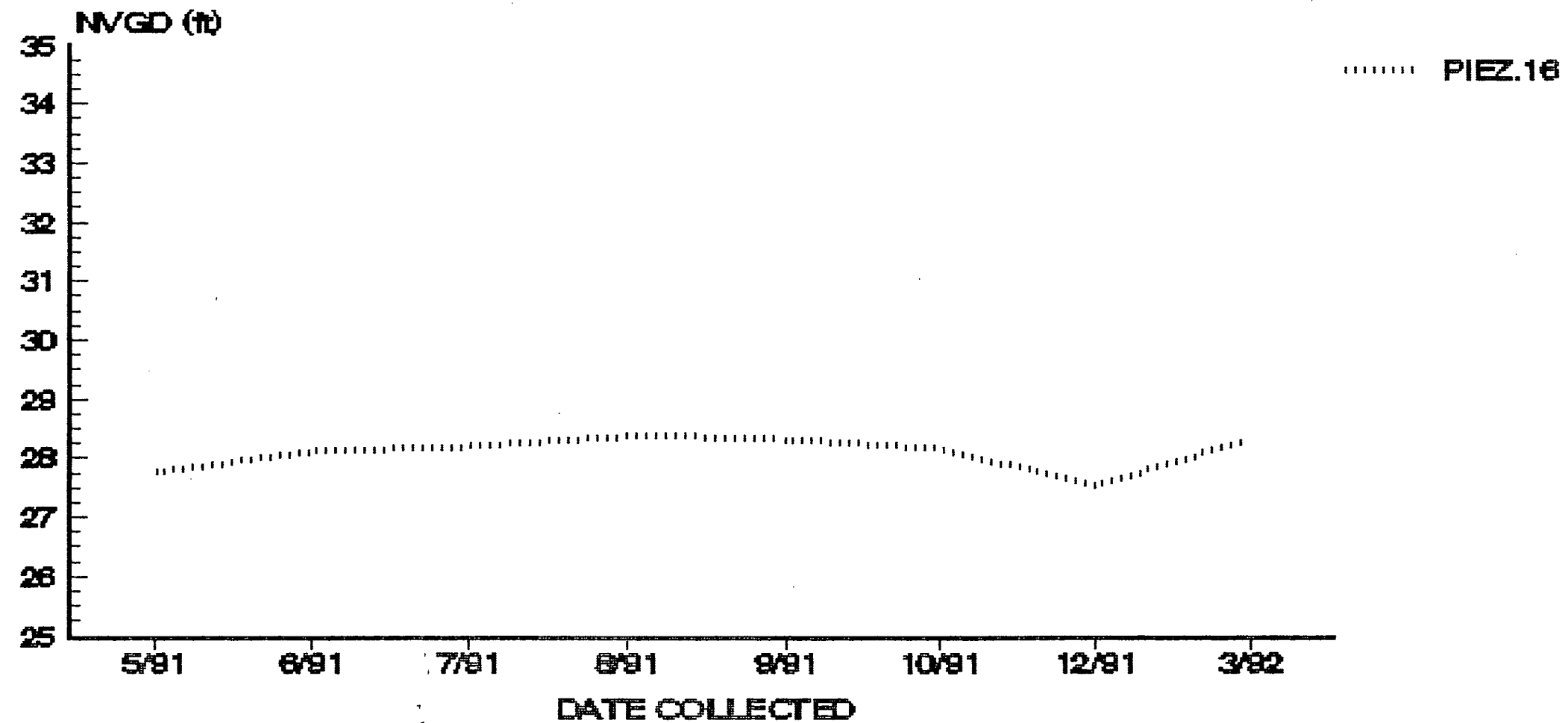
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PIEZIOMETER NVGD

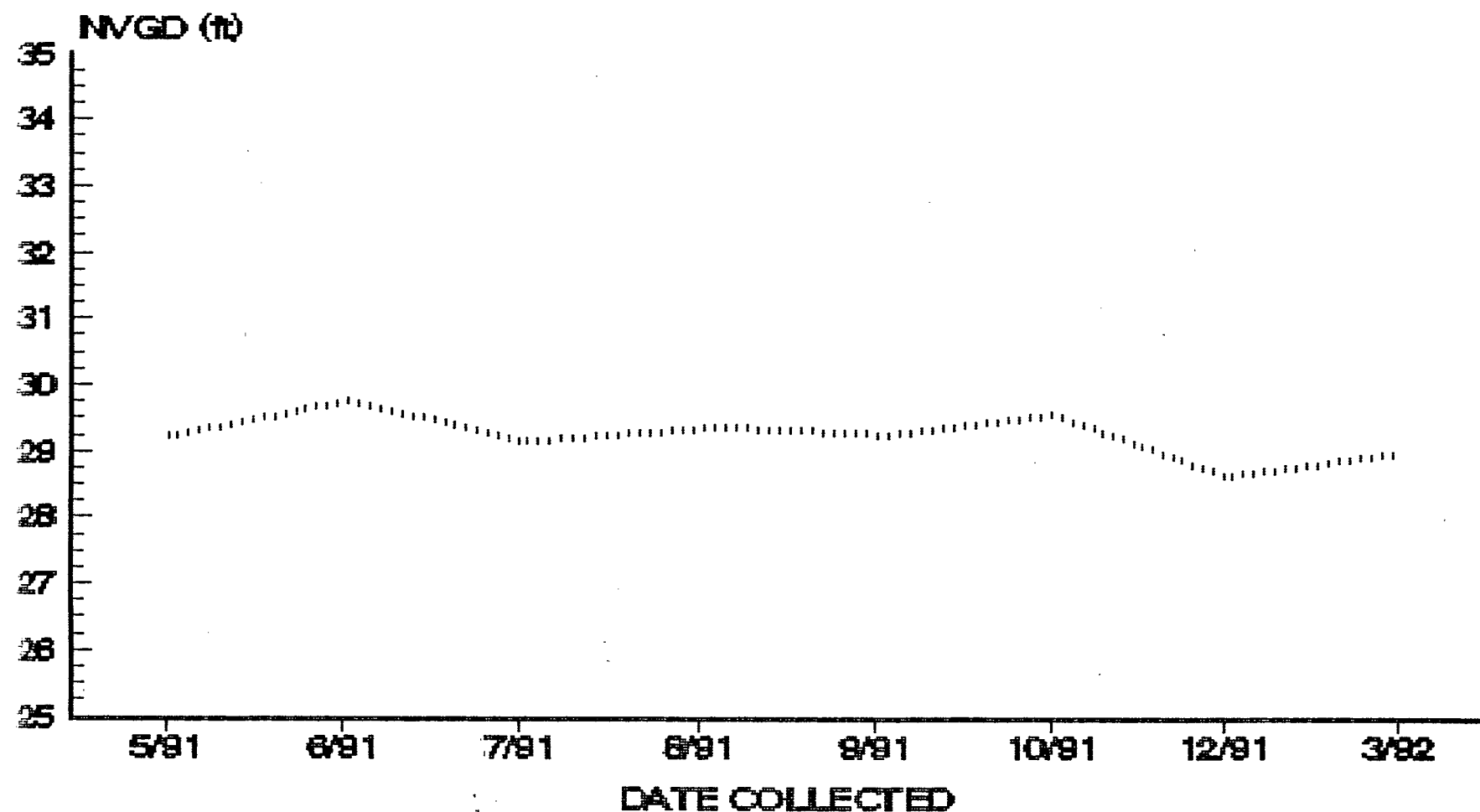


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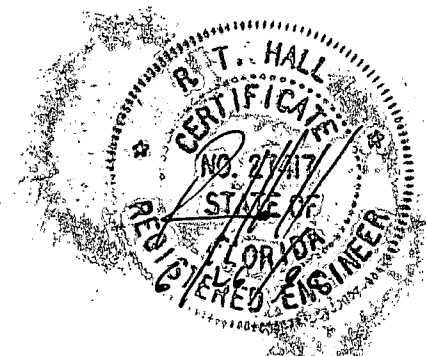
PIEZIOMETER NVGD

..... PIEZ.17



Groundwater
Comparison Table

TABLE EMPHASIZES THAT THE MEAN PIEZIOMETER NVGD IS LESS THAN THE
MEAN WELL NVGD. SUGGESTING THAT FLOW INTO THE SLURRY WALL.



WELL	ASSOCIATED PIEZIOMETER**	WELL NVGD				WELL MEAN	PIEZIOMETER MEAN	DELTA NVGD*
=====	=====	2/92	12/91	8/91	5/91	=====	=====	=====
MW 1	PZ 3	30.22	29.47	32.93	31.35	30.99	30.98	0.01
MW 2	PZ 2	32.61	30.60	31.10	31.10	31.35	31.17	0.18
CW 4	PZ 4	35.62	31.54	32.54	33.01	33.18	32.30	0.88
CW 5	PZ 5	37.25	35.42	38.00	36.50	36.79	36.23	0.56
MW 6	PZ 7	33.19	32.22	34.02	33.49	33.23	32.91	0.32
LRII 5	PZ 8	31.60	28.99	32.28	32.78	31.41	31.40	0.01
LRII 3	PZ 9	26.63	25.26	28.09	29.01	27.25	26.64	0.61
SA 6	PZ 10	15.14	18.74	19.12	13.79	16.70	14.83	1.87
SA 5	PZ 11	16.42	19.32	21.84	15.00	18.15	15.60	2.55
SA 2	PZ 12	19.77	21.27	21.22	18.97	20.31	20.00	0.31
SA 3	PZ 13	13.12	13.66	18.62	14.54	14.98	13.32	1.66
GC 4	PZ 14	28.31	26.31	28.81	29.48	28.23	28.11	0.12
SA 4	PZ 15	9.78	14.61	19.03	12.53	13.99	13.49	0.5
GC 5	PZ 16	29.19	27.94	29.02	30.27	29.11	28.71	0.4
GC 6	PZ 17	31.56	30.77	31.35	32.85	31.63	31.31	0.32

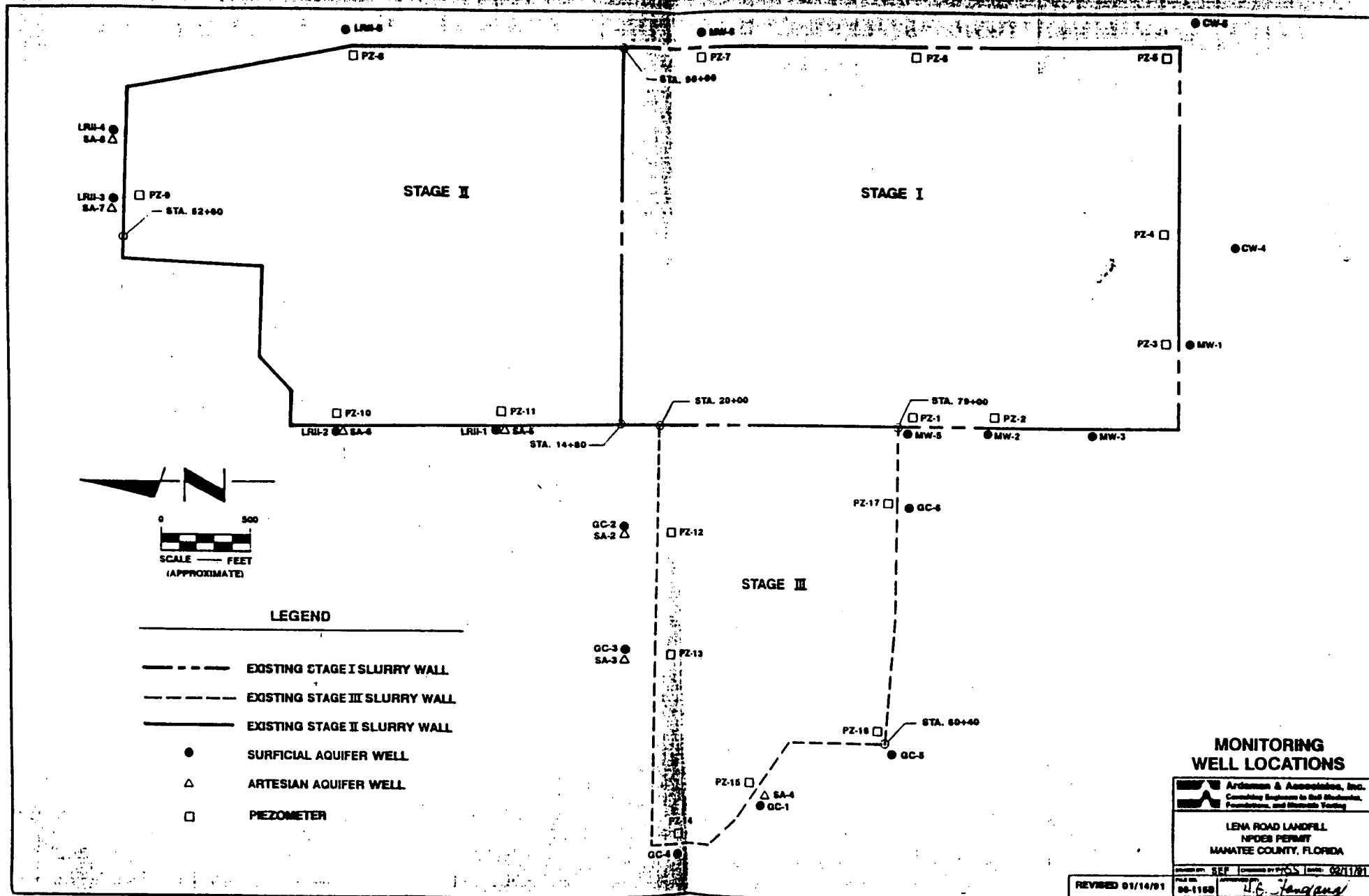
NOTES

* Defined as (Mean Well NVGD - Mean Pieziometer NVGD)

** See attached Monitoring Well Location map

*** For those corresponding to similar dates for Landfill collections

Where is
PZ data?
Lost X on
here?



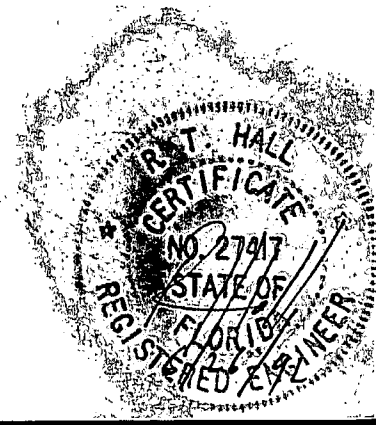
MONITORING WELL LOCATIONS

Ardaman & Associates, Inc. Consulting Engineers in Soil Mechanics, Foundations, and Geotechnical Testing	
LENA ROAD LANDFILL NPDES PERMIT MANATEE COUNTY, FLORIDA	
Project No. SEP	Drawn by WCS Date 02/11/81
Plot No. 80-1150	Checked by J.B. Longenecker

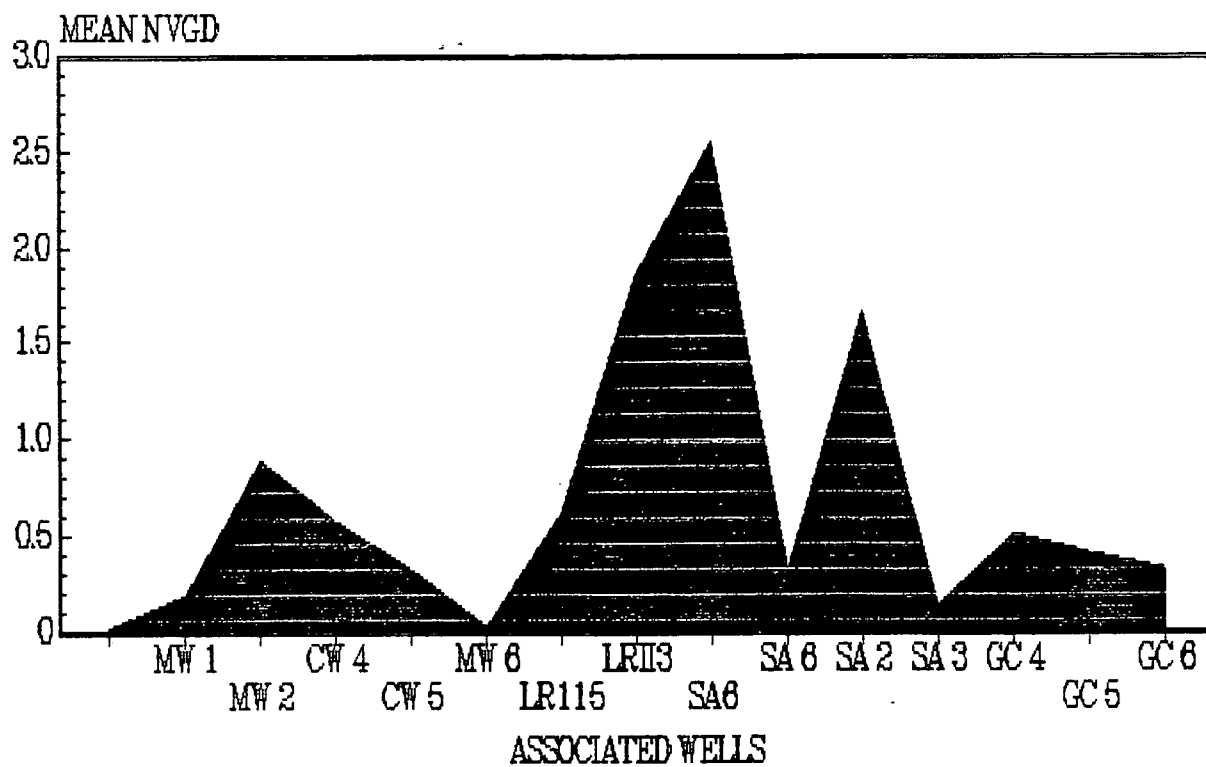
REVISED 01/14/91

Groundwater
Comparison Graph

GRAPH OF THE SAME NVGD DIFFERENCE DEPICTING THE INCREASE IN NVGD
OF EACH WELL OVER ITS ASSOCIATED PIEZIOMETER



DELTA NVGD FOR ASSOCIATED WELLS AND PIEZIOMETERS



Which one
is higher?

Detection of
Metals Table

ONLY TWO MEATLS, SODIUM AND IRON, HAD ANY SIGNIFICAL DATA. ALL
REMAINING METALS WERE TYPICALLY REPORTED AT DETECTION LIMITS



LANDFILL MONITORING WELLS COMPOSITE METALS ANALYSES

		MW 1	MW 2	MW 3	CW 4	CW 5	GC 1	GC 3	SA 2	SA 5
	PARAMETER	=====	=====	=====	=====	=====	=====	=====	=====	=====
1/92	Sodium	11.3	41.7	70.0	45.3	20.0	61.0	19.1	27.3	53.6
12/91	Sodium	7.28	55.7	67.2	43.8	19.5	52.9	23.0	27.4	52.4
1/91	Sodium	8.79	24.2	98.0	38.3	18.5	108	21.2	22.9	56.2
1/91	Sodium	8.23	71.4	68.4	55.8	22.1	23.7	21.3	34.6	55.3
3/91	Sodium	8.23	77.7	62.5	42.2	17.8		21.5	28.5	55.2
1/90	Sodium	24.7	5.03	4.45	87.9	38.3		21.8	31.2	59.0

LANDFILL MONITORING WELLS COMPOSITE METALS ANALYSES

		<u>LR11-2</u>	<u>SA 6</u>	<u>MW 6</u>	<u>GC 5</u>	<u>SA 4</u>	<u>GC 4</u>	<u>SA 3</u>
<u>PARAMETER</u>								
2/92	Sodium	4.96	48.4	17.2	20.3			
12/91	Sodium	4.96	44.6	17.2	14.1	60.4	19.7	35.7
8/91	Sodium	4.36	43.6	16.90	10.3	25.8	17.0	32.5
5/91	Sodium	4.09	46.1	14.10	19.2	65.1	21.8	26.7
3/91	Sodium	3.99	44.3	15.80	45.0		20.6	25.9
8/90	Sodium	5.03	47.1	8.05	19.7			32.5

LANDFILL MONITORING WELLS COMPOSITE METALS ANALYSES

		GC 2	GC 6	LR11-1	SA 7	SA 8	LR11-3	LR11-4	LR11-5	SMR 1	SMR 2
		=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
PARAMETER											
=====											
2/92	Sodium	25.5	32.8	24.3	42.1	42.7	6.28	8.00	10.2	23.3	61.0
12/91	Sodium	27.1	33.5	25.2	39.3	40.9	5.83	7.57	10.4	23.0	59.4
8/91	Sodium	25.4	3.52	23.4	38.2	38.8	5.54	7.03	7.61	39.3	37.3
5/91	Sodium	27.9	26.9	26.4	41.0	42.4	5.72	6.89	11.5	23.7	62.1
3/91	Sodium	27.5	17.3	24.8	39.5	43.9	5.70	7.08	14.1	25.2	57.1
8/90	Sodium	33.1	61.8	24.7	40.1	40.8	4.45	8.05	13.7	23.4	58.9

		MW 1	MW 2	MW 3	CW 4	CW 5	GC 1	GC 3	SA 2	SA 5
		=====	=====	=====	=====	=====	=====	=====	=====	=====
1/92	Iron	4.56	2.63	3.22	4.40	2.17	29.0	7.35	0.330	<0.100
2/91	Iron	2.04	5.26	13.0	4.81	2.22	21.3	6.84	0.330	<0.100
3/91	Iron	4.10	4.53	13.60	5.32	2.87	21.4	6.62	0.758	<0.100
7/91	Iron	1.63	0.17	9.94	4.00	2.53	14.8	5.15	<0.100	<0.100
3/91	Iron	1.53	4.72	10.30	5.14	2.53	0.01	< 0.100	< 0.100	< 0.100
3/90	Iron	1.85	2.67	13.20	9.52	4.42		5.79	<0.10	0.13

LANDFILL MONITORING WELLS COMPOSITE METALS ANALYSES

	PARAMETER =====	GC 2 =====	GC 6 =====	LRII-1 =====	SA 7 =====	SA 8 =====	LRII-3 =====	LRII-4 =====	LRII-5 =====	SMR 1 =====	SMR 2 =====
/92	Iron	36.6	9.56	27.3	<0.100	0.155	0.690	2.85	2.92	9.95	<0.100
2/91	Iron	30.9	6.97	23.7	<0.100	<0.100	0.759	2.49	2.38	7.10	<0.100
/91	Iron	37.1	6.61	28.60	<0.100	<0.100	0.71	2.91	1.88	10.6	<0.05
/91	Iron	8.26	5.54	16.9	<0.100	<0.100	0.57	2.23	2.79	6.54	<0.100
/91	Iron	< 0.100	9.36	22.00	< 0.100	< 0.100	0.85	0.84	5.36	9.82	< 0.100
/90	Iron	32.7	6.32	21.20	<0.05	0.3	0.76	2.99	5.29	10.6	<0.05

LANDFILL MONITORING WELLS COMPOSITE METALS ANALYSES

	PARAMETER =====	LRII-2 =====	SA 6 =====	MW 6 =====	GC 5 =====	SA 4 =====	GC 4 =====	SA 3 =====
/92	Iron	4.83	<0.100	14.1	7.40			
2/91	Iron	3.39	<0.100	11.5	5.48	< 0.100	14.4	0.108
/91	Iron	4.00	<0.100	9.94	1.81	<0.100	16.0	<0.100
/91	Iron	3.54	<0.100	5.95	3.39	<0.100	11.0	<0.100
/91	Iron	4.12	< 0.100	7.39	7.63		12.3	< 0.100
/90	Iron	3.31	<0.10	6.16	4.79	67.7		<0.10

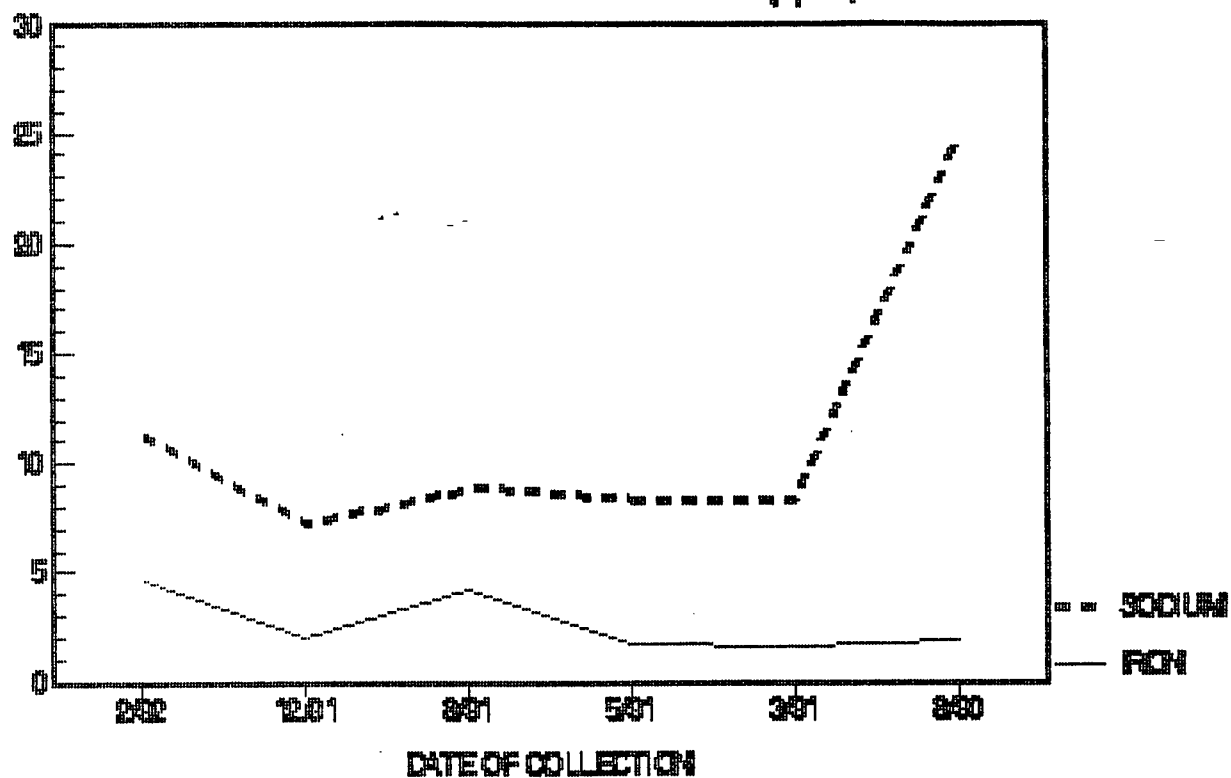
Metal Concentration
Graphs

EACH WELL IS GRAPHICALLY DEPICTED FOR VARIATION IN EACH METAL. INDEPENDENT TREND ANALYSIS (BY LINEAR REGRESSION) WAS NOT FRUITFUL IN DEMONSTRATING A RELIABLE TRENDENCY. ALL REMAINING METALS WERE REPORTED AT THEIR DETECTION LIMITS.



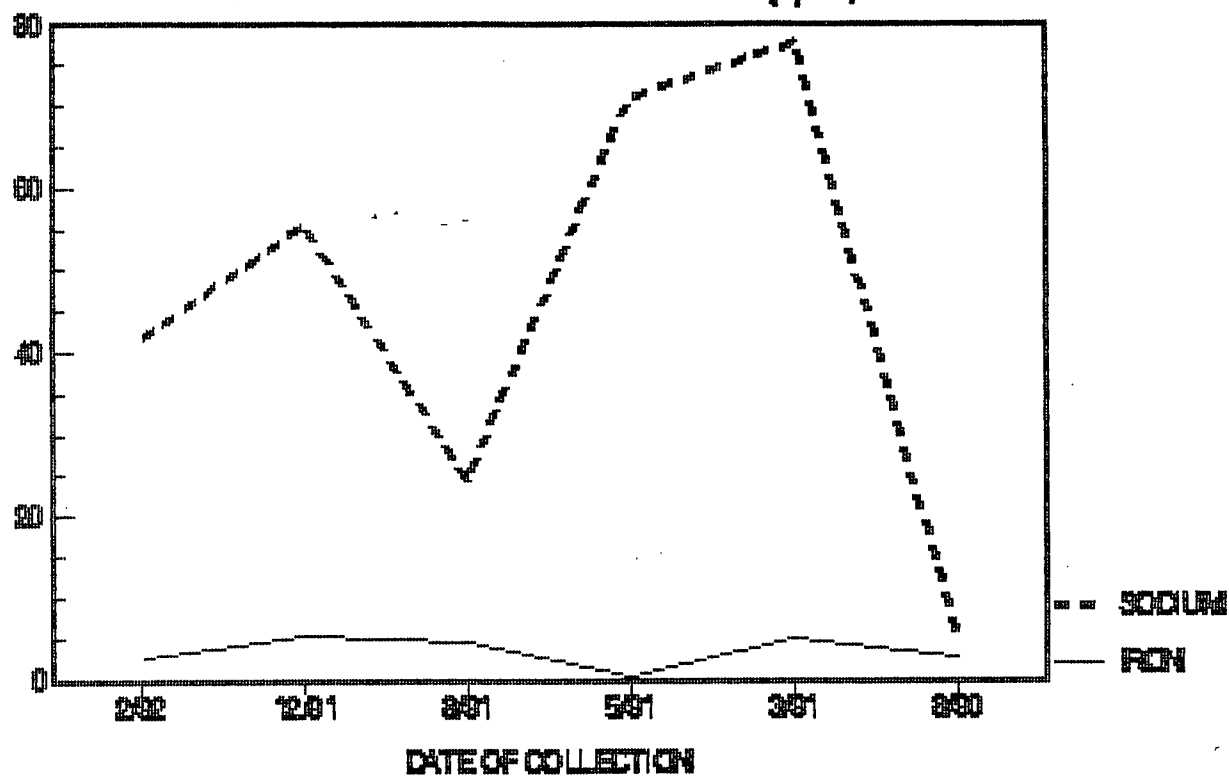
LENA ROAD LANDFILL WELL MW1

METALS CONCENTRATION (ppm)



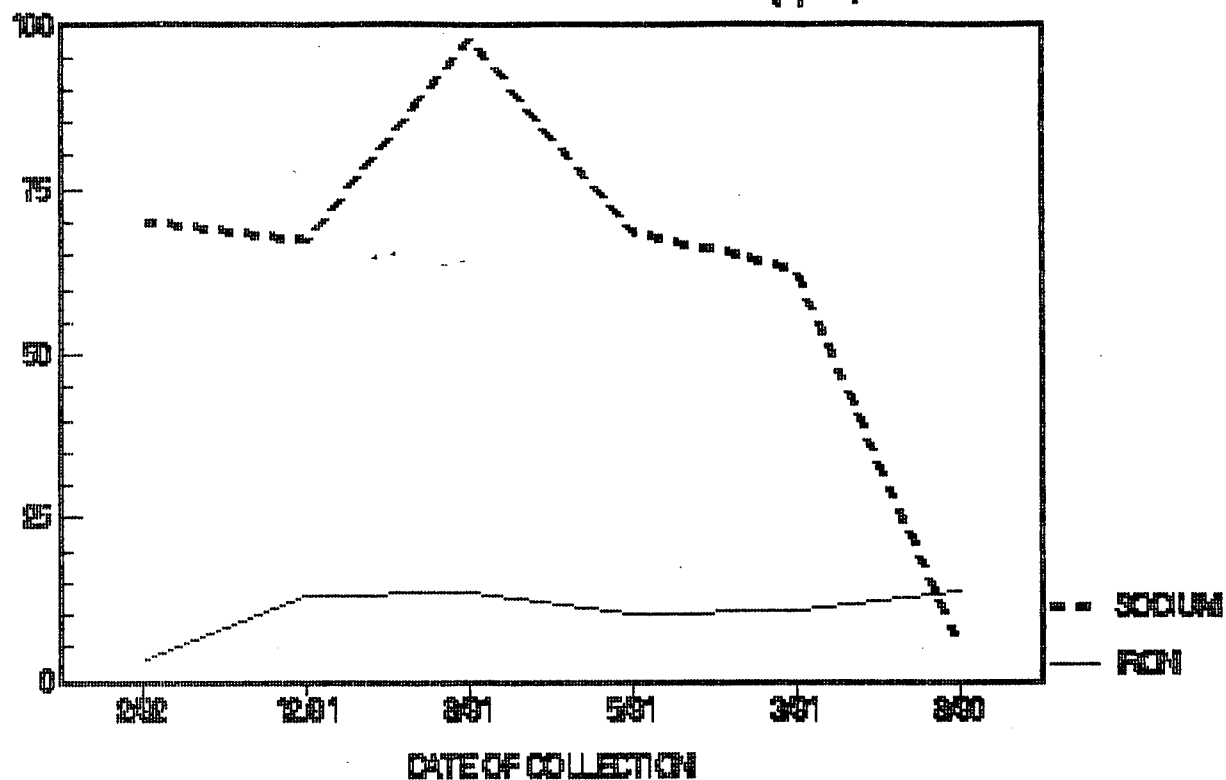
LENA ROAD LANDFILL WELL MW2

METALS CONCENTRATION (ppm)



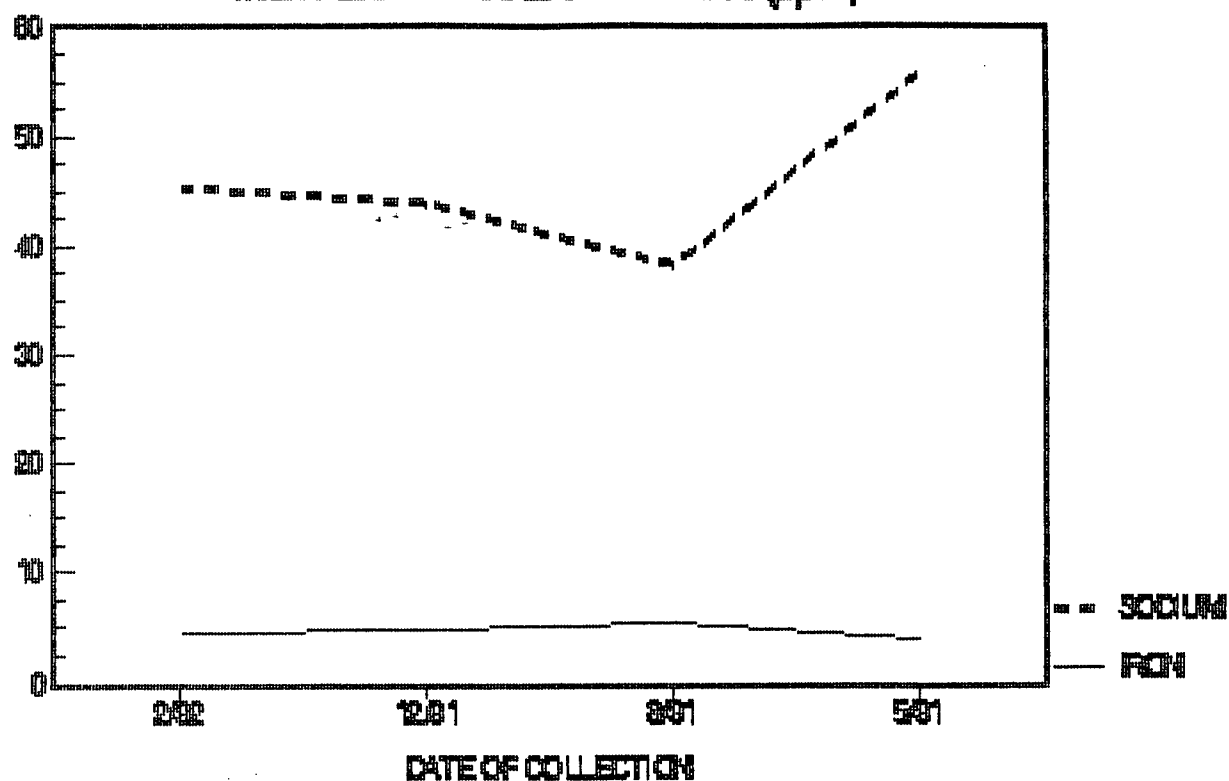
LENA ROAD LANDFILL WELL MW3

METALS CONCENTRATION (ppm)



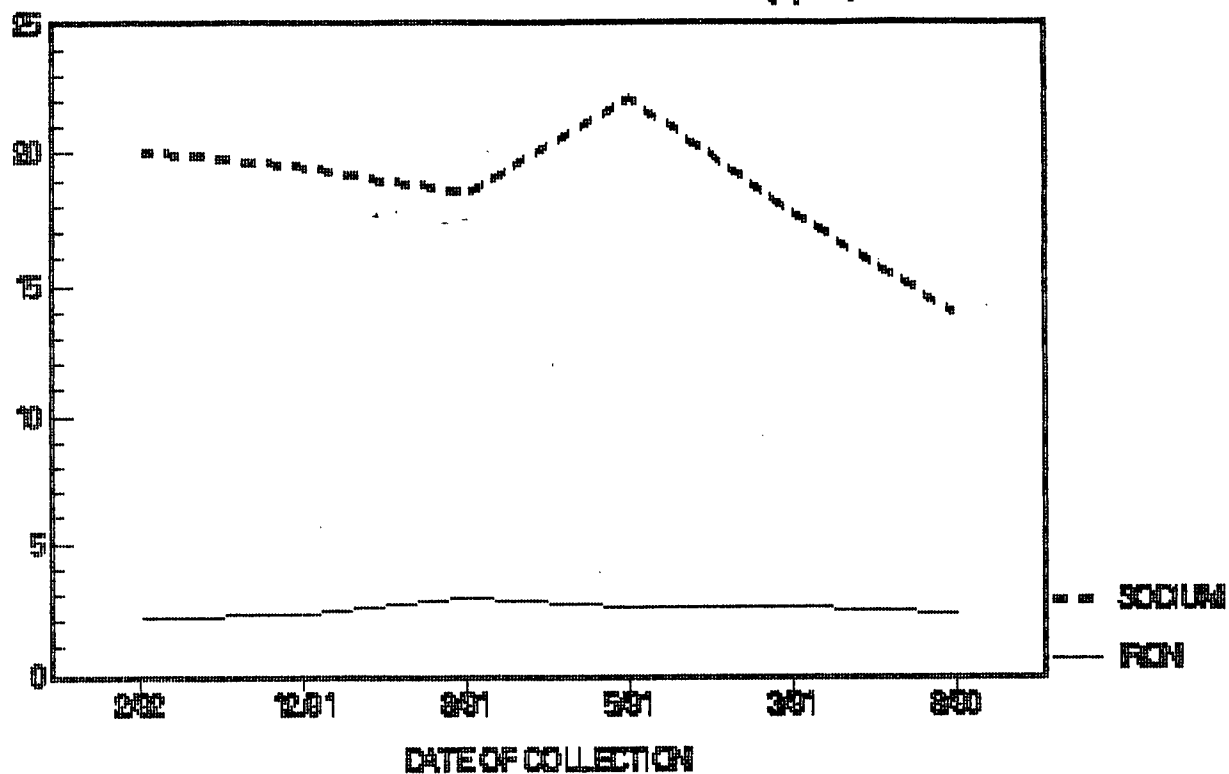
LENA ROAD LANDFILL WELL CW4

METALS CONCENTRATION (ppm)



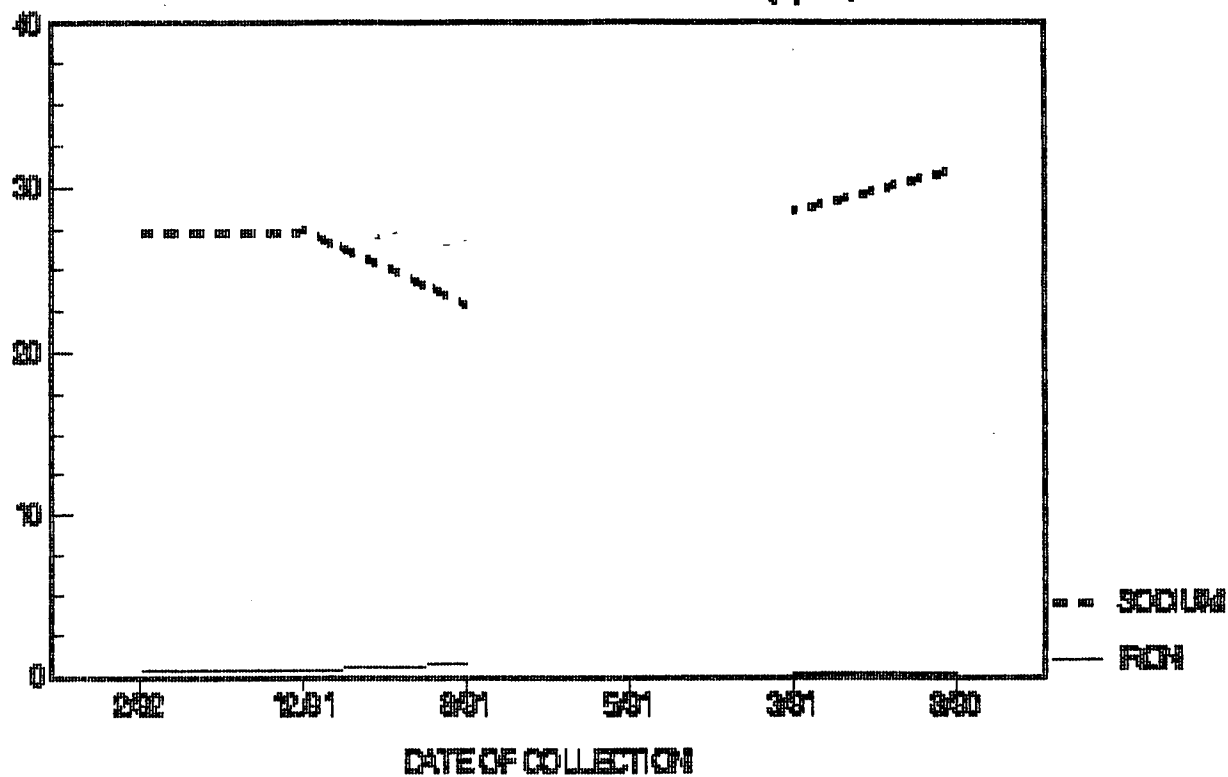
LENA ROAD LANDFILL WELL CW5

METALS CONCENTRATION (ppm)



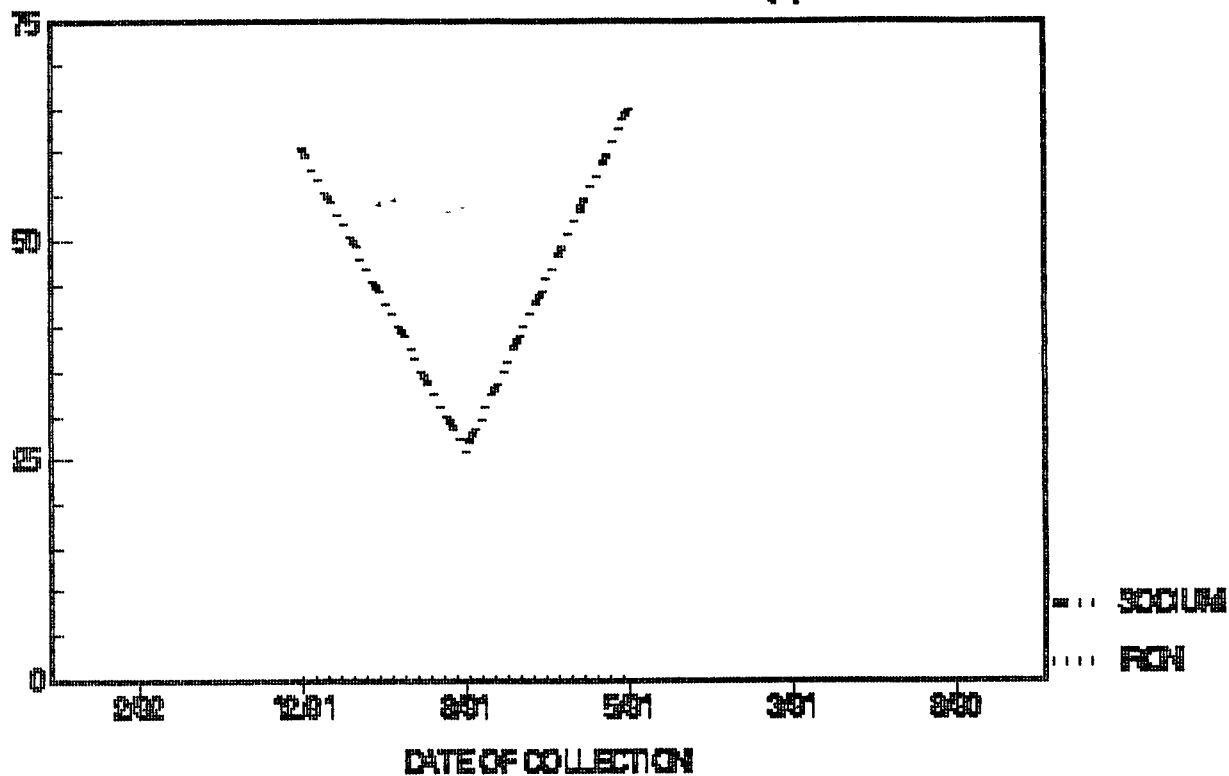
LENA ROAD LANDFILL WELL SA2

METALS CONCENTRATION (ppm)



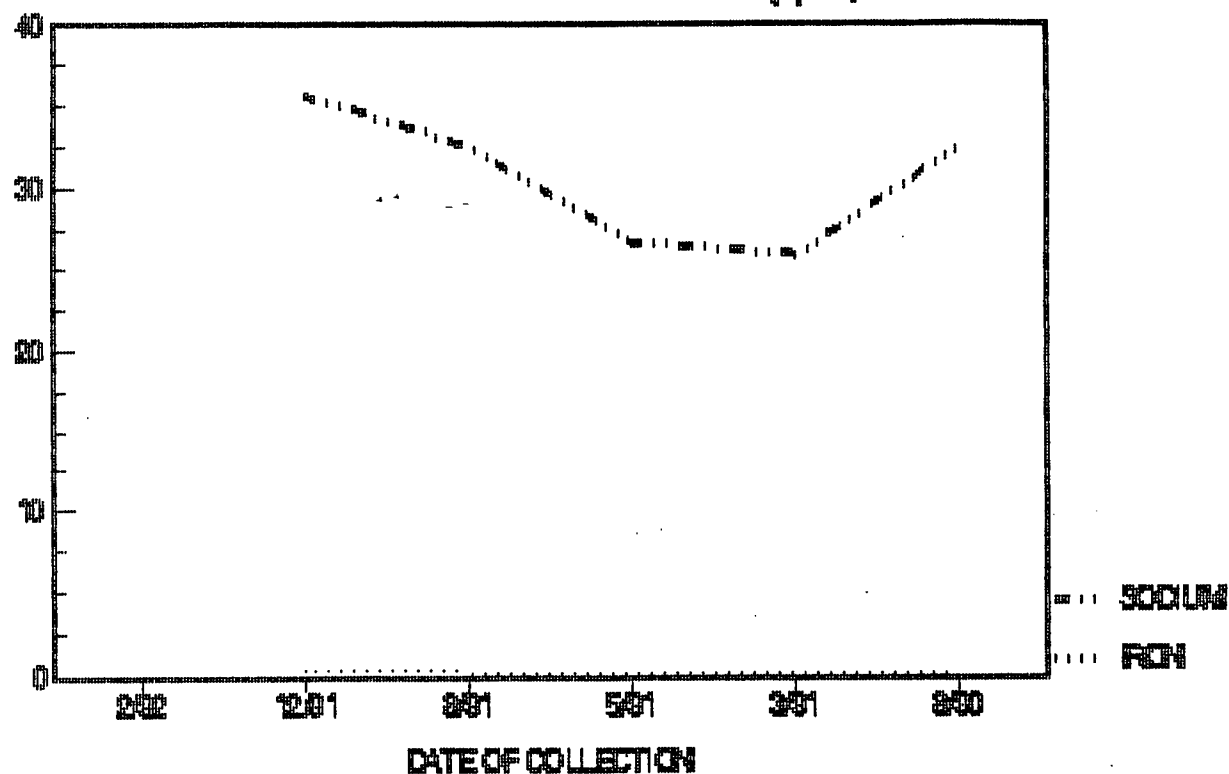
LENA ROAD LANDFILL WELL SA4

METALS CONCENTRATION (ppm)



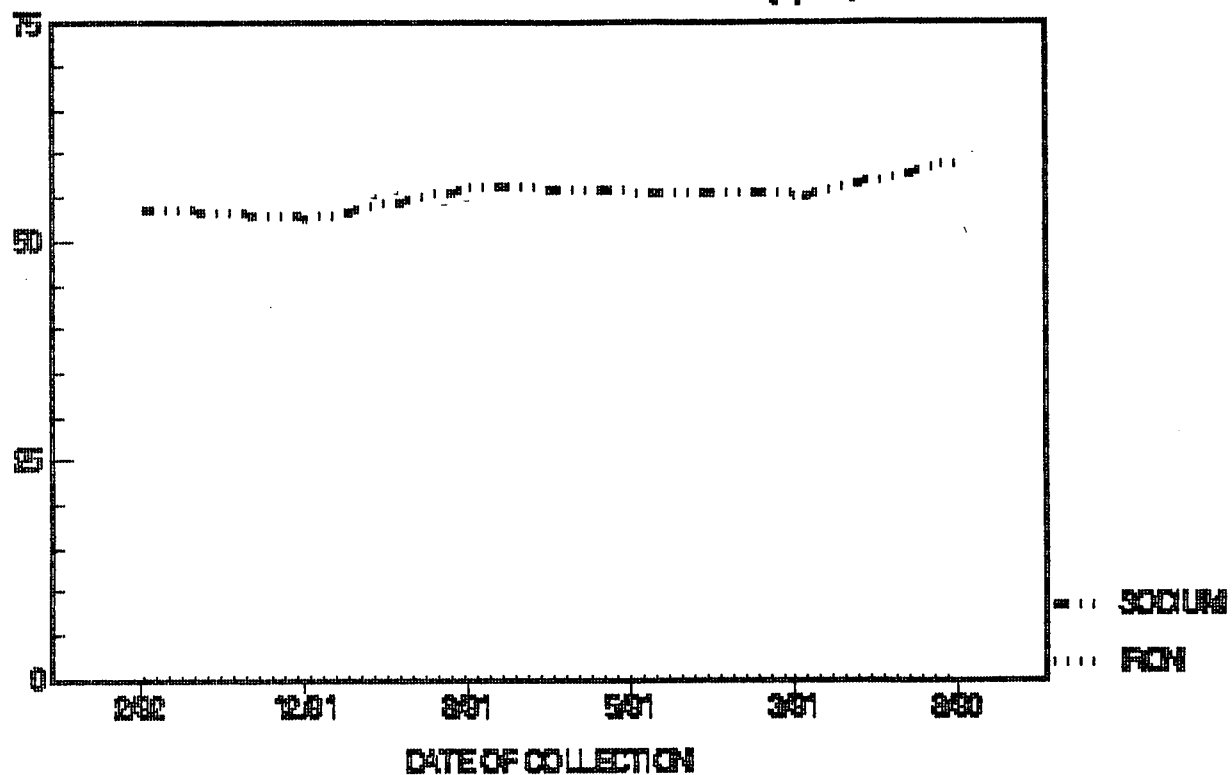
LENA ROAD LANDFILL WELL SA3

METALS CONCENTRATION (ppm)



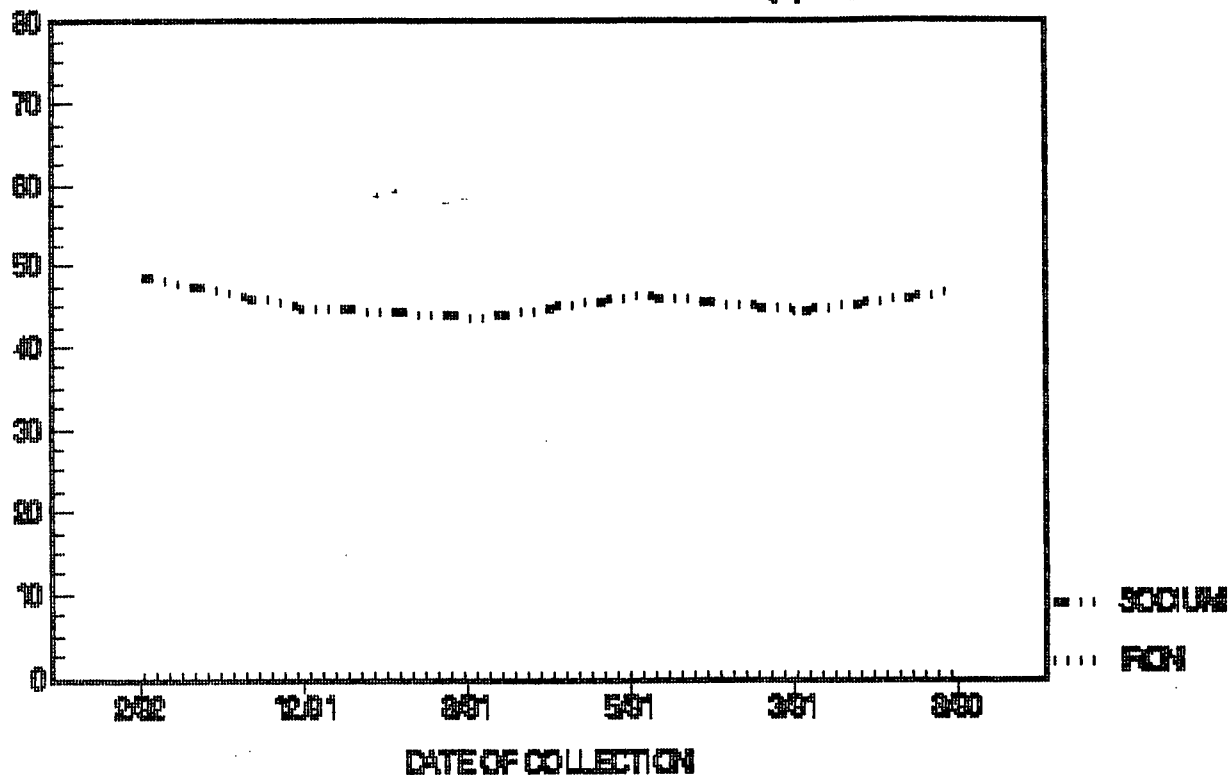
LENA ROAD LANDFILL WELL SA5

METALS CONCENTRATION (ppm)



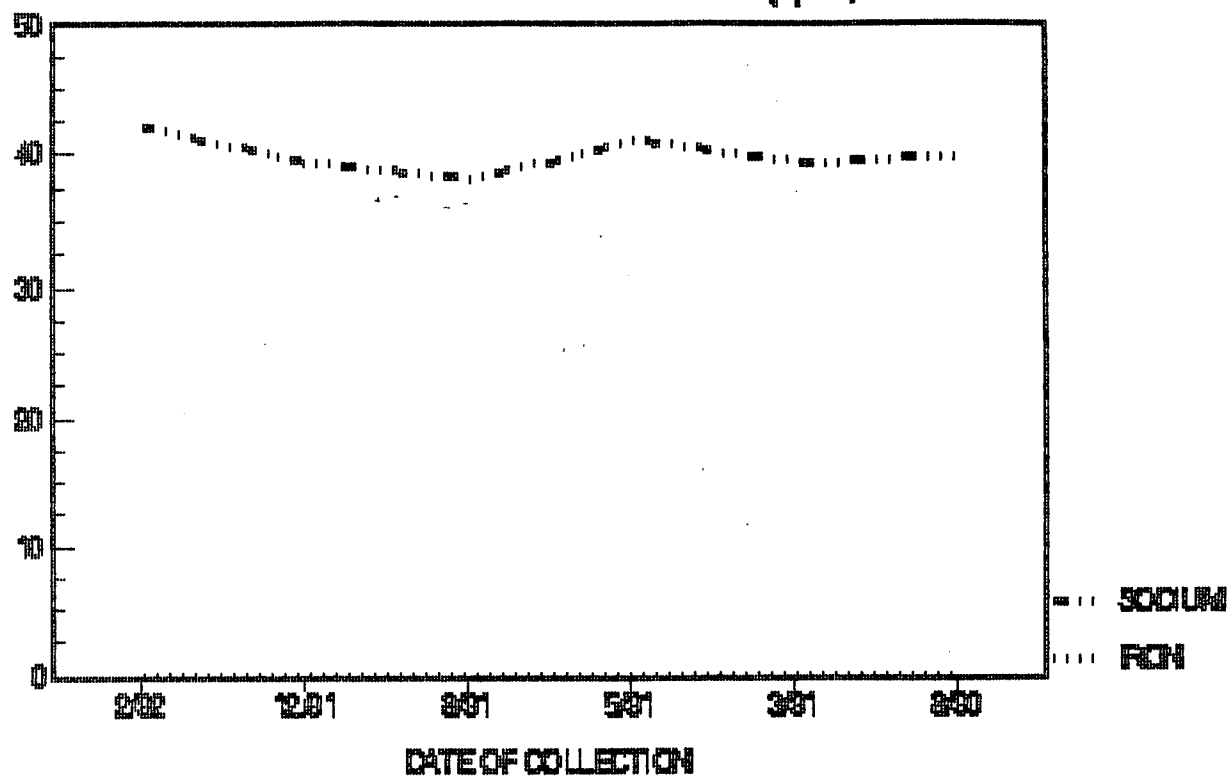
LENA ROAD LANDFILL WELL SA6

METALS CONCENTRATION (ppm)



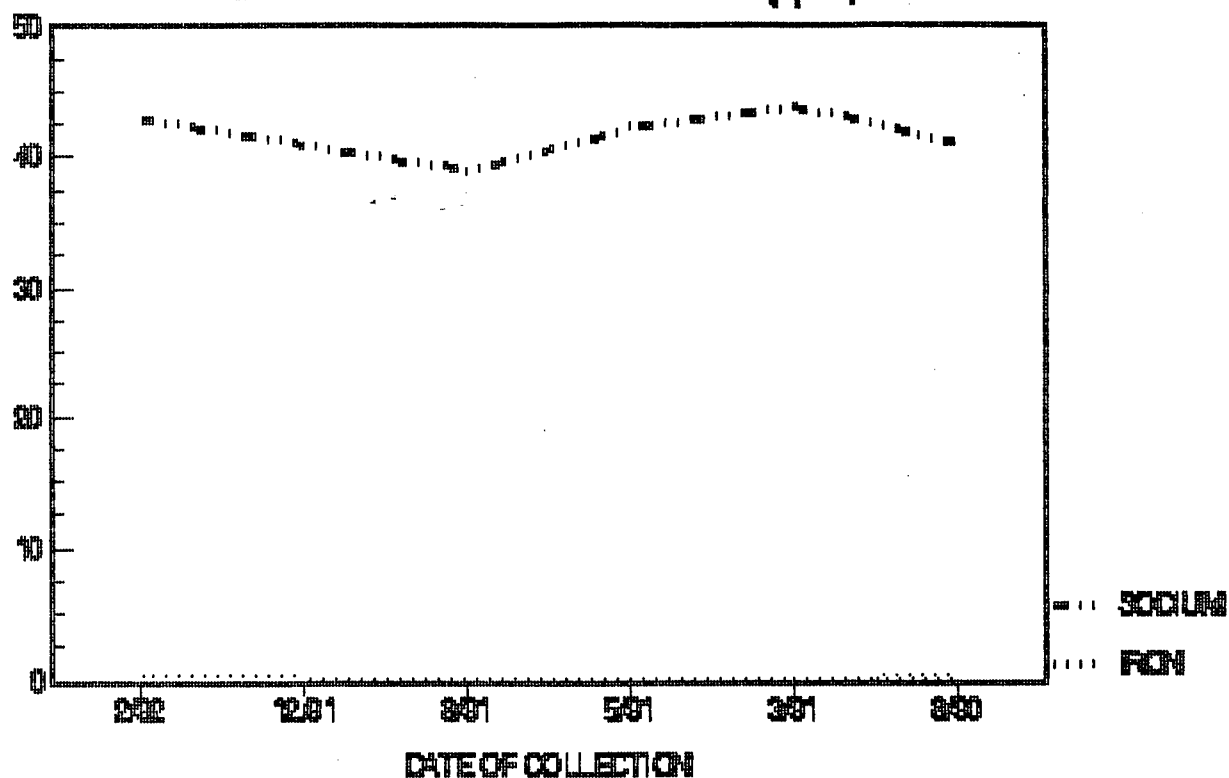
LENA ROAD LANDFILL WELL SA7

METALS CONCENTRATION (ppm)



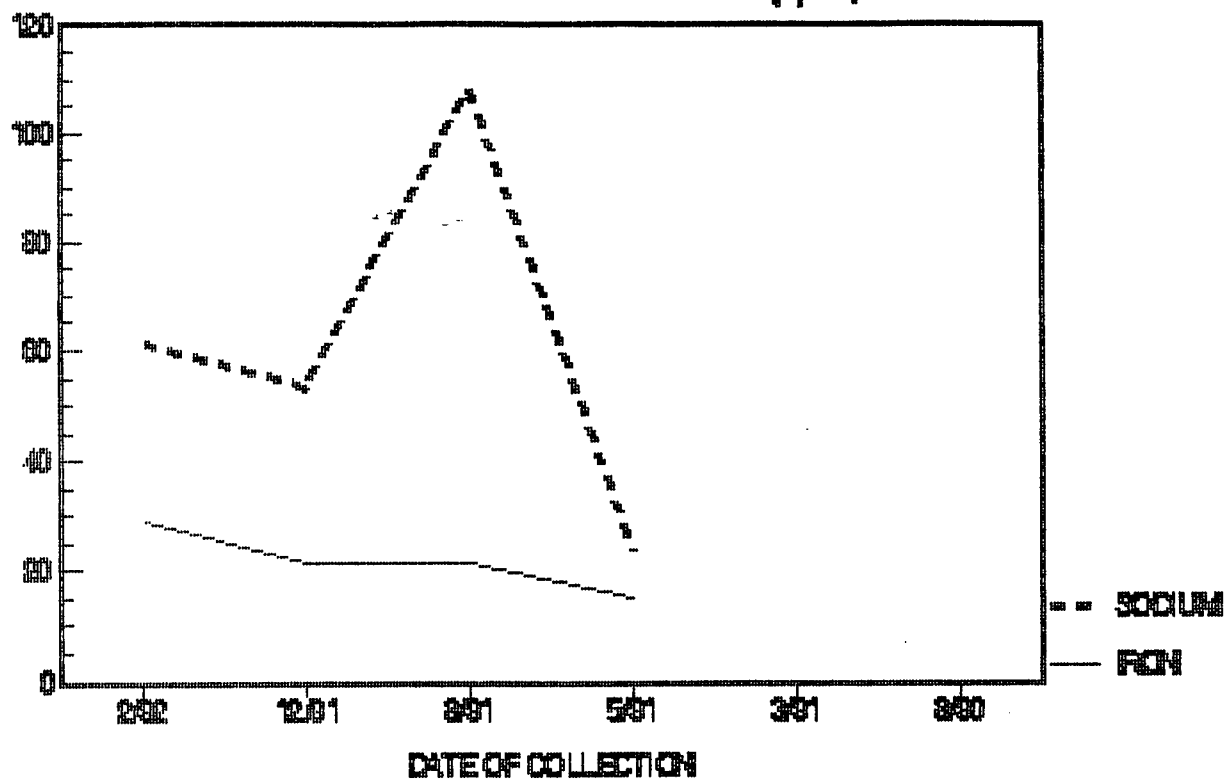
LENA ROAD LANDFILL WELL SA8

METALS CONCENTRATION (ppm)



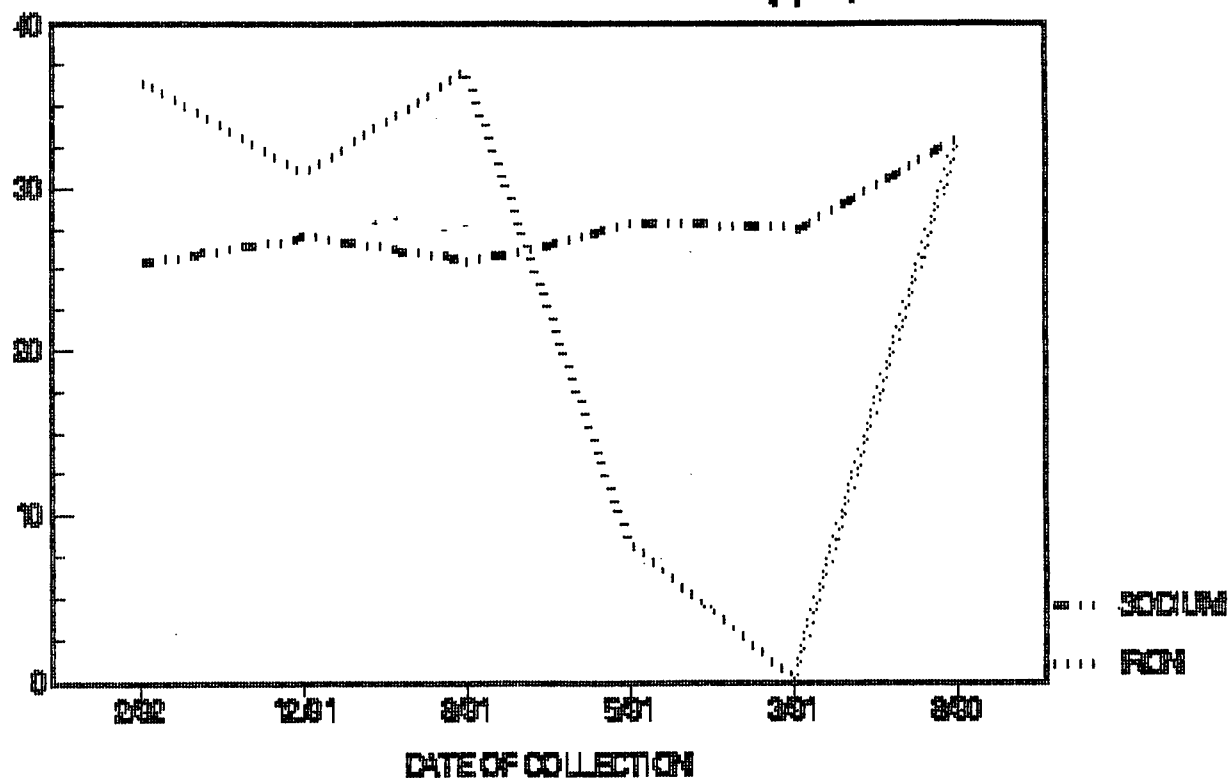
LENA ROAD LANDFILL WELL GC1

METALS CONCENTRATION (ppm)



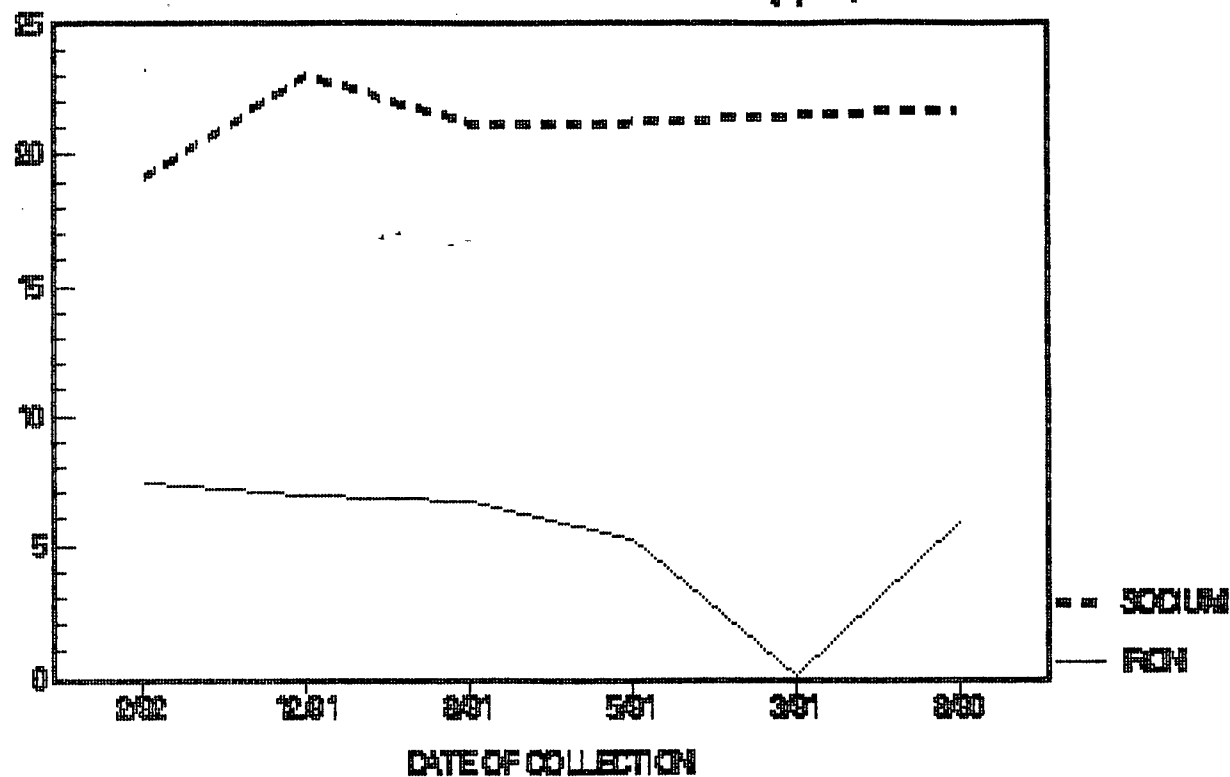
LENA ROAD LANDFILL WELL GC2

METALS CONCENTRATION (ppm)



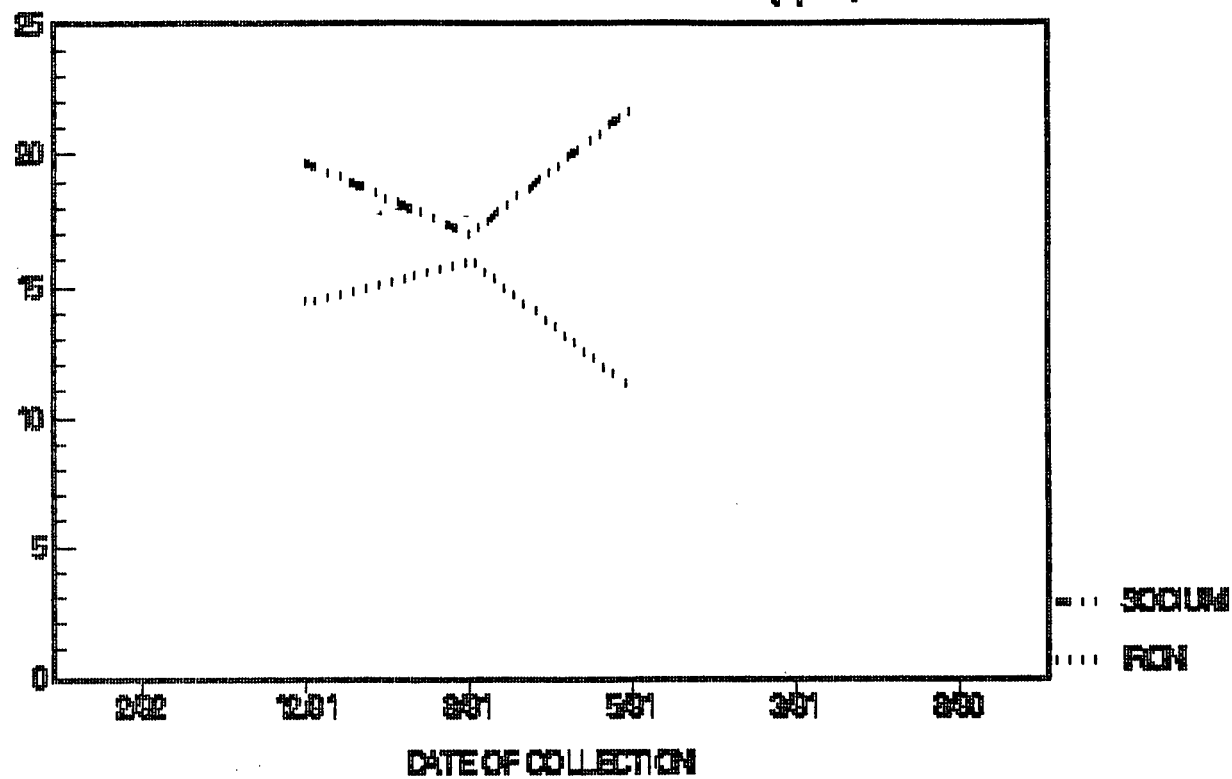
LENA ROAD LANDFILL WELL GC3

METALS CONCENTRATION (ppm)



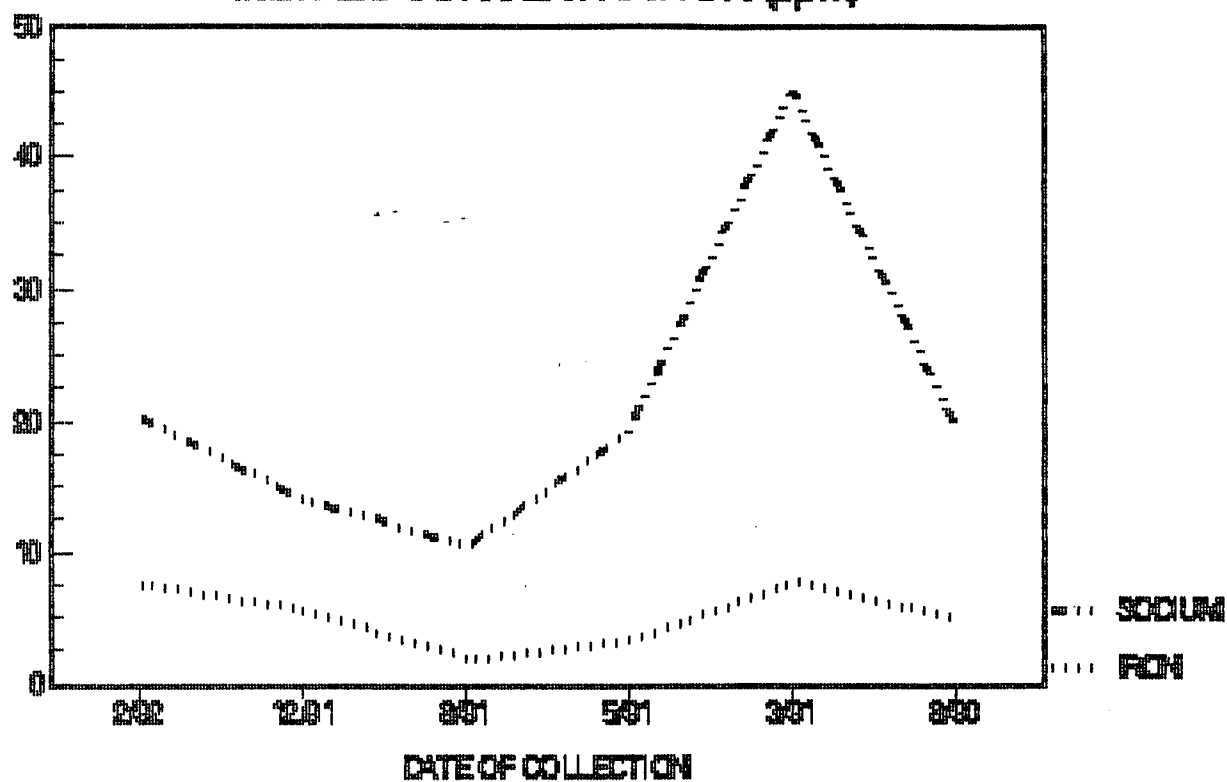
LENA ROAD LANDFILL WELL GC4

METALS CONCENTRATION (ppm)



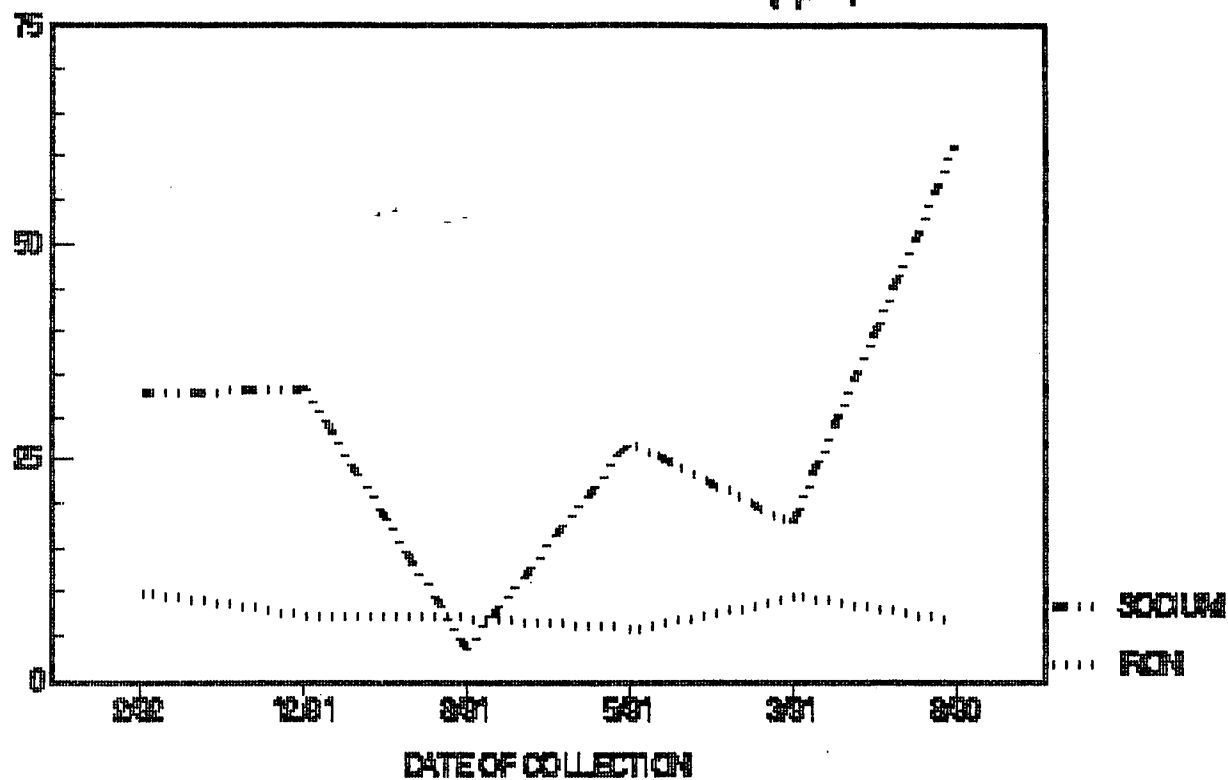
LENA ROAD LANDFILL WELL GC5

METALS CONCENTRATION (ppm)



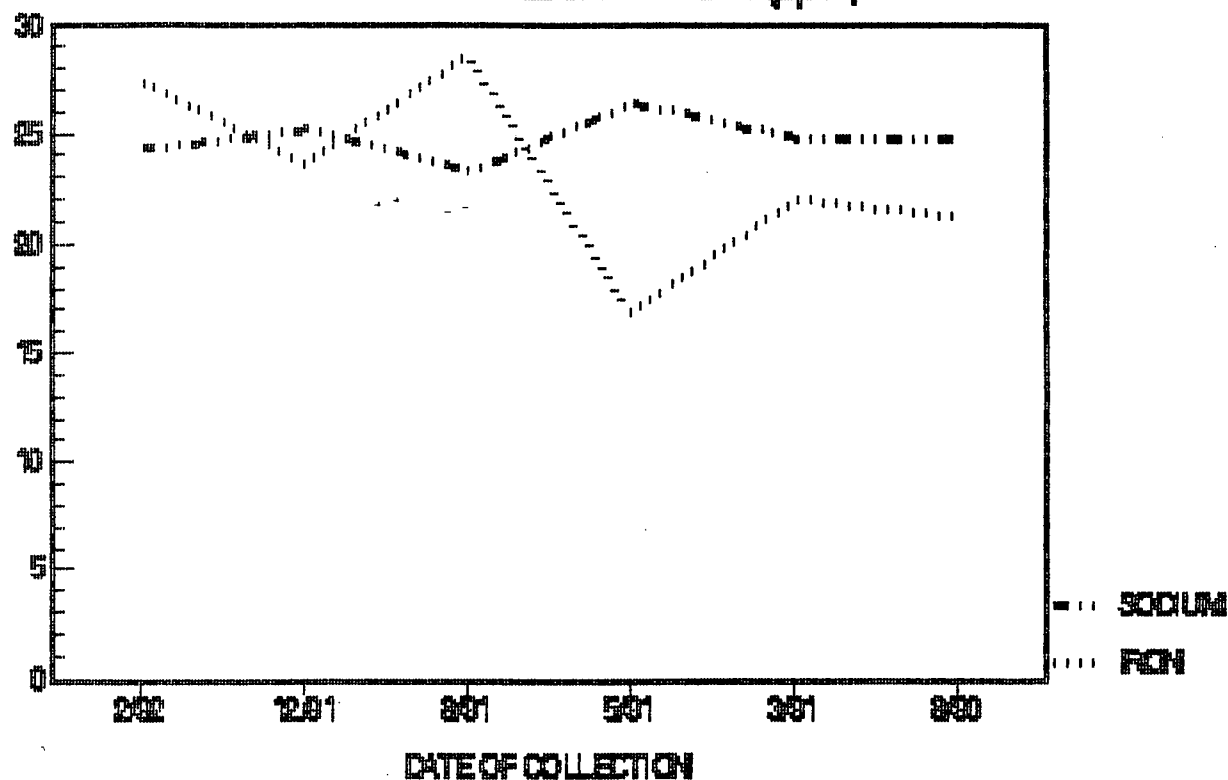
LENA ROAD LANDFILL WELL GC6

METALS CONCENTRATION (ppm)



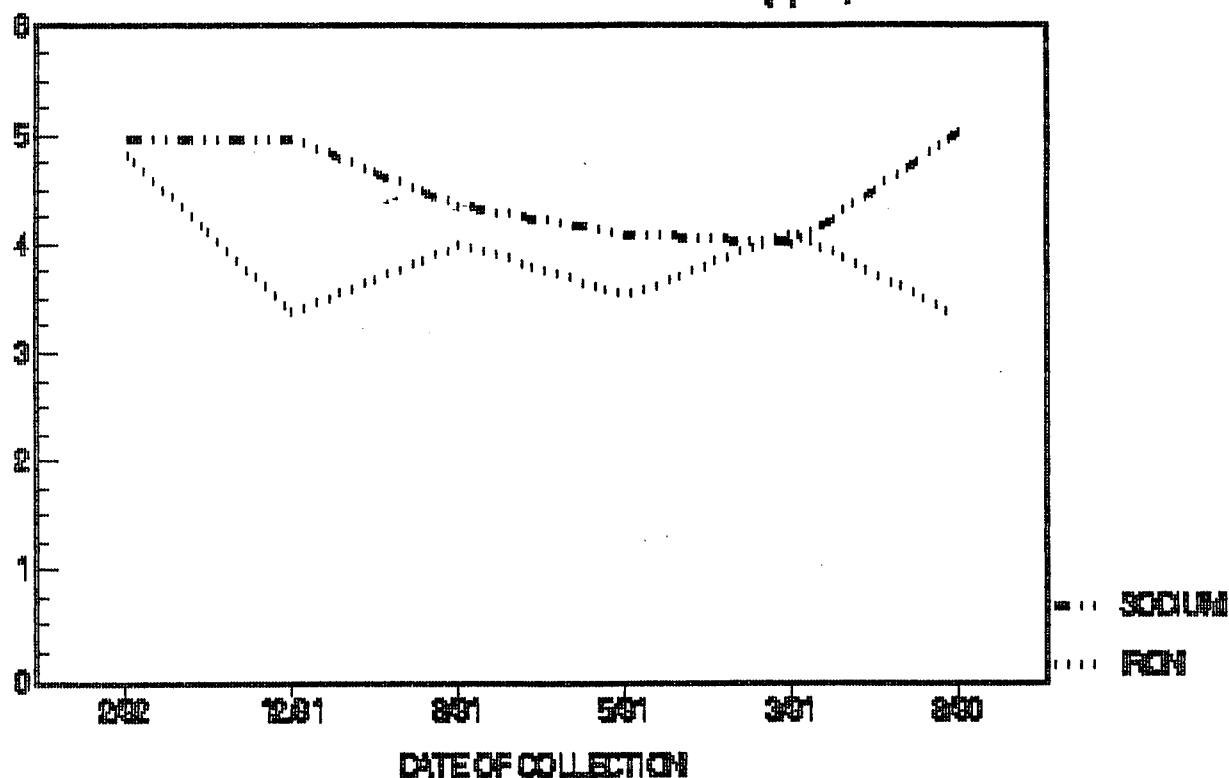
LENA ROAD LANDFILL WELL LR11-1

METALS CONCENTRATION (ppm)



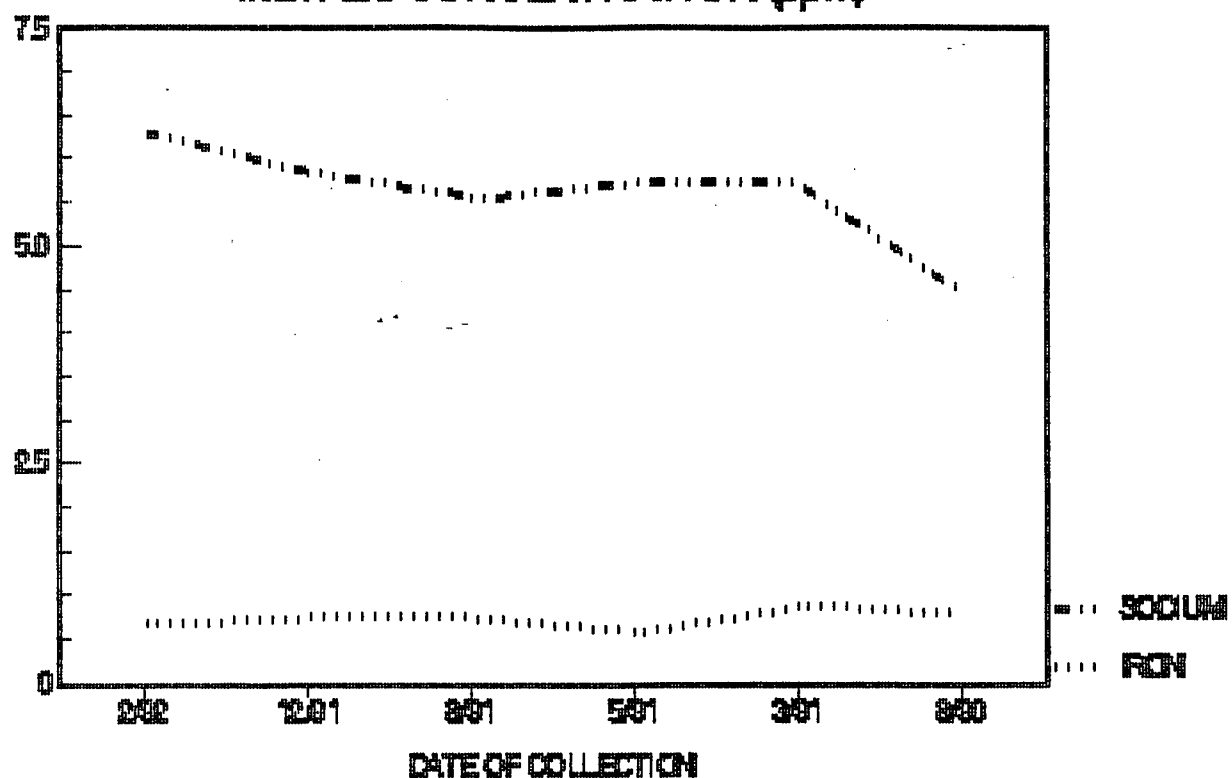
LENA ROAD LANDFILL WELL LR11-2

METALS CONCENTRATION (ppm)



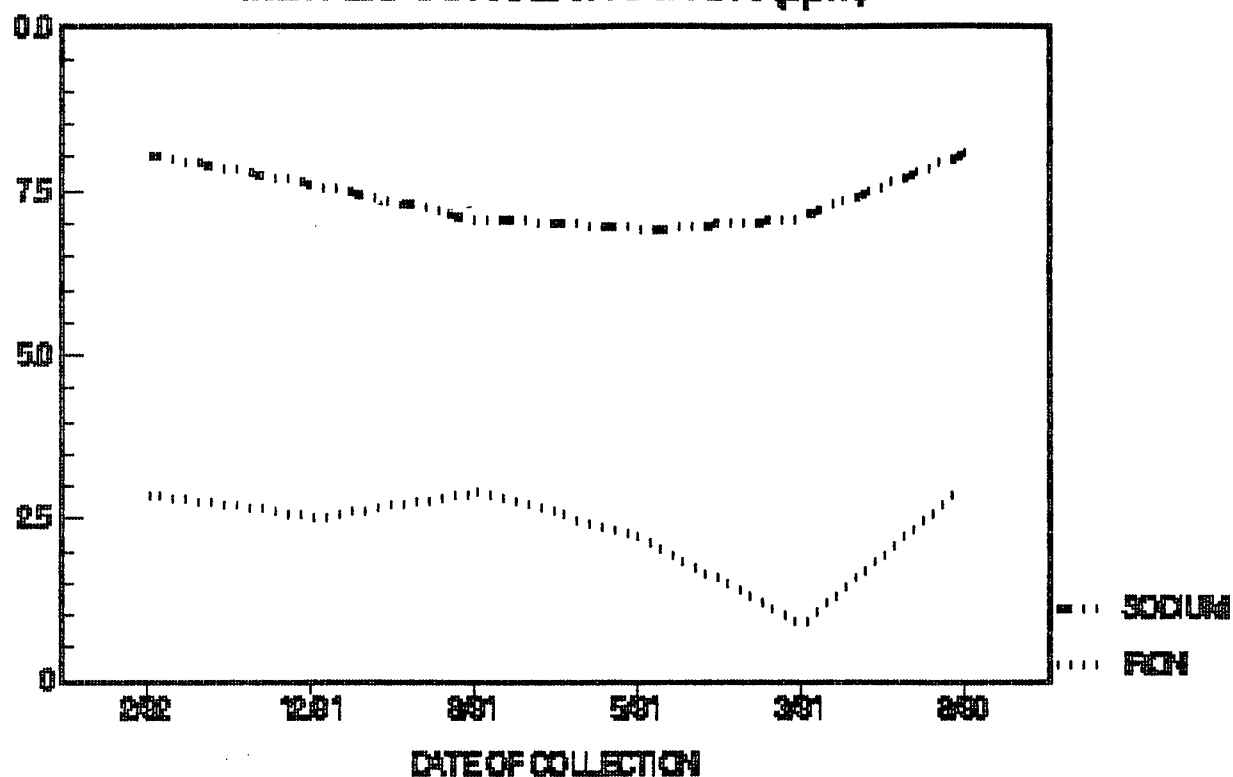
LENA ROAD LANDFILL WELL LR11-3

METALS CONCENTRATION (ppm)



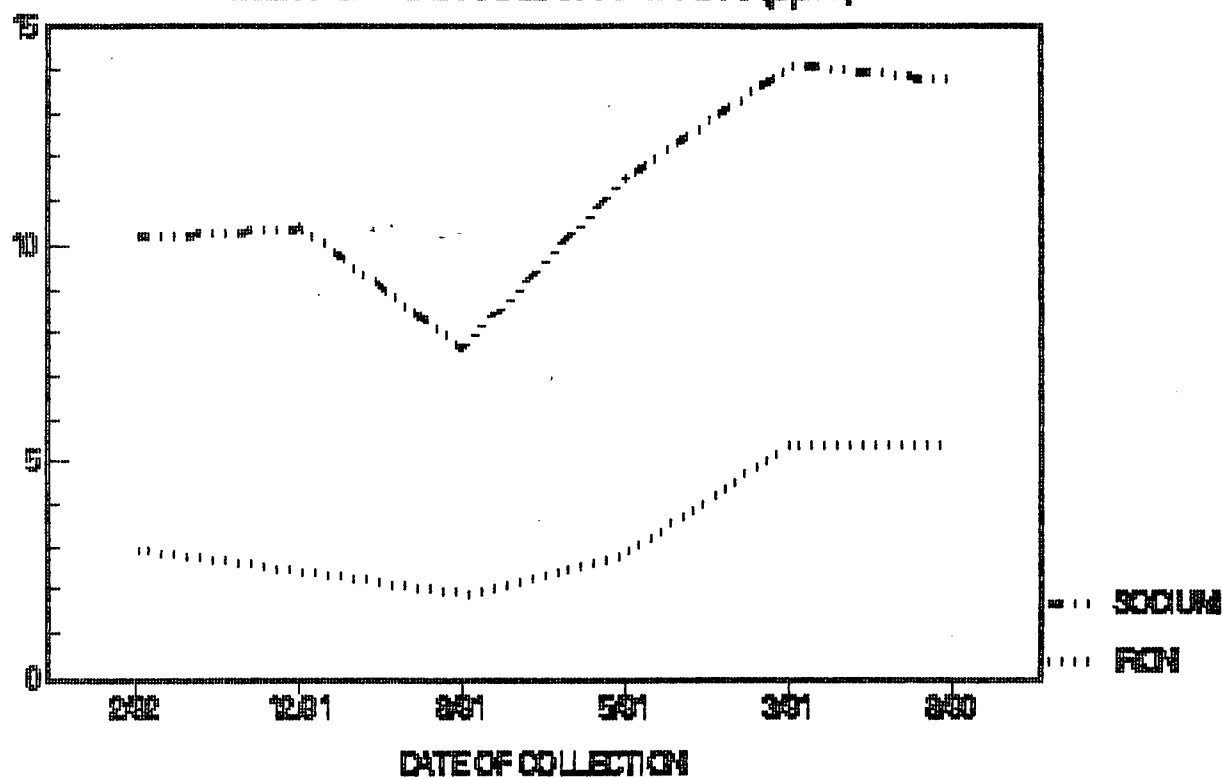
LENA ROAD LANDFILL WELL LR11-4

METALS CONCENTRATION (ppm)



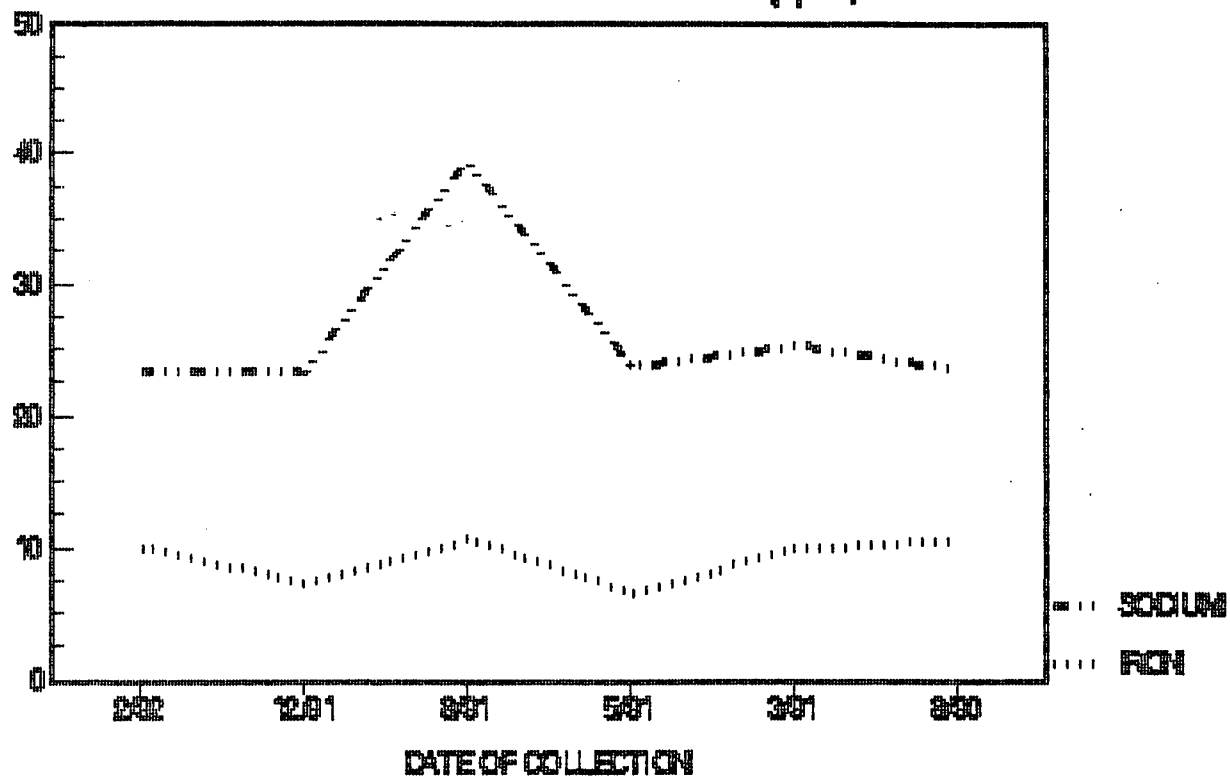
LENA ROAD LANDFILL WELL LRII-5

METALS CONCENTRATION (ppm)



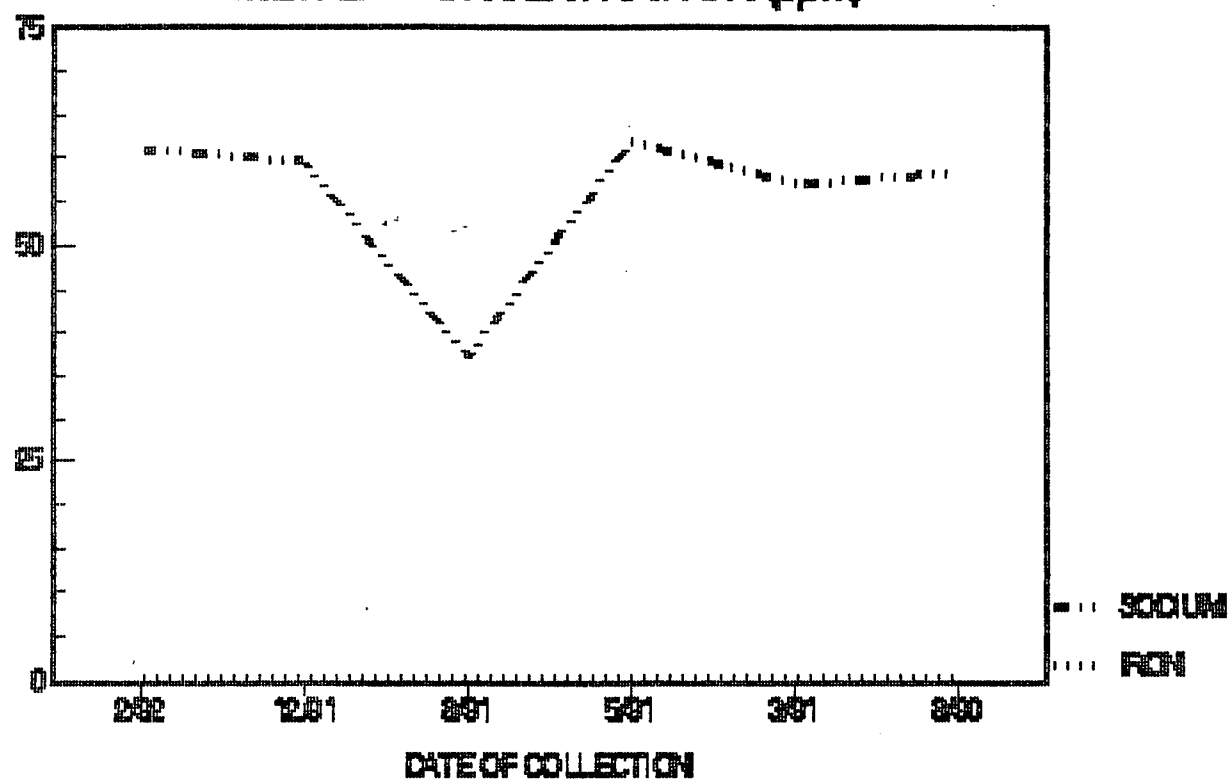
LENA ROAD LANDFILL WELL SMR1

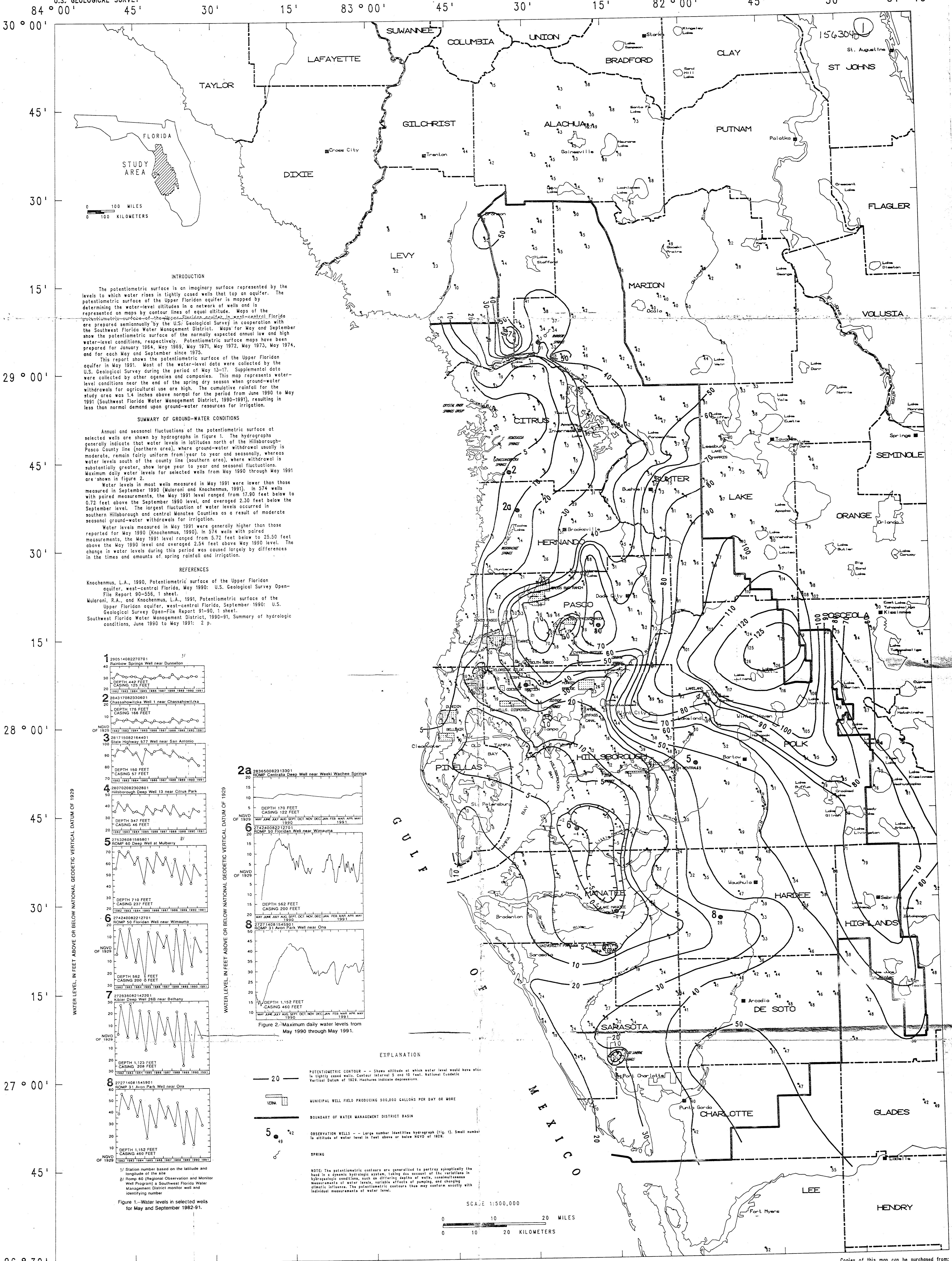
METALS CONCENTRATION (ppm)



LENA ROAD LANDFILL WELL SMR2

METALS CONCENTRATION (ppm)





INTRODUCTION

The potentiometric surface is an imaginary surface represented by the levels to which water rises in tightly cased wells that tap an aquifer. The potentiometric surface of the Upper Floridan aquifer is mapped by determining the water-level altitudes in a network of wells and is represented on maps by contour lines of equal altitude. Maps of the potentiometric surface of the Upper Floridan aquifer in west-central Florida are prepared semiannually by the U.S. Geological Survey in cooperation with the Southwest Florida Water Management District. Maps for May and September show the potentiometric surface of the normally expected annual low and high water-level conditions, respectively. Potentiometric surface maps have been prepared for January 1964, May 1969, May 1971, May 1972, May 1973, May 1974, and for each May and September since 1975.

This report shows the potentiometric surface of the Upper Floridan aquifer in May 1991. Most of the water-level data were collected by the U.S. Geological Survey during the period of May 13-17. Supplemental data were collected by other agencies and companies. This map represents water-level conditions near the end of the spring dry season when ground-water withdrawals for agricultural use are high. The cumulative rainfall for the study area was 1.4 inches above normal for the period from June 1990 to May 1991 (Southwest Florida Water Management District, 1990-1991), resulting in less than normal demand upon ground-water resources for irrigation.

SUMMARY OF GROUND-WATER CONDITIONS

Annual and seasonal fluctuations of the potentiometric surface at selected wells are shown by hydrographs in figure 1. The hydrographs generally indicate that water levels in latitudes north of the Hillsborough-Pasco County line (northern area), where ground-water withdrawal usually is moderate, remain fairly uniform from year to year and seasonally, whereas water levels south of the county line (southern area), where withdrawal is substantially greater, show large year to year and seasonal fluctuations. Maximum daily water levels for selected wells from May 1990 through May 1991 are shown in figure 2.

Water levels in most wells measured in May 1991 were lower than those measured in September 1990 (Mularoni and Knochenmus, 1991). In 574 wells with paired measurements, the May 1991 level ranged from 17.90 feet below to 0.72 feet above the September 1990 level, and averaged 2.30 feet below the September level. The largest fluctuation of water levels occurred in southern Hillsborough and central Manatee Counties as a result of moderate seasonal ground-water withdrawals for irrigation.

Water levels measured in May 1991 were generally higher than those reported for May 1990 (Knochenmus, 1990). In 574 wells with paired measurements, the May 1991 level ranged from 5.72 feet below to 25.50 feet above the May 1990 level and averaged 2.54 feet above May 1990 level. The change in water levels during this period was caused largely by differences in the times and amounts of spring rainfall and irrigation.

REFERENCES

Knochenmus, L.A., 1990, Potentiometric surface of the Upper Floridan aquifer, west-central Florida, May 1990: U.S. Geological Survey Open-File Report 90-535, 1 sheet.

Mularoni, R.A., and Knochenmus, L.A., 1991, Potentiometric surface of the Upper Floridan aquifer, west-central Florida, September 1990: U.S. Geological Survey Open-File Report 91-524, 1 sheet.

Southwest Florida Water Management District, 1990-1991, Summary of hydrologic conditions, June 1990 to May 1991: 2 p.

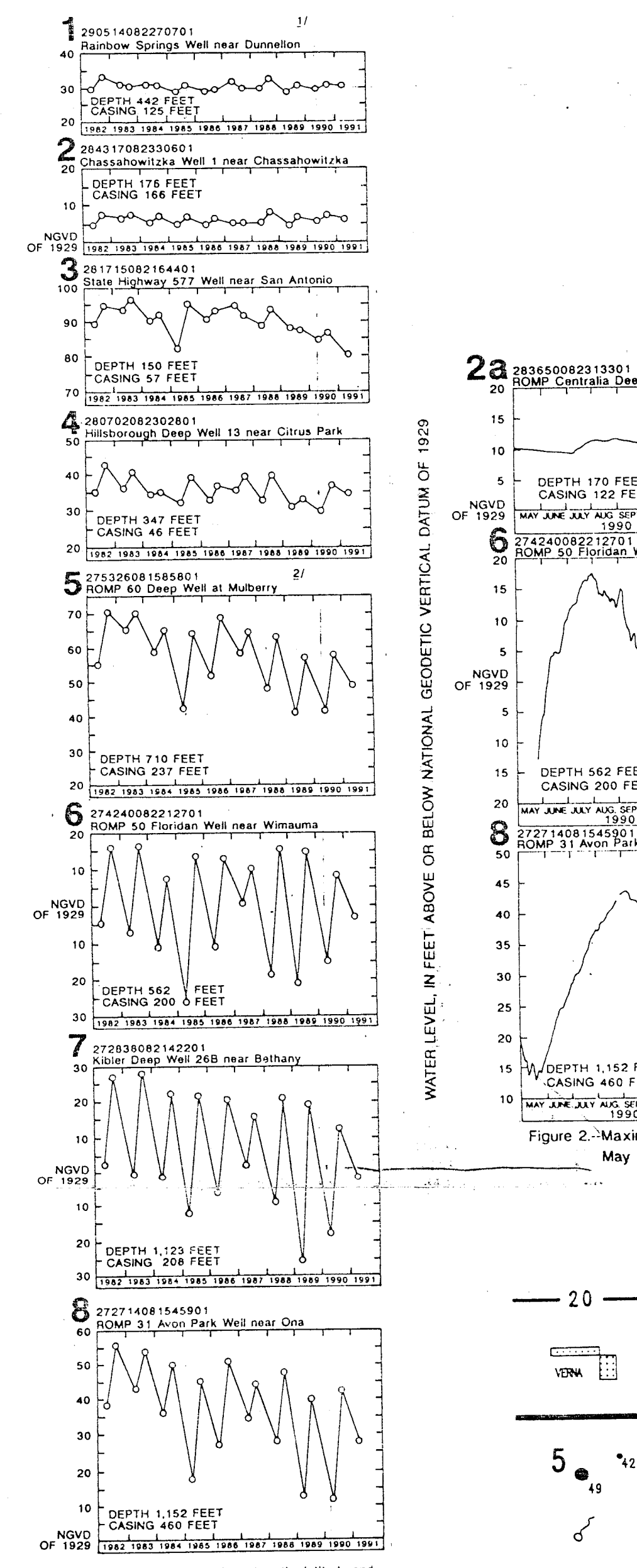


Figure 1.—Water levels in selected wells for May and September 1982-91.

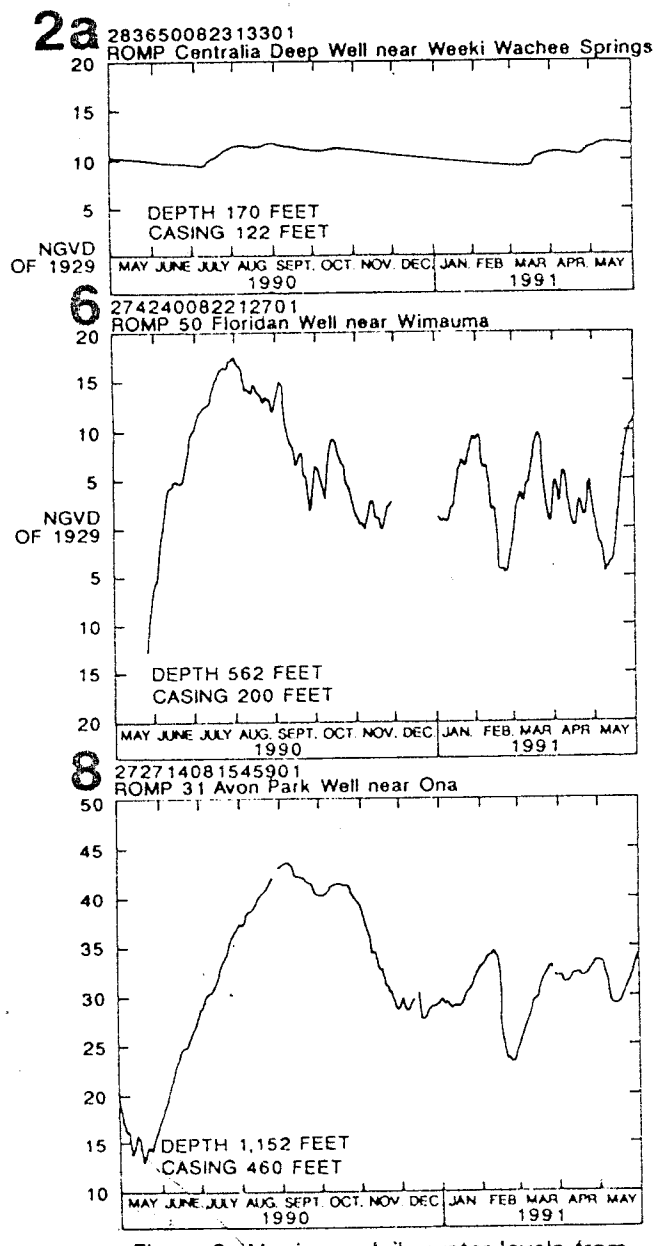


Figure 2.—Maximum daily water levels from May 1990 through May 1991.

EXPLANATION

POTENTIOMETRIC CONTOUR — Shows altitude at which water level would have also in tightly cased wells. Contour interval 5 and 10 feet. National Geodetic Vertical Datum of 1929. Hachures indicate depressions.

MUNICIPAL WELL FIELD PRODUCING 500,000 GALLONS PER DAY OR MORE

BOUNDARY OF WATER MANAGEMENT DISTRICT BASIN

OBSERVATION WELLS — Large number identifies hydrograph (fig. 1). Small number is altitude of water level in feet above or below NGVD of 1929.

SPRING

NOTE: The potentiometric contours are generalized to portray synthetically the head in a dynamic hydrologic system, taking due account of the variations in hydrogeologic conditions, such as differing depths of wells, season-to-season measurements of water levels, variable effects of pumping, and changing climatic influence. The potentiometric contours thus may conform exactly with individual measurements of water level.

SCALE 1:500,000
0 10 20 MILES
0 10 20 KILOMETERS

POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER, WEST-CENTRAL FLORIDA, MAY 1991

Base from digital data derived from State
base map of Florida 1:500,000, 1967
Provided by Southwest Florida Water
Management District

Copies of this map can be purchased from:
U.S. Geological Survey
Book and Open-File Reports Section
Federal Center
Box 25425
Denver, Colorado 80225

D.E.R.

JUN 26 1992

By

R.A. Mularoni

1992

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SOUTHWEST DISTRICT
TAMPA