

KERR-McGEE CORPORATION



SEMI-ANNUAL PERFORMANCE REPORT
CHROMIUM MITIGATION PROGRAM

KERR-McGEE CHEMICAL LLC
HENDERSON, NEVADA

JULY - DECEMBER 1998
January 26, 1999



KERR-McGEE CHEMICAL LLC

POST OFFICE BOX 55 - HENDERSON, NEVADA 89009

ENVIRONMENTAL
PROTECTION

FEB -1 99

January 27, 1999

Mr. Doug Zimmerman
State of Nevada
Division of Environmental Protection
333 West Nye Lane
Carson City, Nevada 89710

Subject: Second Half 1998 Performance Report
Chromium Mitigation Program

Enclosed are two copies of the Second Half 1998, Semi-Annual Chromium Mitigation Program Report for the Kerr-McGee Chemical LLC, Henderson facility.

This Report presents information regarding the groundwater interception, treatment and recharge systems of the chromium mitigation program.

If you have any questions or comments concerning this information, please contact me at (702) 651-2234.

Sincerely,

Susan M. Crowley
Staff Environmental Specialist

smc198-2ND SEMIANNUAL CV LTR.DOC

cc: PSCorbett
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COPY 3

**SEMI-ANNUAL PERFORMANCE REPORT
CHROMIUM MITIGATION PROGRAM
KERR-McGEE CHEMICAL LLC
HENDERSON, NEVADA**

JULY - DECEMBER 1998

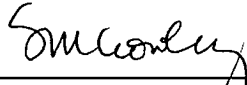
Submitted in Accordance with:

Chromium Mitigation Program
Consent Order
September 9, 1986

Prepared by:

Thomas W. Reed
Hydrology Department
Kerr-McGee Corporation

January 27, 1999



Susan Crowley, Staff Environmental Specialist
Kerr-McGee Chemical LLC
Henderson, Nevada

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SEMI-ANNUAL PERFORMANCE REPORT
CHROMIUM MITIGATION PROGRAM
KERR-McGEE CHEMICAL LLC
HENDERSON, NEVADA

INTRODUCTION

In accordance with the Consent Order for remediation of chromium contaminated groundwater at the Henderson facility, finalized September 9, 1986, Kerr-McGee Chemical LLC (KMCLLC) submits this semi-annual performance report to the Nevada Department of Environmental Protection. This report, covering the period July through December, 1998, summarizes performance data for the groundwater treatment plant and evaluates the effectiveness of the groundwater interception and treatment system installed to carry out the chromium remediation program.

GROUNDWATER SURFACE CONFIGURATION

Figure 1 illustrates the Consent Order monitoring area as defined in Appendix D of the Consent Order, and shows the locations of all groundwater interceptor and monitor wells installed by KMCLLC within this area. Appendix A of this report lists monthly/quarterly groundwater elevations recorded since December 1993 in wells within the Consent Order area. The water table configuration is presented in two formats, potentiometric surface maps and cross-sections for the second half of 1998, reflecting quarterly groundwater level measurements.

Figure 2 shows the potentiometric surface within the Consent Order monitoring area for the third quarter of 1998. Groundwater elevation data were recorded on September 14, 1998. Figure 3 presents a cross-section of the groundwater interceptor line for the same date. Figures 4 and 5 present the same type map and cross-section for the fourth quarter of 1998, based on groundwater elevation data recorded on December 15, 1998. The static water level shown on the cross-sections represents the Consent Order reference groundwater elevation, established September 14, 1987, prior to startup of the interception system. Groundwater elevations continue to confirm that water levels in the Consent Order monitoring area have stabilized since the discharge of cooling water to the beta ditch was discontinued in November 1987.

CONTINUOUS WATER LEVEL RECORDERS

Wells M-78 and M-80 (Figure 1) are equipped with continuous water level recorders. Appendix B contains copies of the recorder charts generated during the second half of 1998. The water levels in M-78 and M-80 varied less than 0.9 feet during the last six months of the year. KMCLLC intends to discontinue use of the water level recorders as they have proven no more effective at monitoring groundwater elevations than the monthly water elevation measurements.

INTERCEPTOR SYSTEM PERFORMANCE

Figures 2 through 5 show the potentiometric surface configuration in the interceptor area during the second half of 1998. Cross-sections show that drawdown consistently exceeded the one foot below reference water level criterion across the entire interceptor well line.

Although the potentiometric surface maps (Figures 2 and 4) do not generally show overlapping drawdown cones along the entire interceptor line, the cross-sections show the majority of interceptor wells are drawn down to or below the top of the Muddy Creek Formation. Drawdowns to this degree indicate that the alluvial aquifer is locally being depleted of water and that interception of groundwater has been maximized with this recovery system.

In May 1990, KMCLLC began monthly analyses for chromium in several other wells located both upgradient and downgradient from the recharge trench. This schedule was modified to quarterly sampling beginning in the second half of 1997. The data are shown in Table 1, and are presented graphically as Figures 6 and 7. The M-70 series wells presented in Figure 6 are located upgradient from the recharge trench. The M-80 series wells presented in Figure 7 are located downgradient from the recharge trench.

Two of the upgradient M-70 series well, M-71 and M-72, show slight increases of chromium concentrations over the last six months. Groundwater interceptor wells I-P and I-Q were recently installed upgradient from this area. Continued groundwater recovery should have an impact on chromium concentrations in the vicinity of these 70-series wells. Well M-73 has continued a gradual decline in chromium concentration during this same time period.

One of the downgradient M-80 series wells, M-84, also exhibits a slight increase in chromium concentrations during the second half of 1998. The chromium concentrations at this well location are also expected to decline with continued pumping of the new groundwater interceptor wells.

Chromium concentration data from the five Consent Order Appendix J wells (see Figure 8) are contained in Table 3. Figure 9 presents this data graphically. Well M-11, closest to the historic upgradient source of the chromium impact, has steadily declined in chromium concentration since September 1993. Chromium impact is now at the lowest concentration in M-11 since 1987. Conversely, well M-36, further downgradient from M-11 but upgradient from the recovery well line, is still increasing in chromium concentration. This chromium decline in M-11 may represent the tail end of a chromium plume, mobilized in the past, moving beyond M-11, and still moving through M-36. Continued future sampling will be necessary to confirm this phenomenon.

KMCLLC instituted a management program to assure maximization of groundwater removal at the individual well locations along the interceptor line by focusing on those wells showing the highest chromium concentrations. Figure 10 portrays chromium concentration for each interceptor well for the past year. Discharge rates for each well are monitored and adjusted to provide maximum recovery of chromium based on the potentiometric surface configuration, chromium concentration, and well production capability. Table 2 lists the pumping rate of each interceptor well for the months of December 1993 through 1997, as compared to December, 1998.

It should be noted in Figure 10 that chromium concentrations moving into the interceptor well system in December 1998 show an increase over concentrations for 1997 in the vicinity of wells I-F through I-O. This increase in chromium is consistent with that seen in well M-36 previously described in the Appendix J well discussion. This portion of the interceptor well line is apparently receiving the bulk of the chromium increase moving downgradient from the Unit 4 area.

IMPACT OF DISPOSAL SYSTEM ON DOWNGRADIENT WATER LEVELS

The Disposal Contingency Plan (Appendix J) of the Consent Order identifies specific monitor wells that are to be utilized to evaluate any water level impact from recharge of treated water into the alluvium. Fifteen wells are monitored monthly for groundwater levels. Figure 8 shows the location of these wells. Data presented in Appendix A show that groundwater elevations have stabilized in that portion of the facility downgradient

from the recharge system (evidenced by wells M-47, M-23, and M- 49), and have continued to decline.

CHROMIUM TREATMENT SYSTEM EFFECTIVENESS

The Consent Order specifies the following effluent concentration limits for the treatment plant discharge water:

Monthly average

Total Chromium	1.7 mg/l
Hexavalent Chromium	0.05 mg/l

Maximum single value on a composite sample

Total Chromium	3.4 mg/l
Hexavalent Chromium	0.1 mg/l

Table 4 updates the treatment plant feed and discharge chromium concentration data with data for the second half of 1998. Although the maximum single value on a composite sample for hexavalent chromium was exceeded once in July (0.11 mg/l), Total Chromium and hexavalent Chromium values for the second half of 1998 did not exceed the monthly permissible averages.

RECOVERY/TREATMENT SYSTEM MAINTENANCE

Approximately every twenty days, the electrodes in the treatment plant's electrolytic cells deteriorate to the point they require replacement. During electrode replacement, a backup cell is placed in active service in the circuit to maintain groundwater treatment.

Engine hour meters are being used to determine the average number of hours per day

individual pumps are running. Six of the interceptor wells utilize a time-marking device that shuts the pump off for a pre-determined amount of time if the well runs dry. If a pump spends a significant amount of time shut down, overall recovery can be increased by decreasing the pump rate, allowing a smaller discharge to occur a greater percentage of the time. Well discharge rates are adjusted periodically, as engine hour meters show either continuous pumping or a low percentage of pumping time.

All interceptor wells are checked for operation each day; flow rates are recorded for each well twice weekly. Flowmeter readings (total volume) are recorded for each time-marking well twice weekly. These records indicate when a pump needs to be replaced or a flow rate adjusted. In addition, other maintenance associated with maintaining treatment plant operations was performed. During the second half of 1998, maintenance work was performed on the pumping systems in recovery wells I-G (7/6 - 7/20), I-O (7/13-7/20), I-H (7/23), and I-G (12/14-12/21). General repairs were made to the plant system itself on 11/23 – 11/24, and the valves were closed on wells I-A, I-H, and I-P from 12/14 – 12/18.

CONCLUSIONS

Average monthly discharge chromium concentrations for the treatment facility are below established requirements. No adverse impacts to downgradient groundwater levels have been observed as a result of returning treated groundwater to the near-surface aquifer via the recharge galleries. Chromium concentrations in monitor wells immediately downgradient from key areas along the interceptor line may be indicative of incomplete capture.

RECENT CHANGES TO THE CHROMIUM MITIGATION SYSTEM

Several changes and modifications associated with the chromium mitigation system were made during the last half of 1998.

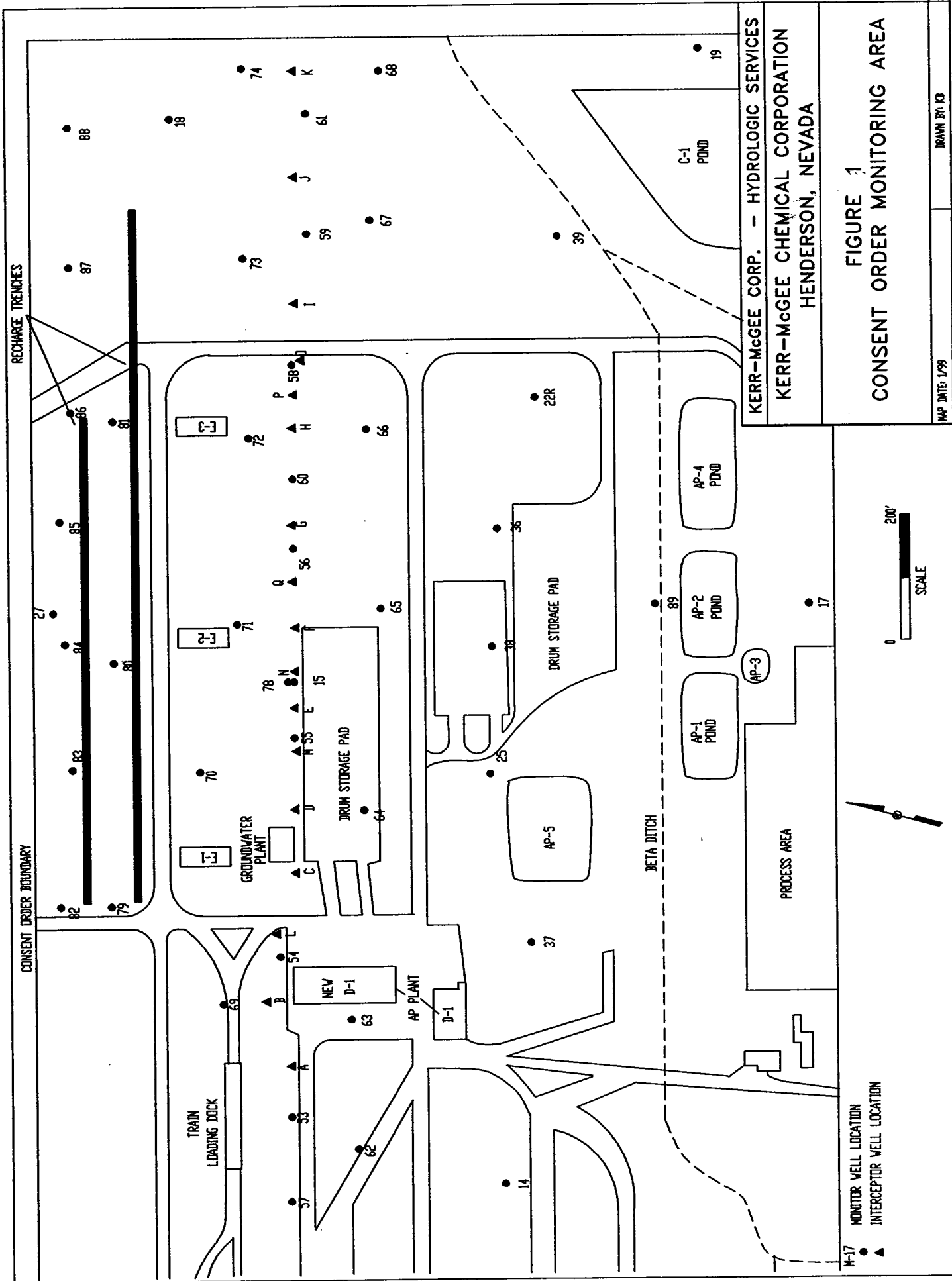
- 1) Do to impending construction of the Warm Springs Road extension, monitor wells M-46, M-47, and M-49, several hundred feet downgradient from the recharge trenches, were plugged and abandoned. In addition, well M-23 may not be available for continued groundwater monitoring. Although wells M-46, M-47, and M-49 were not directly involved in the chromium mitigation monitoring scheme, KMCLLC believed that installing replacement wells upgradient to the south of the Warm Springs Road right-of-way would be a valuable addition to the monitoring program. To this end, five new monitor wells, M-98 through M-102 were drilled and installed in an east-west line approximately 800 feet north of the recharge trenches. The well locations will be included in future reports.

2) As of December 30, 1998, groundwater recovered and treated by the chromium mitigation system is now being discharged to the recently completed onsite, 11-acre pond. This change was instituted to halt recharge of perchlorate-impacted groundwater back to the subsurface groundwater system. Untreated Lake Mead water is now being reinjected into the groundwater system via the recharge trenches in volumes at or below the rate of groundwater extracted by the interceptor wells. Replacing the recovered groundwater with a like volume of lake water will maintain the groundwater flow gradient and potentiometric pattern, and will serve as a slight mounding barrier to aid in upgradient recovery of the impacted groundwater.

PROPOSED FUTURE ACTIVITIES

KMCLLC will continue to record water levels in the Consent Order area on a quarterly basis. Quarterly potentiometric surface maps and cross-sections will be developed. Any additional monitor well data required in the approved UIC permit will be incorporated in the map preparation. Due to apparent breakthrough of impacted groundwater along the interceptor well line, five new interceptor wells will be installed and put on line during the first half of 1999. These wells reduce the well spacing to approximately 50 feet over the majority of the interceptor well line, and are expected to capture the bulk of any groundwater currently escaping recovery.

FIGURES



KERR-MCGEE CORP. - HYDROLOGIC SERVICES
 KERR-MCGEE CHEMICAL CORPORATION
 HENDERSON, NEVADA

FIGURE 1
 CONSENT ORDER MONITORING AREA

M-17 MONITOR WELL LOCATION
 ▲ INTERCEPTOR WELL LOCATION

MAP DATE: 1/99

DRAWN BY: KC

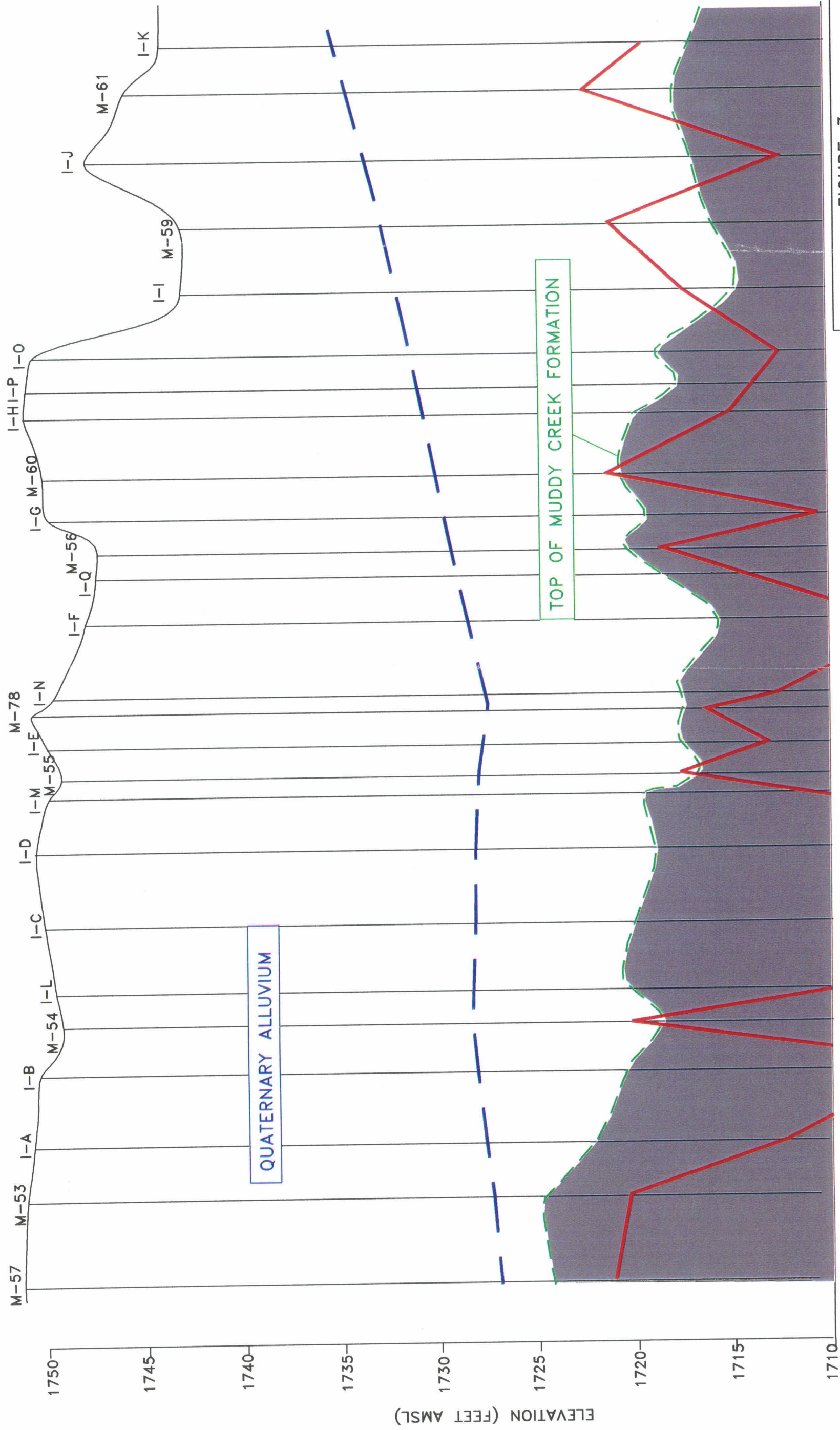


FIGURE 3
GROUNDWATER INTERCEPTOR
CROSS-SECTION 9-14-98

KERR-McGEE CORP. - HYDROLOGIC SERVICES
 KERR-McGEE CHEMICAL CORPORATION
 HENDERSON, NEVADA

MAP DATE: 1/99 DRAWN BY: KB

0 150 FT
 HORIZONTAL SCALE
 VERTICAL EX. = 30

POTENTIOMETRIC SURFACE
 MEASURED ON 9/14/98
 STATIC WATER LEVEL
 (9/14/87)

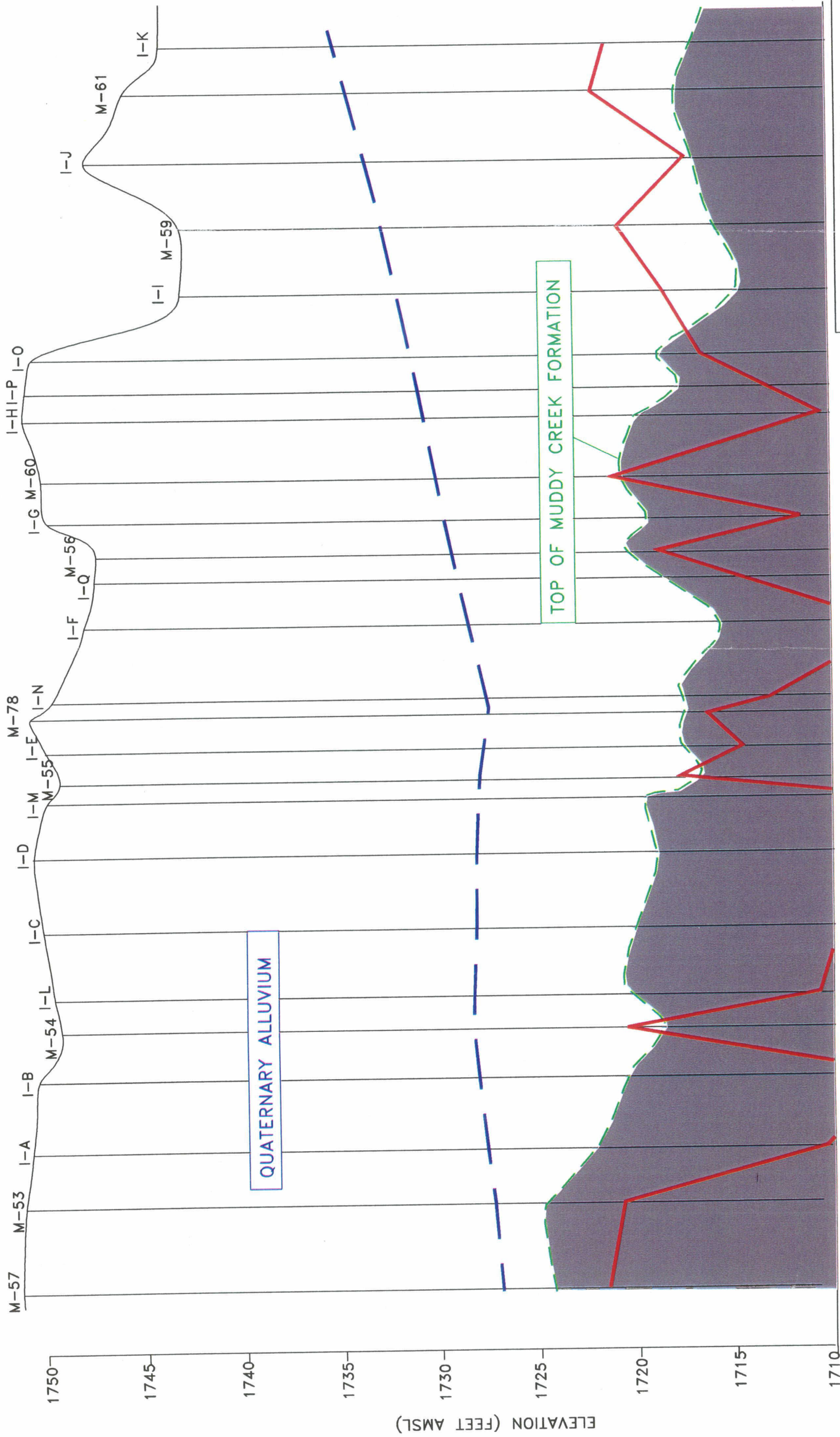


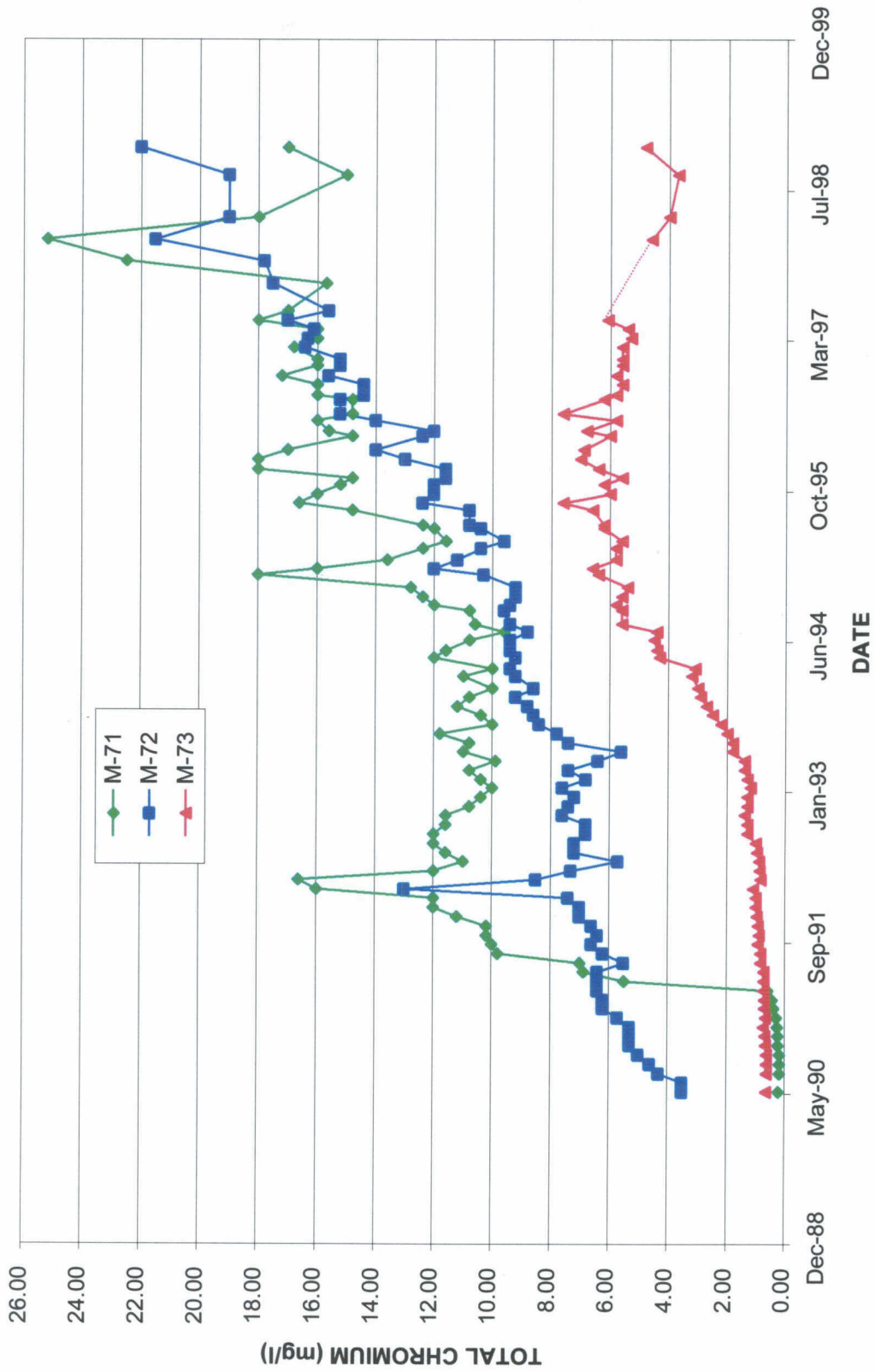
FIGURE 5
GROUNDWATER INTERCEPTOR
CROSS-SECTION 12-15-98

KERR-McGEE CORP. - HYDROLOGIC SERVICES

KERR-McGEE CHEMICAL CORPORATION
 HENDERSON, NEVADA

MAP DATE: 1/99 DRAWN BY: KB

**FIGURE 6: UPGRADE MONITOR WELLS
KMCLLC HENDERSON, NEVADA FACILITY**



**FIGURE 7: DOWNGRAIDENT MONITOR WELLS
KMCLLC HENDERSON, NEVADA FACILITY**

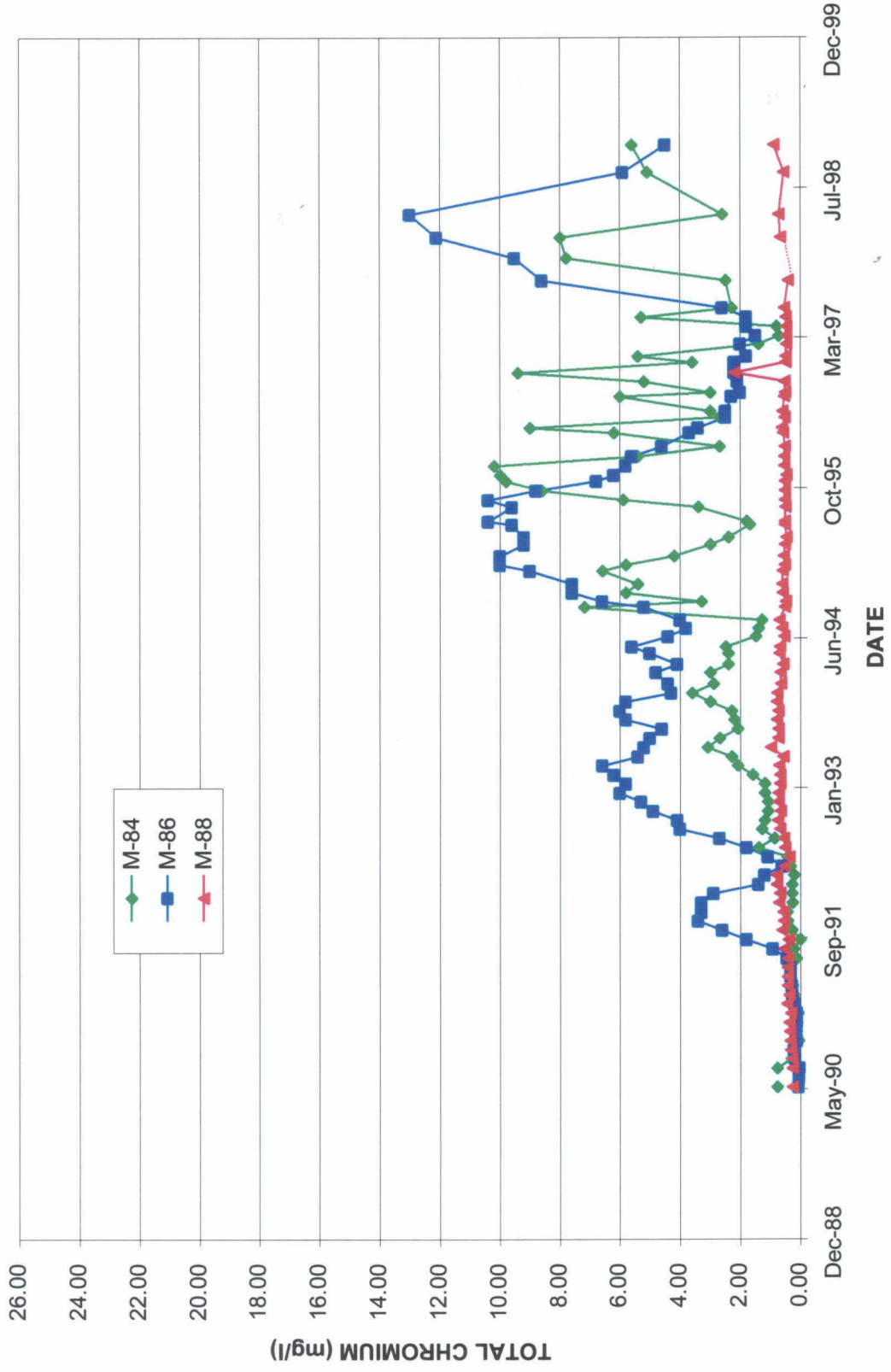
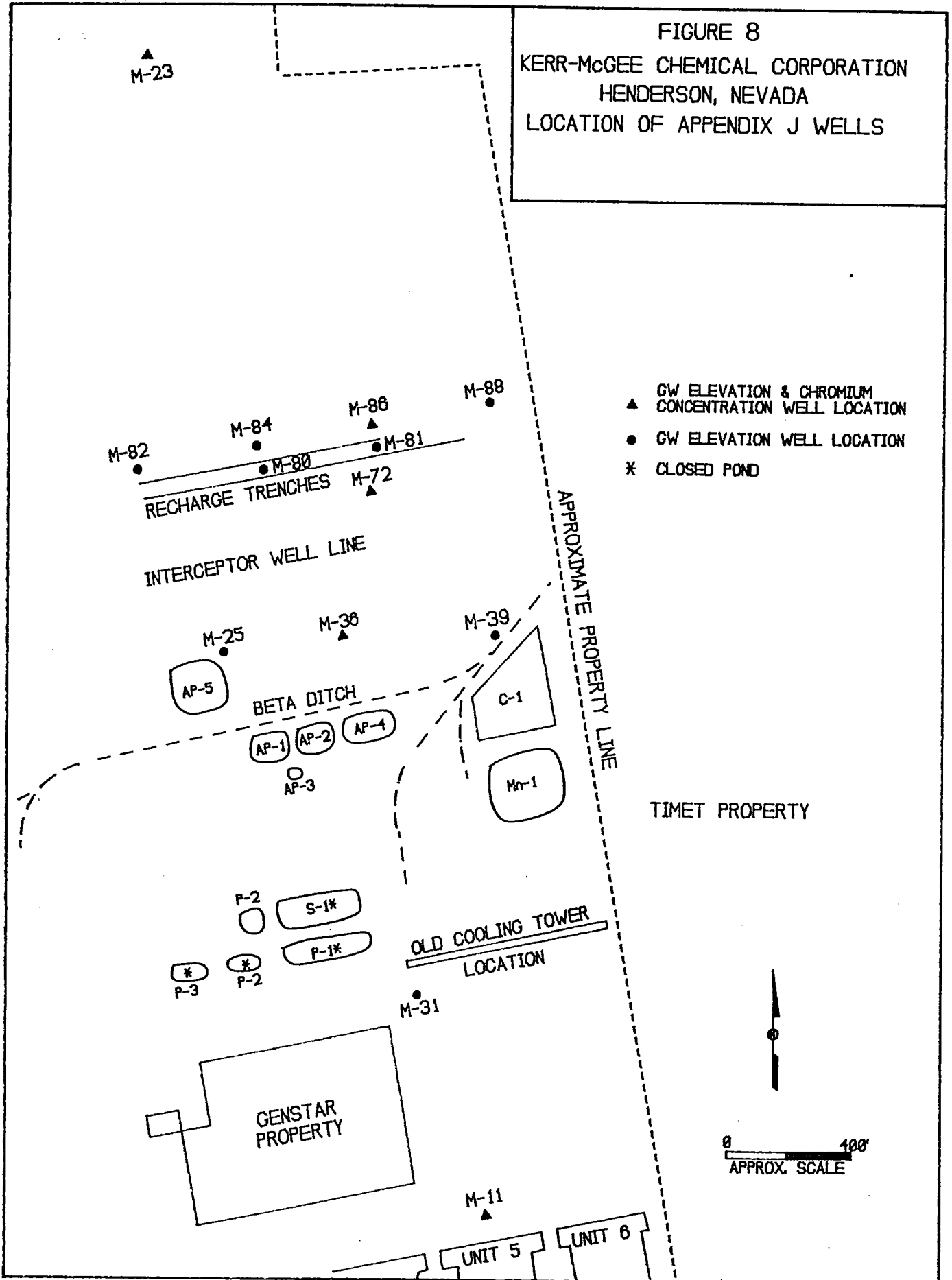


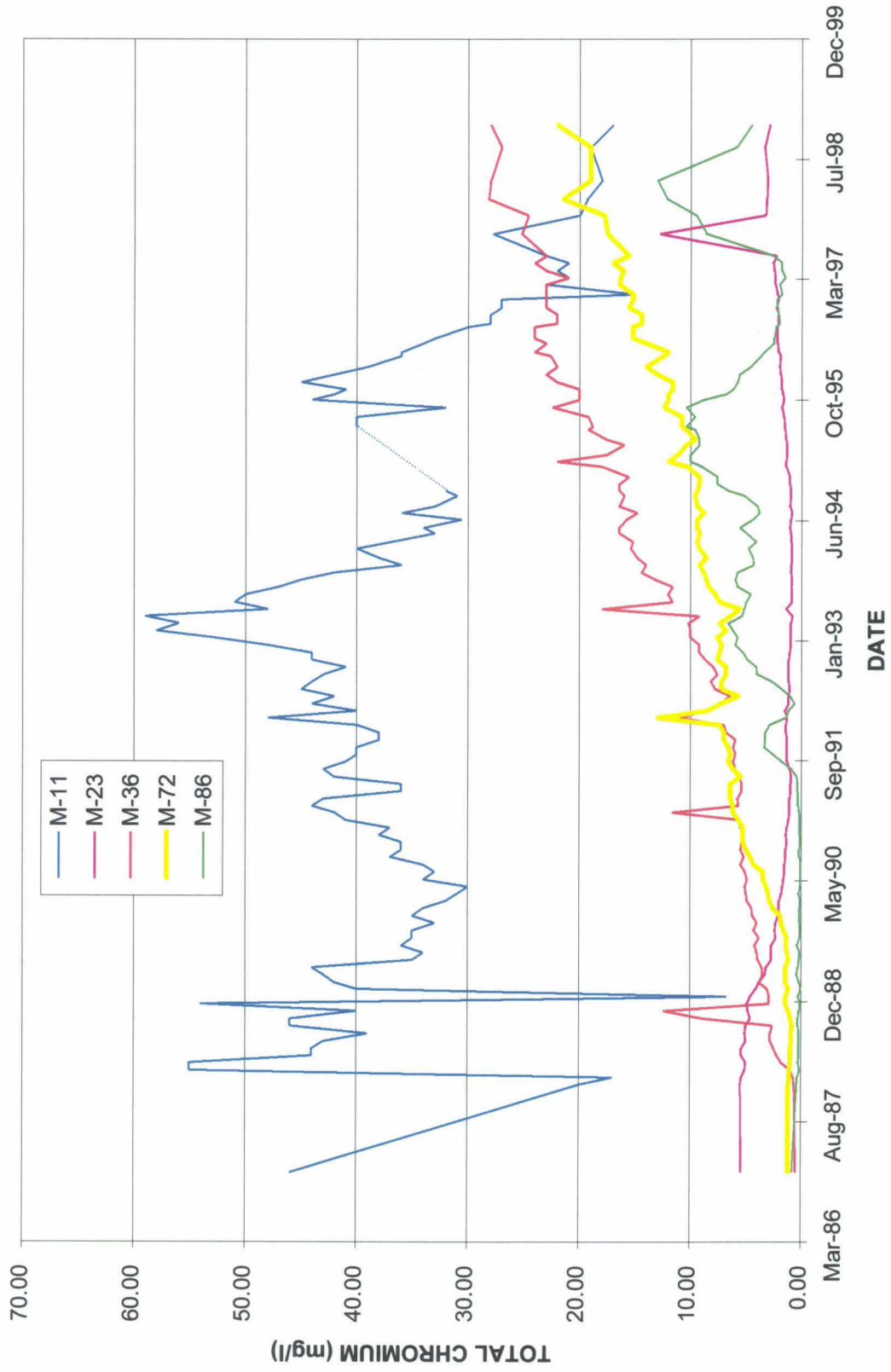
FIGURE 8
 KERR-McGEE CHEMICAL CORPORATION
 HENDERSON, NEVADA
 LOCATION OF APPENDIX J WELLS



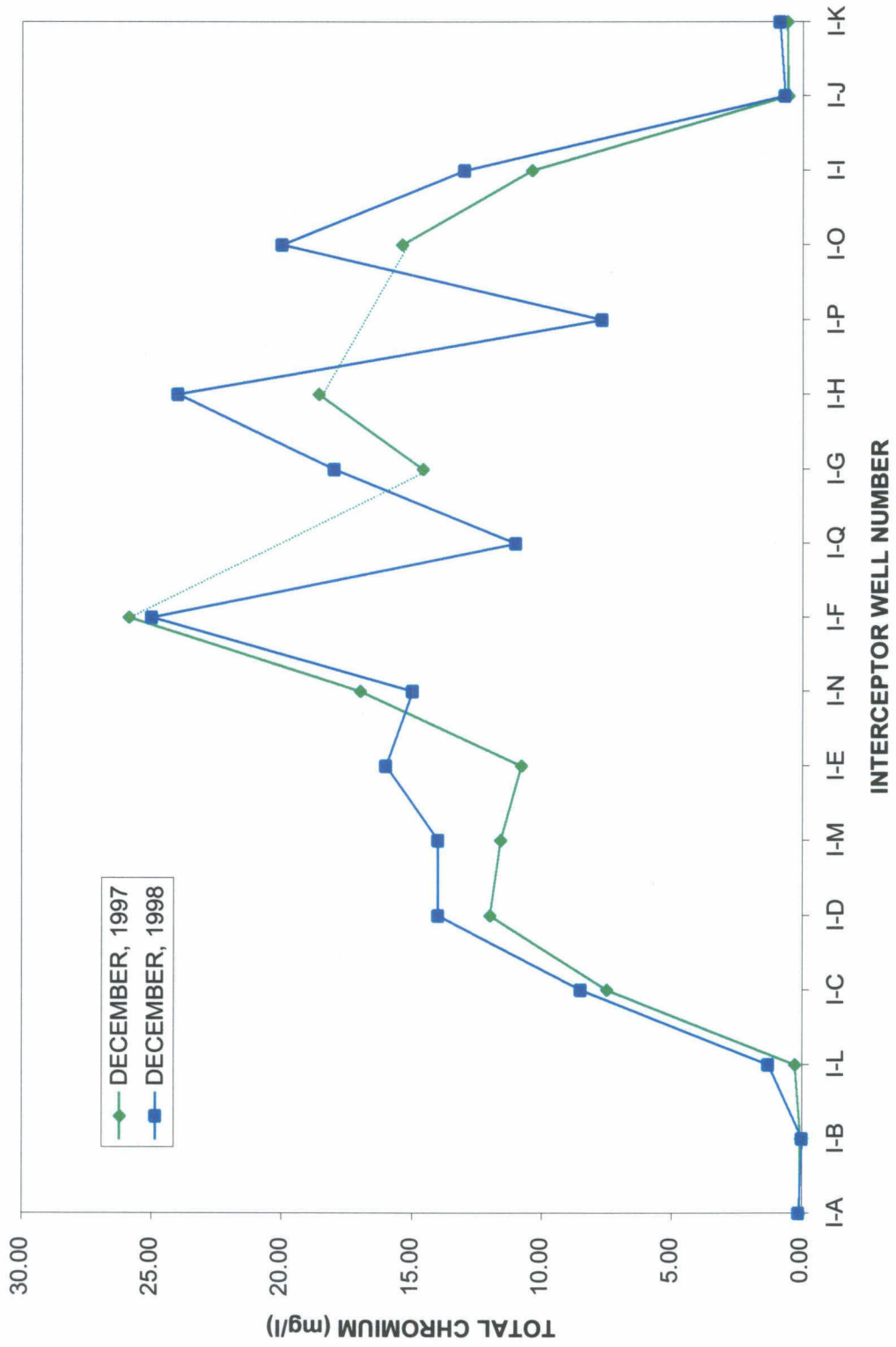
- ▲ GW ELEVATION & CHROMIUM CONCENTRATION WELL LOCATION
- GW ELEVATION WELL LOCATION
- * CLOSED POND

0 100'
 APPROX. SCALE

**FIGURE 9: APPENDIX J WELLS
KMCLLC HENDERSON, NEVADA FACILITY**



**FIGURE 10: INTERCEPTOR WELL LINE GRAPH
 KMCLLC HENDERSON, NEVADA FACILITY**



TABLES

TABLE 1

TOTAL CHROMIUM (mg/l)
IN SELECTED MONITOR WELLS
KMCLLC HENDERSON NEVADA

DATE	WELL #			
	M-71	M-73	M-84	M-88
Jul-93	10.80	1.80	2.70	0.74
Aug-93	11.80	2.00	2.10	0.75
Sep-93	10.00	2.20	2.20	0.80
Oct-93	10.40	2.50	2.30	0.74
Nov-93	11.20	2.70	3.00	0.80
Dec-93	10.80	2.90	3.60	0.79
Jan-94	10.00	3.00	2.90	0.65
Feb-94	11.00	3.20	3.00	0.67
Mar-94	10.00	3.10	2.40	0.59
Apr-94	12.00	4.30	2.40	0.71
May-94	11.60	4.40	2.50	0.70
Jun-94	10.80	4.50	1.50	0.54
Jul-94	9.60	4.40	1.40	0.62
Aug-94	10.60	5.60	1.30	0.71
Sep-94	10.80	5.60	7.20	0.53
Oct-94	12.00	5.80	3.30	0.50
Nov-94	12.40	5.60	5.80	0.60
Dec-94	12.80	5.40	5.40	0.62
Jan-95	18.00	6.40	6.60	0.60
Feb-95	16.00	6.60	5.80	0.52
Mar-95	13.60	5.80	4.20	0.57
Apr-95	12.40	5.80	3.00	0.52
May-95	11.60	5.60	2.40	0.48
Jun-95	12.00	6.20	1.70	0.52
Jul-95	12.40	6.20	1.80	0.52
Aug-95	14.80	6.60	3.40	0.51
Sep-95	16.60	7.60	5.90	0.52
Oct-95	16.00	6.00	8.60	0.52
Nov-95	15.20	6.20	9.80	0.53
Dec-95	14.80	5.60	10.00	0.47
Jan-96	18.00	6.40	10.20	0.54
Feb-96	18.00	7.00	5.40	0.55
Mar-96	17.00	6.90	2.70	0.53
Apr-96	14.80	6.00	6.20	0.59
May-96	15.60	6.80	9.00	0.61
Jun-96	16.00	5.80	2.70	0.53
Jul-96	14.80	7.60	3.00	0.60
Aug-96	14.80	6.20	6.00	0.55
Sep-96	16.00	5.80	3.00	0.51
Oct-96	16.00	5.60	5.20	0.53
Nov-96	17.20	5.80	9.40	2.20
Dec-96	16.00	5.60	3.60	0.49
Jan-97	16.00	5.60	5.40	0.49
Feb-97	16.80	5.60	1.40	0.47
Mar-97	16.00	5.30	0.72	0.48
Apr-97	16.00	5.40	0.80	0.48
May-97	18.00	6.10	5.30	0.50
Jun-97	17.00		2.30	0.54
Sep-97	15.70		2.50	0.42
Dec-97	22.50		7.80	
Feb-98	25.20	4.60	8.00	0.68
Apr-98	18.00	4.00	2.60	0.73
Sep-98	15.00	3.70	5.10	0.56
Dec-98	17.00	4.80	5.60	0.89

TABLE 2
 INTERCEPTOR WELL DISCHARGE RATES
 DISCHARGE RATE (GPM)

WELL #	DEC. 1993	DEC. 1994	DEC. 1995	DEC. 1996	DEC. 1997	DEC. 1998
I-A	2.7	2.7	2.2	2.1	1.0	0.9
I-B	2.2	2.3	1.6	1.4	1.5	1.3
I-C	4.0	1.1	3.1	2.8	2.0	2.7
I-D	1.0	0.7	0.9	0.7	0.9	0.6
I-E	2.0	0.8	0.8	0.5	0.4	0.2
I-F	6.3	4.2	5.2	6.6	0.7	7.0
I-G	0.3	0.2	0.5	0.6	0.1	0.1
I-H	2.1	0.7	1.0	0.9	0.6	0.6
I-I	6.5	5.8	7.0	6.0	6.1	4.8
I-J	4.5	3.9	3.8	4.2	3.2	4.5
I-K	<u>3.9</u>	3.0	2.4	1.8	2.4	3.2
I-L		1.7	1.4	1.2	1.2	1.0
I-M		2.7	2.8	2.7	2.2	2.5
I-N		1.7	2.9	0.3	2.3	2.0
I-O		<u>0.3</u>	<u>1.8</u>	<u>1.5</u>	<u>1.7</u>	2.2
I-P						0.8
I-Q						<u>0.4</u>
TOTAL	35.5	31.8	37.4	33.3	26.3	34.8

TABLE 3

TOTAL CHROMIUM CONCENTRATION (mg/l)
IN APPENDIX J WELLS
KERR-McGEE CHEMICAL LLC
HENDERSON, NEVADA

DATE	WELL #				
	M-11	M-23	M-36	M-72	M-86
Jul-93	51.00	0.87	11.60	7.40	5.00
Aug-93	50.00	0.89	12.00	7.80	4.60
Sep-93	47.00	0.93	11.60	8.40	5.80
Oct-93	45.00	0.89	13.20	8.60	6.00
Nov-93	42.00	0.98	14.40	8.80	5.80
Dec-93	36.00	0.94	14.00	9.20	4.30
Jan-94	38.00	0.90	14.80	8.60	4.40
Feb-94	40.00	0.88	15.40	9.20	4.80
Mar-94	37.00	0.91	15.20	9.40	4.10
Apr-94	33.00	1.00	16.40	9.20	5.00
May-94	34.00	1.10	16.40	9.40	5.60
Jun-94	30.60	1.00	15.80	9.40	4.40
Jul-94	36.00	0.90	14.80	8.80	3.80
Aug-94	33.00	1.08	16.40	9.40	4.00
Sep-94	31.00	0.96	16.00	9.60	5.20
Oct-94	32.00	1.00	16.40	9.40	6.60
Nov-94		1.10	16.40	9.20	7.60
Dec-94		1.10	15.60	9.20	7.60
Jan-95		1.40	18.00	10.31	9.00
Feb-95		1.40	22.00	12.00	10.00
Mar-95		1.30	17.60	11.20	10.00
Apr-95		1.30	16.00	10.40	9.20
May-95		1.40	17.60	9.60	9.20
Jun-95		1.50	19.20	10.40	9.60
Jul-95	40.00	1.50	18.80	10.80	10.40
Aug-95	40.00	1.60	19.20	10.80	9.60
Sep-95	32.00	1.80	22.40	12.40	10.40
Oct-95	44.00	1.60	20.00	12.00	8.80
Nov-95	42.00	1.70	20.00	12.00	6.80
Dec-95	41.00	1.80	20.00	11.60	6.20
Jan-96	45.00	1.80	22.00	11.60	5.80
Feb-96	42.00	1.90	23.00	13.00	5.60
Mar-96	39.00	2.00	22.00	14.00	4.60
Apr-96	36.00	1.90	22.60	12.40	3.70
May-96	36.00	2.10	24.00	12.00	3.40
Jun-96	34.00	2.20	23.00	14.00	2.50
Jul-96	33.00	2.20	24.00	15.20	2.50
Aug-96	30.00	2.20	24.00	15.20	2.30
Sep-96	28.00	2.10	22.00	14.40	2.00
Oct-96	28.00	2.10	22.00	14.40	2.10
Nov-96	27.00	2.30	23.00	15.60	2.20
Dec-96	27.00	2.10	23.00	15.20	2.20
Jan-97	15.00	2.20	23.00	15.20	1.80
Feb-97	23.00	2.40	23.00	16.40	2.00
Mar-97	21.00	2.40	21.00	16.30	1.50
Apr-97	22.00	2.50	23.00	16.10	1.80
May-97	21.00	2.60	24.00	17.00	1.80
Jun-97	23.00	2.30	23.00	15.60	2.60
Sep-97	27.80	12.80	25.20	17.50	8.60
Dec-97	20.00	3.30	24.60	17.80	9.50
Feb-98	19.30	3.20	28.20	21.50	12.10
Apr-98	18.00	3.10	28.00	19.00	13.00
Sep-98	19.00	3.40	27.00	19.00	5.90
Dec-98	17.00	2.90	28.00	22.00	4.50

TABLE 4
GROUNDWATER CHROMIUM TREATMENT ANALYSIS

WEEK OF	VOLUME TREATED (M gal)	TREATED TOTAL (mg/l)	EFFLUENT HEXAVALENT (mg/l)
Jan 5 - Jan 11	367	0.04	0.01
Jan 12 - Jan 18	329	0.11	0.01
Jan 19 - Jan 25	308	0.07	0.01
Jan 26 - Feb 1	284	0.05	0.01
Jan 1998 Average	322	0.06	0.01
Feb 2 - Feb 8	481	0.04	0.01
Feb 9 - Feb 15	679	0.08	0.05
Feb 16 - Feb 22	614	0.02	0.01
Feb 23 - Mar 1	510	0.18	0.09
Feb 1998 Average	571	0.08	0.04
Mar 2 - Mar 8	798	0.09	0.03
Mar 9 - Mar 15	449	0.08	0.03
Mar 16 - Mar 22	652	0.10	0.04
Mar 23 - Mar 29	724	0.08	0.04
Mar 30 - Apr 5	556	0.11	0.09
Mar 1998 Average	635	0.09	0.05
Apr 6 - Apr 12	646	0.10	0.05
Apr 13 - Apr 19	548	0.04	0.01
Apr 20 - Apr 26	569	0.08	0.04
Apr 27 - May 3	609	0.15	0.08
Apr 1998 Average	593	0.09	0.05
May 4 - May 10	599	0.11	0.05
May 11 - May 17	654	0.09	0.03
May 18 - May 24	445	0.07	0.02
May 25 - May 31	502	0.11	0.10
May 1998 Average	550	0.09	0.05
Jun 1 - Jun 7	478	0.09	0.05
Jun 8 - Jun 14	499	0.04	0.03
Jun 15 - Jun 21	453	0.10	0.08
Jun 22 - Jun 28	435	0.07	0.06
Jun 29 - Jul 4	453	0.03	0.01
Jun 1998 Average	463	0.07	0.04

(Note: average feed chromium to treatment system January - June, 1998: 10.97 mg/l)

TABLE 4 (cont.)
GROUNDWATER CHROMIUM TREATMENT ANALYSIS

WEEK OF	VOLUME TREATED (M gal)	TREATED TOTAL (mg/l)	EFFLUENT HEXAVALENT (mg/l)
Jul. 5 - Jul. 11		0.21	0.11
Jul. 12 - Jul. 18		0.01	0.01
Jul. 19 - Jul. 25		0.02	0.01
Jul. 26 - Aug. 1		0.05	0.05
Jul. 1998 Average	397	0.07	0.04
Aug. 2 - Aug. 8		0.01	0.02
Aug. 9 - Aug. 15		0.01	0.03
Aug. 16 - Aug. 22		0.10	0.08
Aug. 23 - Aug. 29		0.02	0.01
Aug. 1998 Average	429	0.03	0.03
Aug. 30 - Sep. 5		0.07	0.06
Sep. 6 - Sep. 12		0.07	0.03
Sep. 13 - Sep. 19		0.05	0.02
Sep. 20 - Sep. 26		0.04	0.01
Sep. 1998 Average	507	0.06	0.03
Sep. 27 - Oct. 3		0.05	0.03
Oct. 4 - Oct. 10		0.05	0.05
Oct. 11 - Oct. 17		0.10	0.07
Oct. 18 - Oct. 24		0.05	0.03
Oct. 25 - Oct. 31		0.03	0.01
Oct. 1998 Average	542	0.06	0.04
Nov. 1 - Nov. 7		0.07	0.01
Nov. 8 - Nov. 14		0.10	0.09
Nov. 15 - Nov. 21		0.02	0.01
Nov. 22 - Nov. 28		0.06	0.01
Nov. 1998 Average	484	0.06	0.03
Nov. 29 - Dec. 5		0.02	0.02
Dec. 6 - Dec. 12		0.03	0.01
Dec. 13 - Dec. 19		0.05	0.02
Dec. 20 - Dec. 26		0.06	0.03
Dec. 27 - Jan. 2		0.10	0.06
Dec. 1998 Average	467	0.06	0.03

(Note: average feed chromium to treatment system July - December, 1998: 10.30 mg/l)

APPENDIX A

APPENDIX A
GROUNDWATER ELEVATIONS

**KERR-MCGEE CHEMICAL LLC
HENDERSON, NEVADA FACILITY
GROUNDWATER ELEVATIONS**

TOC-->	M-11 DTW	M-11 ELEV	M-14 DTW	M-14 ELEV	M-15 DTW	M-15 ELEV	M-17 DTW	M-17 ELEV	M-18 DTW	M-18 ELEV	M-19 DTW	M-19 ELEV	M-22A DTW	M-22A ELEV	M-23 DTW	M-23 ELEV	M-25 DTW	M-25 ELEV	M-27 DTW	M-27 ELEV
15-Dec-93	43.20	1770.26	32.45	1726.36	32.35	1717.34	35.05	1734.49	21.85	1716.43	32.90	1733.64	30.00	1728.35	20.90	1691.88	33.45	1724.70	25.70	1714.77
14-Jan-94	43.00	1770.46					35.00	1734.54			34.50	1733.54		1728.40	21.00	1691.78	33.30	1724.75		
22-Feb-94	42.65	1770.81	33.50	1725.33	32.90	1716.79	34.70	1734.84	22.15	1716.13	32.80	1733.74	29.95	1728.50	21.15	1691.63	33.40	1724.85	25.80	1714.67
21-Mar-94	42.45	1771.01					34.65	1734.89			34.00	1732.54	29.80	1728.55	21.20	1691.58	33.30	1724.85		
26-Apr-94	42.40	1771.06					34.65	1734.89			34.00	1732.54	29.70	1728.65	21.35	1691.43	33.30	1724.85		
19-May-94	42.45	1771.01					34.40	1735.14	22.20	1716.08	30.70	1735.84	29.50	1728.85	21.40	1691.38	33.10	1725.05	-DRY-	
23-Jun-94	42.50	1770.96	32.40	1726.43	32.15	1717.54	34.10	1735.44			34.80	1731.74	29.35	1729.00	21.55	1691.23	33.30	1724.85		
20-Jul-94	42.85	1770.61					34.45	1735.09			34.00	1731.74	29.70	1728.65	21.65	1691.13	33.25	1724.90		
23-Aug-94	42.95	1770.51					33.85	1735.89	22.20	1716.08	34.00	1732.54	29.70	1728.65	21.70	1691.08	33.20	1724.95		
30-Sep-94	42.90	1770.56	32.80	1726.23	32.15	1717.54	34.85	1734.69			34.00	1732.54	29.85	1728.50	22.40	1690.38	33.30	1724.85	out	
18-Oct-94	42.85	1770.61					34.80	1734.64			34.00	1732.54	29.85	1728.50	21.85	1690.93	33.45	1724.70		
16-Nov-94	out						34.80	1734.74			34.00	1732.54	out	1728.50	22.00	1690.78	33.80	1724.35		
02-Dec-94	42.65	1770.81	33.50	1725.33	33.55	1716.14	34.65	1734.69	22.50	1715.78	34.50	1732.04	30.10	1728.25	22.00	1690.78	33.45	1724.70	out	
27-Jan-95	out						34.20	1735.34			33.90	1732.64	29.15	1729.20	21.90	1690.88	33.40	1725.15		
16-Feb-95	out						33.60	1735.94			34.00	1732.54	28.90	1729.55	21.75	1691.03	33.50	1724.65		
22-Mar-95	42.65	1770.81	32.40	1726.43	32.00	1717.69	33.50	1735.04	22.15	1716.13	34.00	1732.54	28.75	1729.60	21.80	1690.98	33.50	1725.40	25.90	1714.57
25-Apr-95	out						33.50	1735.04			33.30	1733.24	28.75	1729.60	21.85	1690.93	32.85	1725.50		
18-May-95	out						33.40	1735.14	22.00	1716.28	33.25	1733.24	28.75	1729.60	21.90	1690.88	32.80	1725.35	25.90	1714.57
29-Jun-95	41.65	1771.81	32.00	1726.83	31.60	1718.09	33.55	1735.99			34.00	1732.54	28.95	1729.40	21.85	1690.93	32.80	1725.20		
19-Jul-95	42.05	1771.41					33.95	1735.99	22.00	1716.28	34.00	1732.54	29.05	1729.30	21.95	1690.88	32.85	1725.20		
24-Aug-95	42.25	1771.21					34.10	1735.44			34.00	1732.54	29.05	1729.30	21.95	1690.83	33.00	1725.15	25.65	1714.82
28-Sep-95	42.20	1771.26	32.65	1726.18	31.95	1717.74	34.15	1735.39	22.00	1716.28	32.90	1732.64	29.20	1729.15	22.00	1690.78	33.00	1725.10		
19-Oct-95	42.15	1771.31					34.30	1735.24			34.00	1732.54	29.30	1729.05	22.20	1690.58	33.00	1725.15		
21-Nov-95	41.90	1771.56	33.00	1725.83	31.60	1718.09	34.15	1735.39	21.90	1716.38	34.00	1732.54	29.15	1729.20	22.00	1690.78	33.05	1725.10	25.80	1714.36
12-Dec-95	41.40	1772.06					34.55	1735.99			33.50	1732.54	29.15	1729.20	22.00	1690.78	33.05	1725.10		
11-Jan-96	41.35	1772.11					33.70	1735.64			33.60	1733.04	28.90	1729.45	22.20	1690.58	33.00	1725.15		
12-Feb-96	41.25	1772.21	33.20	1725.63	32.50	1717.19	33.90	1735.64	21.60	1716.68	33.50	1733.04	28.70	1729.65	22.40	1690.38	33.00	1725.05	26.00	1714.16
30-Mar-96	42.40	1771.06					33.80	1735.74			33.70	1732.84	29.00	1729.35	22.80	1689.98	32.30	1724.95		
15-Apr-96	41.60	1771.86					34.10	1735.44			34.00	1732.54	29.05	1729.30	22.40	1690.38	33.20	1724.95		
16-May-96	41.75	1771.71					34.15	1735.39			34.00	1732.54	29.05	1729.30	22.35	1690.43	33.30	1724.85		
20-Jun-96	42.00	1771.46	33.30	1725.53	32.10	1717.59	34.30	1735.24	21.50	1716.78	34.00	1732.54	29.20	1729.15	22.40	1690.38	33.30	1724.85	25.00	1714.16
11-Jul-96	41.85	1771.61					34.40	1735.14			34.10	1732.44	28.90	1729.45	22.40	1690.38	33.40	1724.75		
28-Aug-96	41.80	1771.66					34.50	1735.04			34.00	1732.54	29.45	1729.20	22.40	1690.38	33.45	1724.70		
11-Sep-96	41.90	1771.56	33.10	1725.73	31.90	1717.79	34.55	1734.99	21.50	1716.78	34.00	1732.54	29.45	1729.20	22.50	1690.28	33.55	1724.60	26.10	1714.06
17-Oct-96	42.30	1771.16					34.45	1735.09			33.00	1733.54	29.45	1728.90	22.60	1690.18	33.50	1724.65		
15-Nov-96	42.50	1770.96	33.50	1725.33	32.10	1717.59	34.45	1735.09	22.15	1716.13	33.00	1733.54	29.40	1728.95	22.65	1690.13	33.50	1724.65	25.90	1714.36
20-Dec-96	42.60	1770.86					34.40	1735.14			33.75	1733.79	29.40	1728.90	22.70	1690.08	33.45	1724.70		
08-Jan-97	42.60	1770.86					34.35	1735.19			33.70	1732.84	29.40	1728.95	22.80	1689.98	33.55	1724.60		
18-Feb-97	42.60	1770.86					34.35	1735.19			33.70	1732.84	29.40	1728.95	22.90	1689.88	33.40	1724.75		
10-Mar-97	42.60	1770.86					34.35	1735.19			34.00	1732.54	29.45	1729.00	23.00	1689.78	33.30	1724.85		
09-Apr-97	42.45	1771.01					34.60	1734.94			34.00	1732.54	29.45	1729.00	23.10	1689.68	33.50	1724.65		
28-Apr-97	42.45	1771.01	33.59	1725.24	32.28	1717.41	34.62	1734.92	22.30	1715.98	34.00	1732.54	29.45	1728.81	23.05	1689.73	33.53	1724.62	dry	
18-Jun-97	42.05	1771.41	33.55	1725.28	32.80	1716.89	34.75	1734.79	22.40	1715.88	31.70	1734.84	29.68	1728.61	23.05	1689.73	33.59	1724.56		
15-Sep-97	41.93	1771.53	33.50	1725.32	32.80	1716.89	34.55	1734.99			31.75	1734.51	29.20	1728.56	23.49	1689.29	33.53	1724.29		
30-Oct-97	41.93	1771.53	33.50	1725.33	32.80	1716.89	34.55	1734.99	21.48	1716.80	31.75	1734.51	29.20	1728.56	23.49	1689.29	33.53	1724.29		
02-Dec-97	45.75	1767.71	33.85	1725.01	32.40	1717.29	33.90	1735.64	21.25	1717.03	32.87	1733.39	28.65	1729.11	23.45	1689.33	33.04	1724.72	25.85	1714.31
22-Jan-98	42.20	1771.26	33.00	1725.83	32.00	1717.69	43.33	1726.21	21.03	1717.03	32.87	1733.39	28.65	1729.11	23.45	1689.33	33.04	1724.72	25.85	1714.31
11-Feb-98	42.25	1771.21	33.91	1724.92	32.29	1717.59	34.15	1735.64	21.30	1717.03	32.15	1734.11	28.60	1729.16	22.85	1689.78	33.00	1724.85	dry	
25-Mar-98	42.00	1771.46	33.00	1725.83	31.80	1717.89	34.15	1735.64	21.30	1717.03	31.95	1734.31	28.65	1729.11	22.70	1690.08	33.00	1724.85	dry	
14-Apr-98	42.00	1771.46	33.44	1725.39	32.31	1717.38	34.22	1735.52	21.60	1716.68	32.40	1733.86	28.00	1728.76	23.16	1689.62	33.05	1724.77	dry	
27-May-98	42.23	1771.23	34.38	1724.45	32.60	1717.09	35.27	1735.27	21.55	1716.73	32.17	1734.09	28.60	1729.16	22.65	1690.13	33.72	1724.10	dry	
15-Dec-98	42.68	1770.78	32.88	1725.95	32.40	1717.29	34.87	1734.67	20.44	1717.84	32.18	1734.08	29.10	1728.66	22.15	1690.63	33.41	1724.41	26.00	1714.16

**KERR-McGEE CHEMICAL LLC
HENDERSON, NEVADA FACILITY
GROUNDWATER ELEVATIONS**

TOC-->	M-31 1788.06		M-36 1757.94		M-37 1759.28		M-38 1757.94		M-39 1759.31		M-47 1716.51		M-49 1718.78		M-53 1751.56		M-54 1748.93		M-55 1749.35	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
15-Dec-93	40.15	1748.24	32.30	1725.64	31.50	1727.78	31.25	1726.63	31.15	1728.16	19.30	1697.21	19.40	1699.38	30.00	1721.56	27.80	1721.13	30.50	1718.85
14-Jan-94	40.00	1748.39	32.00	1725.94					31.20	1728.11	19.35	1697.16	19.55	1699.23						
22-Feb-94	39.65	1748.74	32.10	1725.84	31.45	1727.83	31.00	1726.88	31.10	1728.21	19.55	1696.96	19.60	1698.93	30.50	1721.06	28.00	1720.93	30.75	1718.60
21-Mar-94	39.70	1748.69	32.40	1725.54					31.00	1728.31	19.75	1698.76	19.85	1698.93						
26-Apr-94	39.35	1749.04	32.40	1725.54	31.00	1728.31	30.70	1726.88	30.70	1728.61	19.80	1698.51	20.00	1698.78	30.50	1721.06	28.00	1720.93	30.70	1718.65
19-May-94	39.55	1748.84	32.50	1725.44	31.00	1728.28	30.65	1727.23	30.95	1728.86	19.95	1696.56	20.00	1698.51						
20-Jun-94	39.70	1748.69	32.10	1725.84					31.05	1728.26	19.95	1696.51	20.00	1698.51						
23-Jul-94	39.30	1749.09	32.80	1725.14	31.10	1728.18	30.65	1727.23	31.15	1728.16	20.20	1696.31	20.00	1698.78	30.50	1721.06	28.00	1720.93	30.75	1718.60
30-Sep-94	38.55	1749.84	32.80	1725.04	31.10	1728.18	30.65	1727.23	31.15	1728.16	20.20	1696.31	20.00	1698.78						
18-Oct-94	38.00	1750.39	32.00	1725.94					31.00	1728.31	20.30	1696.11	20.45	1698.33						
16-Nov-94	37.95	1750.44			31.67	1727.61	31.10	1726.78	31.00	1728.31	20.40	1696.11	20.30	1698.33						
02-Dec-94	37.40	1750.99	31.75	1726.19					30.95	1728.31	20.35	1696.16	20.45	1698.33						
27-Jan-95	36.30	1752.09	32.50	1725.44					30.30	1729.01	20.20	1696.31	20.30	1698.33						
16-Feb-95	36.30	1752.09	32.60	1725.34	30.70	1728.58	30.60	1727.28	29.80	1729.51	20.00	1696.51	20.30	1698.48	29.80	1721.76	27.30	1721.63	30.10	1719.25
22-Mar-95	36.50	1751.89	32.60	1725.34					29.90	1729.41	19.15	1697.36	20.25	1698.26						
25-Apr-95	33.60	1754.79	32.60	1725.34	31.00	1728.28	30.70	1727.18	29.80	1729.51	20.25	1696.26	20.20	1698.58	29.75	1721.81	26.80	1722.13	29.60	1719.75
18-May-95	33.60	1754.79	32.60	1725.34					29.75	1729.55	20.30	1696.21	20.20	1698.58						
29-Jun-95	37.75	1750.64	31.30	1726.64	31.00	1728.28	30.70	1727.18	30.00	1729.31	20.35	1696.16	20.30	1698.58						
19-Jul-95	38.70	1749.69	31.90	1726.04					30.15	1729.16	20.40	1696.11	20.30	1698.58						
24-Aug-95	38.60	1749.79	38.60	1719.34	31.00	1728.28	30.85	1727.03	30.30	1729.31	20.50	1696.01	20.30	1698.58						
28-Sep-95	38.90	1749.49	38.90	1719.49					30.40	1728.91	20.60	1695.91	20.30	1698.58						
19-Oct-95	39.20	1749.19	31.35	1726.59	31.20	1728.08	30.80	1727.08	30.25	1729.05	20.80	1695.71	20.30	1698.58						
21-Nov-95	37.20	1751.19	31.35	1726.59					30.30	1729.01	20.65	1695.86	20.30	1698.58						
12-Dec-95	37.60	1750.79	31.35	1726.59	31.20	1728.08	30.80	1727.08	30.00	1729.31	20.70	1695.81	20.30	1698.58						
28-Jan-96	37.75	1750.64	31.30	1726.64					29.90	1729.41	20.80	1695.71	20.50	1698.58						
11-Jan-96	37.75	1750.64	31.35	1726.64	31.50	1727.78	31.70	1726.18	30.00	1729.31	21.70	1694.81	20.50	1698.58						
12-Feb-96	38.05	1750.34	31.35	1726.64					30.10	1729.21	20.80	1695.71	20.40	1698.58						
15-Mar-96	38.30	1750.09	35.00	1722.94	31.00	1728.28	31.10	1726.78	30.15	1729.16	20.80	1695.71	20.40	1698.58						
30-Apr-96			35.00	1722.94					30.35	1728.96	20.85	1695.66	20.40	1698.58						
16-May-96			34.50	1723.44					30.50	1728.81	20.80	1695.71	20.40	1698.58						
20-Jun-96			34.60	1723.34					30.65	1728.66	20.80	1695.71	20.40	1698.58						
11-Jul-96			34.60	1723.34					30.70	1728.61	20.80	1695.71	20.40	1698.58						
28-Aug-96			34.90	1723.04	31.00	1728.28	31.00	1726.88	30.70	1728.61	20.90	1695.61	20.40	1698.58						
11-Sep-96			31.00	1726.94					30.55	1728.76	21.00	1695.51	20.40	1698.58						
17-Oct-96			32.00	1725.94					30.50	1728.81	21.10	1695.41	20.40	1698.58						
15-Nov-96			32.25	1725.69	31.80	1727.48	31.00	1726.88	30.55	1728.76	21.10	1695.41	20.75	1698.03	31.20	1720.36	28.60	1720.33	31.45	1717.90
20-Dec-96			32.20	1725.74					30.60	1728.71	21.20	1695.31	20.50	1698.03						
08-Jan-97			32.20	1725.74					30.60	1728.71	21.20	1695.31	20.50	1698.03						
18-Feb-97			32.00	1725.94					30.50	1728.81	21.00	1695.51	20.50	1698.03						
10-Mar-97			32.00	1725.94					30.50	1728.81	21.00	1695.51	20.50	1698.03						
09-Apr-97			32.30	1725.64					30.70	1728.61	21.35	1695.16	21.04	1697.74						
28-Apr-97			32.35	1725.59	31.95	1727.33	31.08	1726.80	30.68	1728.63	21.40	1695.11	21.04	1697.74						
18-Jun-97	39.53	1748.85	31.30	1726.74	31.93	1727.35	31.15	1726.73	31.40	1727.91	21.41	1695.10	21.04	1697.74						
Aug-97			31.63	1726.31	31.93	1727.35	31.15	1726.73	31.40	1727.91	21.41	1695.10	21.04	1697.74						
15-Sep-97			31.49	1726.45	31.77	1727.51	30.90	1727.04	30.00	1729.37	21.11	1695.40	20.50	1698.28						
20-Nov-97			31.25	1726.69	31.20	1728.08	30.75	1727.19	29.55	1729.76	21.58	1695.36	20.50	1698.28						
02-Dec-97			31.18	1726.76	31.30	1727.98	31.00	1726.94	29.47	1729.84	21.58	1695.36	20.50	1698.28						
22-Jan-98			38.80	1749.26	31.22	1728.82	30.73	1727.21	29.65	1729.66	21.33	1695.18	21.58	1697.20						
11-Feb-98			39.13	1748.93	31.37	1728.08	30.70	1727.24	29.65	1729.66	21.42	1695.09	21.00	1697.78						
25-Mar-98			38.85	1749.21	31.37	1727.91	30.70	1727.24	29.45	1729.66	21.05	1695.46	21.05	1697.78						
17-Apr-98			39.10	1749.29	31.20	1728.08	30.70	1727.24	29.65	1729.66	21.05	1695.46	20.70	1698.08						
24-May-98			31.31	1726.63	31.41	1727.87	30.74	1727.20	30.06	1729.66	20.90	1697.95	20.83	1697.95						
14-Sep-98			39.85	1748.54	32.04	1727.24	31.21	1726.73	30.63	1728.68	21.02	1695.49	20.73	1698.05						
15-Dec-98			39.52	1748.87	31.42	1727.66	31.05	1726.89	29.28	1730.03	20.65	1695.86	20.50	1698.28						

**KERR-MCGEE CHEMICAL LLC
HENDERSON, NEVADA FACILITY
GROUNDWATER ELEVATIONS**

TOC-->	M-56 1746.60 DTW	ELEV	M-57 1752.29 DTW	ELEV	M-58 1749.25 DTW	ELEV	M-59 1743.01 DTW	ELEV	M-60 1750.13 DTW	ELEV	M-61 1745.55 DTW	ELEV	M-62 1752.92 DTW	ELEV	M-63 1750.59 DTW	ELEV	M-64 1749.76 DTW	ELEV	M-65 1752.88 DTW	ELEV	
16-Sep-92	30.90	1718.70	30.45	1721.84	28.90	1720.35	22.45	1720.13	30.00	1720.13	24.30	1721.25	30.00	1722.92	27.60	1722.99	28.85	1720.91	33.25	1719.63	
01-Dec-92	31.30	1718.30	30.80	1721.49	29.15	1720.41	22.60	1720.41	30.30	1719.83	24.40	1721.15	30.35	1722.57	28.00	1722.59	29.35	1720.41	33.50	1719.38	
03-Mar-93	31.05	1718.55	30.40	1721.89	28.65	1720.60	22.10	1720.91	29.85	1720.28	23.70	1721.85	29.90	1723.02	27.50	1723.09	29.15	1720.61	33.23	1719.63	
01-Jun-93	28.91	1719.69	29.52	1722.77	28.81	1720.44	21.96	1721.05	28.67	1721.46	23.39	1722.16	28.34	1724.56	27.51	1723.08	28.71	1721.05	32.00	1720.88	
31-Aug-93	30.60	1719.00	29.10	1723.19	29.35	1719.90	22.50	1720.51	29.25	1720.88	24.05	1721.50	28.10	1724.82	27.10	1723.49	29.40	1720.36	32.45	1720.43	
27-Oct-93																					
16-Nov-93																					
15-Dec-93	30.65	1718.95	30.00	1722.29	29.45	1719.80	22.60	1720.41	29.40	1720.73	24.10	1721.45	28.60	1724.32	27.85	1722.74	29.70	1720.06	32.50	1720.38	
14-Jan-94																					
22-Feb-94																					
21-Mar-94	30.80	1718.80	30.50	1721.79	29.50	1719.75	22.75	1720.26	29.30	1720.83	24.30	1721.25	29.30	1723.62	28.10	1722.49	29.70	1720.06	32.45	1720.43	
26-Apr-94																					
19-May-94	30.65	1718.95	30.50	1721.79	29.35	1719.90	22.55	1720.46	29.10	1721.03	24.00	1721.55	29.20	1723.72	28.00	1722.59	29.60	1720.16	32.20	1720.68	
23-Jun-94																					
20-Jul-94																					
23-Aug-94																					
30-Sep-94	30.60	1719.00	30.10	1722.19	29.40	1719.85	22.55	1720.46	29.20	1720.93	24.10	1721.45	29.30	1723.62	28.00	1722.59	29.60	1720.16	32.30	1720.58	
18-Oct-94																					
16-Nov-94																					
02-Dec-94	30.75	1718.85	30.10	1722.19	30.00	1719.25	22.90	1720.11	29.30	1720.83	24.10	1721.45	29.00	1723.92	27.90	1722.69	30.10	1719.66	32.30	1720.58	
27-Jan-95																					
16-Feb-95																					
22-Mar-95	30.30	1719.30	29.80	1722.49	29.40	1719.85	22.45	1720.56	28.90	1721.23	23.80	1721.75	28.50	1724.42	27.40	1723.19	29.00	1720.76	32.00	1720.88	
25-Apr-95																					
18-May-95	29.95	1719.65	29.90	1722.39	29.30	1719.95	22.35	1720.66	28.70	1721.43	23.80	1721.75	28.65	1724.27	27.30	1723.29	28.90	1720.86	32.00	1720.88	
29-Jun-95																					
19-Jul-95																					
24-Aug-95	29.35	1720.25	30.55	1721.74	28.39	1720.86	22.40	1720.61	28.90	1721.23	23.90	1721.65	28.70	1724.22	27.70	1722.89	29.60	1720.16	31.90	1720.98	
28-Sep-95																					
19-Oct-95																					
21-Nov-95	29.35	1720.25	30.35	1721.94	29.35	1719.90	22.35	1720.66	28.70	1721.43	23.80	1721.75	29.10	1723.82	28.00	1722.59	29.80	1719.96	31.90	1720.98	
12-Dec-95																					
11-Jan-96																					
12-Feb-96	30.00	1719.60	30.90	1721.39	29.00	1720.25	22.00	1721.01	29.80	1720.33	23.50	1722.05	30.60	1722.32	28.00	1722.59	30.00	1719.76	32.40	1720.48	
15-Mar-96																					
30-Apr-96																					
16-May-96	29.90	1719.70	30.40	1721.89	29.25	1720.00	22.10	1720.91	29.00	1721.13	23.50	1722.05	30.00	1722.92	28.00	1722.59	30.10	1719.66	32.45	1720.43	
20-Jun-96																					
11-Jul-96																					
28-Aug-96	29.90	1719.70	30.40	1721.89	29.20	1720.05	22.20	1720.81	29.10	1721.03	23.50	1722.05	30.10	1722.82	28.00	1722.59	30.20	1719.56	32.45	1720.43	
11-Sep-96																					
17-Oct-96																					
15-Nov-96	30.25	1719.35	31.35	1720.94	29.65	1719.60	22.60	1720.41	29.10	1721.03	24.00	1721.55	29.60	1723.32	28.20	1722.39	30.25	1719.51	32.40	1720.48	
20-Dec-96																					
06-Jan-97																					
18-Feb-97																					
10-Mar-97																					
09-Apr-97																					
28-Apr-97	30.70	1718.90	31.38	1720.91	29.85	1719.40	22.77	1720.24	29.33	1720.80	24.15	1721.40	29.85	1723.07	28.00	1722.59	30.15	1719.61	32.60	1720.28	
18-Jun-97	30.63	1718.97	31.28	1721.01	29.90	1719.35	22.80	1720.21	29.35	1720.78	24.20	1721.35	29.45	1723.47	27.97	1722.82	30.40	1719.36	32.70	1720.18	
Aug-97																					
15-Sep-97																					
20-Nov-97	30.35	1716.25	31.33	1720.96	29.05	1720.20	21.80	1721.21	28.80	1721.33	22.85	1722.70	30.28	1722.64	28.07	1722.52	30.35	1719.41	32.25	1720.63	
02-Dec-97	28.80	1717.80	30.56	1721.73	29.08	1720.17	21.85	1721.16	28.64	1721.49	23.50	1722.05	29.00	1723.92	27.30	1723.29	29.70	1720.06	32.07	1720.81	
22-Jan-98	30.00	1716.60	30.64	1721.65	28.34	1720.91	21.25	1721.83	28.30	1721.83	22.45	1723.10	30.08	1722.84	27.40	1723.19	29.80	1719.96	31.95	1720.93	
11-Feb-98	29.85	1716.75	30.95	1721.34	28.90	1720.35	21.80	1721.21	28.37	1721.76	22.90	1722.65	28.50	1724.42	27.70	1722.89	28.45	1721.31	32.10	1720.78	
25-Mar-98	30.00	1716.60	31.00	1721.29	29.00	1720.25	21.85	1721.16	28.55	1721.58	23.10	1722.45	30.50	1722.42	28.00	1722.59	28.70	1721.06	32.15	1720.73	
27-Apr-98	30.14	1719.46	31.08	1721.21	29.30	1719.85	22.12	1720.89	28.65	1721.28	23.49	1722.06	28.55	1724.37	28.16	1722.43	29.47	1720.29	32.35	1720.53	
14-Sep-98	30.75	1718.85	31.20	1721.09	29.40	1719.85	22.00	1721.01	29.00	1721.13	23.22	1722.33	30.90	1722.32	28.66	1721.93	30.40	1719.36	32.60	1720.19	
15-Dec-98	30.68	1718.92	30.80	1721.49	29.52	1719.73	22.28	1720.73	29.05	1721.08	23.55	1722.00	30.60	1722.92	28.15	1722.44	30.15	1719.61	32.60	1720.28	

KERR-MCGEE CHEMICAL LLC
HENDERSON, NEVADA FACILITY
GROUNDWATER ELEVATIONS

TOC-->	M-55		M-57		M-58		M-69		M-70		M-71		M-72		M-73		M-74		M-78	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
16-Sep-92	30.00	1722.33	22.00	1722.98	23.70	1723.74	29.60	1719.17	27.55	1719.41	30.00	1715.88	26.70	1718.59	21.00	1719.05	23.70	1719.72	33.15	1717.86
01-Dec-92	30.10	1722.23	22.15	1722.83	23.70	1723.74	30.20	1718.57	28.40	1718.56	30.60	1715.28	27.35	1717.94	21.20	1718.85	23.70	1719.72	33.85	1717.16
28-Jan-93	29.80	1722.53	22.00	1723.48	23.65	1723.79	28.80	1719.97	28.65	1718.31	30.35	1715.53	26.50	1718.74	21.00	1719.05	22.95	1720.47	33.45	1717.56
03-Mar-93	29.80	1722.53	22.00	1723.38	23.55	1723.89	28.80	1719.97	28.65	1718.31	30.35	1715.53	26.50	1718.74	21.00	1719.05	22.95	1720.47	33.45	1717.56
26-Mar-93	30.12	1722.21	22.00	1722.98	23.75	1723.69	27.49	1721.28	26.94	1720.62	29.20	1716.68	25.72	1719.57	20.07	1719.98	22.52	1720.90	30.33	1720.66
01-Jun-93	30.12	1722.21	22.00	1722.98	23.58	1723.66	27.49	1721.28	26.94	1720.62	29.20	1716.68	25.72	1719.57	20.07	1719.98	22.52	1720.90	30.33	1720.66
28-Jul-93	30.12	1722.21	22.00	1722.98	23.58	1723.66	27.49	1721.28	26.94	1720.62	29.20	1716.68	25.72	1719.57	20.07	1719.98	22.52	1720.90	30.33	1720.66
31-Aug-93	30.65	1721.68	21.10	1723.88	24.00	1724.44	26.35	1722.42	27.95	1719.01	30.00	1715.68	26.10	1719.19	20.30	1719.75	23.15	1720.27	34.30	1716.71
21-Sep-93	30.65	1721.68	21.10	1723.88	24.00	1724.44	26.35	1722.42	27.95	1719.01	30.00	1715.68	26.10	1719.19	20.30	1719.75	23.15	1720.27	34.30	1716.71
27-Oct-93	30.65	1721.68	21.10	1723.88	24.00	1724.44	26.35	1722.42	27.95	1719.01	30.00	1715.68	26.10	1719.19	20.30	1719.75	23.15	1720.27	34.30	1716.71
15-Nov-93	30.80	1721.53	21.00	1723.58	23.55	1723.89	28.70	1720.07	28.10	1718.86	30.40	1715.43	27.20	1718.09	20.60	1719.45	24.40	1719.02	34.40	1716.61
15-Dec-93	30.80	1721.53	21.00	1723.58	23.55	1723.89	28.70	1720.07	28.10	1718.86	30.40	1715.43	27.20	1718.09	20.60	1719.45	24.40	1719.02	34.40	1716.61
14-Jan-94	30.70	1721.63	21.40	1723.48	23.60	1723.84	29.45	1719.32	28.50	1718.46	30.70	1715.18	26.60	1717.69	20.80	1719.25	23.50	1719.92	34.70	1716.31
22-Feb-94	30.70	1721.63	21.40	1723.48	23.60	1723.84	29.45	1719.32	28.50	1718.46	30.70	1715.18	26.60	1717.69	20.80	1719.25	23.50	1719.92	34.70	1716.31
21-Mar-94	30.40	1721.93	21.35	1723.65	23.50	1723.94	29.70	1719.07	28.70	1718.26	30.50	1715.33	28.55	1718.74	20.85	1719.20	23.45	1719.97	34.40	1716.61
19-May-94	30.40	1721.93	21.35	1723.65	23.50	1723.94	29.70	1719.07	28.70	1718.26	30.50	1715.33	28.55	1718.74	20.85	1719.20	23.45	1719.97	34.40	1716.61
23-Jun-94	30.50	1721.83	21.70	1723.26	23.75	1723.99	29.70	1719.07	28.70	1718.26	30.50	1715.33	28.55	1718.74	20.85	1719.20	23.45	1719.97	34.40	1716.61
18-Oct-94	30.50	1721.83	21.70	1723.26	23.75	1723.99	29.70	1719.07	28.70	1718.26	30.50	1715.33	28.55	1718.74	20.85	1719.20	23.45	1719.97	34.40	1716.61
05-Dec-94	30.80	1721.53	21.50	1723.46	23.65	1723.99	29.70	1719.07	28.70	1718.26	30.50	1715.33	28.55	1718.74	20.85	1719.20	23.45	1719.97	34.40	1716.61
16-Nov-94	30.80	1721.53	21.50	1723.46	23.65	1723.99	29.70	1719.07	28.70	1718.26	30.50	1715.33	28.55	1718.74	20.85	1719.20	23.45	1719.97	34.40	1716.61
02-Dec-94	30.10	1722.23	20.90	1723.06	23.00	1724.54	28.55	1720.22	26.80	1720.16	30.50	1715.33	28.55	1718.74	20.85	1719.20	23.45	1719.97	34.00	1717.01
16-Feb-95	30.00	1722.33	20.85	1723.98	22.90	1724.54	27.35	1721.42	26.60	1720.36	30.00	1715.68	26.30	1719.94	20.70	1719.35	23.20	1720.22	33.80	1717.21
25-Mar-95	30.35	1721.98	21.10	1723.98	23.00	1724.54	29.00	1719.77	28.10	1718.86	28.60	1715.88	26.30	1719.29	20.95	1719.40	23.30	1720.12	33.80	1717.21
18-May-95	30.30	1722.03	21.50	1723.48	23.10	1724.34	29.80	1718.97	28.50	1718.46	27.80	1716.08	25.90	1719.59	20.50	1719.55	23.15	1720.27	34.00	1717.01
12-Dec-95	30.00	1722.33	20.80	1723.38	23.20	1724.24	29.80	1718.97	28.50	1718.46	27.80	1716.08	25.90	1719.59	20.50	1719.55	23.15	1720.27	34.00	1717.01
12-Feb-96	30.00	1722.33	20.80	1723.38	23.20	1724.24	29.80	1718.97	28.50	1718.46	27.80	1716.08	25.90	1719.59	20.50	1719.55	23.15	1720.27	34.00	1717.01
15-Mar-96	30.00	1722.33	20.80	1723.38	23.20	1724.24	29.80	1718.97	28.50	1718.46	27.80	1716.08	25.90	1719.59	20.50	1719.55	23.15	1720.27	34.00	1717.01
30-Apr-96	30.00	1722.33	20.75	1724.23	22.85	1724.59	31.00	1717.77	29.30	1717.66	30.00	1715.68	26.30	1720.29	20.20	1719.85	23.00	1720.42	33.00	1718.01
16-May-96	30.20	1722.13	21.00	1723.98	23.00	1724.54	30.00	1718.77	28.90	1718.06	29.70	1715.88	26.30	1720.39	20.60	1720.05	23.10	1720.32	33.80	1717.21
20-Jun-96	30.20	1722.13	21.00	1723.98	23.00	1724.54	30.00	1718.77	28.90	1718.06	29.70	1715.88	26.30	1720.39	20.60	1720.05	23.10	1720.32	33.80	1717.21
28-Aug-96	30.20	1722.13	21.00	1723.98	23.00	1724.54	30.00	1718.77	28.90	1718.06	29.70	1715.88	26.30	1720.39	20.60	1720.05	23.10	1720.32	33.80	1717.21
11-Jul-96	30.20	1722.13	21.00	1723.98	23.00	1724.54	30.00	1718.77	28.90	1718.06	29.70	1715.88	26.30	1720.39	20.60	1720.05	23.10	1720.32	33.80	1717.21
28-Sep-96	30.20	1722.13	21.00	1723.98	23.00	1724.54	30.00	1718.77	28.90	1718.06	29.70	1715.88	26.30	1720.39	20.60	1720.05	23.10	1720.32	33.80	1717.21
15-Nov-96	30.60	1721.73	21.20	1723.78	23.25	1724.19	30.70	1718.07	29.05	1717.91	29.65	1716.03	26.20	1719.09	20.70	1719.35	23.40	1720.02	33.90	1717.11
11-Sep-96	30.60	1721.73	21.20	1723.78	23.25	1724.19	30.70	1718.07	29.05	1717.91	29.65	1716.03	26.20	1719.09	20.70	1719.35	23.40	1720.02	33.90	1717.11
08-Jan-97	30.70	1721.63	21.25	1723.73	23.30	1724.14	30.70	1718.07	29.05	1717.91	29.65	1716.03	26.20	1719.09	20.70	1719.35	23.40	1720.02	33.90	1717.11
18-Feb-97	30.70	1721.63	21.25	1723.73	23.30	1724.14	30.70	1718.07	29.05	1717.91	29.65	1716.03	26.20	1719.09	20.70	1719.35	23.40	1720.02	33.90	1717.11
10-Mar-97	30.70	1721.63	21.25	1723.73	23.30	1724.14	30.70	1718.07	29.05	1717.91	29.65	1716.03	26.20	1719.09	20.70	1719.35	23.40	1720.02	33.90	1717.11
09-Apr-97	30.70	1721.63	21.25	1723.73	23.30	1724.14	30.70	1718.07	29.05	1717.91	29.65	1716.03	26.20	1719.09	20.70	1719.35	23.40	1720.02	33.90	1717.11
28-Apr-97	30.78	1721.55	21.38	1723.58	23.32	1724.12	30.46	1718.31	29.38	1717.58	29.90	1715.53	26.75	1718.54	21.00	1719.05	23.51	1719.91	34.50	1716.51
18-Jun-97	30.78	1721.55	21.38	1723.58	23.32	1724.12	30.46	1718.31	29.38	1717.58	29.90	1715.53	26.75	1718.54	21.00	1719.05	23.51	1719.91	34.50	1716.51
15-Sep-97	29.85	1722.48	20.35	1724.63	22.00	1725.44	28.90	1719.87	29.40	1717.66	30.31	1715.57	26.06	1719.23	20.20	1719.85	22.20	1721.22	34.60	1716.41
20-Nov-97	29.85	1722.48	20.35	1724.63	22.00	1725.44	28.90	1719.87	29.40	1717.66	30.31	1715.57	26.06	1719.23	20.20	1719.85	22.20	1721.22	34.60	1716.41
02-Dec-97	30.32	1722.01	20.30	1724.68	23.14	1724.30	28.38	1720.39	29.51	1717.45	29.14	1716.13	25.65	1719.64	21.51	1718.54	22.04	1721.38	34.28	1716.73
22-Jan-98	29.42	1722.91	20.30	1724.68	23.14	1724.30	28.38	1720.39	29.51	1717.45	29.14	1716.13	25.65	1719.64	21.51	1718.54	22.04	1721.38	34.28	1716.73
11-Feb-98	28.60	1722.53	20.48	1724.63	21.80	1725.64	28.70	1720.07	28.77	1718.22	29.65	1715.96	25.47	1719.82	20.00	1720.05	22.10	1721.32	34.50	1716.51
25-Mar-98	28.60	1722.53	20.48	1724.63	21.80	1725.64	28.70	1720.07	28.77	1718.22	29.65	1715.96	25.47	1719.82	20.00	1720.05	22.10	1721.32	34.50	1716.51
27-Apr-98	30.12	1722.11	20.80	1724.18	22.67	1724.77	29.32	1718.45	27.84	1717.42	29.46	1716.42	27.22	1719.59	20.15	1719.50	22.80	1720.62	34.25	1716.76
14-Sep-98	30.12	1722.11	20.80	1724.18	22.67	1724.77	29.32	1718.45	27.84	1717.42	29.46	1716.42	27.22	1719.59	20.15	1719.50	22.80	1720.62	34.25	1716.76
15-Dec-98	30.95	1721.78	21.00	1723.98	22.40	1725.24	30.18	1718.59	29.15	1717.81	28.29	1717.59	25.74	1719.55	19.74	1720.31	22.80	1720.62	34.65	1716.36

KERR-McGEE CHEMICAL LLC
 HENDERSON, NEVADA FACILITY
 GROUNDWATER ELEVATIONS

TOC-->	M-79 DTW	M-79 ELEV	M-80 DTW	M-80 ELEV	M-81A DTW	M-81A ELEV	M-82A DTW	M-82A ELEV	M-83 DTW	M-83 ELEV	M-84 DTW	M-84 ELEV	M-85 DTW	M-85 ELEV	M-86 DTW	M-86 ELEV	M-87 DTW	M-87 ELEV	M-88 DTW	M-88 ELEV
16-Sep-92	24.45	1718.48	29.50	1716.23	28.00	1715.73	21.90	1717.48	22.90	1717.93	25.00	1714.63	26.70	1714.49	27.75	1714.98	26.70	1715.57	22.65	1715.34
01-Dec-92	24.10	1718.83	29.90	1715.83	28.45	1715.28	21.60	1717.78	23.90	1716.93	24.85	1714.76	27.20	1713.99	26.00	1714.73	27.00	1715.27	22.85	1715.14
28-Jan-93																				
19-Feb-93	22.45	1720.48	30.65	1715.08	28.50	1715.23	21.80	1717.58	22.55	1716.28	24.90	1714.73	27.00	1714.19	27.60	1715.13	26.5	1715.77	22.20	1715.79
03-Mar-93																				
29-Apr-93																				
28-May-93																				
01-Jun-93	24.27	1718.66	30.55	1715.18	27.60	1716.13	21.59	1717.79	23.36	1717.47	24.61	1715.02	26.07	1715.12	26.95	1715.78	26.67	1715.60	22.12	1715.87
28-Jul-93																				
31-Aug-93	24.25	1718.68	31.10	1714.63	28.00	1715.73	21.50	1717.88	28.40	1712.43	24.75	1714.38	27.45	1713.74	27.60	1715.13	27.55	1714.72	22.45	1715.89
23-Sep-93																				
27-Oct-93	25.55	1717.38	31.20	1714.53	29.00	1714.73	22.80	1716.58	25.35	1715.48	25.50	1713.78	27.50	1713.69	28.20	1714.53	27.80	1714.67	22.55	1715.44
15-Dec-93																				
14-Jan-94																				
22-Feb-94	26.20	1716.73	OUT	#VALUE!	29.35	1714.38	23.35	1716.03	25.80	1714.93	25.68	1713.95	27.50	1713.69	27.00	1714.93	27.60	1714.67	22.85	1715.14
21-Mar-94																				
26-Apr-94																				
19-May-94	26.60	1716.33	31.50	1714.23	29.00	1714.73	23.75	1715.63	26.20	1714.63	25.25	1714.38	27.55	1713.64	28.20	1714.53	28.00	1714.27	23.40	1714.59
20-Jun-94																				
23-Jul-94																				
23-Aug-94	26.80	1716.13	31.70	1714.03	29.50	1714.23	23.90	1715.48	26.60	1714.23	25.50	1714.08	27.80	1713.39	29.00	1713.73	28.00	1714.27	23.45	1714.54
30-Sep-94																				
18-Oct-94																				
02-Nov-94	25.70	1717.23	32.90	1712.83	out	#VALUE!	out	#VALUE!	26.15	1714.68	26.10	1713.53	29.10	1712.09	29.50	1713.18	28.60	1713.67	23.70	1714.29
16-Dec-94																				
27-Jan-95																				
16-Feb-95	24.70	1718.23	29.60	1716.13	out	#VALUE!	out	#VALUE!	24.00	1716.83	24.55	1715.08	27.70	1713.49	29.35	1713.38	28.30	1713.97	23.55	1714.44
22-Mar-95																				
25-Apr-95																				
18-May-95	21.75	1721.18	29.45	1716.28	out	#VALUE!	out	#VALUE!	24.45	1716.38	24.95	1714.68	26.90	1714.29	28.60	1714.13	28.00	1714.27	23.30	1714.69
29-Jun-95																				
19-Jul-95																				
24-Aug-95	25.00	1717.93	29.90	1715.83	26.90	1715.18	22.00	1716.35	25.30	1715.53	24.30	1715.33	25.70	1715.49	28.65	1714.63	27.90	1714.37	23.30	1714.69
28-Sep-95																				
18-Oct-95																				
12-Nov-95	25.00	1717.93	30.30	1715.43	25.90	1716.18	22.30	1716.05	25.70	1715.13	24.50	1715.03	25.35	1715.84	26.55	1716.18	27.60	1714.67	22.80	1714.89
11-Jan-96																				
12-Feb-96																				
15-Mar-96	25.70	1717.23	31.00	1714.73	23.90	1718.18	22.80	1715.55	26.70	1714.13	25.10	1714.53	26.90	1714.29	25.20	1715.73	27.00	1715.27	22.60	1715.39
30-Apr-96																				
16-May-96																				
20-Jun-96	25.25	1717.68	31.00	1714.73	27.20	1714.88	21.85	1716.50	26.00	1714.83	24.30	1715.33	25.80	1715.39	24.70	1718.03	27.00	1714.67	22.30	1715.69
11-Jul-96																				
28-Aug-96	25.35	1717.58	31.20	1714.53	27.20	1714.88	21.85	1716.50	26.40	1714.43	23.80	1713.78	25.80	1715.39	27.10	1715.63	27.60	1714.67	22.95	1715.04
17-Oct-96																				
15-Nov-96	26.35	1716.58	30.80	1714.93	26.90	1715.18	23.40	1714.95	26.40	1714.43	23.95	1714.28	26.90	1714.29	26.50	1716.23	28.00	1714.27	23.20	1714.79
08-Jan-97																				
18-Feb-97																				
09-Apr-97	27.00	1715.93	31.05	1714.68	27.40	1714.68	23.80	1714.55	26.92	1713.91	26.05	1713.68	27.35	1713.84	28.00	1714.73	28.27	1714.00	23.67	1714.39
28-Apr-97																				
18-Jun-97	27.25	1715.68	32.45	1713.28	27.85	1714.23	23.95	1714.40	27.45	1713.38	26.50	1713.13	28.03	1713.16	28.48	1714.03	28.35	1713.92	23.67	1714.32
Aug-97																				
15-Sep-97																				
20-Nov-97	26.20	1716.73	31.25	1714.48	26.55	1715.53	22.70	1715.65	26.80	1713.90	26.21	1713.42	27.52	1713.67	27.70	1714.98	27.58	1714.69	22.81	1715.54
02-Dec-97	26.08	1716.85	31.65	1714.08	27.24	1714.84	22.65	1715.70	26.74	1714.09	25.44	1714.19	28.52	1714.67	27.75	1714.96	27.55	1714.72	22.70	1715.28
28-Jan-98	25.65	1717.28	31.52	1714.21	26.80	1715.28	22.66	1715.69	26.82	1714.01	25.78	1713.85	27.40	1713.79	28.11	1714.62	27.32	1714.74	22.63	1715.36
11-Feb-98	25.35	1717.58	30.70	1715.03	26.20	1715.88	22.95	1715.88	26.29	1714.54	25.95	1713.64	27.55	1713.64	27.88	1714.85	27.32	1714.95	22.60	1715.49
25-Mar-98	25.55	1717.38	30.10	1715.63	26.35	1715.73	22.35	1716.00	26.40	1714.43	25.87	1713.78	27.43	1713.76	27.43	1714.43	27.32	1714.95	22.58	1715.41
25-May-98	25.56	1717.37	30.10	1715.63	26.55	1715.53	22.19	1716.16	24.72	1716.11	24.40	1715.23	26.57	1714.62	27.48	1715.20	27.35	1714.92	22.70	1715.29
14-Sep-98	25.56	1717.83	31.00	1714.73	26.55	1716.48	22.45	1713.90	24.35	1716.48	24.55	1714.58	26.66	1714.53	27.77	1714.96	27.63	1714.64	22.64	1715.35
27-Oct-98	25.10	1717.83	31.00	1714.73	25.60	1716.48	24.45	1713.90	25.70	1716.26	25.02	1714.58	25.53	1715.67	26.42	1716.31	26.70	1715.57	22.78	1716.21
15-Dec-98	25.25	1717.68	31.00	1714.73	25.40	1716.68	22.90	1715.45	25.72	1715.11	24.66	1714.97	25.80	1715.39	26.59	1716.14	26.68	1715.59	21.63	1716.36

**KERR-McGEE CHEMICAL LLC
HENDERSON, NEVADA FACILITY
GROUNDWATER ELEVATIONS**

TOC-->	M-89		M-90		M-91		M-5A		M-5A		M-7A		M-10		M-13	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
15-Dec-93	33.40	1731.85					37.45	1710.41	39.10	1690.05	36.80	1693.01	50.90	1783.86	42.50	1771.73
14-Jan-94	33.15	1732.10					37.85	1710.01	39.15	1690.00	36.80	1693.01	50.90	1783.86	42.50	1772.23
22-Feb-94	33.10	1732.15					37.90	1709.96	39.10	1690.05	36.40	1693.41	50.90	1783.86	41.90	1772.33
21-Mar-94	33.05	1732.20					38.00	1709.86	39.90	1689.25	37.00	1692.81	50.80	1783.96	43.65	1770.58
26-Apr-94	32.85	1732.60					38.15	1709.71	39.30	1689.85	36.90	1692.91	50.90	1783.86	43.65	1769.48
19-May-94	32.70	1732.55					38.10	1709.76	39.35	1689.80	37.05	1692.76	50.70	1784.06	44.75	1769.48
23-Jun-94	32.85	1732.40					38.20	1709.66	39.50	1689.65	37.20	1692.61	50.50	1784.26	45.75	1768.48
20-Jul-94	33.00	1732.25							39.65	1689.50	37.30	1692.51	50.00	1784.76	46.20	1768.03
23-Aug-94	33.00	1732.25							39.75	1689.40	37.30	1692.51	50.40	1784.36	46.60	1767.63
30-Sep-94	33.30	1731.95	23.40	1719.28					39.80	1689.35	37.45	1692.36	50.75	1784.01	46.75	1767.48
18-Oct-94	33.35	1731.90							39.90	1689.25	37.50	1692.31	50.50	1784.26	46.75	1767.48
16-Nov-94	33.20	1732.05							39.90	1689.25	37.50	1692.31	49.90	1784.86	46.60	1767.63
02-Dec-94	32.60	1732.65							40.30	1688.65	37.50	1692.31	49.80	1784.96	46.70	1767.53
27-Jan-95	32.30	1732.95							39.90	1689.25	37.50	1692.31	50.00	1784.76	46.50	1767.73
16-Feb-95	32.30	1732.95							39.95	1689.20	37.55	1692.26	50.00	1784.76	46.40	1767.83
22-Mar-95	32.25	1733.00							39.90	1689.25	37.50	1692.31	50.50	1784.26	46.25	1767.98
18-Apr-95	32.25	1733.00							39.90	1689.25	37.50	1692.31	50.20	1784.56	46.00	1768.23
25-May-95	32.25	1733.00							39.90	1689.25	37.50	1692.31	49.90	1784.86	46.45	1767.78
29-Jun-95	32.70	1732.55							39.90	1689.25	37.50	1692.31	49.60	1785.16	46.25	1767.98
19-Jul-95	32.70	1732.55							39.95	1689.20	37.55	1692.26	49.50	1785.26	46.35	1767.88
24-Aug-95	32.70	1732.55							39.75	1689.40	37.55	1692.26				
28-Sep-95	32.80	1732.45							40.55	1688.60	37.50	1692.31				
19-Oct-95	32.80	1732.45							40.55	1688.60	37.50	1692.31				
11-Nov-95	32.55	1732.70							38.75	1711.15	37.50	1692.31				
12-Dec-95	32.55	1732.70							38.80	1711.10	37.50	1692.31				
11-Jan-96	32.50	1732.80							39.80	1710.10	37.50	1692.31				
12-Feb-96	32.50	1732.75							38.95	1710.95	37.60	1692.26				
15-Mar-96	32.90	1732.35							39.10	1710.80	37.60	1692.26				
30-Apr-96	32.75	1732.50							39.90	1689.25	37.50	1692.31				
16-May-96	32.85	1732.40							39.10	1710.90	37.50	1692.31				
20-Jun-96	32.95	1732.30							39.60	1688.85	37.65	1692.16				
11-Jul-96	33.00	1732.25							39.25	1710.65	37.70	1692.11				
12-Aug-96	32.75	1732.50							39.45	1710.45	38.25	1691.56				
28-Sep-96	33.00	1732.25							39.40	1710.50	38.80	1691.01				
11-Oct-96	32.95	1732.30							39.50	1710.40	38.80	1691.01				
12-Nov-96	32.95	1732.30							39.50	1710.40	38.80	1691.01				
11-Dec-96	32.95	1732.30							40.25	1688.90	39.00	1690.81				
12-Jan-97	32.95	1732.30							40.25	1688.90	39.00	1690.81				
13-Feb-97	32.95	1732.30							40.25	1688.90	39.00	1690.81				
15-Mar-97	32.95	1732.30							40.25	1688.90	39.00	1690.81				
30-Apr-97	32.95	1732.30							40.25	1688.90	39.00	1690.81				
16-May-97	32.95	1732.30							40.25	1688.90	39.00	1690.81				
20-Jun-97	32.95	1732.30							40.25	1688.90	39.00	1690.81				
11-Jul-97	32.95	1732.30							40.25	1688.90	39.00	1690.81				
28-Aug-97	32.95	1732.30							40.25	1688.90	39.00	1690.81				
17-Sep-97	32.95	1732.30							40.25	1688.90	39.00	1690.81				
15-Oct-97	32.95	1732.30							40.25	1688.90	39.00	1690.81				
20-Nov-97	33.00	1732.25							40.25	1688.90	39.00	1690.81				
08-Jan-98	33.00	1732.25							40.25	1688.90	39.00	1690.81				
18-Feb-98	32.90	1732.35							40.25	1688.90	39.00	1690.81				
10-Mar-98	32.95	1732.30							40.25	1688.90	39.00	1690.81				
09-Apr-98	33.15	1732.10							40.25	1688.90	39.00	1690.81				
26-Apr-98	33.15	1732.10							40.25	1688.90	39.00	1690.81				
18-Jun-98	33.02	1732.23							40.25	1688.90	39.00	1690.81				
15-Sep-98	32.83	1732.42							40.25	1688.90	39.00	1690.81				
20-Nov-98	32.56	1732.69							40.25	1688.90	39.00	1690.81				
02-Dec-98	32.31	1732.94							40.25	1688.90	39.00	1690.81				
11-Feb-99	32.45	1732.80							40.25	1688.90	39.00	1690.81				
25-Mar-99	32.59	1732.66							40.25	1688.90	39.00	1690.81				
27-Apr-99	33.43	1731.82							40.25	1688.90	39.00	1690.81				
14-Sep-99	33.13	1732.12							40.25	1688.90	39.00	1690.81				
15-Dec-99	33.13	1732.12							40.25	1688.90	39.00	1690.81				

**KERR-McGEE CHEMICAL LLC
HENDERSON, NEVADA FACILITY
GROUNDWATER ELEVATIONS**

TOC-->	1751.06		1750.69		1750.44		1750.54		1750.22		1747.58		1750.42		1751.07	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
15-Dec-93	42.00	1709.06	44.00	1706.69	42.00	1708.44	44.30	1706.24	44.20	1706.02	45.00	1702.58	40.00	1710.42	43.00	1708.07
14-Jan-94	41.10	1709.96	44.00	1706.69	36.00	1714.44	44.10	1706.44	43.85	1706.37	45.00	1702.58	39.00	1711.42	39.30	1711.77
22-Feb-94	32.60	1718.46	42.80	1707.89	43.30	1707.14	44.10	1706.44	44.10	1706.12	45.00	1702.58	40.60	1709.62	41.40	1709.67
21-Mar-94	41.00	1710.06	43.00	1707.69	43.20	1719.24	44.10	1706.44	42.90	1707.32	44.00	1703.58	40.60	1709.82	31.70	1719.37
26-Apr-94	41.00	1710.06	43.80	1706.89	41.80	1708.64	44.20	1706.44	44.30	1705.92	45.00	1702.58	40.60	1709.82	31.80	1719.37
19-May-94	43.00	1708.06	44.15	1706.54	33.70	1716.74	44.10	1706.44	45.15	1705.07	45.05	1702.53	40.55	1709.87	39.70	1719.37
23-Jun-94	42.00	1709.06	42.00	1706.69	36.00	1714.44	44.00	1706.54	36.30	1711.92	45.00	1702.58	40.50	1709.82	31.75	1719.32
20-Jul-94	41.10	1709.96	40.30	1710.39	38.20	1712.24	44.10	1706.44	44.00	1706.22	44.90	1702.68	40.10	1710.32	33.10	1717.97
23-Aug-94	42.10	1708.96	43.60	1707.09	38.00	1706.44	44.15	1706.39	45.10	1705.12	45.00	1702.58	40.55	1709.87	39.50	1711.57
30-Sep-94	41.00	1710.06	43.00	1707.69	33.40	1717.04	36.00	1714.54	34.60	1702.58	45.00	1702.58	40.50	1709.92	32.30	1718.77
18-Oct-94	42.00	1709.06	43.00	1707.69	32.40	1718.04	40.00	1708.04	40.00	1710.22	45.00	1702.58	41.90	1708.52	32.20	1718.87
16-Nov-94	41.00	1709.06	44.00	1706.69	32.70	1717.74	42.50	1708.44	40.00	1711.52	44.60	1702.58	40.50	1709.92	43.00	1708.07
02-Dec-94	42.00	1709.06	44.20	1706.49	36.00	1718.44	44.10	1708.44	38.70	1711.52	45.00	1702.58	42.00	1709.92	40.55	1710.52
27-Jan-95	42.00	1709.06	44.20	1706.49	36.00	1714.44	44.15	1706.39	43.40	1706.82	35.60	1711.98	42.00	1708.42	39.40	1711.67
16-Feb-95	42.00	1709.06	44.10	1706.59	35.40	1715.04	44.15	1706.39	42.50	1707.72	44.80	1702.78	39.90	1710.52	38.50	1712.57
22-Mar-95	42.00	1709.06	44.00	1706.69	43.80	1706.64	44.10	1706.44	40.40	1709.82	40.00	1707.58	39.80	1709.62	41.50	1709.57
25-Apr-95	42.00	1709.06	43.00	1707.69	31.00	1719.44	44.10	1706.44	33.00	1717.22	40.00	1707.58	39.90	1709.62	41.50	1709.57
18-May-95	42.00	1709.06	43.10	1707.59	43.90	1706.54	44.10	1706.44	32.90	1717.32	44.25	1703.33	30.60	1719.82	39.70	1711.37
29-Jun-95	40.50	1710.56	30.00	1720.69	43.10	1707.34	44.10	1706.44	32.40	1717.82	44.00	1703.58	30.85	1719.57	44.50	1706.57
19-Jul-95	41.00	1710.06	43.50	1707.19	43.90	1706.54	44.10	1706.44	34.50	1715.72	44.00	1703.58	30.85	1719.57	39.25	1711.82
24-Aug-95	41.00	1710.06	43.30	1707.39	43.85	1706.59	43.80	1706.74	33.10	1717.12	31.50	1716.08	30.85	1719.57	38.60	1712.47
24-Aug-95	41.00	1710.06	44.10	1706.59	44.00	1706.44	43.00	1707.54	33.10	1717.12	31.50	1716.08	30.85	1719.57	38.60	1712.47
28-Sep-95	42.00	1709.06	42.80	1707.89	30.90	1719.54	43.80	1706.74	34.70	1715.32	31.00	1716.58	40.60	1709.82	40.80	1710.27
19-Oct-95	42.00	1709.06	43.70	1706.99	43.70	1706.74	43.80	1706.74	34.70	1715.32	31.00	1716.58	40.10	1710.32	39.70	1711.37
21-Nov-95	41.95	1709.11	43.70	1706.99	43.80	1706.74	43.80	1706.74	34.00	1716.22	31.00	1716.58	40.10	1710.32	41.80	1709.27
12-Dec-95	41.00	1710.06	42.95	1707.74	43.80	1706.64	44.00	1706.54	44.80	1705.42	30.70	1716.88	39.80	1710.62	41.00	1710.07
11-Jan-96	42.00	1709.06	44.10	1706.59	43.20	1719.24	43.80	1706.74	35.90	1714.32	39.80	1707.78	41.00	1709.42	40.20	1710.87
12-Feb-96	42.00	1708.06	43.80	1706.89	43.70	1706.74	44.00	1706.54	38.00	1712.22	44.00	1703.58	30.70	1719.72	44.50	1706.57
15-Mar-96	42.00	1708.06	43.20	1707.49	44.10	1706.34	46.10	1704.44	42.30	1707.92	44.90	1702.68	38.00	1711.42	46.00	1705.47
30-Apr-96	42.00	1709.06	43.50	1707.19	43.85	1706.59	46.00	1704.54	35.90	1714.32	44.00	1703.58	38.55	1711.87	45.60	1705.47
16-May-96	41.95	1709.11	43.20	1707.49	43.75	1706.69	46.00	1704.54	35.90	1714.32	44.00	1703.58	38.55	1711.87	45.60	1705.47
20-Jun-96	41.80	1709.26	43.10	1707.59	43.90	1706.54	43.80	1706.74	34.50	1715.72	40.00	1707.58	39.50	1710.92	30.45	1720.62
11-Jul-96	42.00	1709.06	42.80	1707.89	43.60	1706.79	43.80	1706.74	36.20	1714.02	44.10	1703.48	31.00	1719.42	36.00	1715.07
28-Aug-96	42.20	1708.86	43.60	1707.89	43.60	1706.24	43.80	1706.74	34.50	1714.02	42.80	1704.78	32.20	1718.22	33.40	1717.67
11-Sep-96	42.00	1709.06	43.60	1707.09	44.20	1706.24	43.80	1706.74	36.00	1714.22	42.80	1704.78	32.20	1718.22	33.40	1717.67
17-Oct-96	42.00	1708.06	43.25	1707.44	43.80	1706.74	43.80	1706.74	34.70	1715.52	41.70	1705.88	31.45	1719.12	33.95	1717.12
15-Nov-96	42.00	1709.06	42.50	1708.19	43.80	1706.64	43.85	1706.69	36.50	1713.72	41.40	1705.18	39.70	1710.72	39.00	1712.07
08-Dec-96	42.00	1709.06	42.80	1707.89	44.00	1706.44	43.80	1706.74	34.80	1715.42	41.70	1705.88	31.40	1719.02	35.10	1715.07
26-Dec-96	42.00	1709.06	42.00	1707.69	43.85	1706.69	43.85	1706.69	34.45	1715.77	40.00	1707.58	31.30	1719.12	41.50	1709.57
06-Jan-97	33.50	1717.56	44.05	1706.64	43.85	1706.69	43.85	1706.69	35.30	1714.92	41.65	1705.93	40.75	1709.67	41.70	1709.37
18-Feb-97	42.00	1709.06	44.00	1706.69	43.90	1706.54	43.85	1706.69	41.15	1709.07	41.70	1705.88	40.70	1709.72	36.20	1714.87
10-Mar-97	33.00	1718.06	42.60	1708.09	43.85	1706.54	43.85	1706.69	35.70	1714.52	41.60	1705.98	40.75	1709.67	35.65	1715.42
09-Apr-97	40.00	1711.06	42.65	1708.04	43.85	1706.54	43.80	1706.74	34.60	1715.62	41.60	1705.98	40.75	1709.67	36.00	1715.42
28-Apr-97	34.25	1716.81	42.70	1707.59	43.90	1706.54	43.87	1706.67	33.80	1716.42	41.15	1706.43	40.76	1709.66	42.00	1708.07
18-Jun-97	40.00	1711.06	43.40	1707.29	31.85	1718.59	43.00	1707.54	35.70	1714.52	40.60	1706.98	40.70	1709.72	39.80	1711.27
Aug-97																
15-Sep-97	35.94	1715.12	43.15	1707.54	43.20	1707.24	34.60	1715.94			41.91	1705.67				
20-Nov-97	40.00	1711.06	43.00	1707.69	30.05	1720.39	44.05	1706.49	34.35	1715.87	43.00	1704.58	40.70	1709.72	36.40	1714.67
02-Dec-97	40.00	1711.06	43.00	1707.69	30.05	1720.39	44.05	1706.49	34.35	1715.87	43.00	1704.58	40.70	1709.72	36.40	1714.67
22-Jan-98	34.00	1711.06	35.00	1715.69	34.00	1716.44	42.80	1707.74	37.00	1713.22	33.30	1714.28	39.90	1710.52	37.70	1713.37
11-Feb-98	37.65	1713.41	39.20	1711.49	42.20	1708.24	44.25	1706.29	37.50	1712.72	38.25	1709.33	39.40	1710.98	31.54	1719.53
25-Mar-98	34.80	1716.25	40.00	1707.69	44.00	1706.44	44.70	1705.84	34.30	1712.72	40.85	1706.73	39.70	1710.72	34.20	1716.87
27-Apr-98	37.89	1713.17	43.18	1707.51	42.73	1707.71	32.15	1718.39	33.22	1717.00	40.70	1706.84	35.87	1714.55	34.85	1716.22
14-Sep-98	38.73	1712.33	42.73	1707.56	41.13	1709.31	44.41	1706.13	37.53	1713.07	40.70	1706.88	39.84	1714.55	36.02	1715.05
15-Dec-98	40.70	1710.36	42.85	1707.83	41.10	1709.34	44.50	1706.04	35.63	1714.59	40.98	1706.04	40.70	1709.72	40.58	1710.49

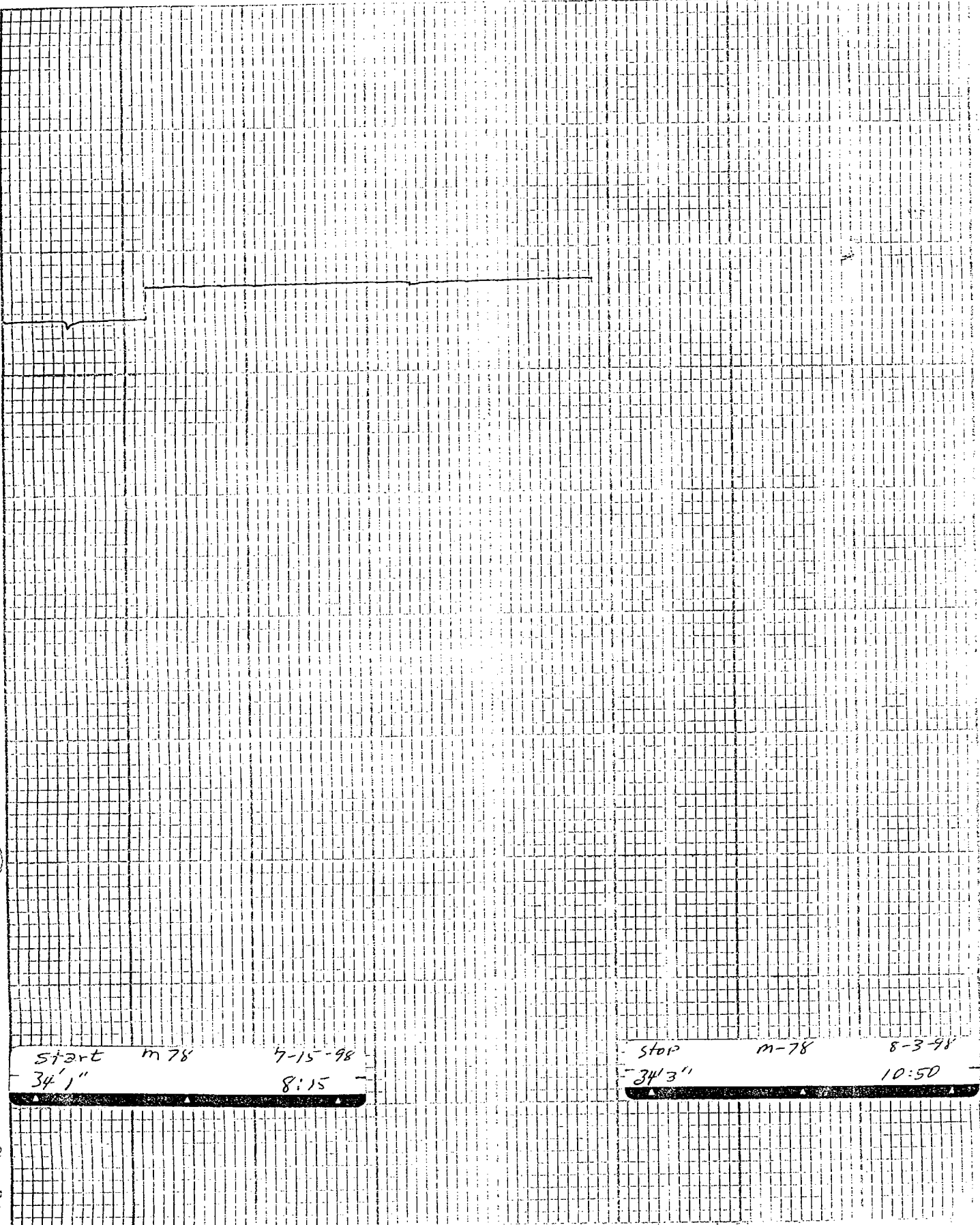
APPENDIX B

APPENDIX B
CONTINUOUS WATER LEVEL RECORDER CHARTS

5

Start m-78 6-1-98
34'0" 11:24

Stop m-78 7-15-98
34'1" 8:15



start m-78 7-15-98
34'1" 8:15

stop m-78 8-3-98
34'3" 10:50

start
34'3"

m-78

8-3-98

10:52

stop

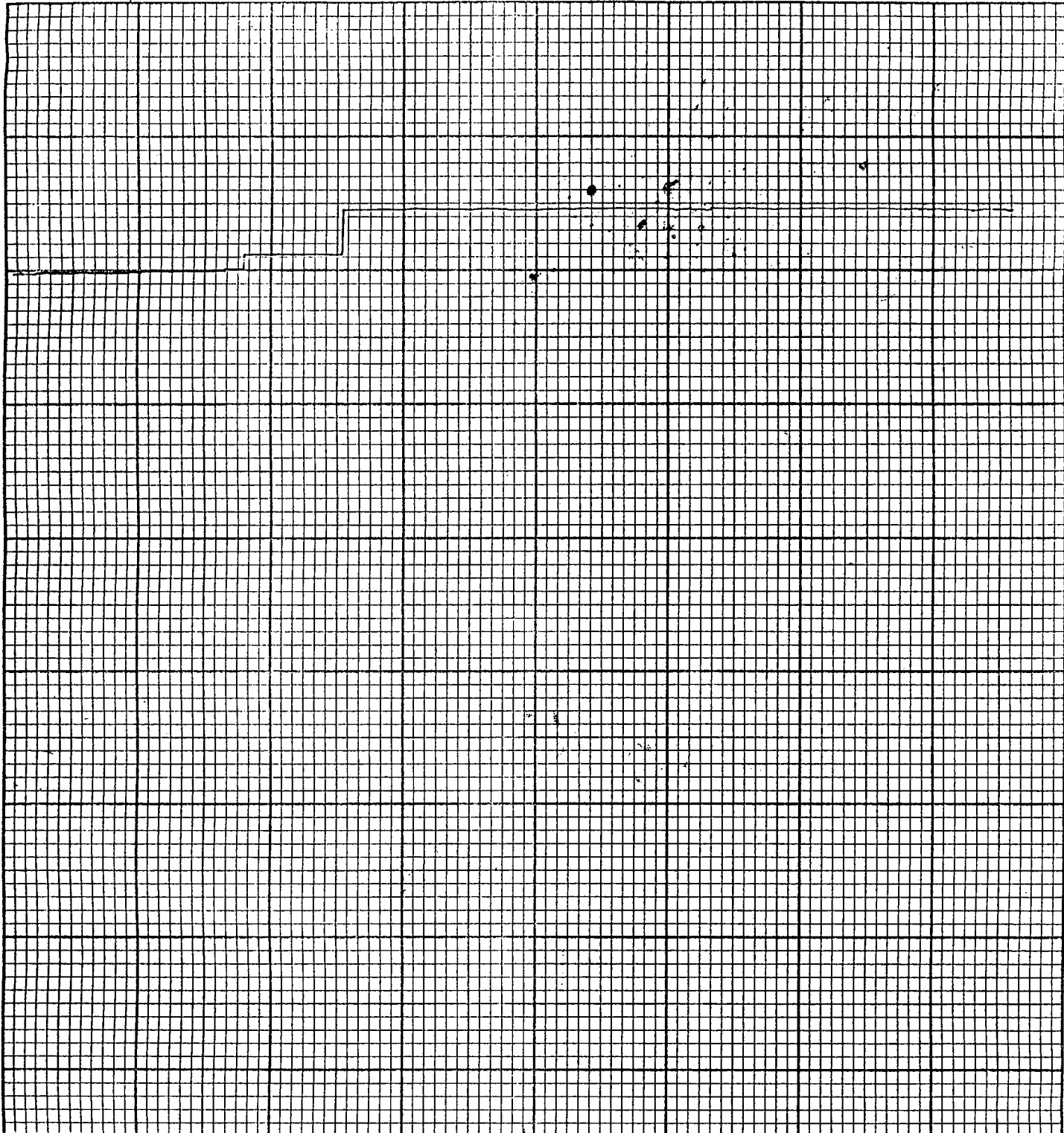
m-78

9-1-98

34'4"

11:09

Stevens Water Level Recorder — Type F



start m 78 9-1-98
34'4" 11:09

stop m-78 10-1-98
34'65" 13:33

Chart F-1

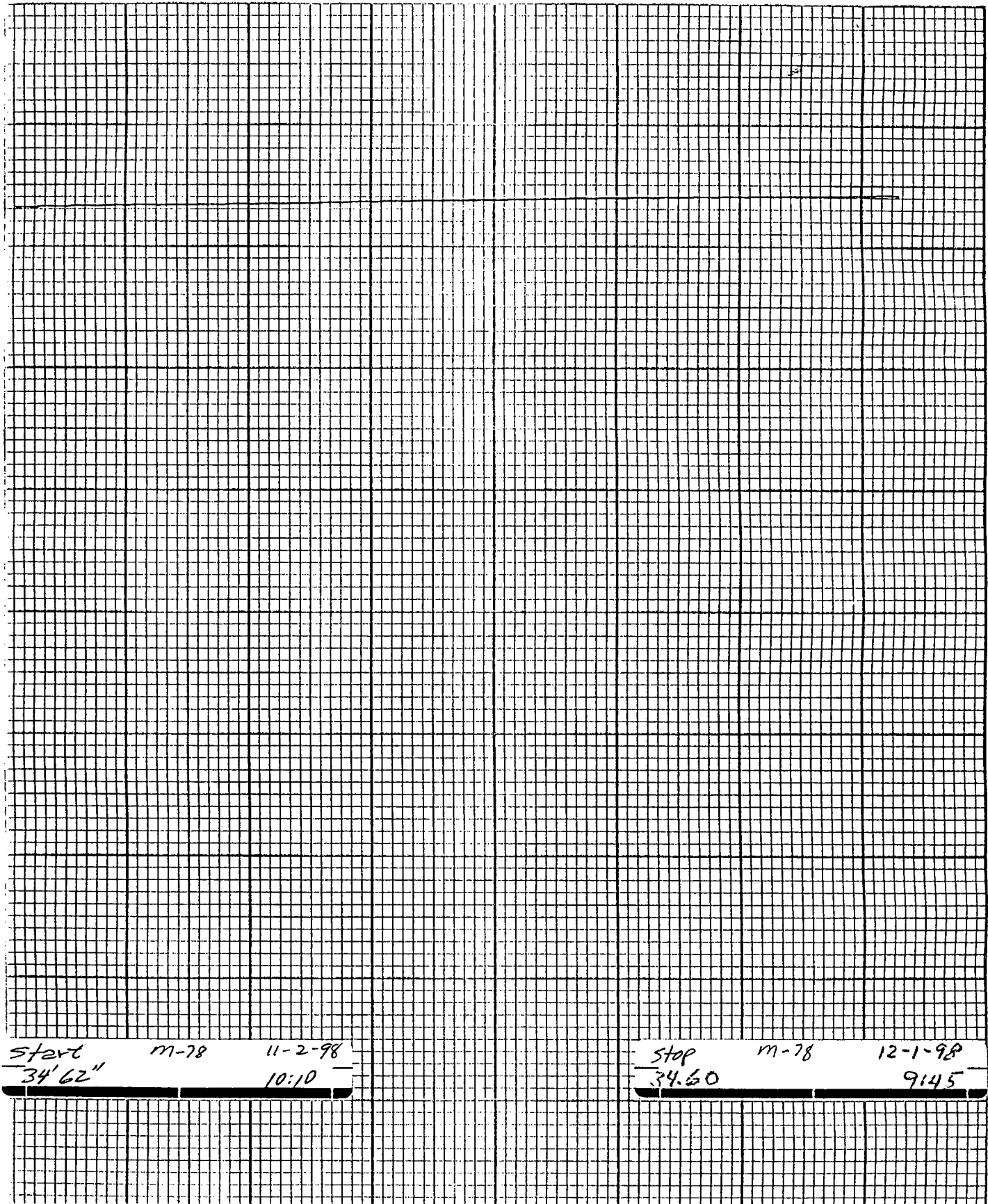
Stevens Water Level Recorder - Type J



Chart B-1

start m-78 10-1-98
34'65" 13.33

stop m-78 11-2-98
34'62" 10.10



start m-78 11-2-98
34' 62" 10:10

stop m-78 12-1-98
34.60 9:45

Stop m-80 7-15-98
30'3" 8:20

Start m-80 6-1-98
30'2" 11:30

stop
30' 4"

m-80

8-3-98

10:44

start
30' 3"

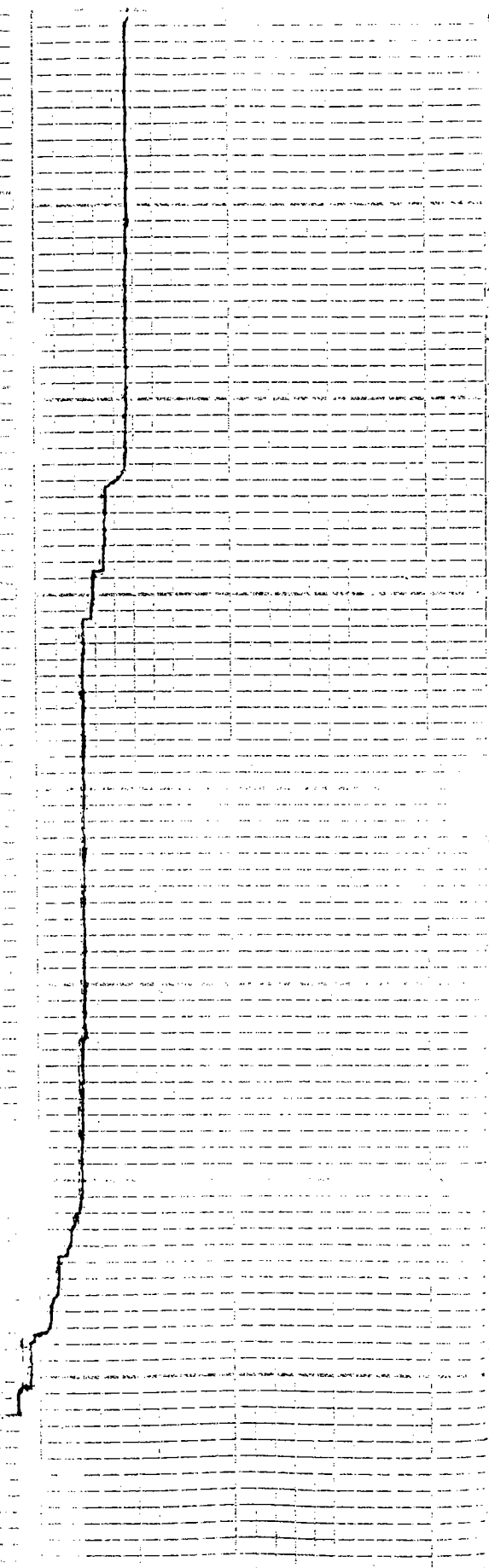
m-80

7-15-98

8:20

start
30' 4" m-80 8-3-98
10:44

stop
30' 6" m-80 9-1-98
11:13



Adjustment went out
because cup got full
of water - Replace
cup - Got level back
to 30'02"

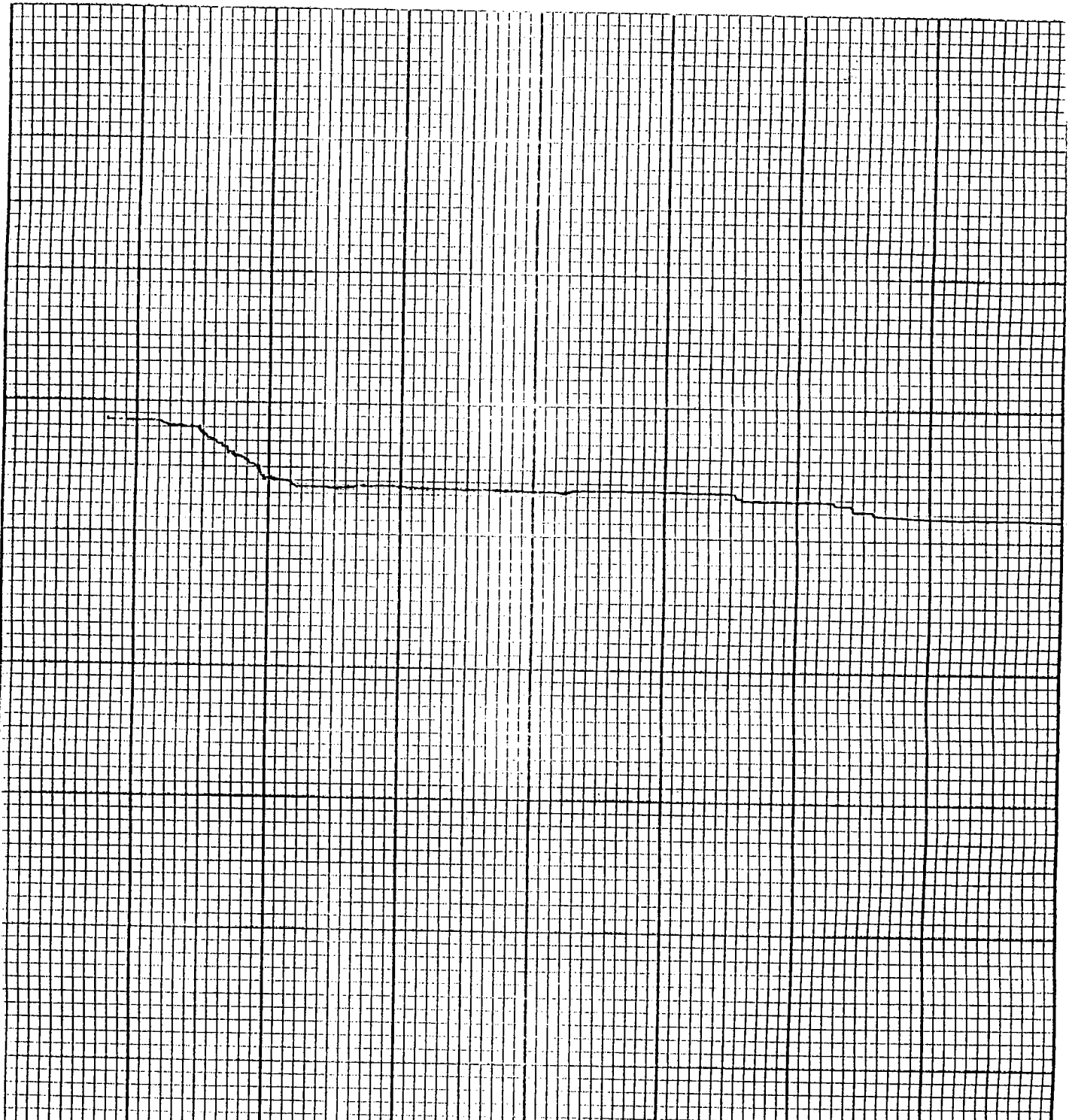
Adjustment
to 31'02"

Got bar info
← correct level →

Stop m-80 11-2-98
30'2" 10:34

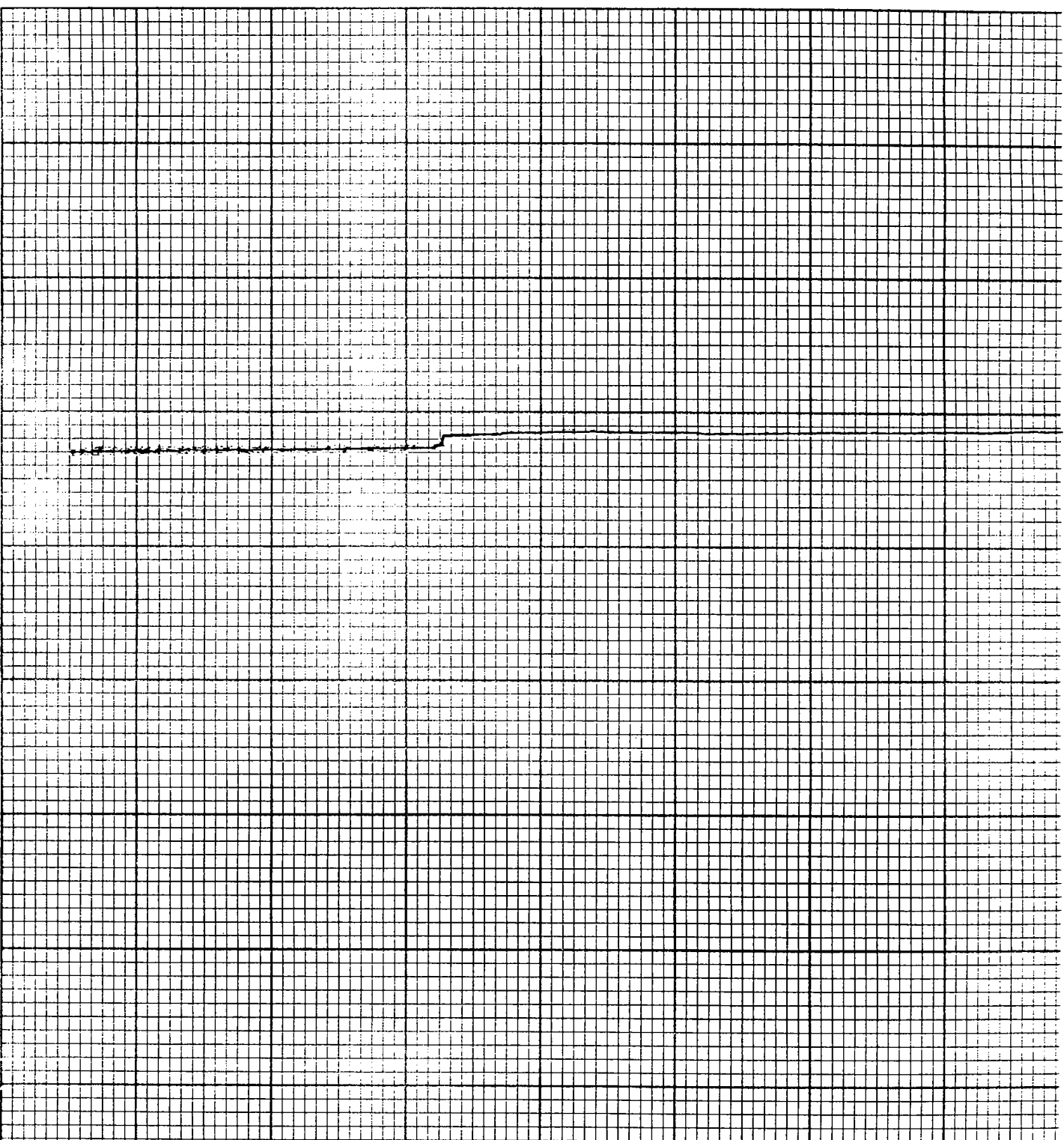
Start m-80 10-1-98
30'9" 13:27

Station: Water Control - 1000 - 1000



stop m-80 12-1-98
30'50" 9:55

start m-80 11-2-98
30'2" 10:34



stop m-80 1-1-99
30'48" 10:31

start m-80 12-1-98
30'50" 9:55