AMAX COAL COMPANY

CASTLE GATE MINE

1995 HYDROLOGIC MONITORING REPORT

ANNUAL REPORT

May 1996

HANSEN ALLEN & LUCE INC
SALT LAKE CITY, UTAH

HANSEN ALLEN & LUCE INC

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Mr. Johnny Pappas
Cyprus Plateau Mining Company
P.O. Drawer PMC
Price, Utah 84501

May 14, 1996

RE: 1995 Annual Water Monitoring Report for the Castle Gate Mine

Dear Johnny:

As per your request we have prepared the 1995 Annual Water Monitoring Report for the Castle Gate Mine. The Water Monitoring Report includes graphical time plots for flow; pH; TDS; major anions and cations including calcium, magnesium, chloride, bicarbonate and sulfate; and oil and grease for surface stations. The report also includes a station by station summary of data trends. A data disk has also been included at the end of the report with all water quality data and flow plots in Quattro Pro 6.0 for Windows format.

We appreciate the opportunity to assist you with this project. Please call should you have any questions.

Sincerely,

David E. Hansen, Ph.D., P.E.
Project Manager

John Bjerregaard, P.E.
Project Engineer

cc: file

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INTRODUCTION

The Castle Gate Mines, owned and operated by Cyprus Plateau Mining Corporation (CPMC), are located approximately 10 miles north-northwest of Price, Utah. The locations of all monitoring stations are shown on Exhibit 7-3 located at the end of this report.

GROUND WATER MONITORING

Water quality monitoring has been completed for springs at monitoring stations B-22, BM-30, BM-31, and BM-32. Monitoring data are arranged according to the formation in which the springs originate. The formations of interest, beginning with the lowest are the Mancos Shale, Star Point Sandstone, the Blackhawk, and the Price River. A review of the surficial geology shows that the spring at B-22 issues from the Price River Formation, the spring at BM-30 issues from the Blackhawk Formation, the spring at BM-31 issues from the interface between the Blackhawk and Star Point Formations, and the spring at BM-32 issues from the Mancos Shale Formation. Because the Star Point Formation is typically a better aquifer than the Blackhawk Formation, it will be assumed that the flow from the spring at BM-31 is primarily from the Star Point Formation.

The stations have been sampled on a quarterly basis when accessible. The locations of these springs are shown on Exhibit 7-3. Graphical time plots have been prepared for flow, pH, TDS, major anions and cations including Calcium, Magnesium, Chloride, Bicarbonate and Sulfate. The data have been plotted to show flow and water quality variations as sequential time plots (see plots in Appendix A). Plots were prepared for TDS and flow from all available sampling from 1977 through 1995. Plots were prepared for the other indicated water quality parameters for sampling from 1991 through 1995. The plots were used in our analyses of flow and water quality changes over time as discussed herein. Complete data sets prior to 1991 can be found in prior annual reports. Water sampling data and the plots for each station are located in Appendix A.

Since it is likely that there is correlation between spring flows and precipitation, plots were also prepared which compare recorded flows to annual precipitation records for a local gaging station over the period of record. The National Weather Service rainfall gaging station closest to the Castle Gate mine area is located in Price which is about 10 miles south-southeast of the Castle Gate mine. Average annual precipitation for the Price station is 9.4 inches per year. Precipitation values recorded at the Price weather station have been plotted for comparison with recorded spring flows at each water sampling station. The NWS weather station at Price was chosen for this comparison over other stations because of its proximity to the water monitoring stations. It must be remembered that although data from the Price station provides an overall indication of precipitation patterns they do not necessarily represent true local conditions.

Notes on some of the original water quality data collection sheets appear to indicate that the location of Station BM-30 was moved to its current location in April of 1995. All available flow and TDS data have been included in this report. For a few stations the data is not continuous over the entire period of record.

A few anomalies in the flow measurements were noted. Flow data collected from Stations BM-31 and BM-32 show unusually high flows in 1984. Because the magnitude of the flows in 1984 are so much higher than average flows, there is some concern that these flow measurements could be in error. However, both 1983 and 1984 were extremely wet years, and the possibility that the recorded flows are correct cannot be completely dismissed. Therefore, despite the uncertainty, the 1983 and 1984 flows documented in this report for BM-31 and BM-32 are consistent with the original recorded values on the laboratory data sheets. The flow measurement recorded on the laboratory data sheet for BM-32 on 4/19/89 indicates a flowrate of 1 cfs, which is much higher than expected flow, and the flow units (cfs) for this measurement are inconsistent with units (gpm) used in flow units for preceding and following sampling events. The flow units recorded for BM-32 on 4/19/89 were corrected from cfs to gpm for this report.

Price River Formation Spring

Station B-22 - Spring located in Crandall Canyon

Flow. The measured flow at Station B-22 has generally varied between 0.0 cfs and 0.05 cfs, although some much higher flows ranging from 0.1 to 0.5 cfs occurred during the extremely wet years experienced in the mid 1980's. In normal to dry years, "dry" measurements are common. An extended period of less than normal precipitation in recent years appears to be the reason for numerous "dry" measurements. Flow measurements from the spring indicate some correlation with precipitation data when the delaying effects of snowmelt and recharge are considered. This conclusion was reached by visually examining the plot of flow versus precipitation and comparing springtime and early summertime flows to wintertime precipitation. A similar analysis was performed for each of the other springs.

pH. From 1991 through 1995, the measured pH varied from 7.6 to 8.1. It appears that there is some tendency for the pH to increase with higher flows, although the trend is not consistent for all data. No long term trends in the data are apparent.

TDS. TDS levels have remained fairly constant over the period of record with values generally between 700 and 1,000 mg/l. However, several samples had TDS levels much lower than this range, and one sample taken in 1988 had a TDS level significantly higher than this range. It appears that TDS levels tend to decrease with increasing flow. No long term trends in the data are apparent.

Major Cations and Anions. Levels of major cations and anions have remained fairly constant during the period of record except for the sample obtained September 1991 which had much lower levels of the major cations and anions. There is also a tendency for the relative levels of major cations and anions to stay consistent with each other within the individual samples. For example, when chloride levels are low, the levels of the other major cations and anions also tend to be low. No long term trends in the data are apparent.

Blackhawk Formation Spring

Station BM-30 - Spring located in Price Canyon

Notes on some of the original water quality data collection sheets appear to indicate that the location of Station BM-30 was moved to its current location sometime before in April or 1995.

Flow. The measured flow at Station BM-30 has generally varied between 0.0 gpm and 0.05 gpm, although some much higher flows ranging between 4 and 15 gpm were recorded during the extremely wet years experienced in the mid 1980's and once each in 1992 and 1995. In normal to dry years, "dry" measurements are common. Flow measurements from the spring indicate some correlation with precipitation data when the delaying effects of snowmelt and recharge are considered. Less than normal precipitation in recent years appears to be the reason for the numerous "dry" measurements.

pH. From 1991 through 1995, the measured pH varied from 7.0 to 8.3. Only three samples were collected from 1991 through 1995. The highest pH level was measured in 1991 and the lowest pH level was measured in 1995 so the data do indicate pH is decreasing. However, with only three pH measurements available it cannot be determined if this is a long term trend or a normal random variation.

TDS. TDS levels have remained fairly constant over the period of record except for a sample in 1986 and three samples in 1987, all of which had much lower TDS levels. TDS levels have general been between 3,500 and 4,500 mg/l, while the four samples with lower TDS levels varied from approximately 600 to 3,200 mg/l. No long term trends in the data are apparent.

Major Cations and Anions. Only three samples were collected from 1991 through 1995. The number of measurements in insufficient to distinguish long term trend from random variations.

Star Point Sandstone Formation Spring

Station BM-31 - Spring located in Spring Canyon

Flow. The measured flow at Station BM-31 has generally varied between 0 and 15 gpm, although some much higher flows ranging from 32 to 403 gpm were recorded during the extremely wet years experienced in the mid 1980's. During periods or normal or less than normal precipitation, "dry" measurements are common. Flow measurements from the spring indicate some correlation with precipitation data when the delaying effects of snowmelt and recharge are considered.

pH. Before September 1993, pH levels were 8.0 to 8.1. Beginning in September 1993, pH levels decreased to range between 6.3 and 7.2. No other long term data trends are apparent.

TDS. TDS measurements at this station are available for only the past 5 years. TDS levels have varied from 638 to 988 mg/l. While there is considerable variation in TDS levels, the available data appears to indicate that TDS levels are slightly increasing over the period of record.

Major Cations and Anions. Levels of major cations and anions show the following trends: 1) Bicarbonate levels appear to be generally decreasing over the period of record; 2) Chloride levels decreased suddenly in September 1993 but returned to average levels by September 1994; 3) Sulfate levels may have a slight downward trend over time; 4) Calcium levels decreased suddenly in September 1993 but returned to average levels by September 1994; 5) Magnesium levels may be increasing slightly over time. Insufficient Oil & Grease data exists at the present time to determine whether a long term trend exists.

Mancos Shale Formation Spring

Station BM-32 - Spring located in Spring Canyon

Flow. The measured flow at Station BM-32 is generally less than 10 gpm, although flows exceeding 100 gpm were recorded during wet periods in the mid 1980's. Large seasonal variations in flow are common. In normal to dry periods, the spring is often dry. The spring has been dry in all but four sampling events during the past 5 years. The lack of measurable flow from the spring in the past 5 years is probably the result of less than normal precipitation. Flow measurements from the spring indicate some correlation with precipitation data when the delaying effects of snowmelt and recharge are considered.

pH. During the period of record, measured pH levels varied from 7.0 to 9.7. Only four pH measurements are available for the spring. No data trends are apparent using available data.

TDS. TDS levels have varied from 288 to 365 mg/l from 1978 to 1984. Beginning in 1984, TDS levels suddenly increased to about 1,500 mg/l. TDS levels have varied from 828 to 1,930 mg/l from 1984 through 1995. The increase in TDS levels in 1984 corresponds to recorded flows that are several orders of magnitude higher than average flows, but the fact that TDS levels remained at approximately 1,500 mg/l even after flows returned to normal values indicates that the underground flow patterns may have changed in 1984. Because the change corresponds to record wet period, it is possible that the change is a natural response.

Major Cations and Anions. The spring has been dry for all but four of the sampling events in the past 5 years, therefore water quality data is only available for 4 samples. No data trends are apparent using available data, although in all cases the most recent cation and anion levels are less than the single sample collected in 1993.

A summary of the general trend for major water quality parameters for springs found within the Mancos Shale Formation, Star Point Sandstone Formation, Blackhawk Formation, and the Price River Formation is provided in the following table. Note that the table shows whether the general trend (as evidenced by the graphs provided in the Appendices) is "Down", "Stable", or "Up". For

major cations and anions there may be more than one category marked, indicating that there was variation found between parameters evaluated. N/A in the table indicates insufficient data exists to make a determination of a potential trend. The reader is referred to either the text or the graphs for further details when two or more categories are marked.

Summary for Springs

Station/Formation	Flow			pH			TDS			Major Cations/Anions		
	Down	Stable	Up	Down	Stable	Up	Down	Stable	Up	Down	Stable	Up
B-22/Price River	X				X			X			X	
BM-30/Blackhawk	X			N/A				X			N/A	
BM-31/Star Point		X		X					X	X	X	X
BM-32/Mancos		X			N/A				X	N/A		

Conclusions

The data gathered for the past 5 years at springs near the Castle Gate Mine generally do not appear to have established definable trends of increasing or decreasing flows or of water quality that are applicable to the springs as a group. Less than normal precipitation in recent years appears to account for the numerous "dry" measurements at several of the springs. Flow variations within any year appear to be seasonal. Flow variations from year to year appear to be generally random with spring flows responding to natural flow factors, including 1) variations in precipitation and 2) the delayed effects of recharge areas. Variations and trends in pH, TDS, and the levels of major cations and anions are discussed in the sections above for individual stations.

SURFACE WATER MONITORING

Water quality monitoring has been completed for stations B-5, B-6, B-11, B-12, B-17, B-25, B-26, and B-28. These stations are located on rivers or intermittent streams, and they have been sampled on a quarterly basis when accessible. The locations of these stations are shown on Exhibit 7-3. Graphical time plots have been prepared for flow, pH, TDS, oil and grease, major anions and cations including Calcium, Magnesium, Chloride, Bicarbonate and Sulfate. The data have been plotted to show flow and water quality variations as sequential time plots (see plots in Appendix B). Plots were prepared for TDS and flow from all available sampling from 1977 through 1995. Plots were prepared for the other indicated water quality parameters for sampling from 1991 through 1995. The plots were used in our analyses of flow and water quality changes over time as discussed herein. Complete data sets prior to 1991 can be found in prior annual reports. Water sampling data and the plots for each station are located in Appendix B.

Since it is likely that there is correlation between stream flows and precipitation, plots were also prepared which compare recorded flows to annual precipitation records for a local gaging station

over the period of record. The National Weather Service rainfall gaging station closest to the Castle Gate mine area is located in Price which is about 10 miles south-southeast of the Castle Gate mine. Average annual precipitation for the Price station is 9.4 inches per year. Precipitation values recorded at the Price weather station have been plotted for comparison with recorded spring flows at each water sampling station. The NWS weather station at Price was chosen for this comparison because of its proximity to the water monitoring stations. It must be remembered that although data from the Price station provides an overall indication of precipitation patterns they do not necessarily represent true local conditions.

A flow measurement of 1 cfs was recorded on the laboratory data sheet for Station B-26 on 9/21/89. Based on comparison with average measured flows at this station, it appeared that recorded flow units were in error and the measured flow should have been about 1 gpm. The actual field measurement data sheet was available for this sampling event, and the recorded field measurements confirm that the actual measured flow was 1 gpm rather than 1 cfs. The flow value given in this report for Station B-26 on 9/21/89 is 1 gpm, as was recorded on the field measurement data sheet.

A station by station summary of the eight surface water station that were sampled is given below. A discussion of any apparent data trends is included in the summary for each station.

Station B-5 - Price River near Castle Gate

Flow. The measured flow at Station B-5 has varied from less than 10 cfs to over 600 cfs. Flow data between 1981 and 1984 were not available. From 1984 to 1995, only the order of magnitude of the flow was recorded and these flows are given as greater than or less than 10 cfs or 100 cfs. Castle Gate Mining plans to make more precise measurements of flow at this station in the future. Flow data from 1977 to 1981 indicate some correlation with precipitation data, however correlation is limited by the fact that releases from Scofield Reservoir impact flows in the Price River. The more recent data is not precise enough to indicate any correlation with precipitation data.

pH. From 1991 through 1995, the measured pH varied from 7.2 to 8.8. Generally pH levels are near 8.0, but occasionally pH levels near the extremes of the indicated range have been measured. No long term data trends are apparent.

TDS. TDS levels have generally varied from approximately 200 to 500 mg/l. With the exception of one very high TDS measurement of 1,090 mg/l in 1982, TDS levels have remained fairly constant over the period of record.

Oil and Grease. From 1991 to 1995, oil and grease levels have been less than 5 mg/l and have generally been less than the detectable limits. The plot showing oil and grease levels over time show an apparent decrease in the oil and grease levels beginning in 1992. However, this decrease probably reflects more precise testing methods which lowered the detectable limits of oil and grease, rather than actual decreases in oil and grease levels.

Major Cations and Anions. Levels of major cations and anions show the following trends: 1) Bicarbonate levels appear to be generally decreasing over the period of record. There

appears to be tendency of Bicarbonate to vary seasonally, with higher Bicarbonate levels in winter months, decreasing in the Spring and Summer, and then increasing again in the Fall. 2) Chloride levels vary seasonally with the highest levels generally occurring in the late Winter and early Spring, followed by a sharp decrease in early Summer, and then gradually increasing through Summer and Fall. 3) Sulfate levels appear to follow a seasonal trend similar to Chloride levels, but the seasonal trend is less consistent. In addition, sulfate levels show a slight downward trend over time. 4) Calcium levels do not show any long term or seasonal trends. 5) Magnesium levels appear to be the highest during winter months. No long term trends are apparent.

Station B-6 - Price River near Castle Gate

Flow. The measured flow at Station B-6 has varied from less than 10 cfs to over 600 cfs. Flow data between 1981 and 1984 were not available. From 1984 to 1995, only the order of magnitude of the flow was recorded and these flows are given as greater than or less than 10 cfs or 100 cfs. Castle Gate Mining plans to make more precise measurements of flow at this station in the future. Flow data from 1977 to 1981 indicate some correlation with precipitation data. The more recent data is not precise enough to indicate any correlation with precipitation data. It should be noted releases from Scofield Reservoir directly impact flows in the Price River.

pH. From 1991 through 1995, the measured pH varied from 7.3 to 8.7. In November 1993, pH levels decreased abruptly but had returned to near average by November 1994. No long term data trends are apparent.

TDS. TDS levels have generally varied from approximately 200 to 500 mg/l. With the exception of two high TDS measurements (701 mg/l in 1978 and 10 mg/l in 1982), TDS levels have remained fairly constant over the period of record.

Oil and Grease. From 1991 to 1995, oil and grease levels have been less than 5 mg/l and have generally been less than the detectable limits. The plot showing oil and grease levels over time show an apparent decrease in the oil and grease levels beginning in 1992. However, this decrease probably reflects more precise testing methods which lowered the detectable limits of oil and grease, rather than actual decreases in oil and grease levels.

Major Cations and Anions. Levels of major cations and anions show the following trends: 1) Bicarbonate levels appear to be generally decreasing over the period of record. There appears to be tendency of Bicarbonate to vary seasonally, with higher Bicarbonate levels in winter months, decreasing in the Spring and Summer, and then increasing again in the Fall. 2) Chloride levels vary seasonally with the highest levels generally occurring in the late Winter and early Spring, followed by a sharp decrease in early Summer, and then gradually increasing through Summer and Fall. 3) Sulfate levels appear to follow a seasonal trend similar to Chloride, but the trend is less consistent. In addition, sulfate levels show a slight downward trend over time. 4) Calcium levels do not show any long term or seasonal trends. 5) Magnesium levels appear to be the highest during winter months. No long term trends are apparent.

Comparison of Upstream and Downstream Stations B-5 and B-6

A comparison of upstream and downstream flows and water quality was made between stations B-5 and B-6. Stations B-5 and B-6 are located downstream and upstream respectively from the Castle Gate mine complex. The plots included within Appendix B indicate no identifiable impact on flows or on water quality from the mining operation. Although there is some variation between individual measurements at the upstream and downstream stations, the variations appear to be random and are probably the result sampling differences and the precision of the measurements. Comparing the averages for the flows and water quality parameters at the upstream and downstream station supports this conclusion. Averages are approximately equal for both flow and water quality measurements.

Station B-11 - Intermittent Stream in Hardscrabble Canyon

Flow. The measured flow at Station B-11 has varied from 0.0 to 0.19 cfs from 1977 through 1981. No measurable flows have occurred during sampling events since 1981.

pH. Because the stream has been dry during sampling events, no pH measurements are available for the past 5 years.

TDS. From 1977 through 1981, TDS levels varied from 339 to 1,260 mg/l. Because the stream has been dry during sampling events, no TDS measurements are available since 1981.

Oil and Grease. Because the stream has been dry during sampling events, no oil and grease measurements are available for the past 5 years.

Major Cations and Anions. Because the stream has been dry during sampling events, no measurements for major cations and anions are available for the past 5 years.

Station B-12 - Intermittent Stream in Hardscrabble Canyon

From the time this location first became a sampling station in 1981, no measurable flows have been recorded during sampling events. Therefore, no water quality samples have been obtained.

Station B-17 - Intermittent Stream in Sowbelly Gulch

Flow. The measured flow at Station B-17 has varied from 0.0 to 0.34 cfs from 1977 through 1987. No measurable flows have occurred during sampling events from 1988 through 1995. It appears that flows in this stream are highly dependent upon local conditions and that flow events are probably brief. There is little correlation between stream flows at this station and precipitation records for the Price weather station.

pH. Because the stream has been dry during sampling events, no pH measurements are available for the past 5 years.

TDS. From 1977 through 1987, TDS levels varied from 784 to 1,835 mg/l. Because the stream has been dry during sampling events, no TDS measurements are available after 1987.

Oil and Grease. Because the stream has been dry during sampling events, no oil and grease measurements are available for the past 5 years.

Major Cations and Anions. Because the stream has been dry during sampling events, no measurements for major cations and anions are available for the past 5 years.

Station B-25 - Intermittent Stream in Crandall Canyon

Flow. The measured flow at Station B-25 has varied from 0.0 to 450 gpm from 1981 through 1995. The stream at this station has been dry for most sampling events and only two measurable flows have been recorded in the past 5 years. It appears that flows in this stream are highly dependent upon local conditions and that flow events are probably brief. There is very little correlation between stream flows at this station and precipitation records for the Price weather station.

pH. Because the stream has been dry during all but two sampling events, only two pH measurements have been obtained. Measured pH levels were 7.8 and 7.7 for these two samples.

TDS. TDS levels have varied from 118 to 437 mg/l for the ten samples tested. No long term data trends are apparent.

Oil and Grease. Only one oil and grease measurement from this station have been obtained within the past 5 years. Oil and grease in this sample was less than 0.25 mg/l.

Major Cations and Anions. Because the stream has been dry for all but two sampling events in the past 5 years, only two samples have been obtained for cation and anion measurements. Levels of major cations and anions in these two samples are relatively low when compared to measured levels in other intermittent streams.

Station B-26 - Intermittent Stream in Crandall Canyon

Flow. The measured flow at Station B-26 has varied between 0 to 1 cfs from 1981 through 1995. The stream at this station has been dry for most sampling events and only 2 measurable flows have been recorded in the past 5 years. It appears that flows in this stream are highly dependent upon local conditions. There is very little correlation between stream flows at this station and precipitation records for the Price weather station.

pH. From 1991 through 1995, the measured pH levels varied from 6.1 to 8.0. No long term data trends are apparent.

TDS. From 1981 through 1995 the measured TDS levels varied from 270 to 1,480 mg/l. No long term data trends are apparent.

Oil and Grease. Only two samples from this station were tested for oil and grease in the past 5 years. Oil and grease in these samples was less than 0.25 mg/l.

Major Cations and Anions. Levels of major cations and anions vary considerably for the five samples tested in the past five years. While no long term data trends are apparent, there is a tendency for the relative levels of major cations and anions to stay consistent with each other within the individual samples. For example, when bicarbonate levels are high, the levels of the other major cations and anions are also high.

Station B-28 - Intermittent Stream in Sowbelly Gulch

From the time this location first became a sampling station in 1985, the only measurable flow recorded during a sampling event was in October 1987. A TDS level of 71 mg/l was measured for this sample. No water quality samples have been obtained in the past 5 years.

A summary of the general trend for major water quality parameters for surface water is provided in the following table. For major cations and anions there may be more than one category marked, indicating that there was variation found between parameters evaluated. The reader is referred to either the text or the graphs for further details when two or more categories are marked. N/A in the table indicates insufficient data exists to make a determination of a potential trend.

Summary for Surface Water

Station	Flow			pH			TDS			Major Cations/Anions		
	Down	Stable	Up	Down	Stable	Up	Down	Stable	Up	Down	Stable	Up
B-5		N/A			X			X		X	X	X
B-6		N/A			X			X		X	X	X
B-11		X			N/A			N/A			N/A	
B-12		X			N/A			N/A			N/A	
B-17		X			N/A			N/A			N/A	
B-25		X			N/A			X			N/A	
B-26		X			X			X			X	
B-28		X			N/A			N/A			N/A	

Conclusions

The data gathered for the past 5 years at surface water monitoring stations near the Castle Gate Mine generally do not appear to have established definable trends of increasing or decreasing flows or of water quality that are applicable to the surface water monitoring stations as a group. Flow variations within any year appear to be seasonal for the Price River and appear to be random for the intermittent streams. Flow variations from year to year appear to be generally random with

river and stream flows responding to natural flow factors, including 1) variations in precipitation and 2) the delayed snowmelt effects. Variations and trends in pH, TDS, and the levels of major cations and anions are discussed in the sections above for the individual stations.

Precipitation and Climatological Data.

Precipitation data for the Price weather station is shown on the surface and ground water data plots included within the appendices.

Summarized Water Monitoring Data

Monitoring Locations/Monitoring Frequencies

Current monitoring locations and sampling frequencies are identified on the water quality data sheets included within Appendix A and Appendix B. Sampling station locations are also shown on Exhibit 7-3 of the MRP. Exhibit 7-3 is also included in this report.

UPDES Permit Number, Discharge Points and Locations.

The UPDES permit number is UTG040012. Discharge points and locations are shown on Exhibit 7-3.

Appendix A
Water Quality Data
Groundwater

Cyprus Plateau Mining Company - Water Quality Data

Print Date 05/10/96

Station: B-22 Property: Castle Gate Location: NW1/4, NW1/4, Sec 27, T12 S, R9 E Station Type Spring Sampling Frequency: Quarterly Formation: Price River Elevation: 6500

Date		Field Measurements					Laboratory Measurements																	
Yr-Mo	Sample Date	Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
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10	10/31/80	0.004					795																	
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9																								
10	10/29/81						988																	
11																								
12	12/3/81						966																	
82																								
2	2/15/82																							
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4	4/14/82																							
5																								
6	6/14/82	0.002					920																	
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Cyprus Plateau Mining Company - Water Quality Data

Print Date 05/10/96

Station: B-22 | Property: Castle Gate | Location: NW1/4, NW1/4, Sec 27, T12 S, R9 E | Station Type Spring | Sampling Frequency: Quarterly | Formation: Price River | Elevation: 6500

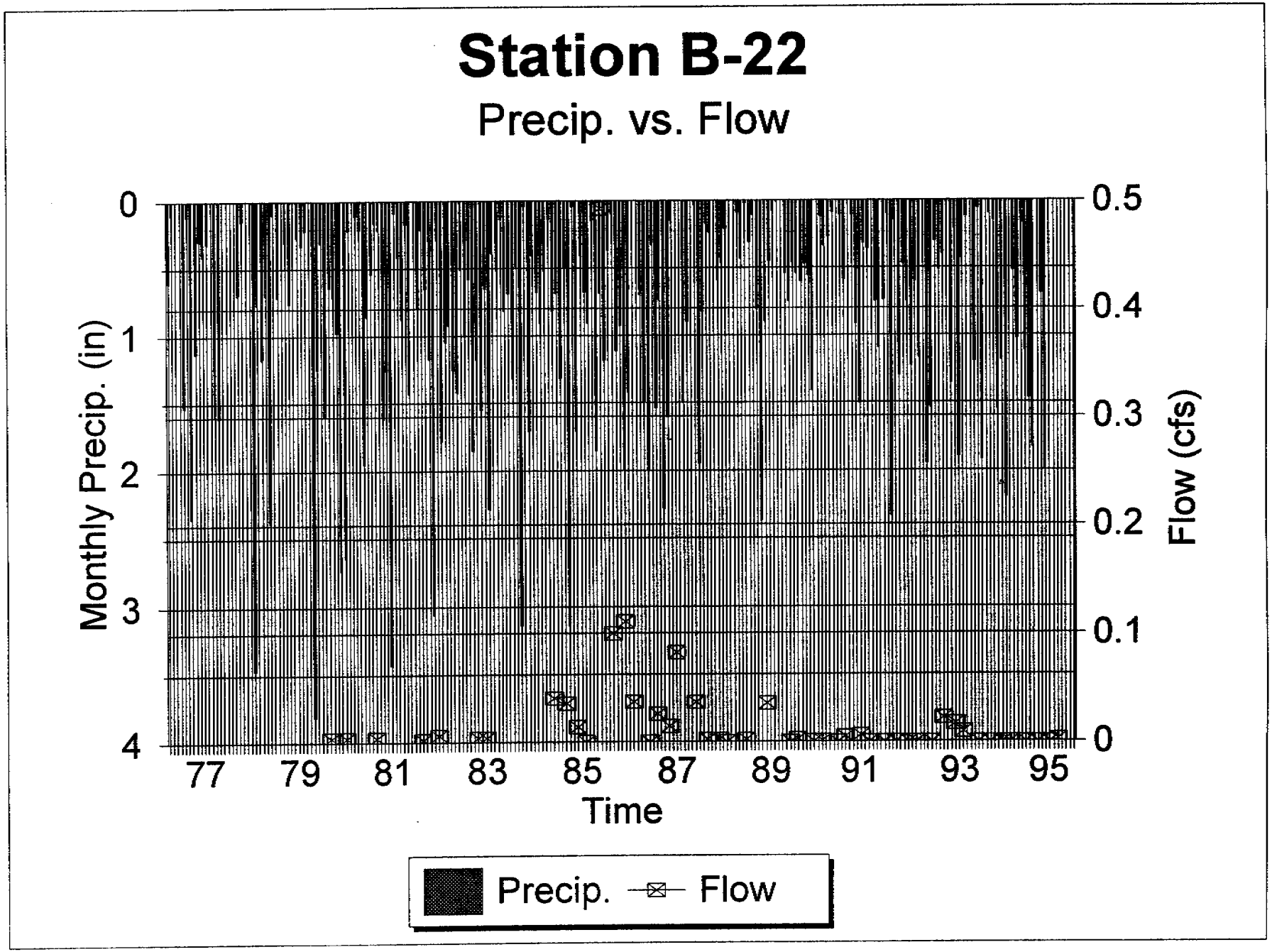
Date Yr-Mo	Sample Date	Field Measurements Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	Laboratory Measurements TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
10	10/18/83	0.004					780																	
11																								
12																								
84																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
85																								
2																								
3	3/30/85	0.0401					815																	
4																								
5																								
6	6/15/85	0.0357					842																	
7																								
8																								
9	9/30/85	0.0138					848																	
10																								
11	11/30/85	0																						
12																								
86																								
2																								
3	3/31/86	0.4924					292																	
4																								
5																								
6	6/23/86	0.1003					936																	
7																								
8																								
9	9/25/86	0.111					238																	
10																								
11	11/24/86	0.0368					827																	
12																								
87																								
2																								
3	3/26/87	0																						
4																								
5	5/22/87	0.0256					347																	
6																								
7																								
8	8/10/87	0.0143					766																	
9																								
10	10/13/87	0.0824																						
11							717																	
12																								
88																								
2																								
3	3/22/88	0.0365					412																	
4																								
5																								
6	6/13/88	0.0022					892																	
7																								
8																								
9	9/14/88	< 0.0022					866																	
10																								
11	11/30/88	0																						
12																								
89																								
2																								
3																								
4	4/10/89	< 0.0022					1500																	
5																								
6	8/21/89						854																	
7																								
8																								
9	9/21/89	0.0357					173																	
10																								
11																								
12																								
90																								
2																								
3	3/9/90	0																						
4																								
5	5/30/90	0.0027					829																	
6																								

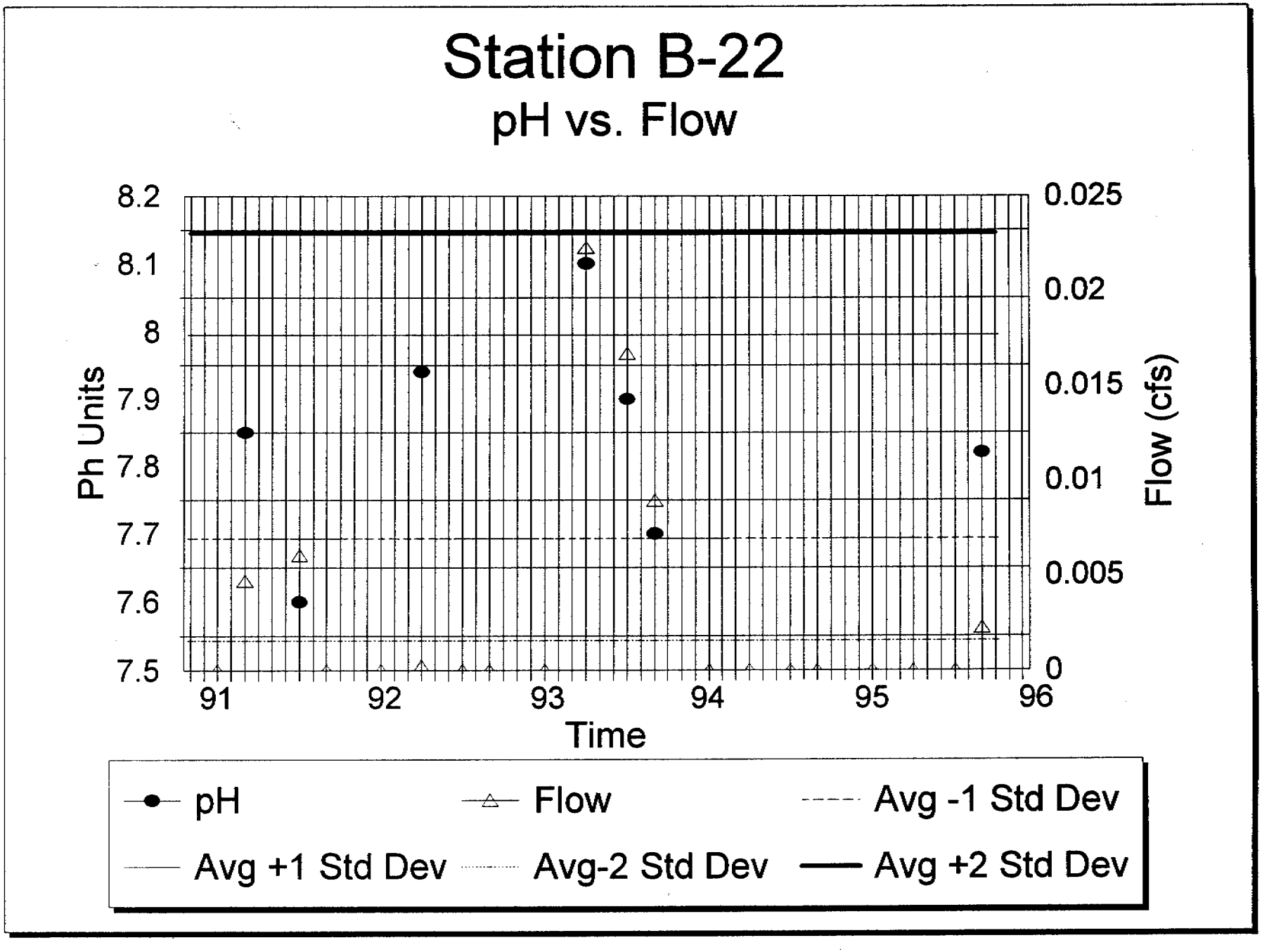
Cyprus Plateau Mining Company - Water Quality Data

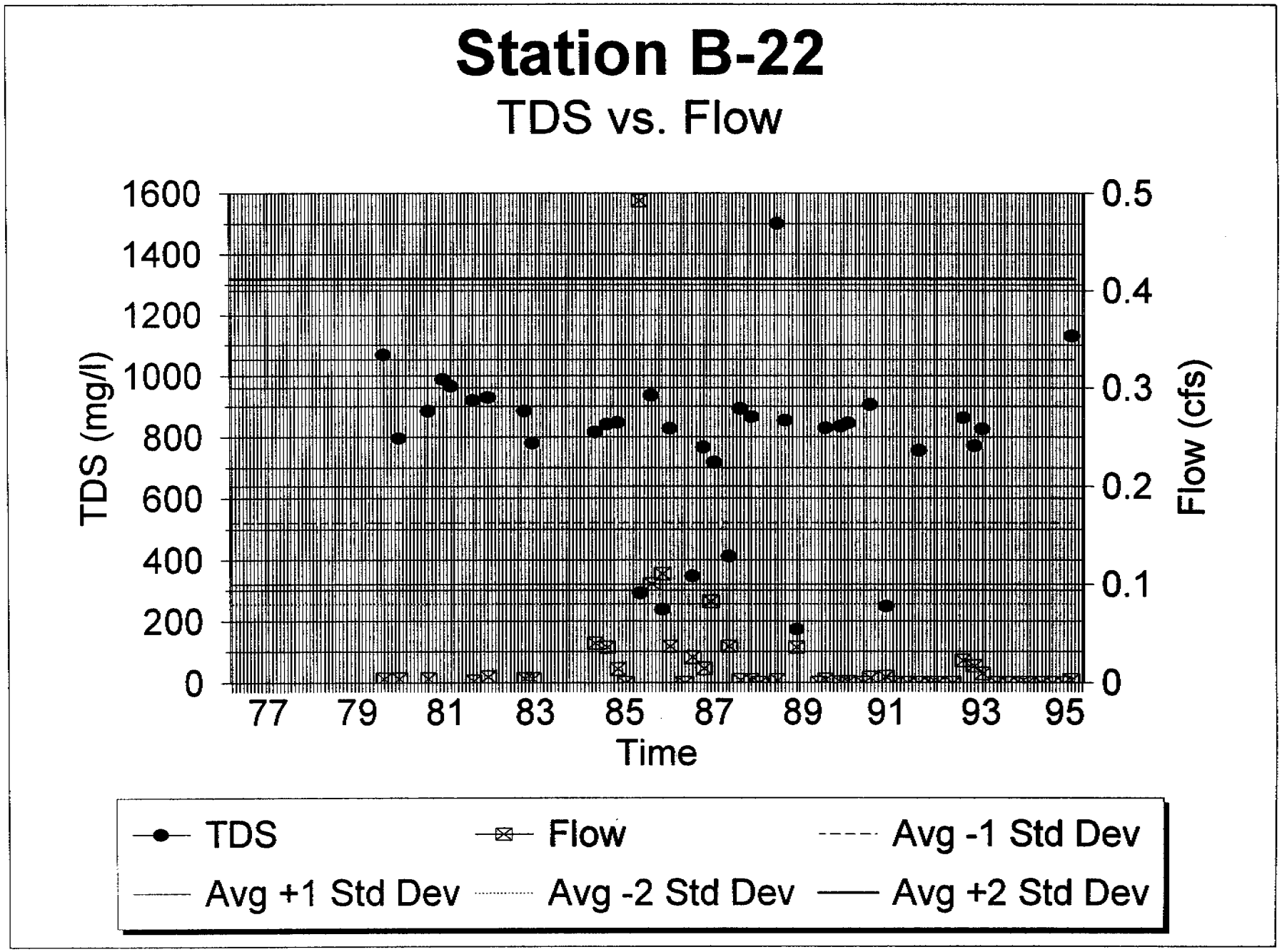
Station: B-22 | Property: Castle Gate | Location: NW1/4, NW1/4, Sec 27, T12 S, R9 E | Station Type: Spring | Sampling Frequency: Quarterly | Formation: Price River | Elevation: 6500 | Print Date 05/10/96

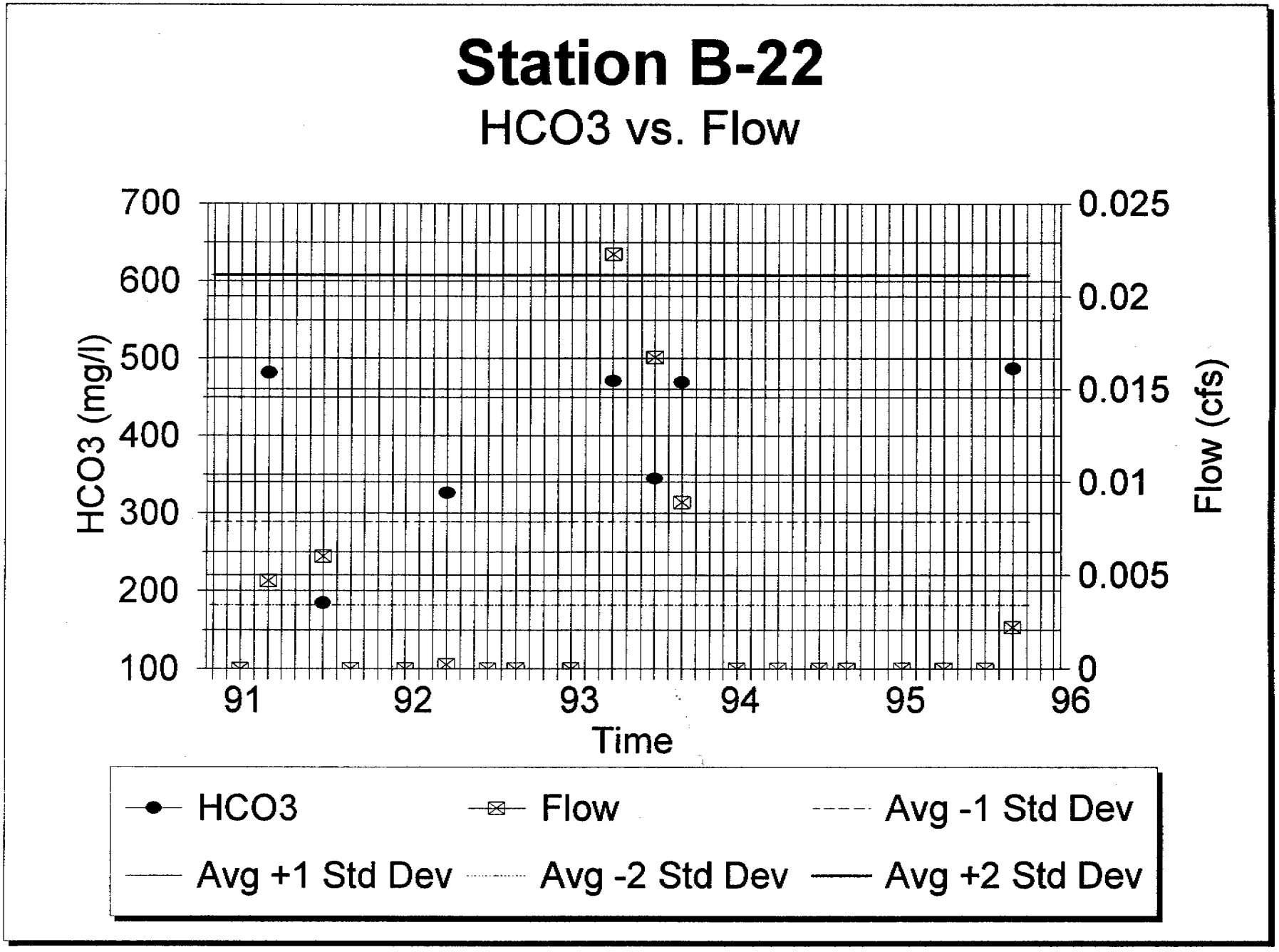
Date Yr-Mo	Sample Date	Field Measurements: Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	Laboratory Measurements: TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
7																								
8																								
9	9/29/90	0.0004					836																	
10																								
11	11/26/90	0.0009					846																	
12																								
91																								
2																								
3	3/13/93	0																						
4																								
5	5/26/91	0.0047	7.85	1475	52	8	907	14		394	759	0	481	0	27	367	152	92.5						
6																								
7																								
8																								
9	9/11/91	0.006	7.6	390	13	9	248	5540		151	207	0	184	0	3.85	57.9	46.5	22.1						
10																								
11	11/22/91	0																						
12																								
92																								
2																								
3	3/4/92	0																						
4																								
5																								
6	6/8/92	< 0.0002	7.94	1470	7	8	756	2		267	560	0	326	0	26.1	320	82.2	86.4						
7																								
8																								
9	9/3/92	0																						
10																								
11	11/14/92	0																						
12																								
93																								
2																								
3	3/30/93	0																						
4																								
5																								
6	6/14/93	0.0223	8.1	900	16	7.4	863	1 <	0.25	386	678		471	0	27	356	120	95						
7																								
8																								
9	9/20/93	0.0167	7.9	1400	6	8	771 <	1 <	0.3	282	589		344	0	27	358	87	92						
10																								
11	11/17/93	0.0089	7.7	1940	1	8	826	48 <	0.26	384	710		469	0	29	356	58	117						
12																								
94																								
2																								
3	3/24/94	0																						
4																								
5																								
6	6/14/94	0																						
7																								
8																								
9	9/7/94	0																						
10																								
11	11/28/94	0																						
12																								
95																								
2																								
3	3/13/95	0																						
4																								
5																								
6	6/7/95	0																						
7																								
8																								
9	9/13/95	0																						
10																								
11	11/27/95	0.0022	7.82	1560	8	6	1130	12	0	487	974		487	0	28	455	189	122						
12																								
96																								
END DATA																								
Count		49	7	7	7	7	35	7	4	7	7	3	7	7	7	7	7	7	0	0	0	0	0	
Minimum		< 0	7.6	390.0	1.0	6.0	173.0	< 1.0	< 0.0	151.0	207.0	0.0	184.0	0.0	3.9	57.9	46.5	22.1	ERR	ERR	ERR	ERR	ERR	
Maximum		< 0.4924	8.1	1940.0	52.0	9.0	1500.0	< 5540	< 0.3	487.0	974.0	0.0	487.0	0.0	29.0	455.0	189.0	122.0	ERR	ERR	ERR	ERR	ERR	
Average		< 0.0229	7.8	1305.0	14.7	7.8	787.3	< 803	< 0.2	335.9	639.6	0.0	394.6	0.0	24.0	324.3	105.0	89.6	ERR	ERR	ERR	ERR	ERR	
Std. Dev		< 0.0721	0.2	468.2	15.9	0.8	265.8	< 1934	< 0.1	102.0	216.8	0.0	106.2	0.0	8.3	115.3	47.8	30.3	ERR	ERR	ERR	ERR	ERR	
Avg -1 Std		< -0.049	7.7	836.8	-1.2	6.9	521.5	< -1132	< 0.1	233.8	422.9	0.0	288.3	0.0	15.7	209.0	57.2	59.3	ERR	ERR	ERR	ERR	ERR	
Avg +1 Std		< 0.0951	8.0	1773.2	30.6	8.6	1053.0	< 2737	< 0.3	437.9	856.2	0.0	500.8	0.0	32.3	439.8	152.7	119.8	ERR	ERR	ERR	ERR	ERR	
Avg -2 Std		< -0.121	7.5	368.5	-17.0	8.1	255.7	< -3066	< -0.0	131.8	206.3	0.0	182.1	0.0	7.5	93.7	9.4	29.0	ERR	ERR	ERR	ERR	ERR	
Avg +2 Std		< 0.1672	8.1	2241.5	46.5	9.5	1318.8	< 4671	< 0.4	539.9	1072.9	0.0	607.0	0.0	40.5	554.8	200.5	150.1	ERR	ERR	ERR	ERR	ERR	

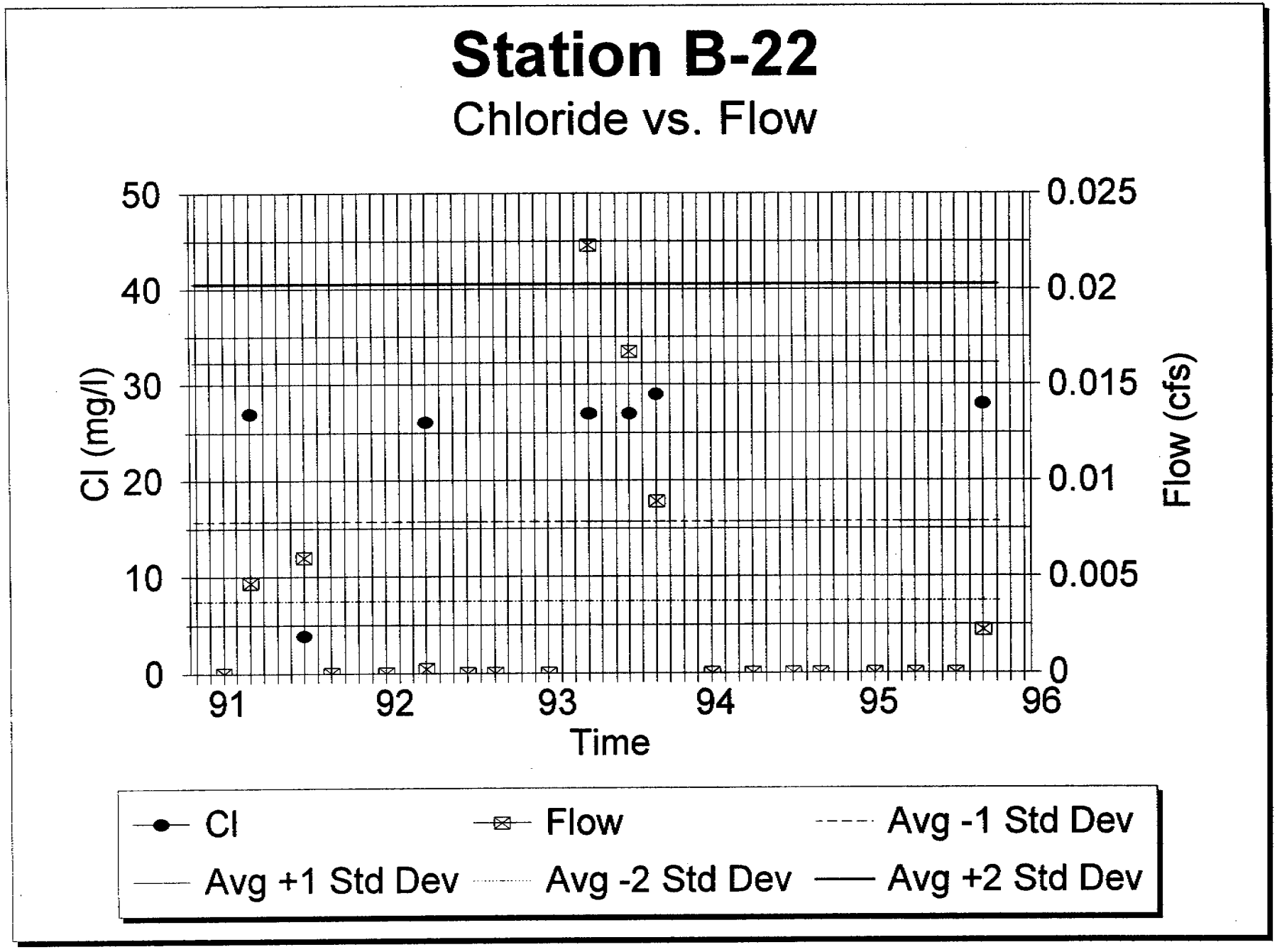
NOTE: The "<" symbol indicates that "Less Than" data was found in the data set, statistics are approximate.

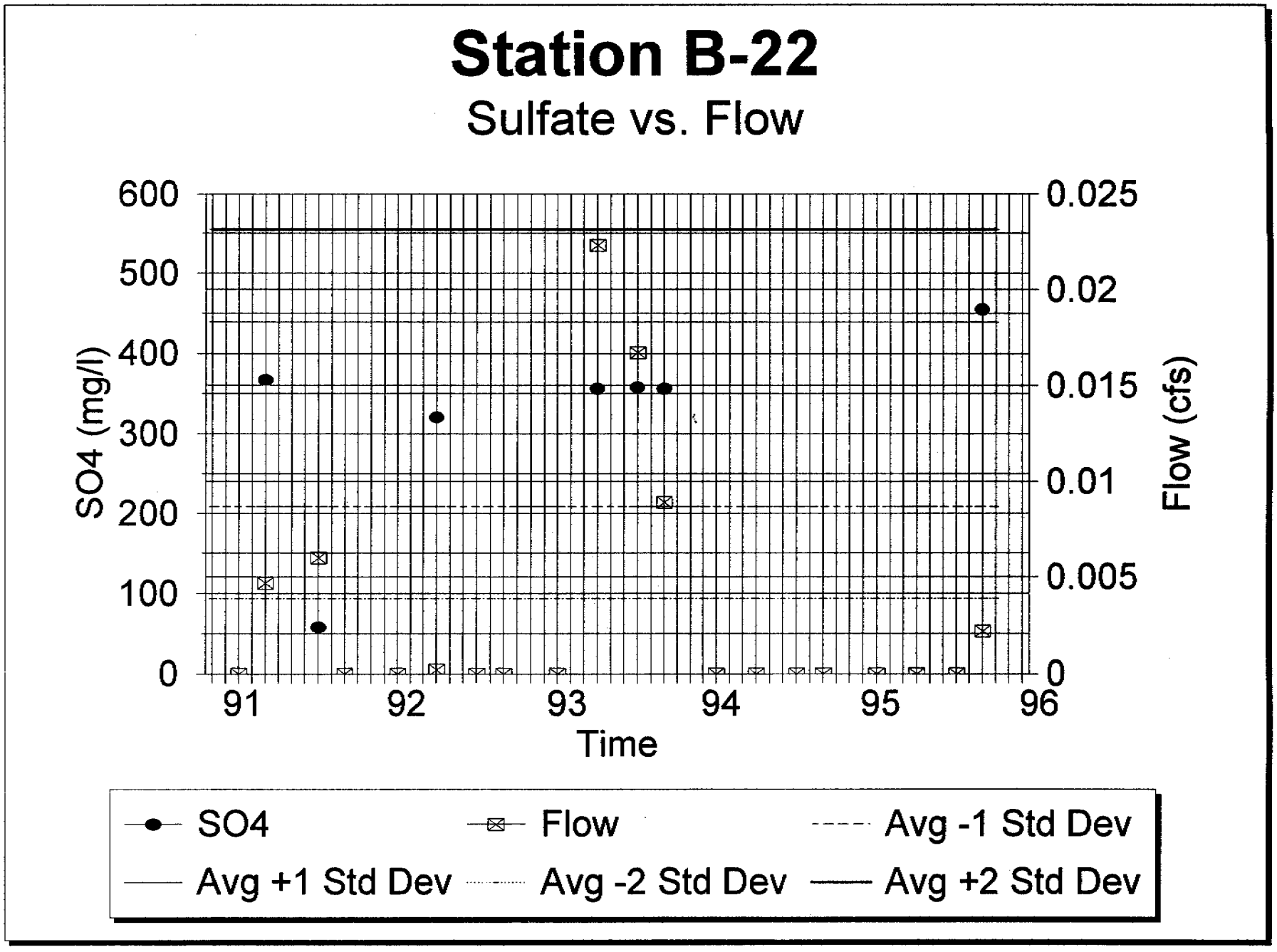

Station B-22
Precip. vs. Flow
Monthly Precip. (in)
0
1
2
3
4
Flow (cfs)
0.5
0.4
0.3
0.2
0.1
0
77
79
81
83
85
87
89
91
93
95
Time
Precip.
Flow

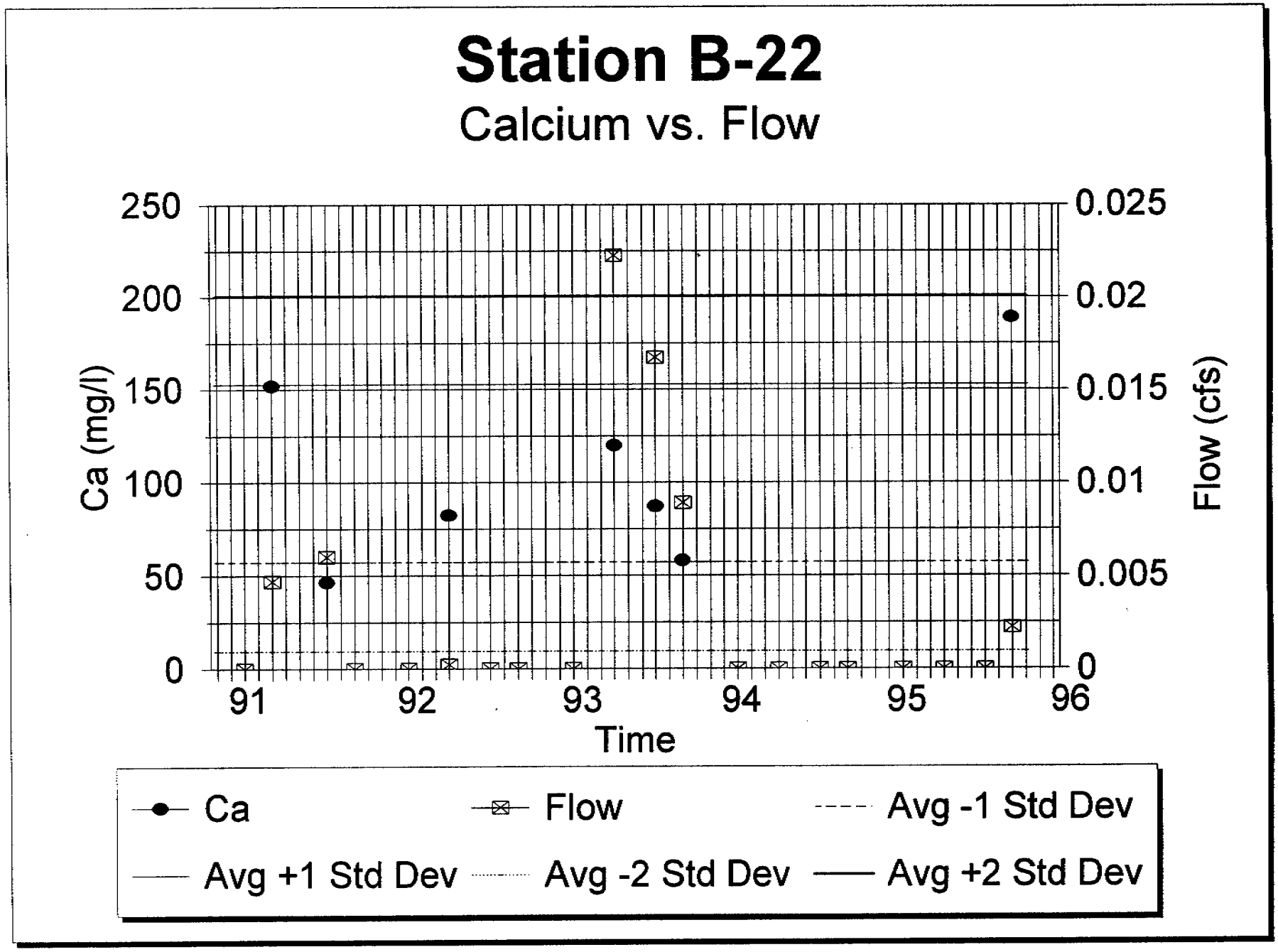

Station B-22
pH vs. Flow
Ph Units
8.2
8.1
8
7.9
7.8
7.7
7.6
7.5
0.025
0.02
0.015
0.01
0.005
0
Flow (cfs)
91
92
93
94
95
96
Time
pH
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg-2 Std Dev
Avg +2 Std Dev

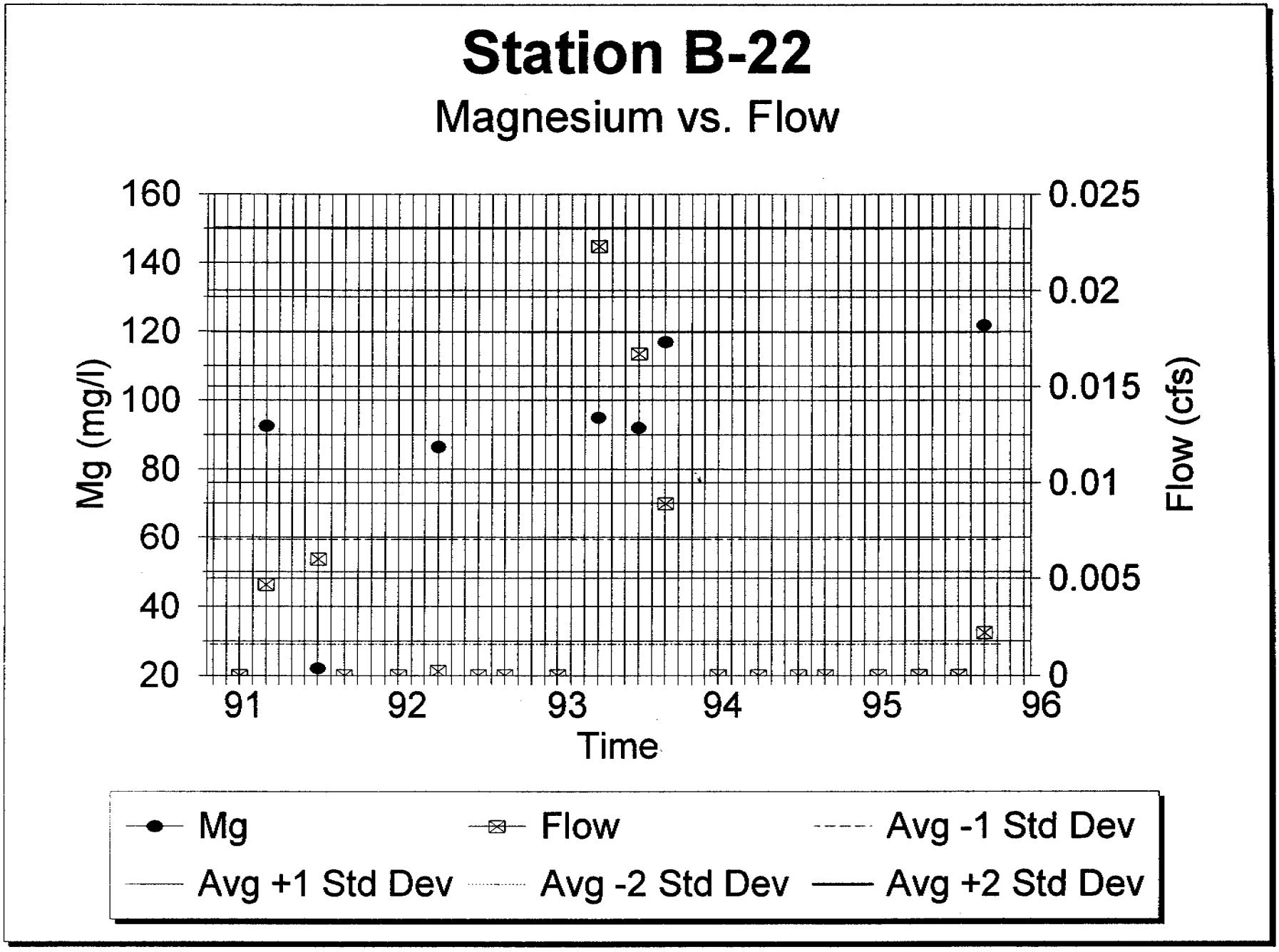

Station B-22
TDS vs. Flow
TDS (mg/l)
1600
1400
1200
1000
800
600
400
200
0
Flow (cfs)
0.5
0.4
0.3
0.2
0.1
0
77
79
81
83
85
87
89
91
93
95
Time
TDS
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

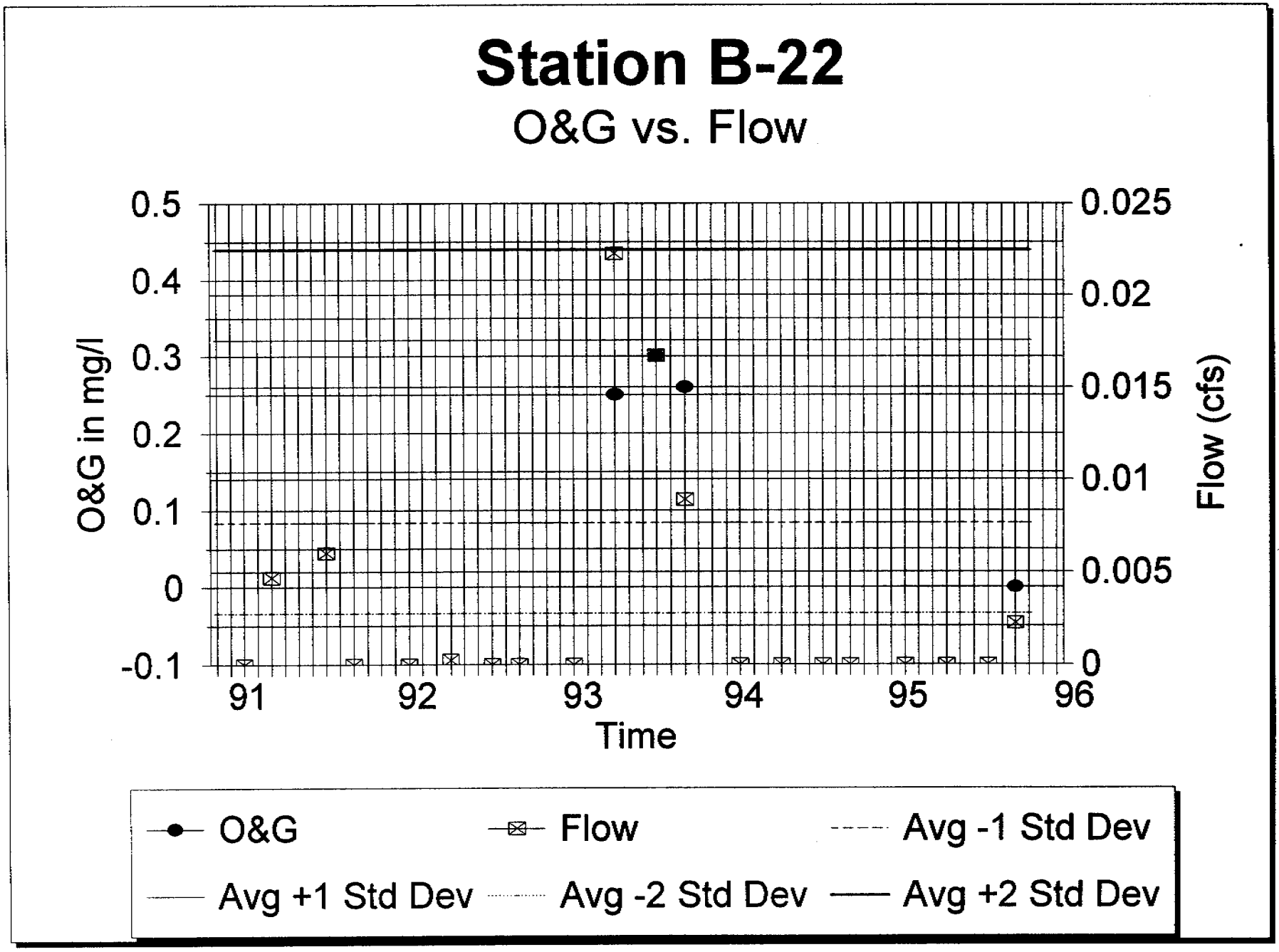

Station B-22
HCO3 vs. Flow
700
600
500
400
300
200
100
HCO3 (mg/l)
0.025
0.02
0.015
0.01
0.005
0
Flow (cfs)
91
92
93
94
95
96
Time
HCO3
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-22
Chloride vs. Flow
Cl (mg/l)
50
40
30
20
10
0
0.025
0.02
0.015
0.01
0.005
0
Flow (cfs)
91
92
93
94
95
96
Time
Cl
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-22
Sulfate vs. Flow
600
500
400
300
200
100
0
SO4 (mg/l)
0.025
0.02
0.015
0.01
0.005
0
Flow (cfs)
91
92
93
94
95
96
Time
SO4
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-22
Calcium vs. Flow
250
200
150
100
50
0
Ca (mg/l)
0.025
0.02
0.015
0.01
0.005
0
Flow (cfs)
91
92
93
94
95
96
Time
Ca
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-22
Magnesium vs. Flow
160
140
120
100
80
60
40
20
Mg (mg/l)
0.025
0.02
0.015
0.01
0.005
0
Flow (cfs)
91
92
93
94
95
96
Time
Mg
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-22
O&G vs. Flow
O&G in mg/l
0.5
0.4
0.3
0.2
0.1
0
-0.1
Flow (cfs)
0.025
0.02
0.015
0.01
0.005
0
91
92
93
94
95
96
Time
O&G
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Cyprus Plateau Mining Company - Water Quality Data

Print Date 05/10/96

Station: BM-30 | Property: Castle Gate | Location: NW1/4, NW1/4, Sec 1, T13 S, R9 E | Station Type: Spring | Sampling Frequency: Quarterly | Formation: Blackhawk | Elevation: 6100

Date		Field Measurements					Laboratory Measurements																	
Yr-Mo	Sample Date	Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
77																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
78																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
79																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
80																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
81																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
82																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
83																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							

Cyprus Plateau Mining Company - Water Quality Data

Print Date 08/10/98

Station: BM-30 Property: Castle Gate Location: NW1/4, NW1/4, Sec 1, T13 S, R9 E Station Type Spring Sampling Frequency: Quarterly Formation: Blackhawk Elevation: 6100

Date		Field Measurements					Laboratory Measurements																		Comments
Yr-Mo	Sample Date	Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)		
10																									
11																									
12																									
84																									
2																									
3																									
4																									
5																									
6	6/19/84	0																							
7																									
8																									
9	9/10/84	8.0784					3780																		
10																									
11																									
12																									
85																									
2																									
3	3/30/85	5					3970																		
4																									
5																									
6	6/15/85	5					4010																		
7																									
8																									
9	9/30/85	12					4082																		
10																									
11	11/30/85	6					4220																		
12																									
86																									
2																									
3																									
4	4/3/86	15					4120																		
5																									
6	6/30/86	< 0.02																							
7																									
8																									
9	9/23/86	10.5					3183																		
10																									
11																									
12	11/24/86	12					4008																		
87																									
2																									
3	3/26/87	0.1					4320																		
4																									
5	5/22/87	0.72					1746																		
6																									
7																									
8	8/10/87	7					1770																		
9																									
10	10/13/87	0.2					613																		
11																									
12																									
88																									
2																									
3																									
4																									
5																									
6	6/14/88	0																							
7																									
8																									
9	9/28/88	0																							
10																									
11	11/30/88	0																							
12																									
89																									
2																									
3																									
4																									
5																									
6	6/21/89	0																							
7																									
8																									
9	9/21/89	0																							
10																									
11																									
12																									
90																									
2																									
3	3/9/90	0																							
4																									
5	5/30/90	0																							
6																									

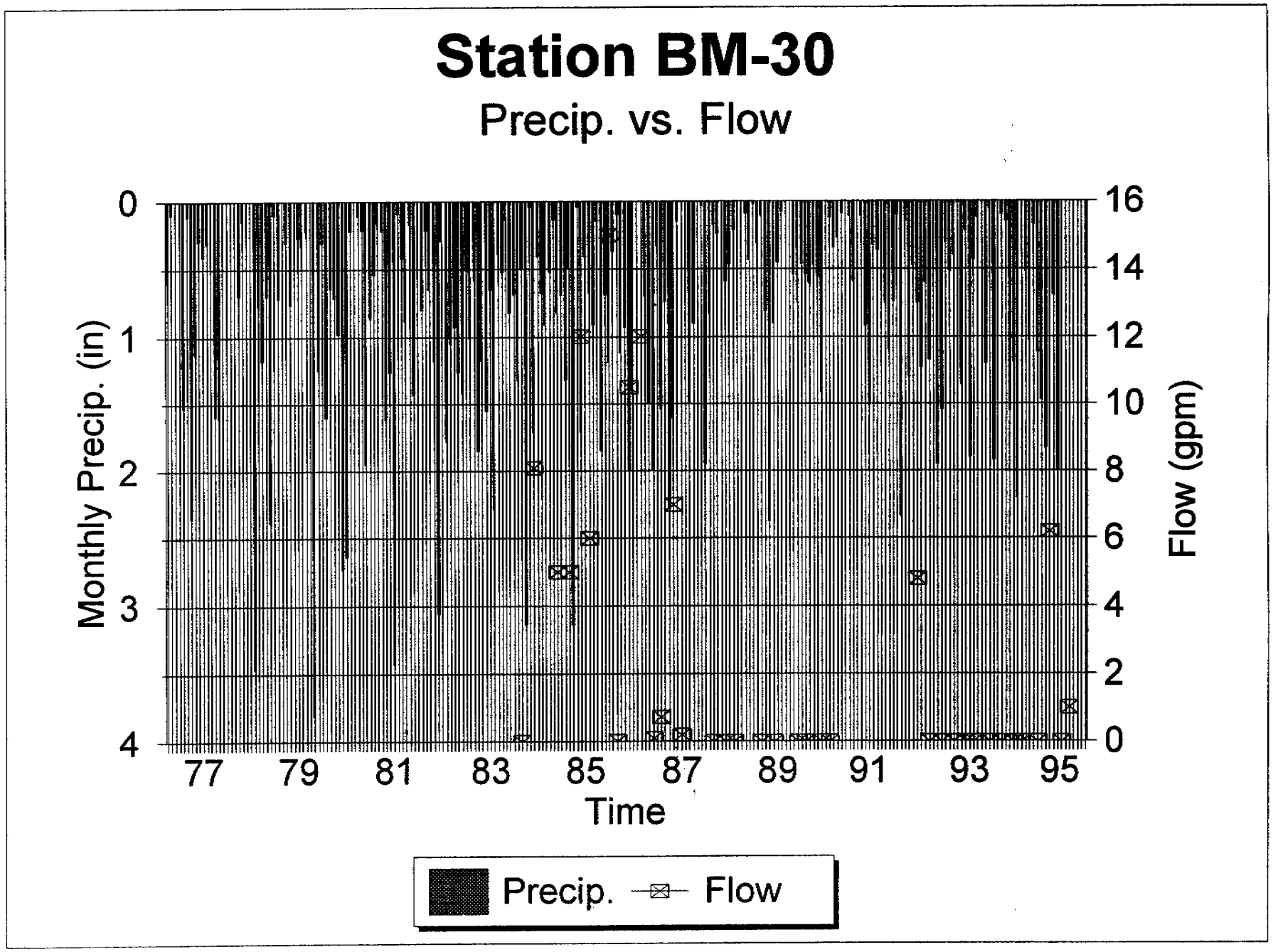
Cyprus Plateau Mining Company - Water Quality Data

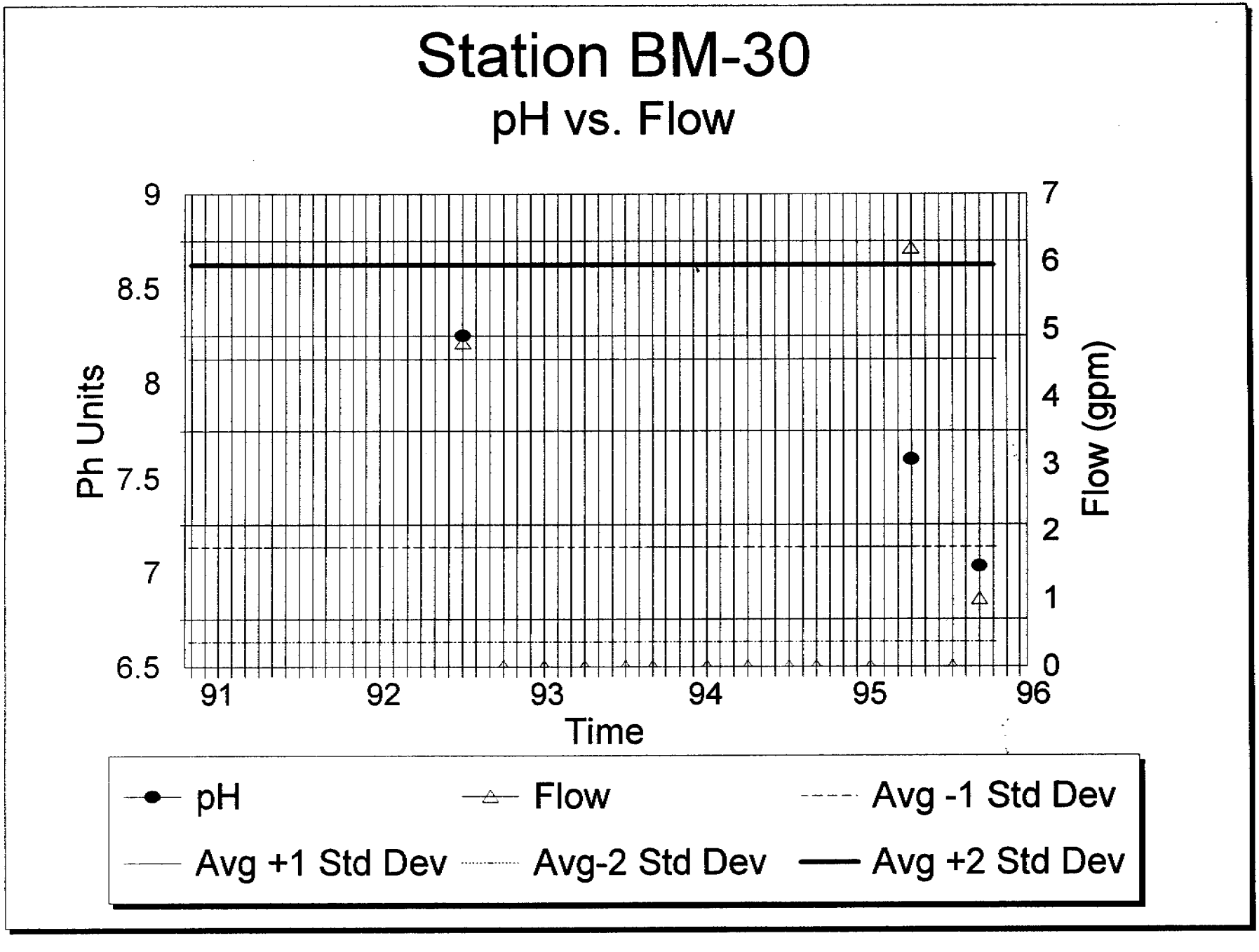
Print Date 05/10/96

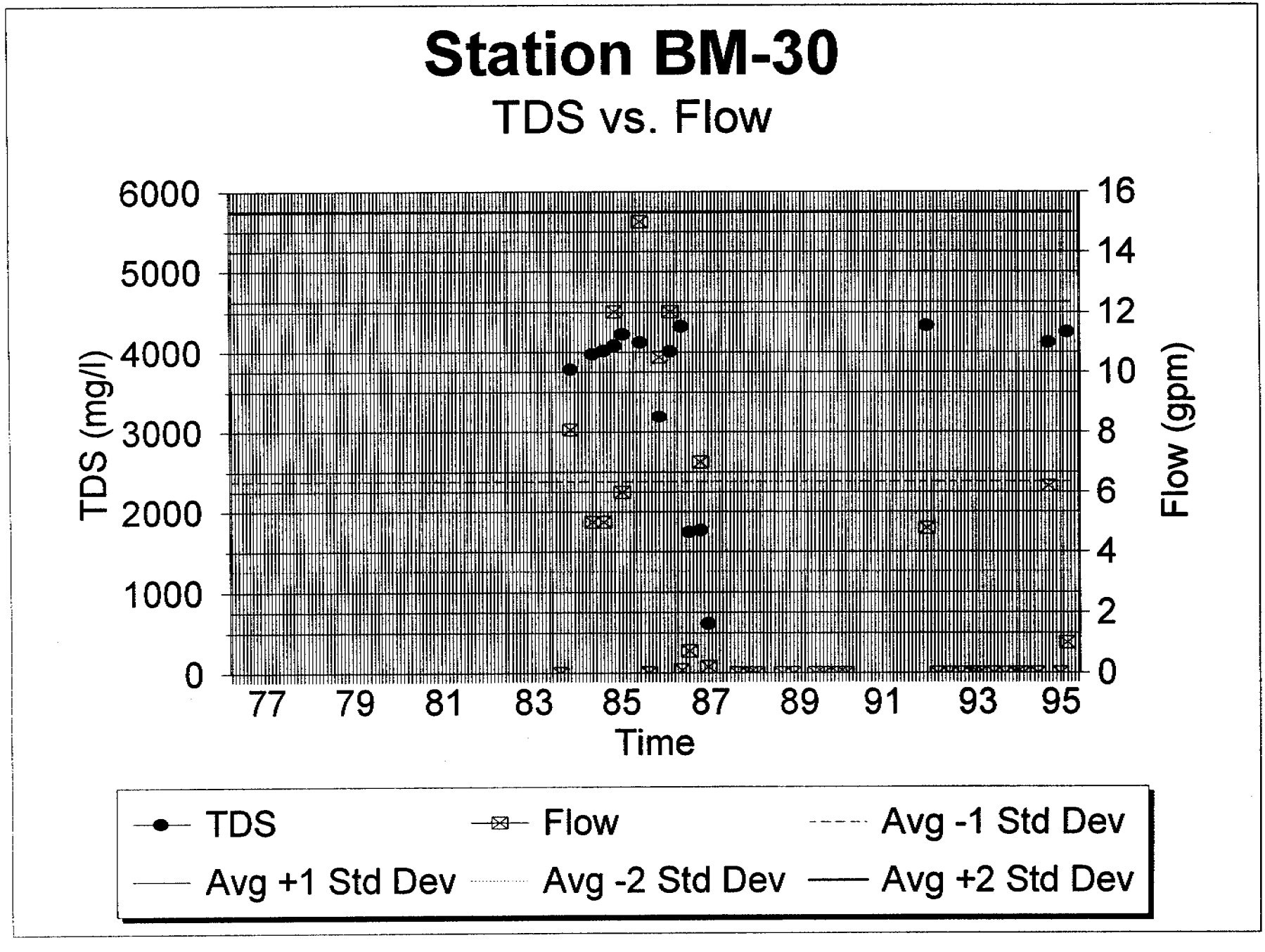
Station: BM-30 | Property: Castle Gate | Location: NW1/4, NW1/4, Sec 1, T13 S, R9 E | Station Type Spring | Sampling Frequency: Quarterly | Formation: Blackhawk | Elevation: 6100

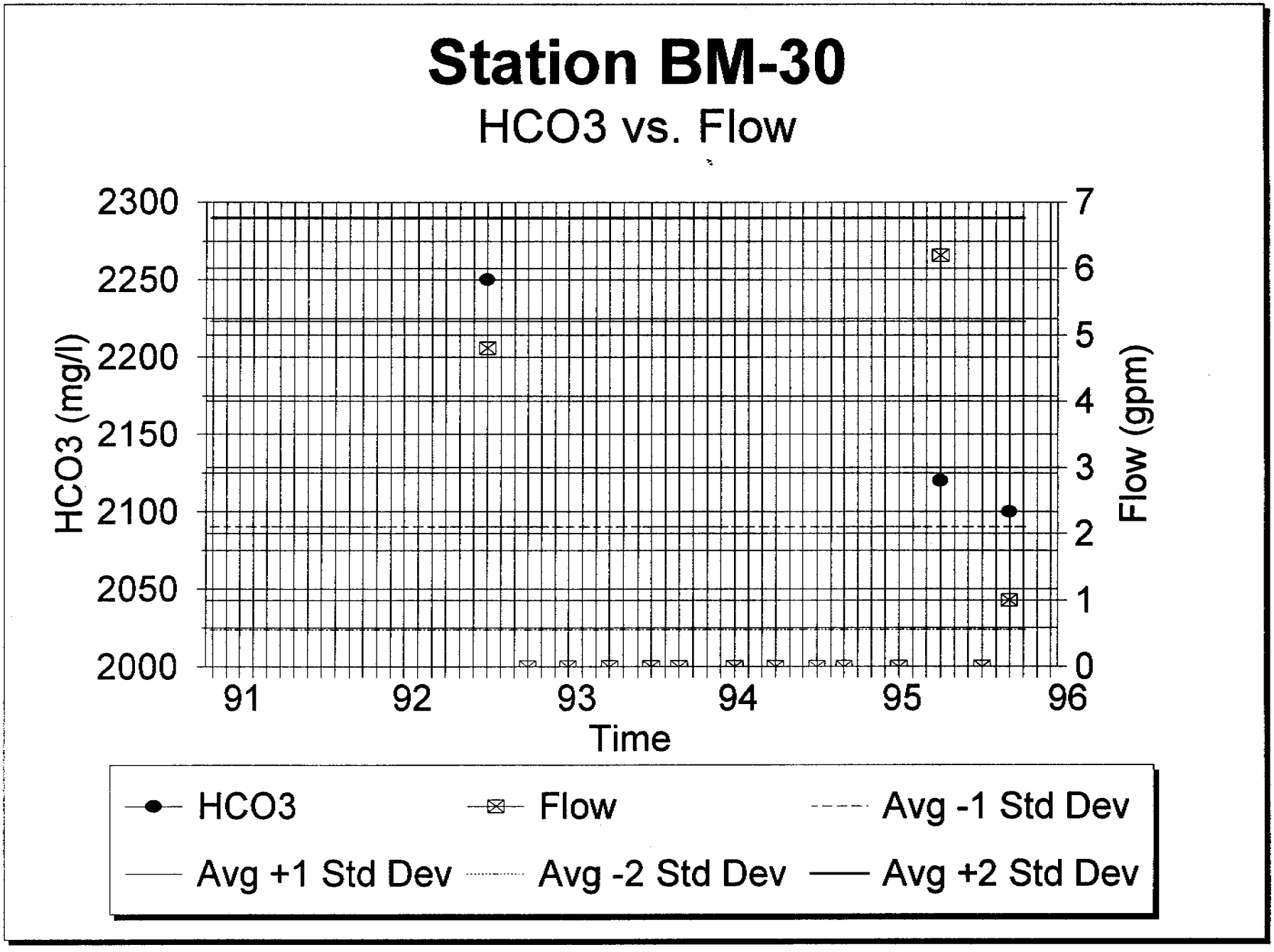
Date		Field Measurements					Laboratory Measurements																		
Yr-Mo	Sample Date	Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
7																								
8																								
9	9/29/90	0																						
10																								
11	11/28/90	0																						
12																								
91																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
92																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9	9/3/92	4.8	8.25	8000	11		4330	5 <	0.25	1880	749	0	2250	19.4	242	1370	12.7	174						
10																								
11																								
12	12/7/92	0																						
93																								
2																								
3	3/30/93	0																						
4																								
5																								
6	6/14/93	0																						
7																								
8																								
9	9/20/93	0																						
10																								
11	11/17/93	0																						
12																								
94																								
2																								
3	3/24/94	0																						
4																								
5																								
6	6/14/94	0																						
7																								
8																								
9	9/7/94	0																						
10																								
11	11/28/94	0																						
12																								
95																								
2																								
3	3/13/95	0																						
4																								
5																								
6	6/7/95	8.2	7.6	1080	10		4120	0	0	2120	934	0	2120	0	153	1210	91	172						
7																								
8																								
9	9/13/95	0																						
10																								
11	11/27/95	1	7.03	6380	9	8	4250	0	0	2100	923	0	2100	0	245	1250	88.2	171						
12																								
96																								
END DATA																								
Count		37	3	3	3	1	15	3	3	3	3	3	3	3	3	3	3	3	0	0	0	0	0	
Minimum		< 0	7.0	1080.0	9.0	8.0	613.0	0.0	< 0.0	1880.0	749.0	0.0	2100.0	0.0	153.0	1210.0	12.7	171.0	ERR	ERR	ERR	ERR	ERR	
Maximum		< 15	8.3	6380.0	11.0	8.0	4330.0	5	< 0.3	2120.0	934.0	0.0	2250.0	19.4	245.0	1370.0	91.0	174.0	ERR	ERR	ERR	ERR	ERR	
Average		< 2.5302	7.6	4486.7	10.0	8.0	3501.5	2	< 0.1	2033.3	868.7	0.0	2156.7	6.5	213.3	1278.7	64.0	172.3	ERR	ERR	ERR	ERR	ERR	
Std. Dev		< 4.1903	0.5	2413.9	0.8	0.0	1121.7	2	< 0.1	108.7	84.7	0.0	66.5	9.1	42.7	68.0	36.3	1.2	ERR	ERR	ERR	ERR	ERR	
Avg -1 Std		< -1.66	7.1	2072.8	9.2	8.0	2379.8	-1	< -0.0	1924.6	783.9	0.0	2090.2	-2.7	170.7	1208.7	27.7	171.1	ERR	ERR	ERR	ERR	ERR	
Avg +1 Std		< 6.7206	8.1	6900.5	10.8	8.0	4623.1	4	< 0.2	2142.1	953.4	0.0	2223.2	15.6	256.0	1344.7	100.2	173.6	ERR	ERR	ERR	ERR	ERR	
Avg -2 Std		< -5.85	6.6	-341.1	8.4	8.0	1258.1	-3	< -0.2	1815.9	699.2	0.0	2023.7	-11.8	128.0	1140.7	-8.6	169.8	ERR	ERR	ERR	ERR	ERR	
Avg +2 Std		< 10.911	8.6	9314.4	11.6	8.0	5744.8	8	< 0.3	2250.8	1038.1	0.0	2289.7	24.8	298.7	1412.6	136.5	174.8	ERR	ERR	ERR	ERR	ERR	

NOTE: The "<" symbol indicates that "Less Than" data was found in the data set, statistics are approximate.


Station BM-30
Precip. vs. Flow
Monthly Precip. (in)
0
1
2
3
4
Flow (gpm)
16
14
12
10
8
6
4
2
0
77
79
81
83
85
87
89
91
93
95
Time
Precip.
Flow

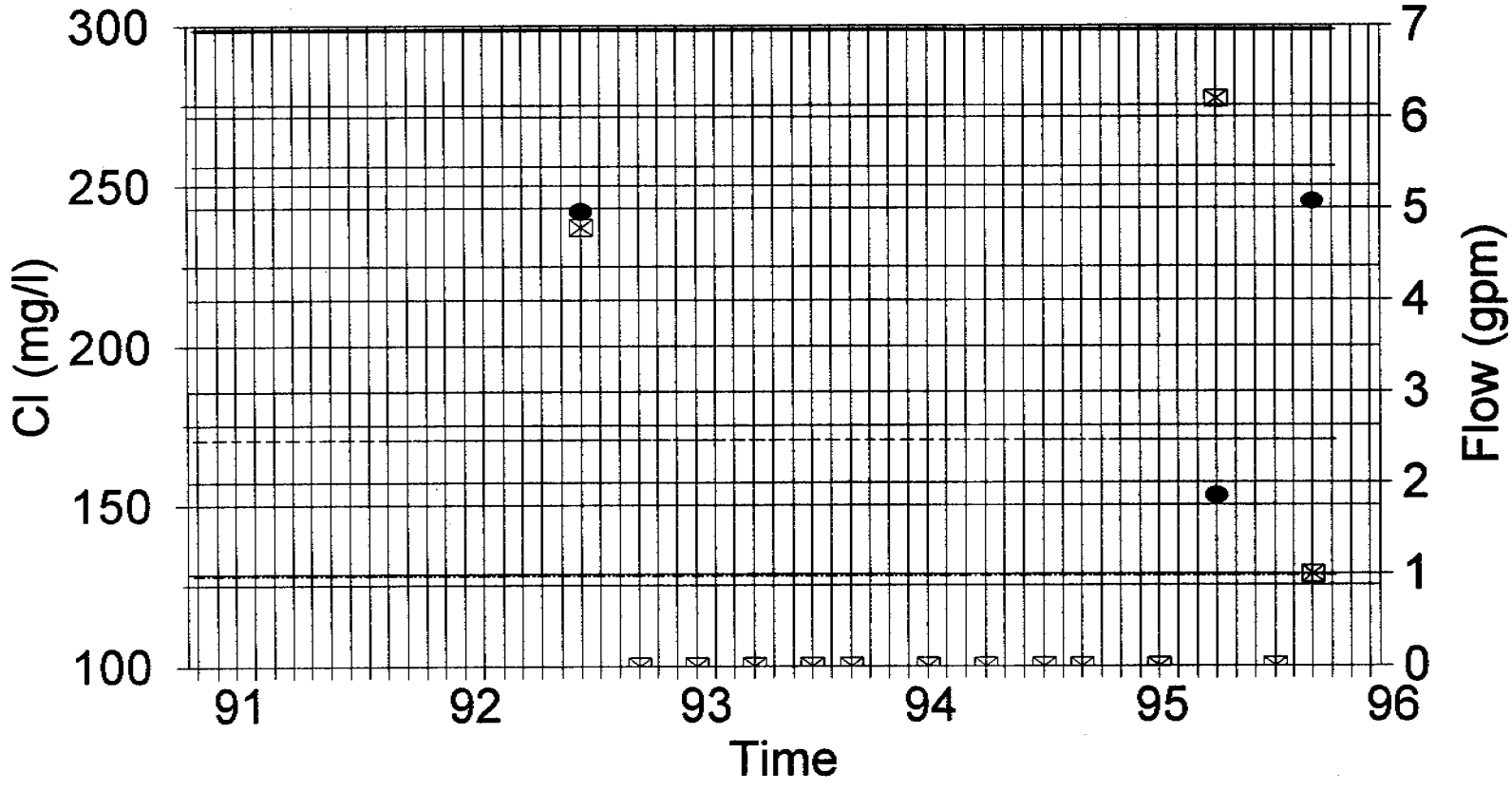

Station BM-30
pH vs. Flow
Ph Units
9
8.5
8
7.5
7
6.5
Flow (gpm)
7
6
5
4
3
2
1
0
91
92
93
94
95
96
Time
pH
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg-2 Std Dev
Avg +2 Std Dev


Station BM-30
TDS vs. Flow
TDS (mg/l)
6000
5000
4000
3000
2000
1000
0
Flow (gpm)
16
14
12
10
8
6
4
2
0
77
79
81
83
85
87
89
91
93
95
Time
TDS
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

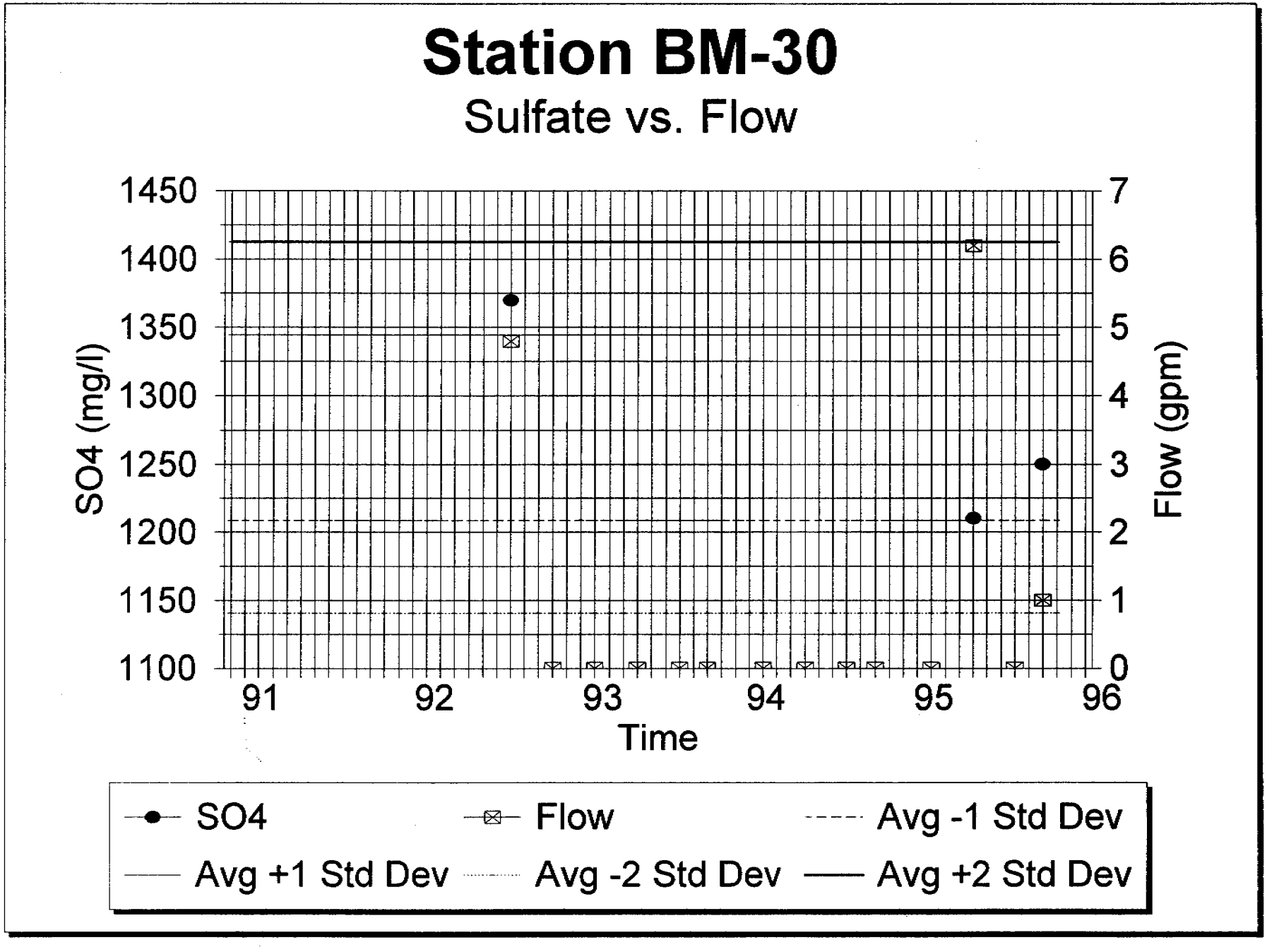

Station BM-30
HCO3 vs. Flow
HCO3 (mg/l)
2300
2250
2200
2150
2100
2050
2000
Flow (gpm)
7
6
5
4
3
2
1
0
91
92
93
94
95
96
Time
HCO3
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Station BM-30

Chloride vs. Flow

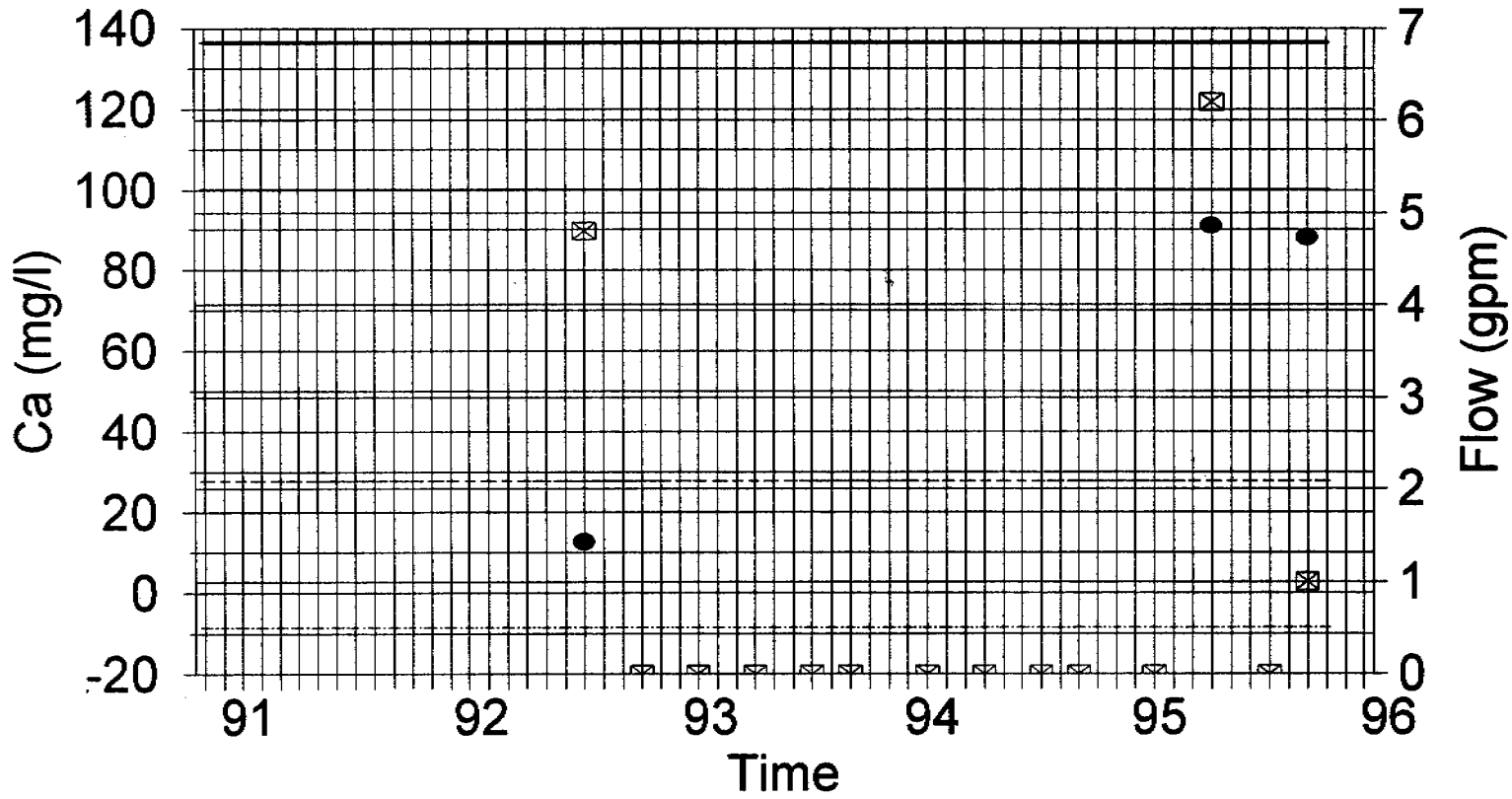


Cl | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev

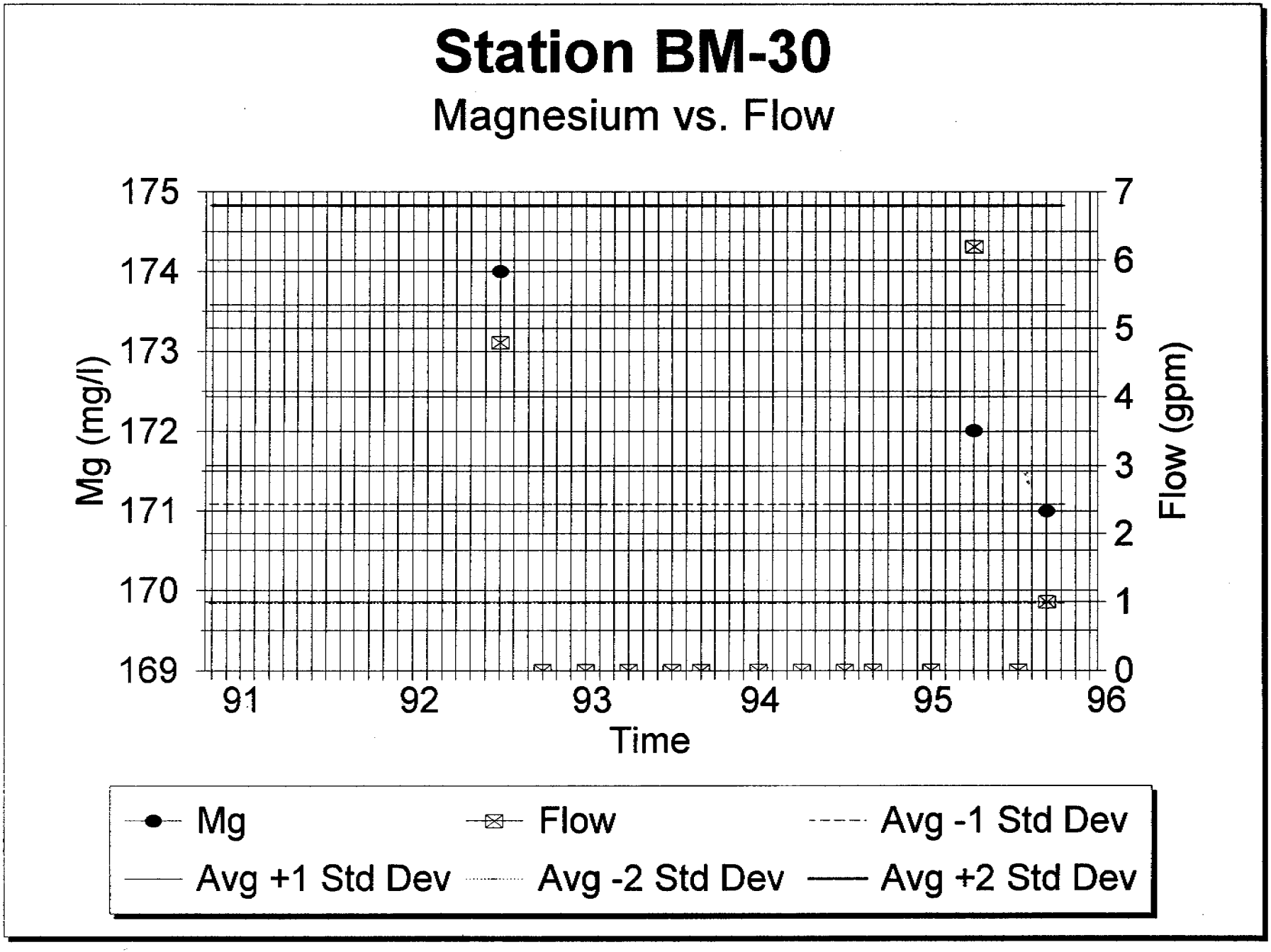

Station BM-30
Sulfate vs. Flow
SO4 (mg/l)
1450
1400
1350
1300
1250
1200
1150
1100
Flow (gpm)
7
6
5
4
3
2
1
0
91
92
93
94
95
96
Time
SO4
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Station BM-30

Calcium vs. Flow

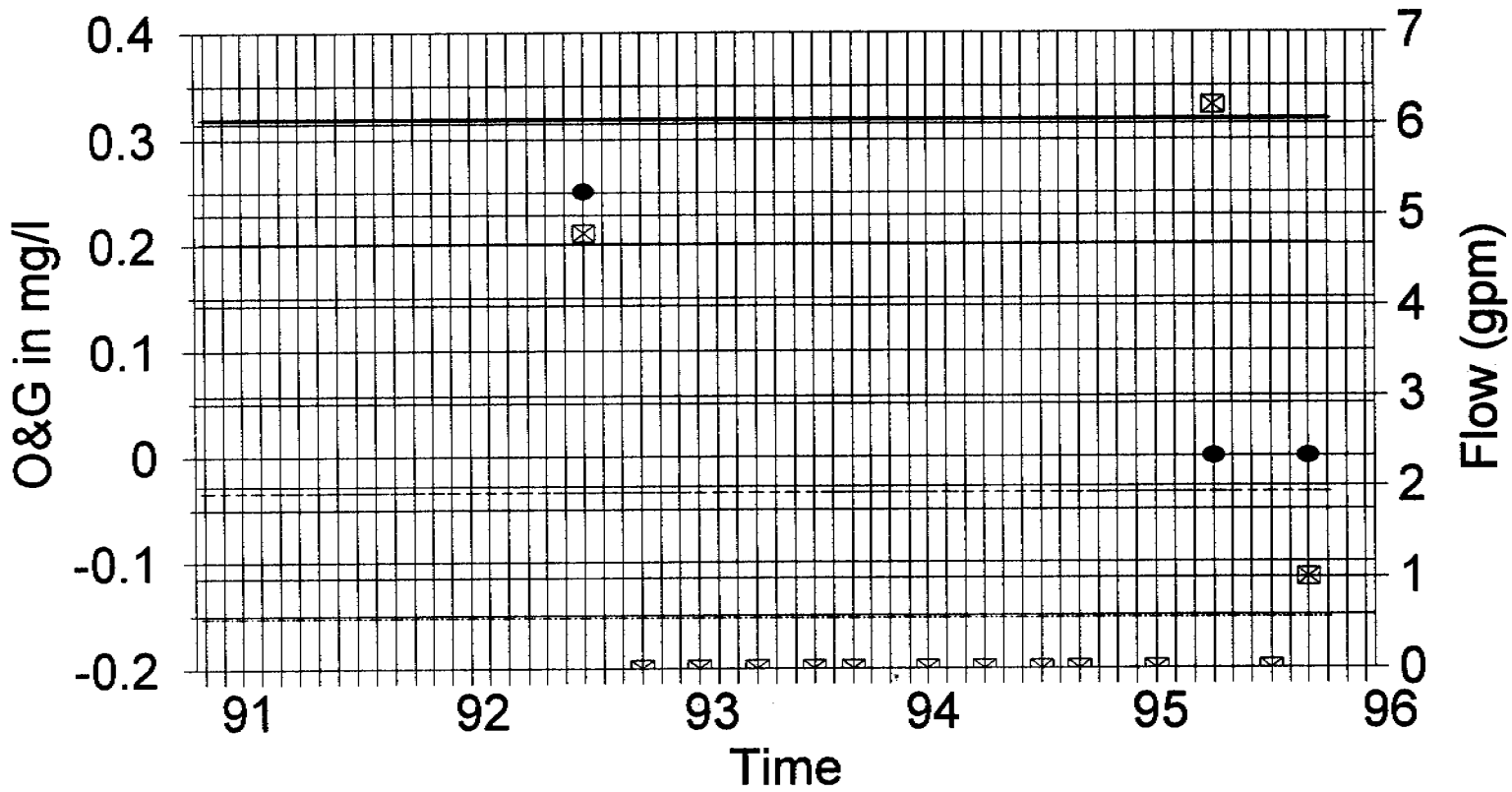


Ca | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev


Station BM-30
Magnesium vs. Flow
175
174
173
172
171
170
169
Mg (mg/l)
7
6
5
4
3
2
1
0
Flow (gpm)
91
92
93
94
95
96
Time
Mg
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Station BM-30

O&G vs. Flow



O&G | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev

Cyprus Plateau Mining Company - Water Quality Data

Print Date 05/10/98

Station: BM-31 Property: Castle Gate Location: SW1/4, SE1/4, Sec 1, T13 S, R8 E Station Type Spring Sampling Frequency: Quarterly Formation: Star Point/Blackhawk Elevation: 7530

Date		Field Measurements					Laboratory Measurements																	Comments
Yr-Mo	Sample Date	Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	
77																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
78																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
79																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
80																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
81																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
82																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
83																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							

Cyprus Plateau Mining Company - Water Quality Data

Print Date 05/10/96

Station: BM-31 Property: Castle Gate Location: SW1/4, SE1/4, Sec 1, T13 S, R8 E Station Type Spring Sampling Frequency: Quarterly Formation: Star Point/Blackhawk Elevation: 7530

Date		Field Measurements					Laboratory Measurements																		Comments
Yr-Mo	Sample Date	Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)		
10																									
11																									
12																									
84																									
2																									
3																									
4																									
5																									
6	6/19/84	285.89																							
7																									
8																									
9	9/7/84	403.92																							
10																									
11																									
12																									
85																									
2																									
3	3/30/85	0																							
4																									
5																									
6	6/15/85	32																							
7																									
8																									
9	9/30/85	7.02																							
10																									
11	11/30/85	0																							
12																									
86																									
2																									
3																									
4	4/4/86	1.7																							
5																									
6	6/30/86	10.3																							
7																									
8																									
9	9/25/86	0																							
10																									
11																									
12	11/24/86	0																							
87																									
2																									
3	3/26/87																								
4																									
5	5/22/87	0																							
6																									
7																									
8	8/10/87	0																							
9																									
10	10/13/87	0																							
11																									
12																									
88																									
2																									
3	3/22/88	0																							
4																									
5																									
6	6/13/88	10																							
7																									
8																									
9	9/26/88	5																							
10																									
11																									
12	12/07/88	3																							
89																									
2																									
3																									
4	4/11/89	5																							
5																									
6	6/21/89																								
7																									
8																									
9	9/21/89	5																							
10																									
11																									
12																									
90																									
2																									
3	3/9/90																								
4																									
5	5/30/90	0																							
6																									

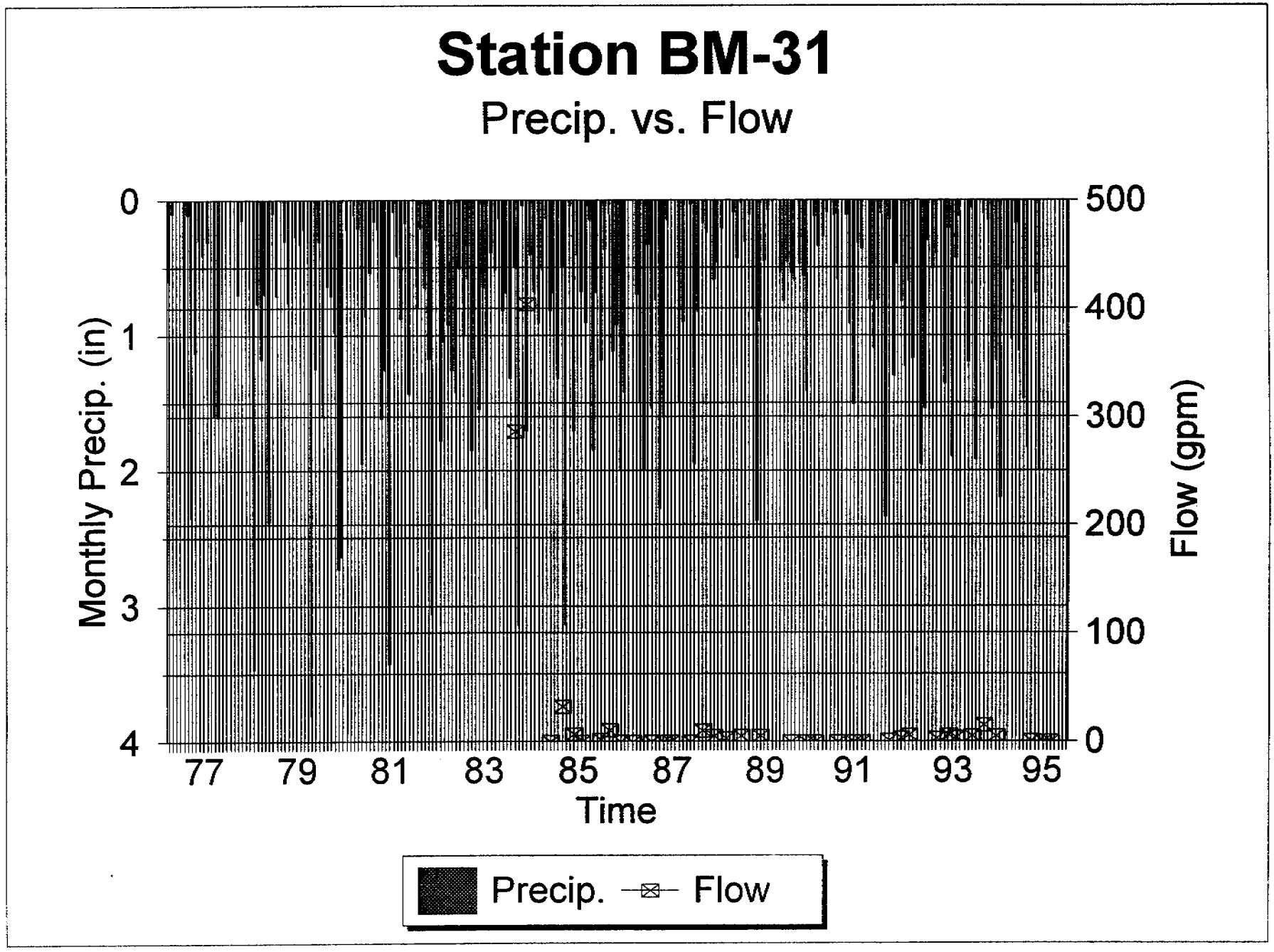
Cyprus Plateau Mining Company - Water Quality Data

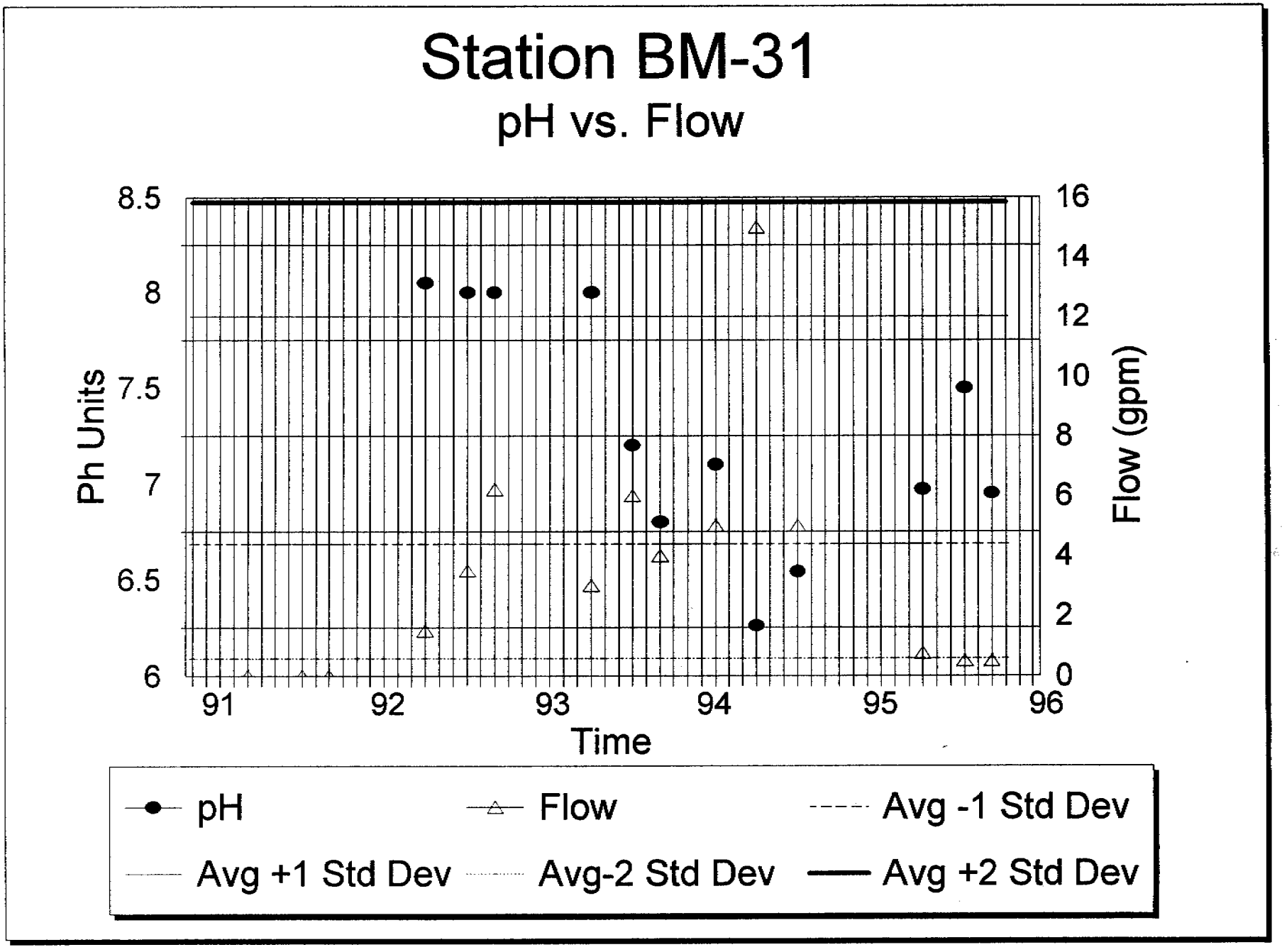
Print Date 05/10/96

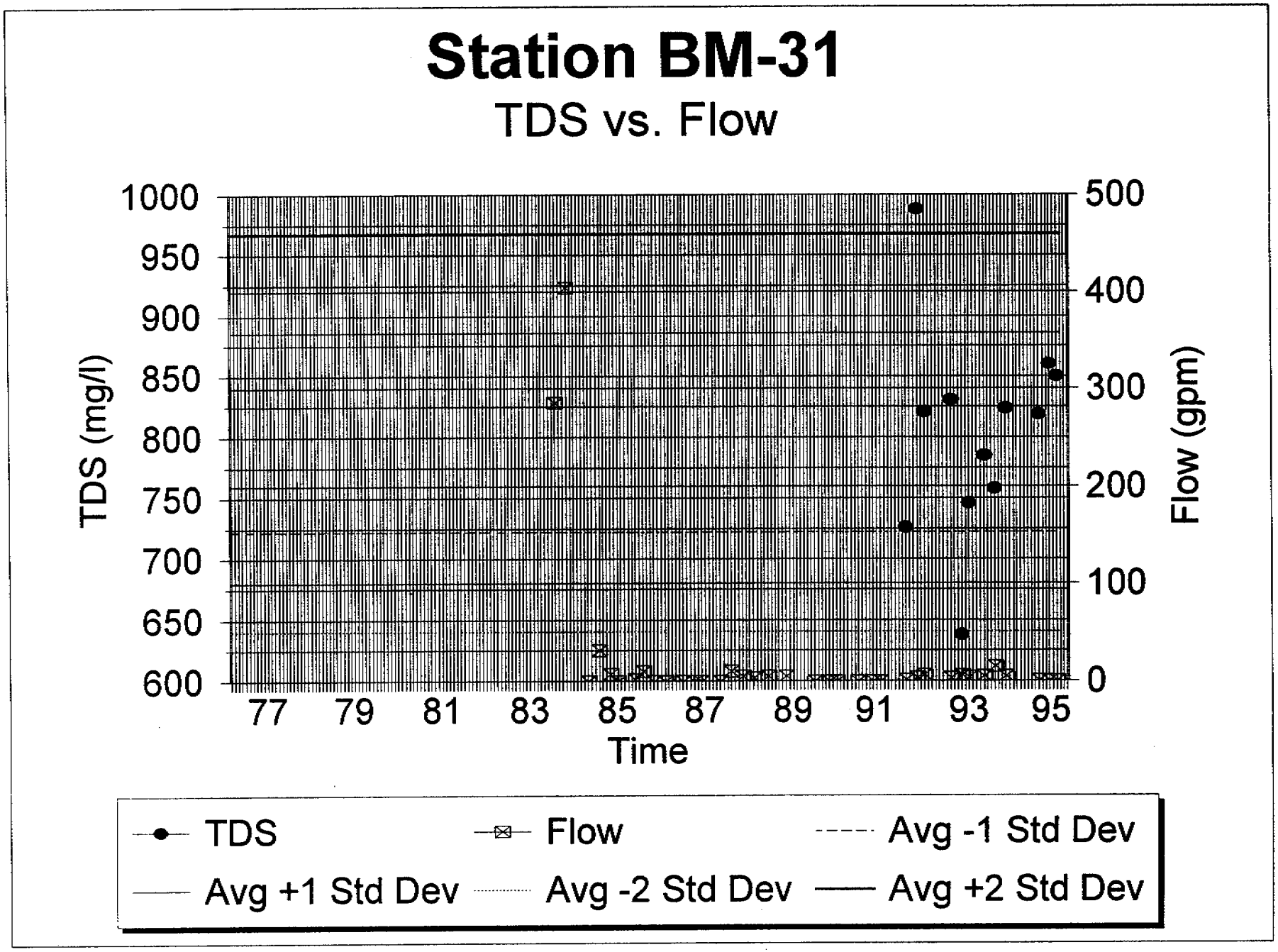
Station: BM-31 | Property: Castle Gate | Location: SW1/4, SE1/4, Sec 1, T13 S, R8 E | Station Type Spring | Sampling Frequency: Quarterly | Formation: Star Point/Blackhawk | Elevation: 7530

Date Yr-Mo	Sample Date	Field Measurements Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	Laboratory Measurements TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
7																								
8																								
9	9/28/90	0																						
10																								
11	11/28/90	0																						
12																								
91																								
2																								
3	3/13/91																							
4																								
5	5/28/91	0																						
6																								
7																								
8																								
9	9/11/91	0																						
10																								
11	11/22/91	0																						
12																								
92																								
2																								
3	3/4/92																							
4																								
5																								
6	6/8/92	1.5	8.05	1402	7		726	43		311	550	0	380	0	33.2	268	100	73						
7																								
8																								
9	9/3/92	3.5	8	1300	9		988	19		446	690	0	544 <	0.1	33.7	268	138	85.1						
10																								
11	11/7/92	6.2	8	1200	6		821	8		437	677	0	533 <	0.1	32.2	273	138	81						
12																								
93																								
2																								
3	3/30/93																							
4																								
5																								
6	6/15/93	3	8	900	15	7	831 <	1 <	0.25	429	684		523	0	33	272	140	79						
7																								
8																								
9	9/20/93	6	7.2	141	85		638	19 <	0.3	273	478		333	0	21	247	120	43						
10																								
11	11/17/93	4	6.8	1205	4		746 <1	1 <	0.26	434	653		529	0	27	264	58	103						
12																								
94																								
2																								
3	3/24/94	5	7.1	1270	7		785	15		424	673		517	0	29	270	88	111						
4																								
5																								
6	6/14/94	15	6.26	1450	8		758	18		415	700		507	0	30	263	44	144						
7																								
8																								
9	9/7/94	5	6.54	1401	8		824	4		428	646		428	0	34	286	129	79						
10																								
11	11/28/94																							
12																								
95																								
2																								
3	3/13/95																							
4																								
5																								
6	6/7/95	0.76	6.97	1760	7		819	0.99		431	727		431	0	32	260	144	89.4						
7																								
8																								
9	9/13/95	0.5	7.5	1580	12		860	0		453	725		453	0	36	267	144	86.7						
10																								
11	11/27/95	0.5	6.95	1260	9		850	0		449	758		449	0	32	268	150	93.2						
12																								
96																								
END DATA																								
Count		37	12	12	12	1	12	12	3	12	12	3	12	12	12	12	12	12	0	0	0	0	0	
Minimum		0	6.3	141.0	4.0	7.0	638.0 <	0.0 <	0.3	273.0	478.0	0.0	333.0 <	0.0	21.0	247.0	44.0	43.0	ERR	ERR	ERR	ERR	ERR	
Maximum		403.92	8.1	1760.0	85.0	7.0	988.0 <	43 <	0.3	453.0	758.0	0.0	544.0 <	0.1	36.0	286.0	150.0	144.0	ERR	ERR	ERR	ERR	ERR	
Average		22.156	7.3	1239.1	13.1	7.0	803.8 <	11 <	0.3	410.8	683.4	0.0	468.9 <	0.0	31.1	267.2	115.9	89.1	ERR	ERR	ERR	ERR	ERR	
Std. Dev		78.581	0.6	388.7	15.9	0.0	81.8 <	12 <	0.0	54.7	74.8	0.0	84.7 <	0.0	3.8	8.7	34.1	23.0	ERR	ERR	ERR	ERR	ERR	
Avg -1 Std		-56.42	6.7	850.3	-2.8	7.0	722.1 <	-2 <	0.2	356.2	588.6	0.0	404.2 <	-0.0	27.3	258.5	81.8	66.1	ERR	ERR	ERR	ERR	ERR	
Avg +1 Std		100.74	7.9	1627.8	29.0	7.0	885.6 <	23 <	0.3	465.5	738.2	0.0	533.6 <	0.1	34.9	275.9	150.0	112.2	ERR	ERR	ERR	ERR	ERR	
Avg -2 Std		-135	6.1	461.6	-18.7	7.0	640.3 <	-14 <	0.2	301.5	513.8	0.0	339.6 <	-0.1	23.5	249.8	47.7	43.0	ERR	ERR	ERR	ERR	ERR	
Avg +2 Std		179.32	8.5	2016.6	44.9	7.0	967.4 <	35 <	0.3	520.2	813.1	0.0	598.3 <	0.1	38.7	284.6	184.1	135.2	ERR	ERR	ERR	ERR	ERR	

NOTE: The "<" symbol indicates that "Less Than" data was found in the data set, statistics are approximate.

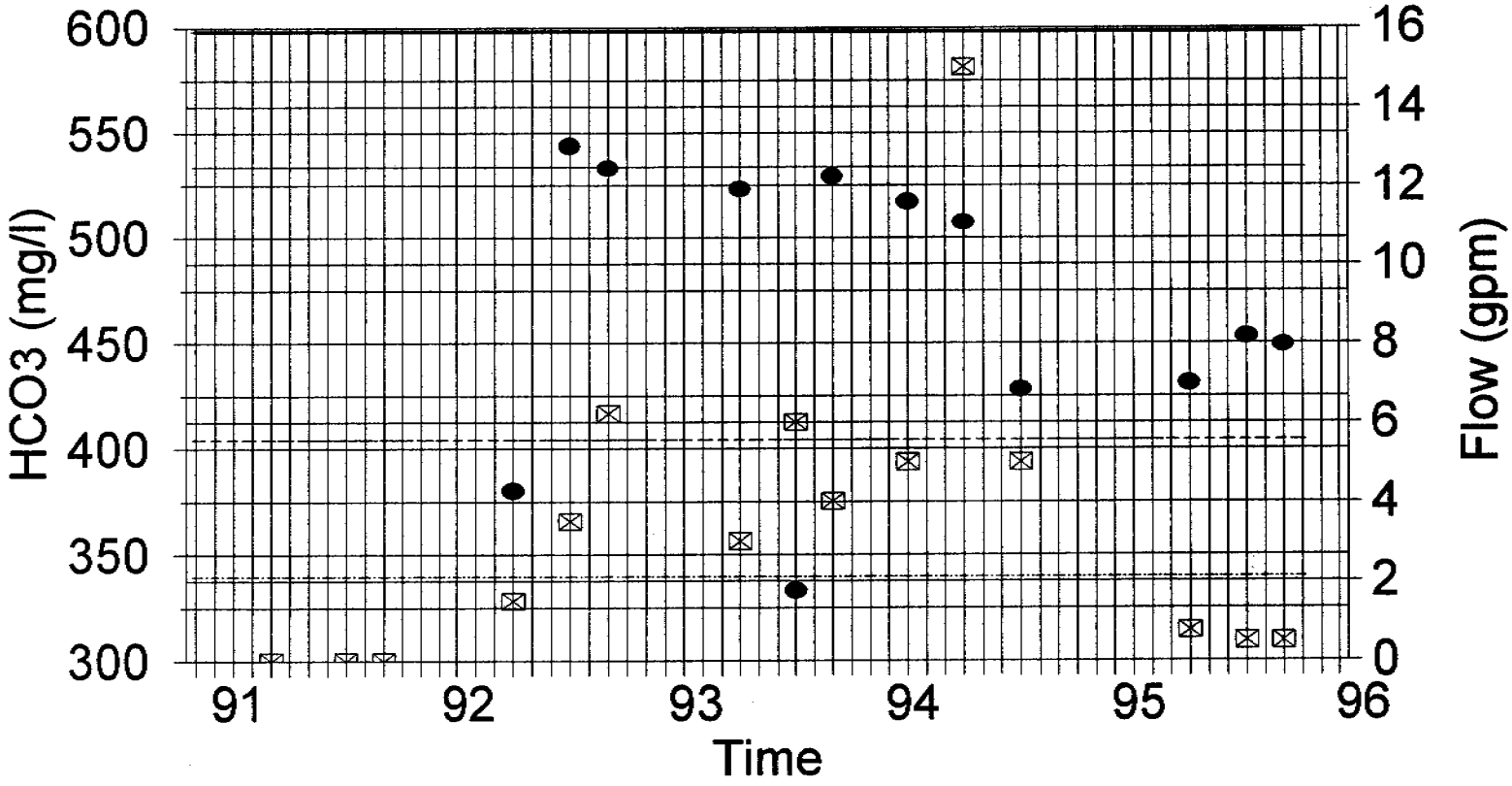

Station BM-31
Precip. vs. Flow
Monthly Precip. (in)
0
1
2
3
4
Flow (gpm)
500
400
300
200
100
0
77
79
81
83
85
87
89
91
93
95
Time
Precip.
Flow


Station BM-31
pH vs. Flow
Ph Units
8.5
8
7.5
7
6.5
6
Flow (gpm)
16
14
12
10
8
6
4
2
0
91
92
93
94
95
96
Time
pH
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg-2 Std Dev
Avg +2 Std Dev

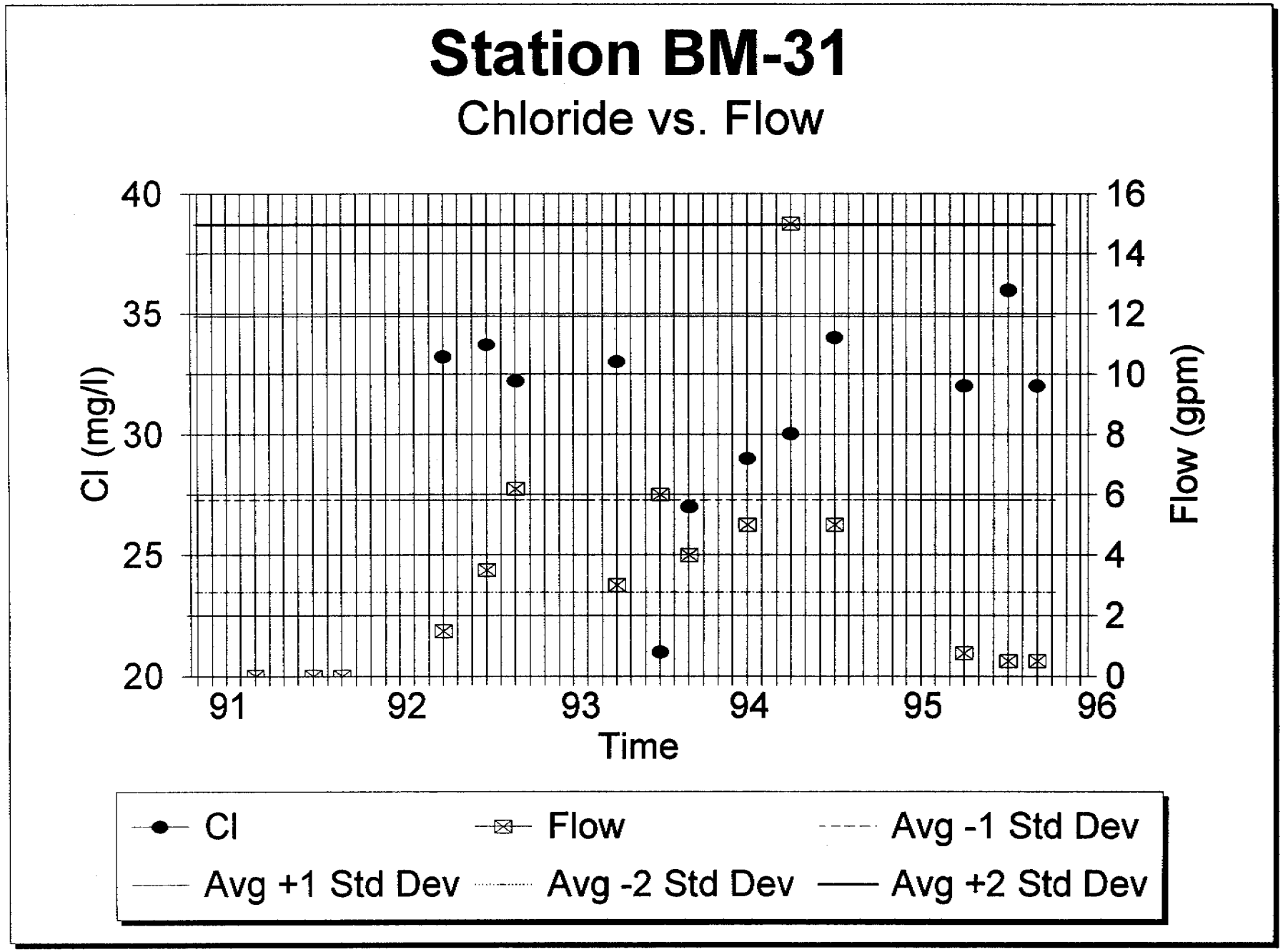

Station BM-31
TDS vs. Flow
TDS (mg/l)
1000
950
900
850
800
750
700
650
600
Flow (gpm)
500
400
300
200
100
0
77
79
81
83
85
87
89
91
93
95
Time
TDS
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Station BM-31

HCO3 vs. Flow

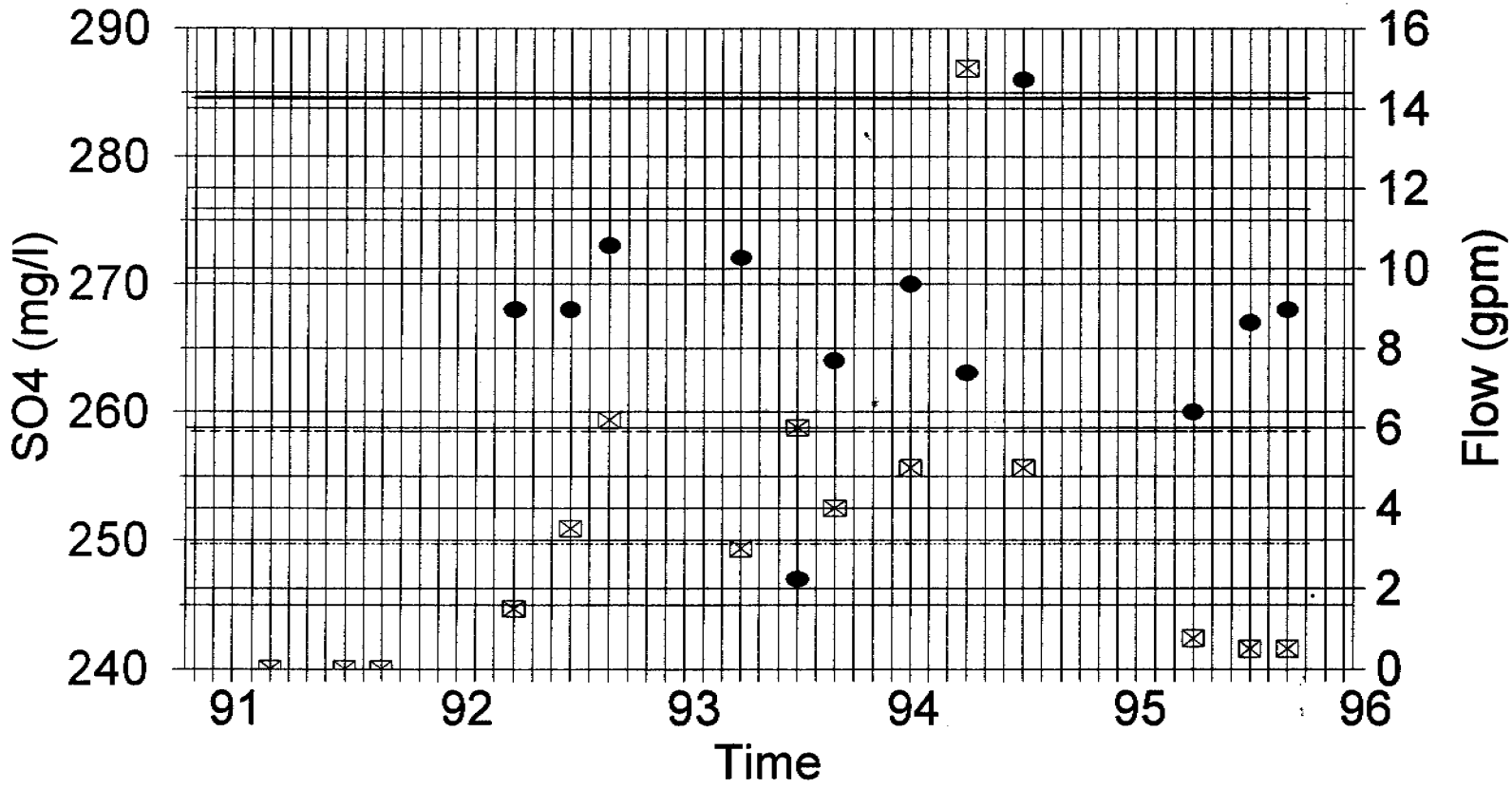


HCO3 | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev


Station BM-31
Chloride vs. Flow
Cl (mg/l)
40
35
30
25
20
Flow (gpm)
16
14
12
10
8
6
4
2
0
91
92
93
94
95
96
Time
Cl
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Station BM-31

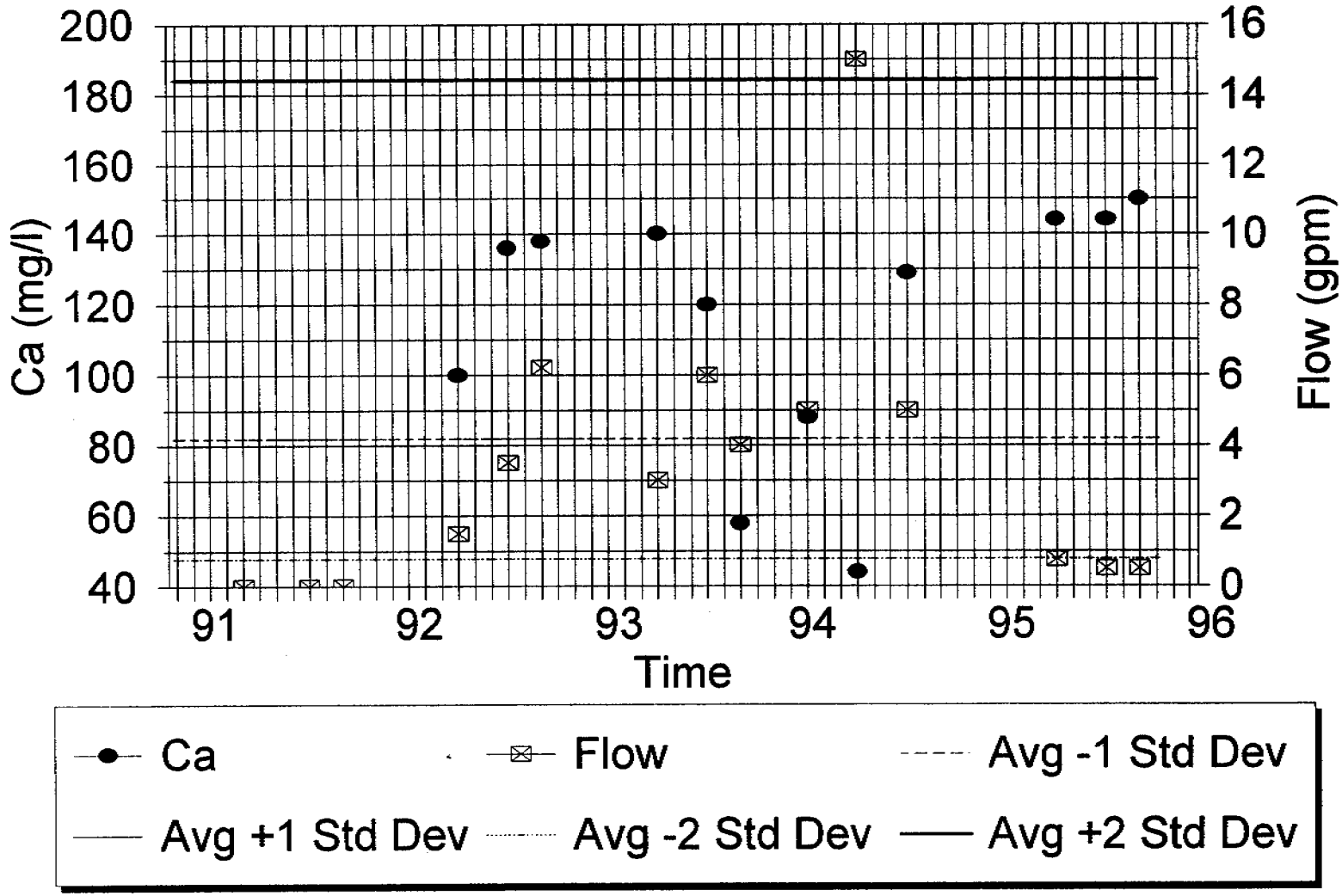
Sulfate vs. Flow

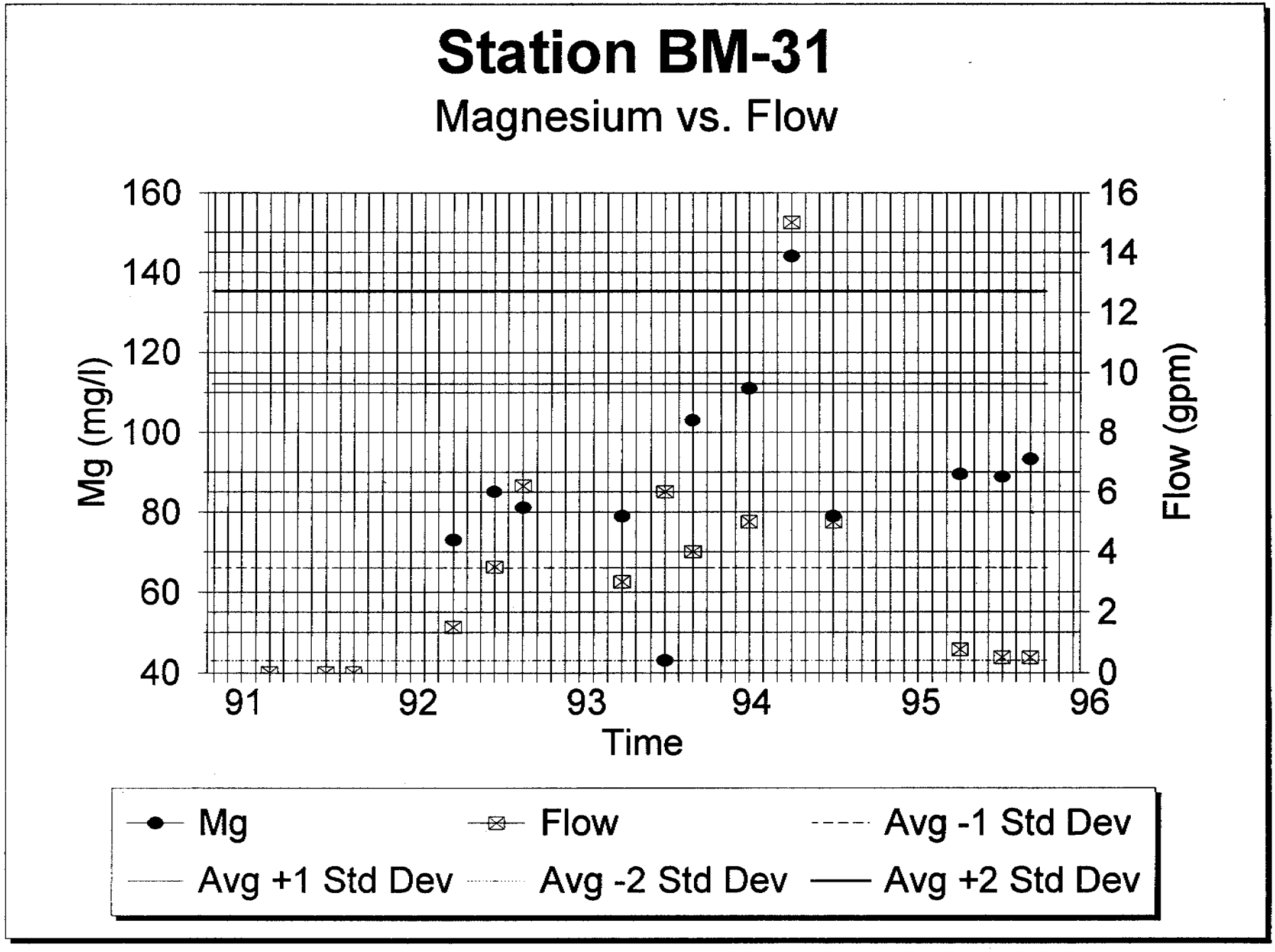


SO4 | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev

Station BM-31

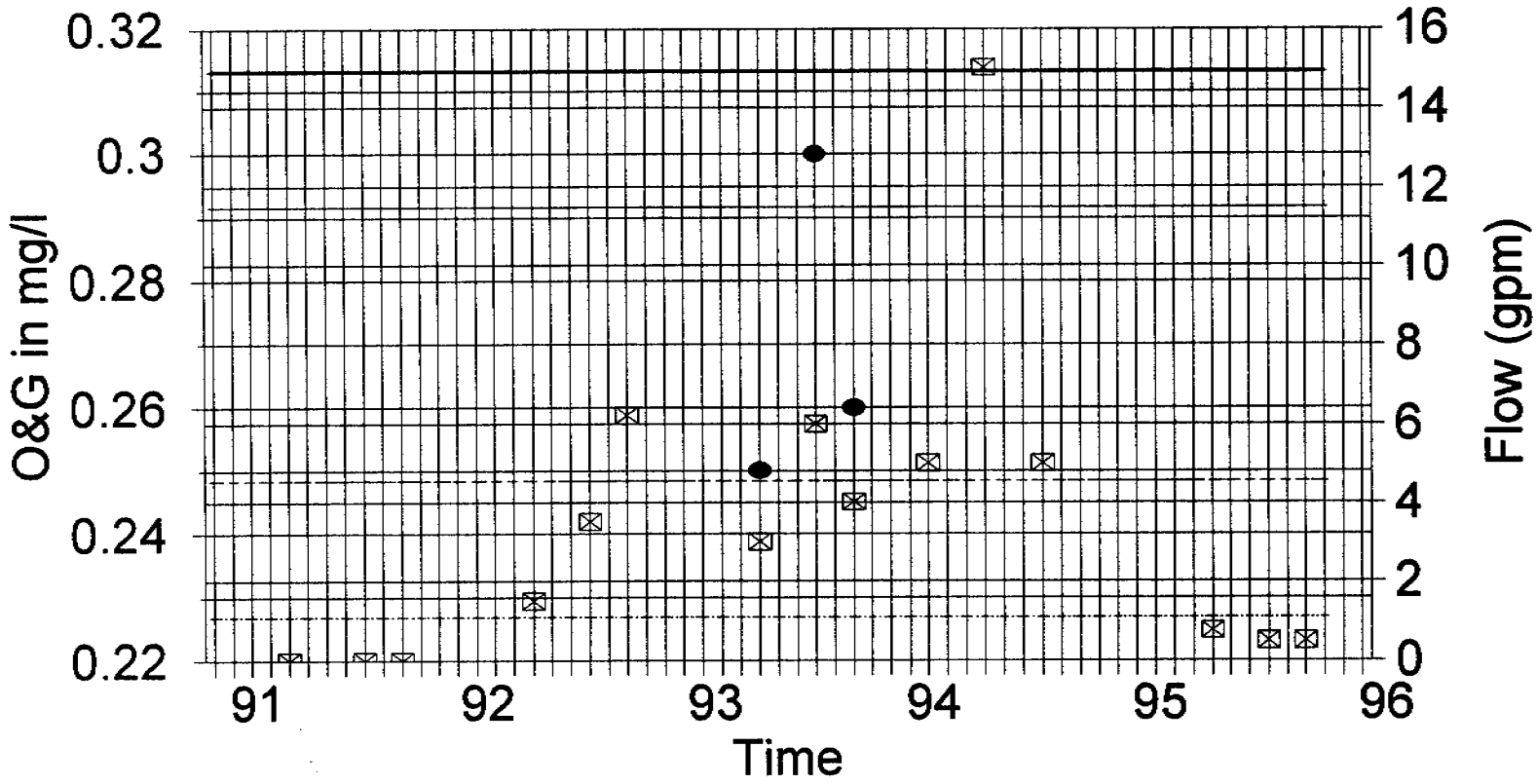
Calcium vs. Flow




Station BM-31
Magnesium vs. Flow
Mg (mg/l)
160
140
120
100
80
60
40
Flow (gpm)
16
14
12
10
8
6
4
2
0
91
92
93
94
95
96
Time
Mg
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Station BM-31

O&G vs. Flow



O&G | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev

Cyprus Plateau Mining Company - Water Quality Data

Print Date 05/10/96

Station: BM-32 Property: Castle Gate Location: NE1/4, NW1/4, Sec 17, T13 S, R9 E Station Type Spring Sampling Frequency: Quarterly Formation: Elevation: 6780

Date		Field Measurements					Laboratory Measurements																	
Yr-Mo	Sample Date	Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
77																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
78																								
2																								
3																								
4																								
5	5/24/78	45					360																	
6																								
7	7/27/78	0																						
8																								
9																								
10																								
11																								
12																								
79																								
2																								
3																								
4																								
5																								
6	6/21/79	36																						
7							365																	
8																								
9																								
10																								
11																								
12																								
80																								
2																								
3																								
4																								
5																								
6	6/23/80	18					325																	
7																								
8																								
9																								
10																								
11																								
12	12/22/80	0																						
81																								
2																								
3																								
4																								
5																								
6	6/23/81	18					352																	
7																								
8																								
9																								
10																								
11	11/6/81	1.8					325																	
12																								
82																								
2																								
3																								
4																								
5																								
6	6/14/82	3.1					268																	
7																								
8																								
9																								
10	10/18/82	1.8					295																	
11																								
12																								
83																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								

Cyprus Plateau Mining Company - Water Quality Data

Print Date 05/10/94

Station: BM-32 | Property: Castle Gate | Location: NE1/4, NW1/4, Sec 17, T13 S, R9 E | Station Type: Spring | Sampling Frequency: Quarterly | Formation: | Elevation: 6780

Date Yr-Mo	Sample Date	Field Measurements Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	Laboratory Measurements TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
10	10/18/83	1.8																						
11							295																	
12																								
84																								
2																								
3																								
4																								
5																								
6	6/19/84	1530																						
7																								
8																								
9	9/9/84	840					1620																	
10																								
11																								
12																								
85																								
2																								
3	3/30/85	0																						
4																								
5																								
6	6/15/85	118					1610																	
7																								
8																								
9	9/30/85	0																						
10																								
11	11/30/85	0																						
12																								
86																								
2																								
3																								
4	4/4/86	28					1506																	
5																								
6	6/30/86	130					1530																	
7																								
8																								
9	9/25/86																							
10																								
11																								
12	11/24/86	6.8					1519																	
87																								
2																								
3	3/26/87	6.4					1506																	
4																								
5	5/22/87	0																						
6																								
7																								
8	8/10/87	3.9					1480																	
9																								
10	10/13/87	6.2					1420																	
11																								
12																								
88																								
2																								
3	3/22/88	1.3					1470																	
4																								
5																								
6	6/14/88	1					1840																	
7																								
8																								
9	9/26/88	10					1640																	
10																								
11																								
12	11/30/88	5					1412																	
89																								
2																								
3																								
4	4/11/89	1					828																	
5																								
6	6/21/89	10					1678																	
7																								
8																								
9	9/21/89	0																						
10																								
11																								
12																								
90																								
2																								
3	3/9/90	0																						
4																								
5	5/30/90	2					1604																	
6																								

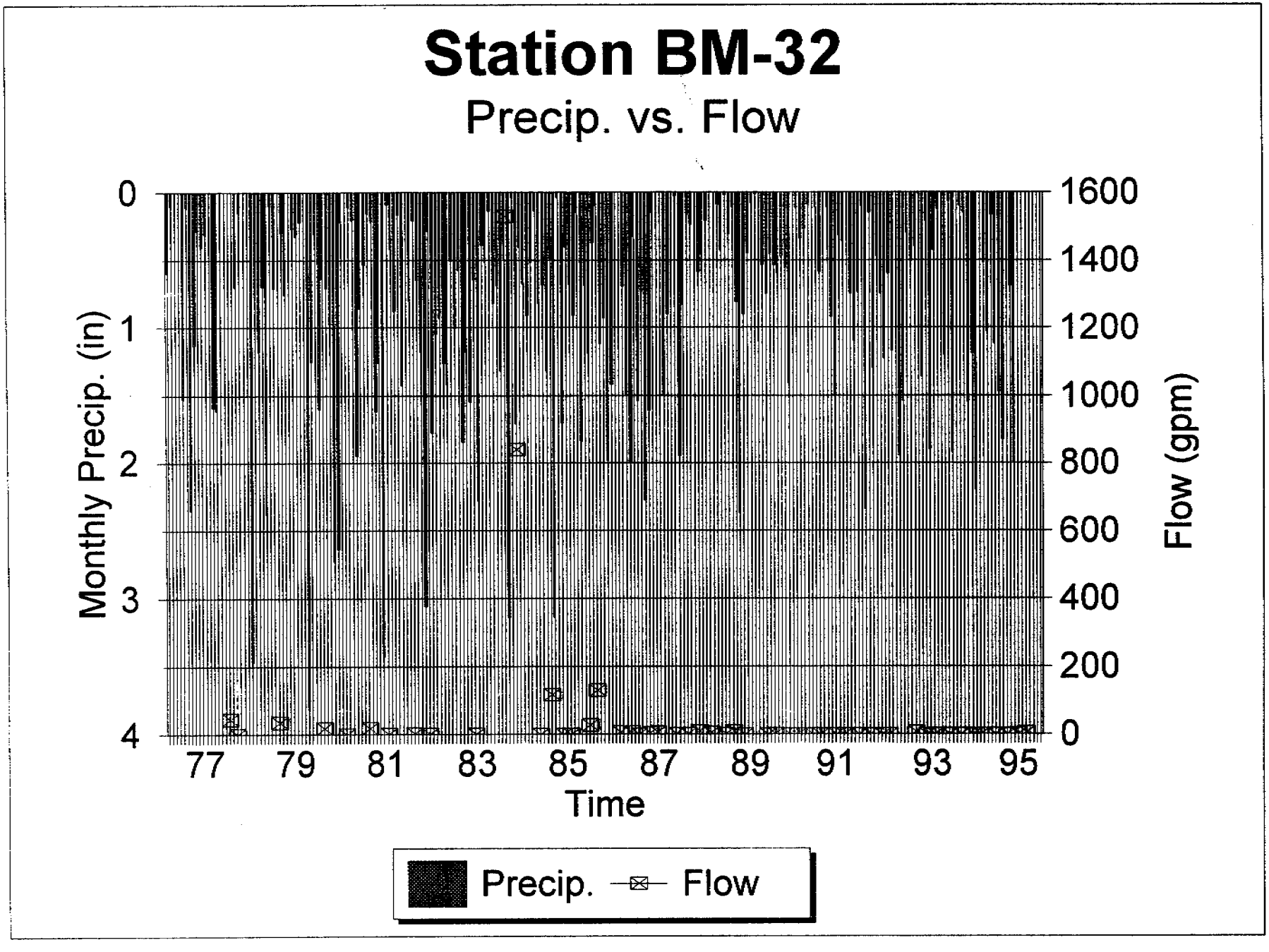
Cyprus Plateau Mining Company - Water Quality Data

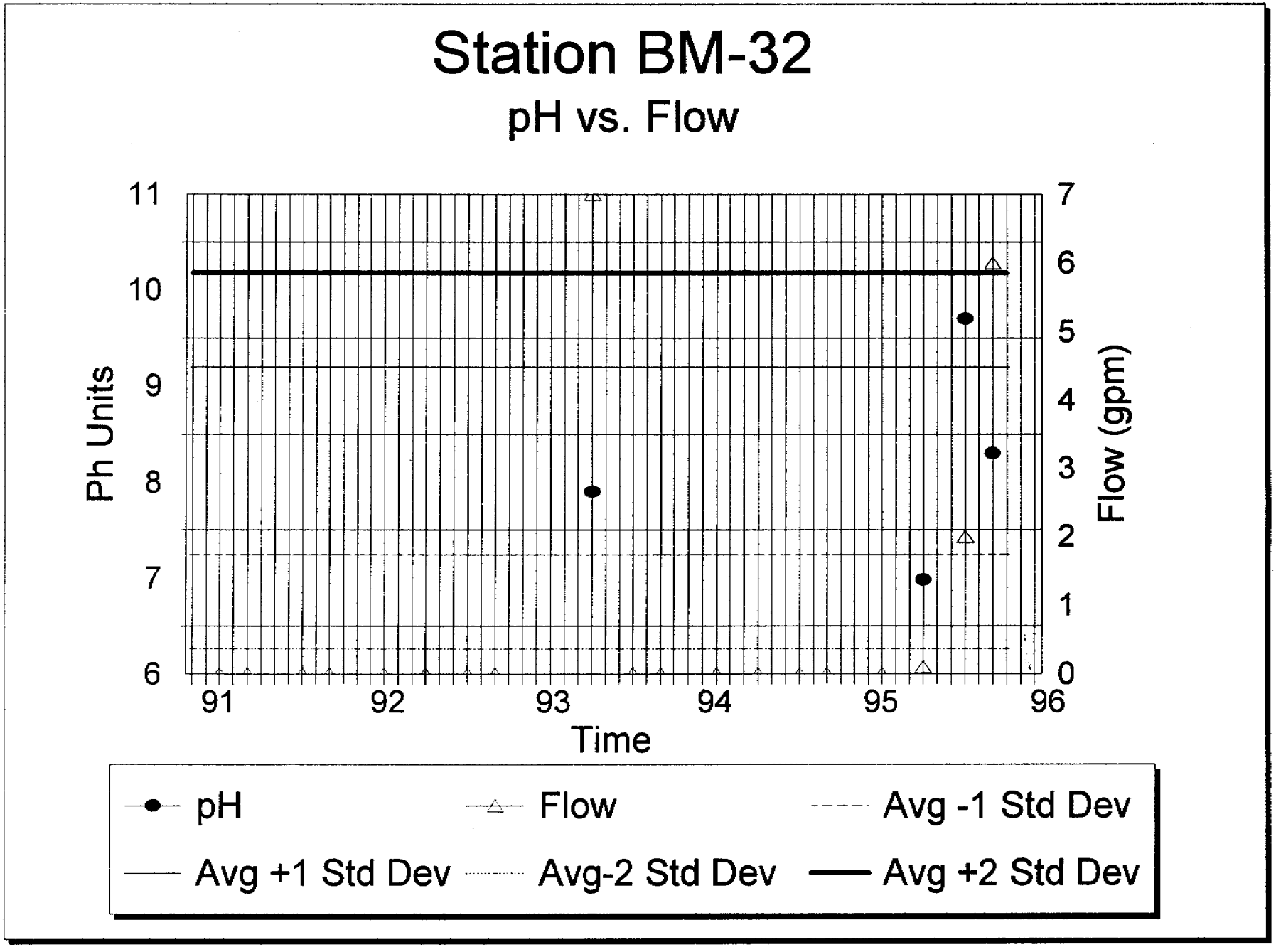
Print Date 05/10/96

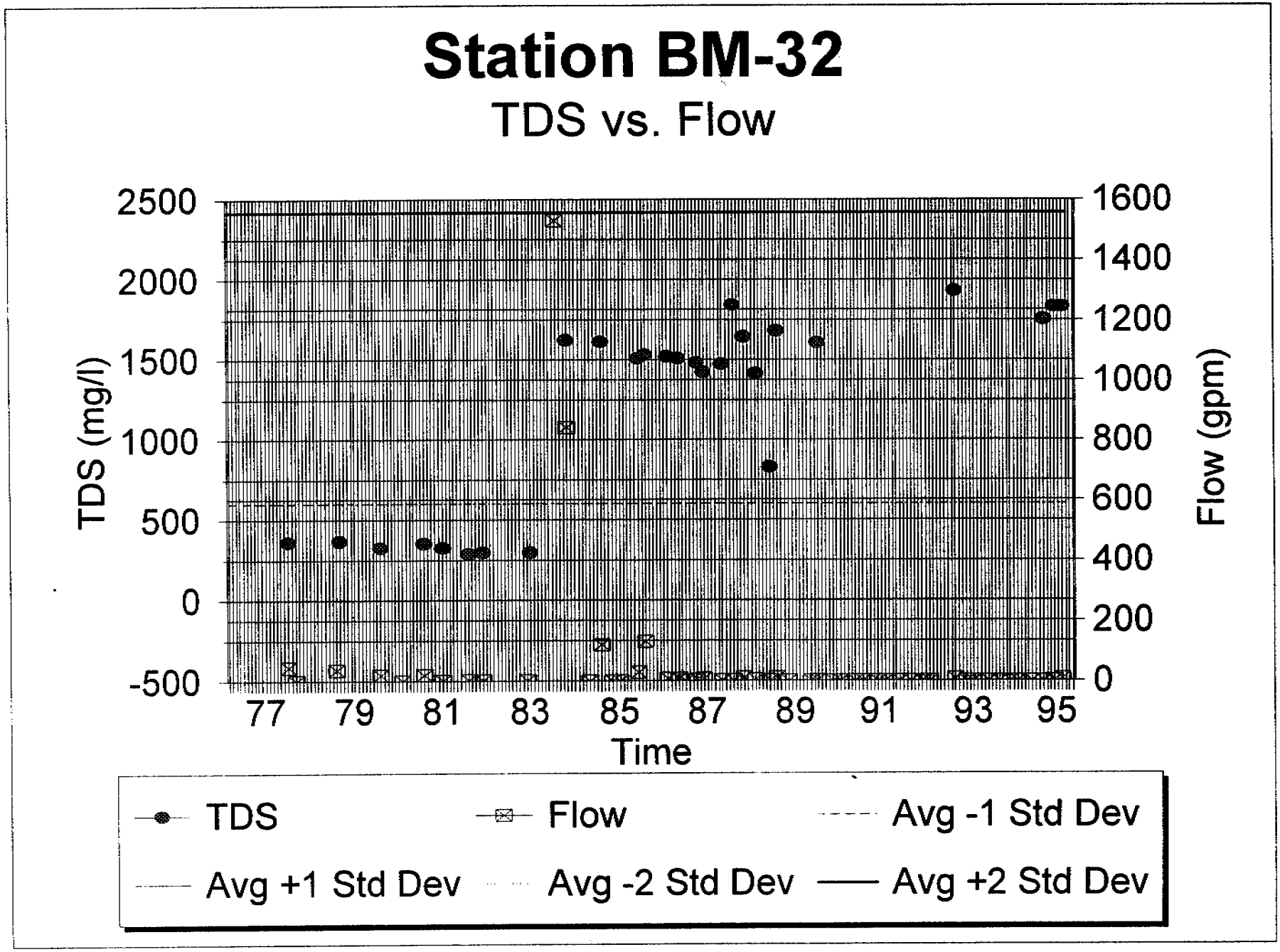
Station: BM-32 | Property: Castle Gate | Location: NE1/4, NW1/4, Sec 17, T13 S, R9 E | Station Type: Spring | Sampling Frequency: Quarterly | Formation: | Elevation: 6780

Date Yr-Mo	Sample Date	Field Measurements Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	Laboratory Measurements TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
7																								
8																								
9	9/29/90	0																						
10																								
11	11/26/90	0																						
12																								
91																								
2																								
3	3/13/91	0																						
4																								
5	5/28/91	0																						
6																								
7																								
8																								
9	9/11/91	0																						
10																								
11	11/22/91	0																						
12																								
92																								
2																								
3	3/4/92	0																						
4																								
5																								
6	6/8/92	0																						
7																								
8																								
9	9/3/92	0																						
10																								
11	11/14/92	0																						
12																								
93																								
2																								
3	3/30/93																							
4																								
5																								
6	6/15/93	7	7.9	1900	9		1930	1 <	0.25	443	1440		540	0	50	1090	230	212						
7																								
8																								
9	9/20/93	0																						
10																								
11	11/17/93	0																						
12																								
94																								
2																								
3	3/24/94	0																						
4																								
5																								
6	6/14/94	0																						
7																								
8																								
9	9/7/94	0																						
10																								
11	11/28/94	0																						
12																								
95																								
2																								
3	3/13/95	0																						
4																								
5																								
6	6/7/95	< 0.1	6.98	2970	7		1750	1.06		410	13.3	0	410	0	40	970	196	204						
7																								
8																								
9	9/13/95	2	9.7	2700	8		1830	8		408	1260	0	408	0	46	915	185	194						
10																								
11	11/27/95	6	8.3	2280	9		1830	6		412	1370	0	412	0	39	977	202	210						
12																								
96																								
END DATA																								
Count		53	4	4	4	0	27	4	1	4	4	3	4	4	4	4	4	4	0	0	0	0	0	
Minimum		< 0	7.0	1900.0	7.0	ERR	288.0	1.0	< 0.3	408.0	13.3	0.0	408.0	0.0	39.0	915.0	185.0	194.0	ERR	ERR	ERR	ERR	ERR	
Maximum		< 1530	9.7	2970.0	9.0	ERR	1930.0	8	< 0.3	443.0	1440.0	0.0	540.0	0.0	50.0	1090.0	230.0	212.0	ERR	ERR	ERR	ERR	ERR	
Average		< 53.589	8.2	2462.5	8.3	ERR	1207.7	4	< 0.3	418.3	1020.8	0.0	442.5	0.0	43.8	988.0	203.3	205.0	ERR	ERR	ERR	ERR	ERR	
Std. Dev		< 235.14	1.0	407.3	0.8	ERR	604.6	3	< 0.0	14.4	585.2	0.0	56.3	0.0	4.5	83.8	16.8	7.0	ERR	ERR	ERR	ERR	ERR	
Avg -1 Std		< -181.5	7.2	2055.2	7.4	ERR	603.1	1	< 0.3	403.9	435.6	0.0	386.2	0.0	39.3	924.4	186.6	198.0	ERR	ERR	ERR	ERR	ERR	
Avg +1 Std		< 288.73	9.2	2869.8	9.1	ERR	1812.3	7	< 0.3	432.6	1606.0	0.0	498.8	0.0	48.2	1051.6	219.9	212.0	ERR	ERR	ERR	ERR	ERR	
Avg -2 Std		< -416.7	6.3	1647.8	6.6	ERR	-1.6	-2	< 0.3	389.5	-149.6	0.0	329.9	0.0	34.8	860.8	170.0	191.0	ERR	ERR	ERR	ERR	ERR	
Avg +2 Std		< 523.86	10.2	3277.2	9.9	ERR	2417.0	10	< 0.3	447.0	2191.3	0.0	555.1	0.0	52.7	1115.2	236.5	219.0	ERR	ERR	ERR	ERR	ERR	

NOTE: The "<" symbol indicates that "Less Than" data was found in the data set, statistics are approximate.

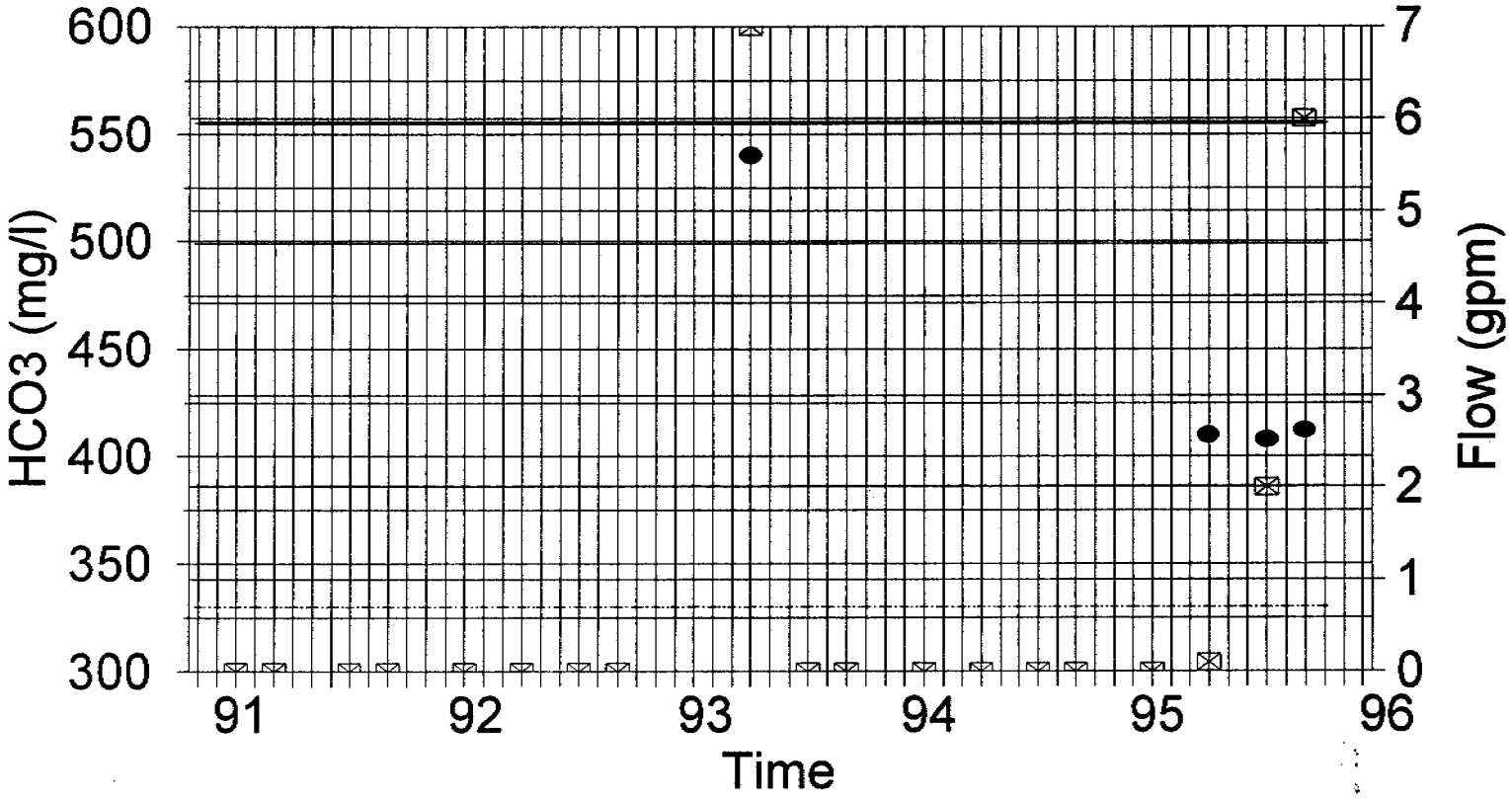

Station BM-32
Precip. vs. Flow
Monthly Precip. (in)
0
1
2
3
4
Flow (gpm)
1600
1400
1200
1000
800
600
400
200
0
77
79
81
83
85
87
89
91
93
95
Time
Precip.
Flow


Station BM-32
pH vs. Flow
Ph Units
11
10
9
8
7
6
Flow (gpm)
7
6
5
4
3
2
1
0
91
92
93
94
95
96
Time
pH
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg-2 Std Dev
Avg +2 Std Dev


Station BM-32
TDS vs. Flow
TDS (mg/l)
2500
2000
1500
1000
500
0
-500
Flow (gpm)
1600
1400
1200
1000
800
600
400
200
0
77
79
81
83
85
87
89
91
93
95
Time
TDS
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Station BM-32

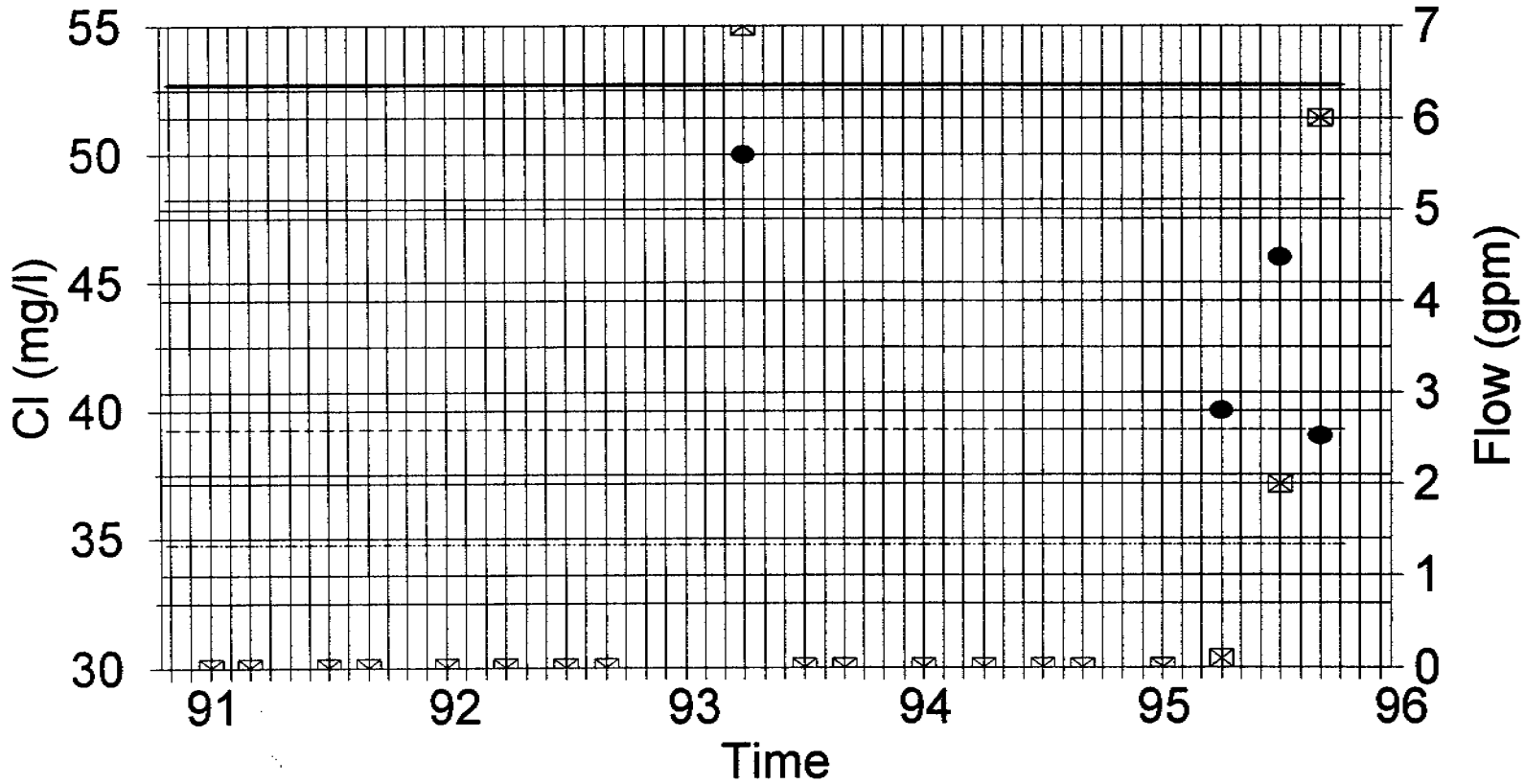
HCO3 vs. Flow



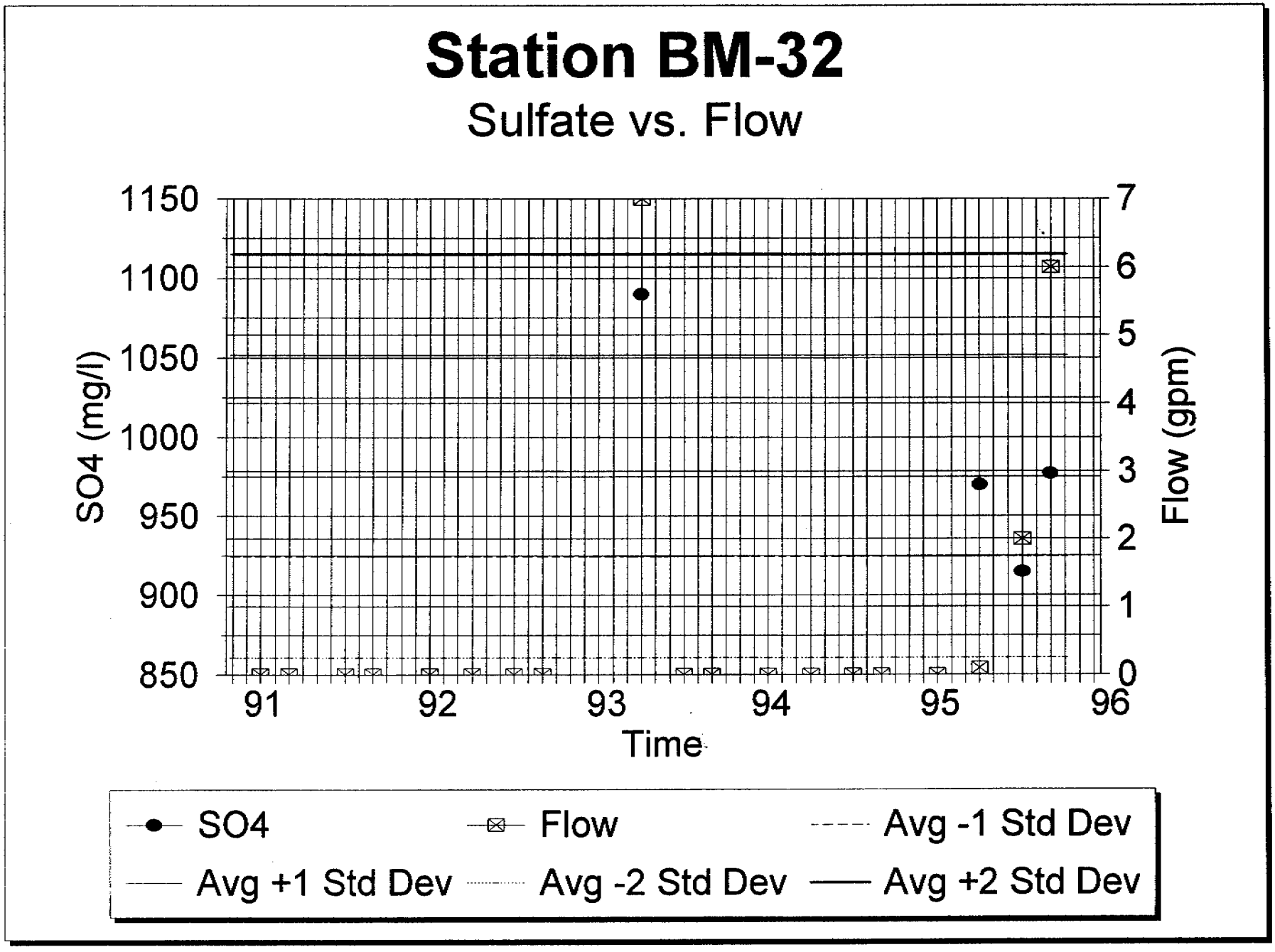
HCO3 | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev

Station BM-32

Chloride vs. Flow

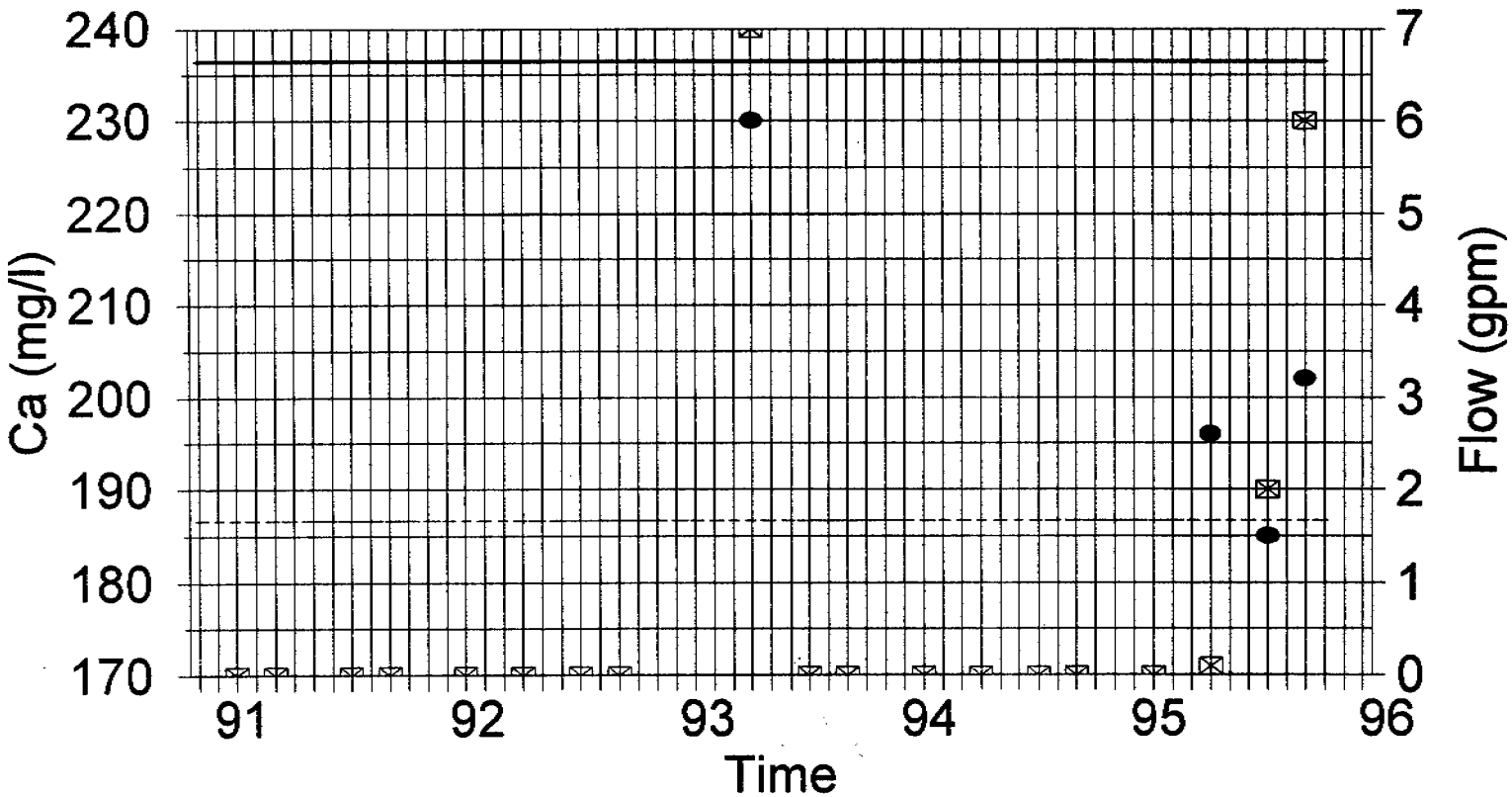


Cl | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev


Station BM-32
Sulfate vs. Flow
SO4 (mg/l)
1150
1100
1050
1000
950
900
850
Flow (gpm)
7
6
5
4
3
2
1
0
91
92
93
94
95
96
Time
SO4
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Station BM-32

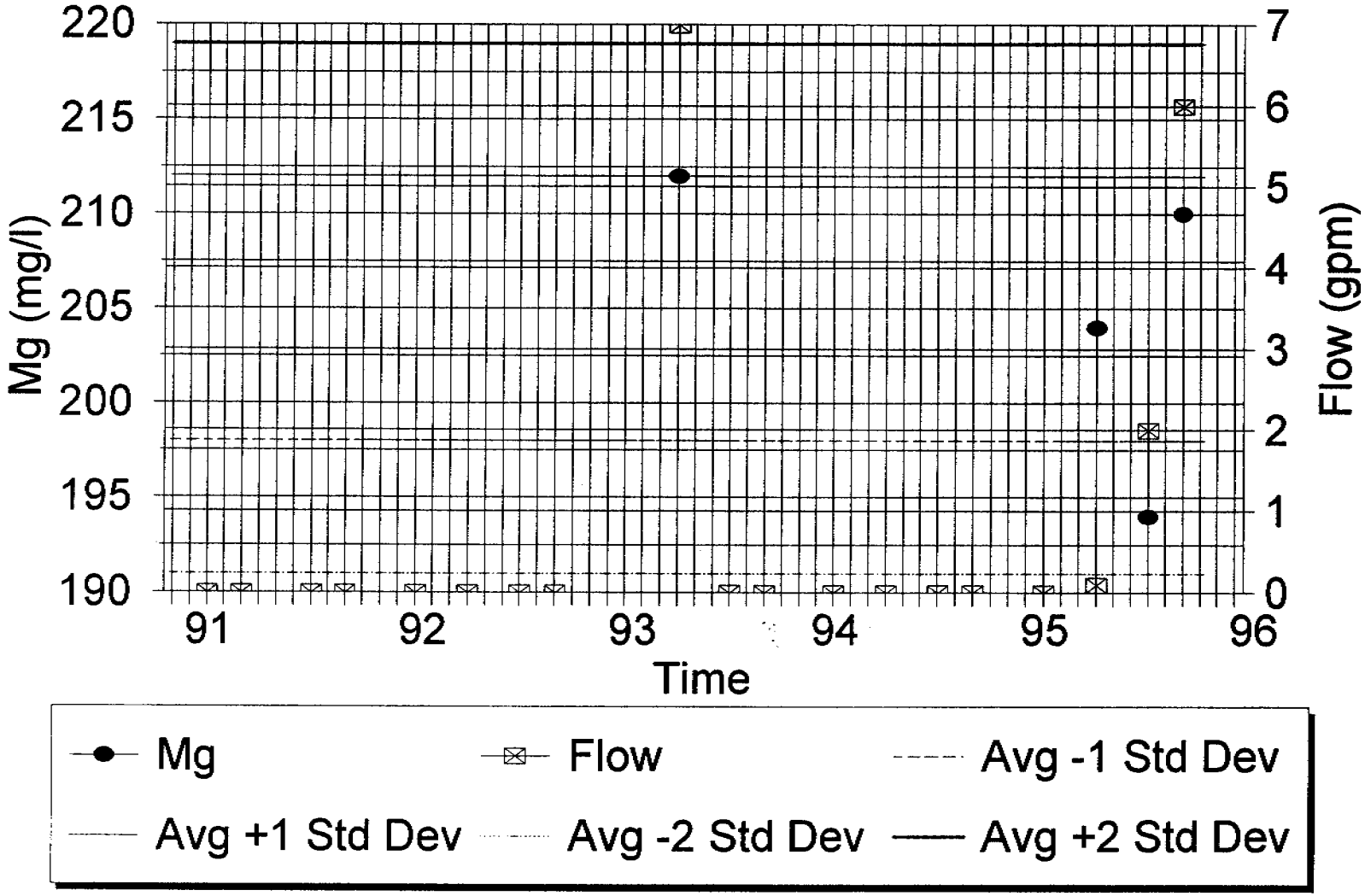
Calcium vs. Flow



Ca | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev

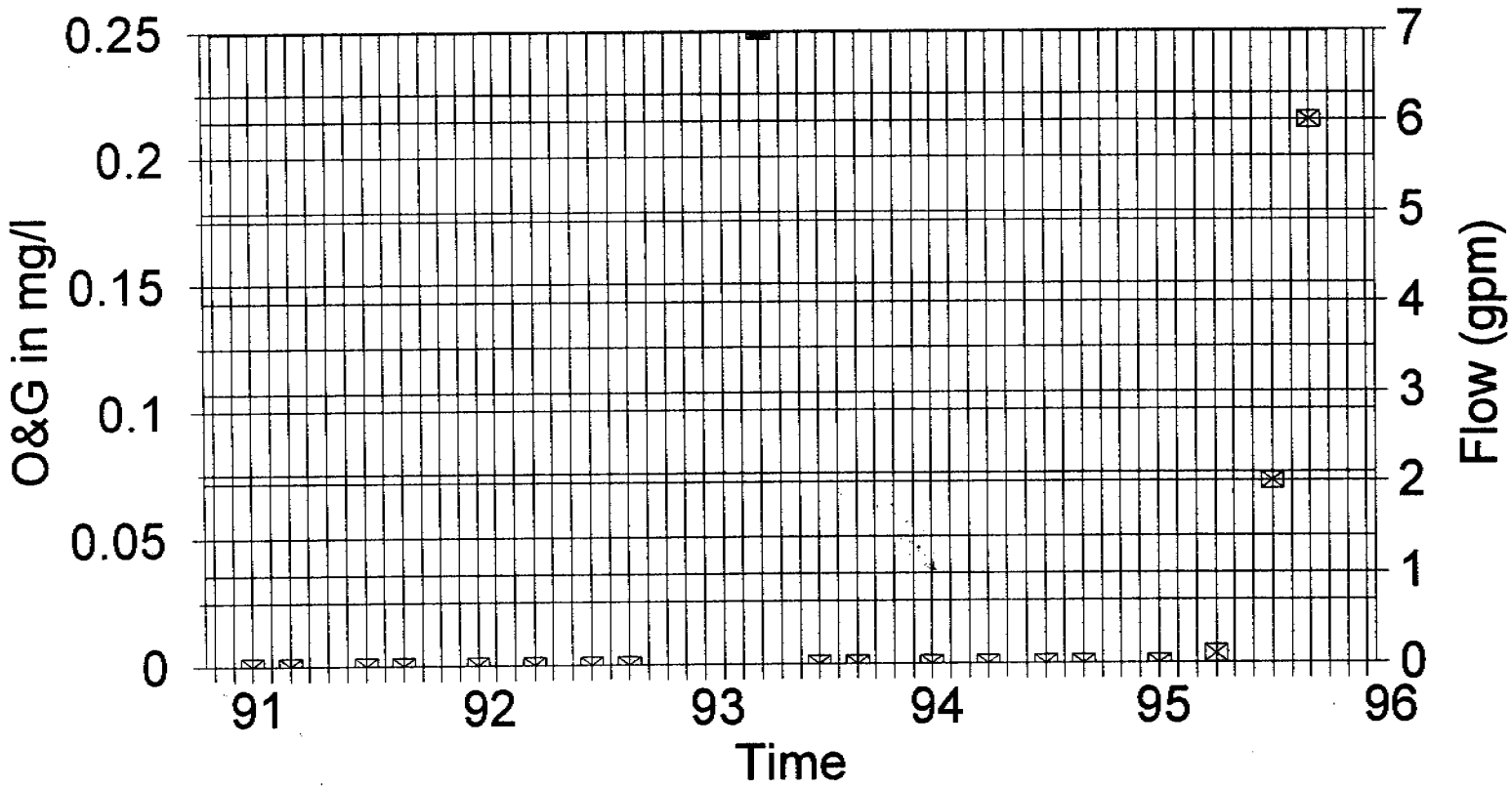
Station BM-32

Magnesium vs. Flow



Station BM-32

O&G vs. Flow



O&G | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev

Appendix B
Water Quality Data
Surface Water

Cyprus Plateau Mining Company - Water Quality Data

Print Date 04/10/96

Station: B-5 Property: Castle Gate Location: SE1/4, NW1/4, Sec 1, T13 S, R9 E Station Type River Sampling Frequency: Quarterly Formation: Elevation: 8025

Date		Field Measurements					Laboratory Measurements																	Comments
Yr-Mo	Sample Date	Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ao-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	
77																								
2																								
3																								
4	4/13/77	48					380																	
5	5/9/77	156					320																	
6	6/1/77	64					330																	
7	7/1/77	25					235																	
8	8/3/77	35					228																	
9	9/8/77	17					200																	
10	10/12/77	2.6					310																	
11	11/9/77	1.7					434																	
12	12/14/77	12.5					258																	
78	1/11/78	8.5					308																	
2	2/8/78	10					321																	
3	3/8/78	36					367																	
4	4/12/78	159					368																	
5	5/10/78	204					330																	
6	6/14/78	84					293																	
7																								
8	8/9/78	114					238																	
9																								
10	10/11/78	60					268																	
11																								
12	12/13/78						420																	
79																								
2	2/15/79	49					448																	
3																								
4	4/18/79	255					425																	
5																								
6	6/13/79	170					270																	
7																								
8	8/8/79	170					318																	
9																								
10	10/30/79	12.8					365																	
11																								
12	12/26/79	60					380																	
80																								
2	2/13/80	31					355																	
3																								
4	4/17/80	340					288																	
5																								
6	6/5/80	612					258																	
7																								
8	8/7/80	108					230																	
9																								
10	10/28/80	33					340																	
11																								
12	12/29/80	14					310																	
81																								
2	2/4/81						358																	
3																								
4	4/7/81	24					400																	
5																								
6	6/23/81						210																	
7																								
8	8/27/81						198																	
9																								
10	10/29/81						300																	
11																								
12	12/23/81						365																	
82																								
2	2/15/82						365																	
3																								
4	4/14/82						1090																	
5																								
6	6/14/82						266																	
7																								
8	8/3/82						265																	
9																								
10	10/7/82						286																	
11																								
12	12/21/82						388																	
83																								
2	2/24/83						270																	
3																								
4	4/21/83						362																	
5																								
6	6/28/83						266																	
7																								
8	8/17/83						256																	
9																								
10	10/18/83						225																	

Cyprus Plateau Mining Company - Water Quality Data

Print Date 04/10/96

Station: B-5 | Property: Castle Gate | Location: SE1/4, NW1/4, Sec 1, T13 S, R9 E | Station Type: River | Sampling Frequency: Quarterly | Formation: | Elevation: 6028

Date Yr-Mo	Sample Date	Field Measurements Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	Laboratory Measurements TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
11																								
12																								
84																								
2																								
3																								
4																								
5																								
6	6/19/84						220																	
7																								
8																								
9	9/10/84						199																	
10																								
11																								
12																								
85																								
2																								
3	3/30/85	< 10					300																	
4																								
5																								
6	6/15/85	< 10					248																	
7																								
8																								
9	9/30/85	< 10					260																	
10																								
11	11/30/85	< 10					388																	
12																								
86																								
2																								
3																								
4	4/3/86	< 10					306																	
5																								
6	6/23/86	< 10					223																	
7																								
8																								
9	9/25/86	< 10					203																	
10																								
11	11/24/86	< 10					490																	
12																								
87																								
2																								
3	3/26/87	> 10					410																	
4																								
5	5/22/87	> 10					261																	
6																								
7																								
8	8/10/87	> 10					188																	
9																								
10	10/13/87	> 10					239																	
11																								
12																								
88																								
2																								
3	3/22/88	> 10					302																	
4																								
5																								
6	6/13/88	> 10					248																	
7																								
8																								
9	9/14/88	> 100					216																	
10																								
11	11/30/88	100					284																	
12																								
89																								
2																								
3																								
4	4/10/89	10					248																	
5																								
6	6/21/89	< 100					234																	
7																								
8																								
9	9/24/89	< 100					200																	
10																								
11																								
12																								
90																								
2																								
3	3/9/90	> 5	7.6	1290	2	8	369	27	< 5	240.66	275.78	0	293.6	0	19.3	74.5	67.4	26.2						
4																								
5	5/30/90	> 10	8	400	4	10	242	63	20.8	179.54	220.88	0	209.7	4.6	8.4	72.4	52.2	22						
6																								
7																								
8																								

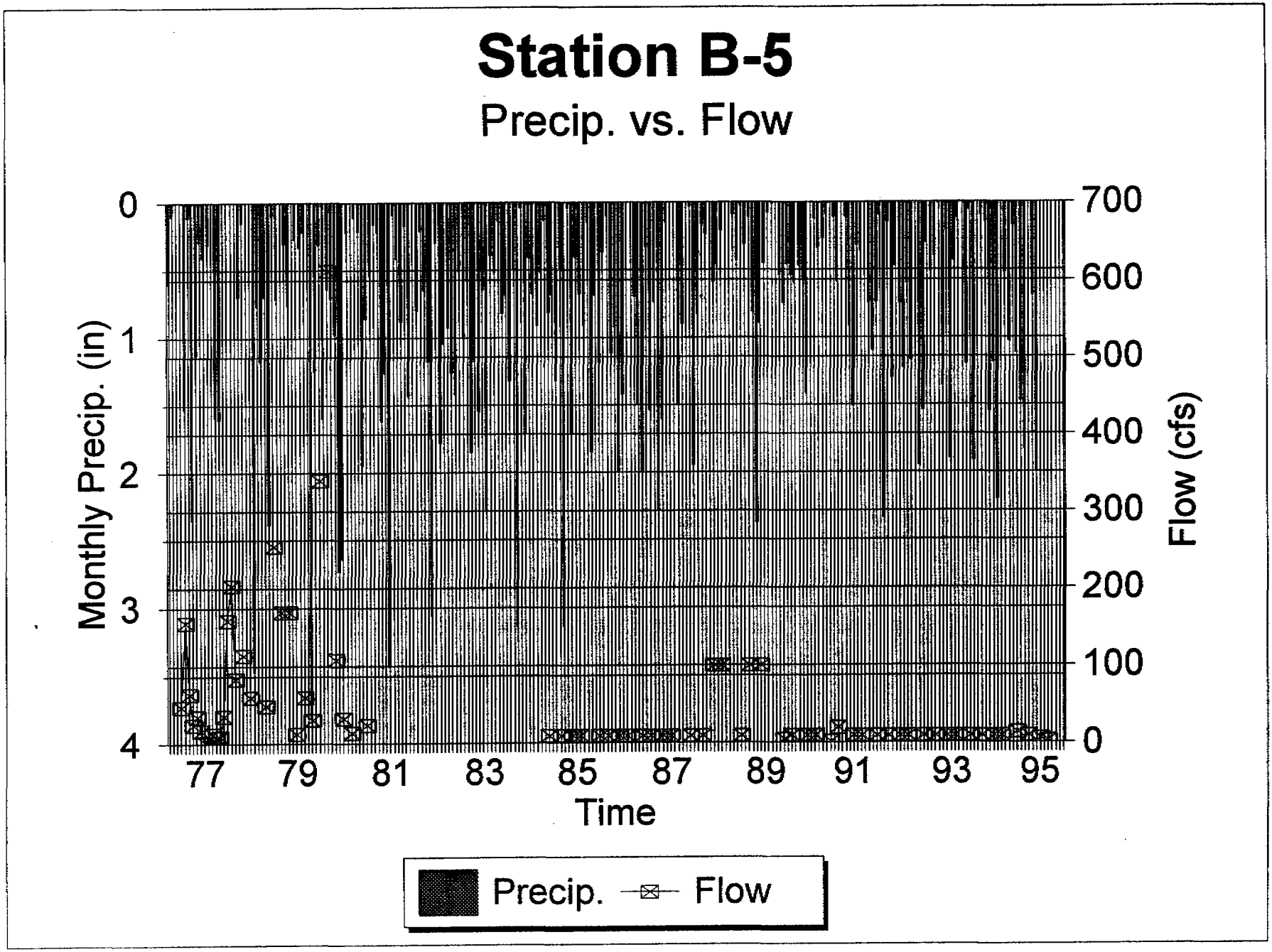
Cyprus Plateau Mining Company - Water Quality Data

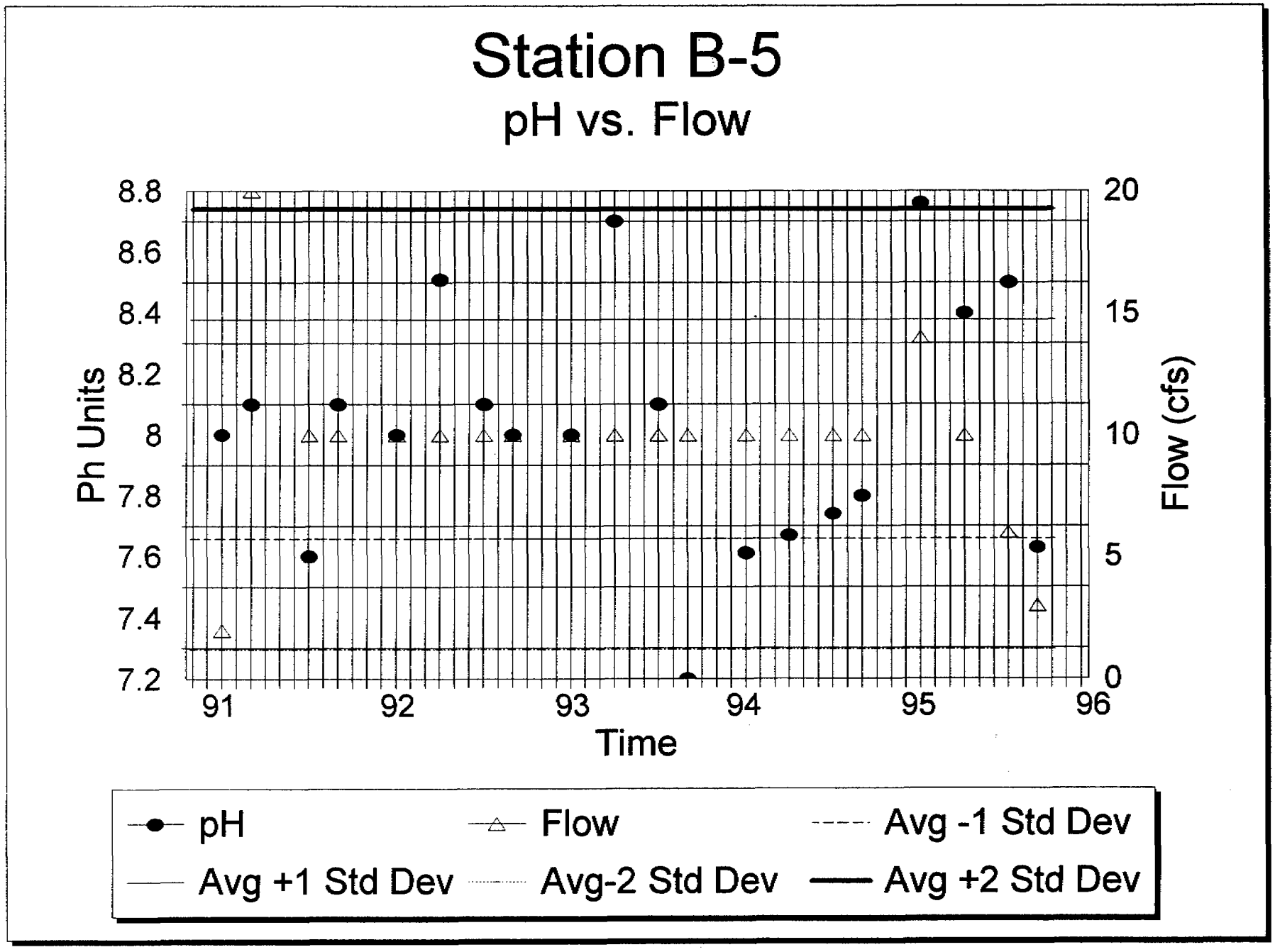
Print Date 04/10/96

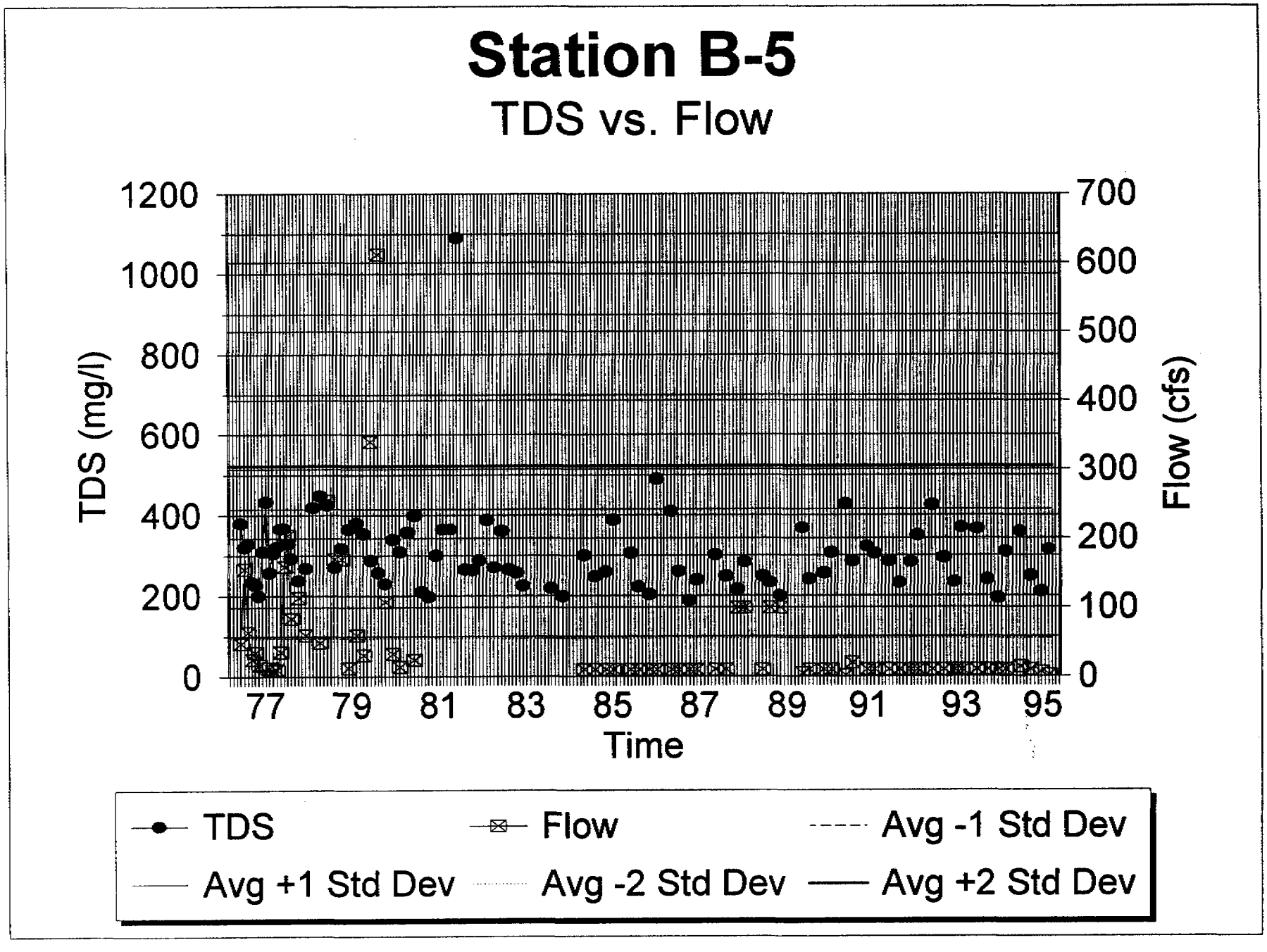
Station: B-5 | Property: Castle Gate | Location: SE1/4, NW1/4, Sec 1, T13 S, R9 E | Station Type: River | Sampling Frequency: Quarterly | Formation: | Elevation: 6025

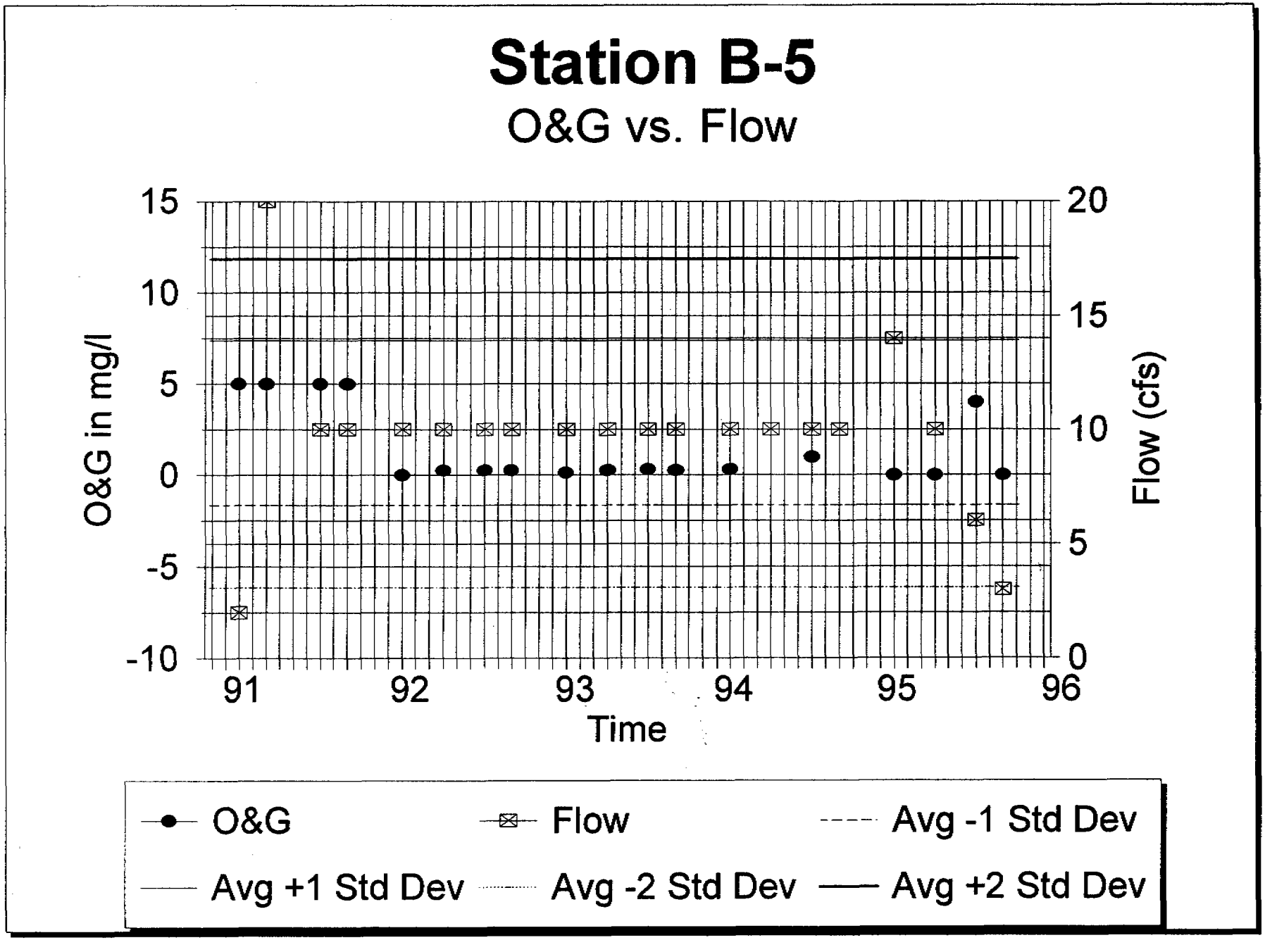
Date Yr-Mo	Sample Date	Field Measurements: Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	Laboratory Measurements: TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
9	9/29/90	> 10	8.1	440	5	9	257	49 <	5	181	213	0	221	0	18.9	39.1	46.6	23.5						
10																								
11	11/26/90	> 10	8	490	2	9	308	21 <	5	239	253	0	251	20.4	16.4	52.3	56.2	27.4						
12																								
91																								
2																								
3	3/13/93	< 2	8	700	2	9	428	6 <	5	294	306	0	359	0	27.6	87.6	65.1	34.9						
4																								
5	5/26/91	> 20	8.1	620	52	9	288	281 <	5	227	242	0	278	0	7.6	44.9	85.8	19						
6																								
7																								
8																								
9	9/11/91	> 10	7.6	450	12	9	322	5280 <	5	184	207	0	224	0	10.2	42.8	50.4	19.8						
10																								
11	11/22/91	> 10	8.1	690	1	8	305	31 <	5	221	232	0	270	0	12.9	54.4	54.6	23.3						
12																								
92																								
2																								
3	3/4/92	< 10	8	640	1	8	286	250 <	0.01	195	216	0	238	0	18.8	52.7	49.7	22.5						
4																								
5																								
6	6/8/92	> 10	8.51	470	8	8	232	180 <	0.25	168	190	0	205	0	7.09	34.6	40.3	21.7						
7																								
8																								
9	9/3/92	> 10	8.1	490	9	9	284	28 <	0.25	156	196	0	190	0	12.7	50.2	39.5	23.7						
10																								
11	11/7/92	> 10	8	600	-1	8	350	12 <	0.28	227	270	0	270	3.3	16.5	75.7	73	21.4						
12																								
93																								
2																								
3	3/30/93	> 10	8	690	1	8	426	898	0.14	264	301		322	0	42	84	63	35						
4																								
5																								
6	6/14/93	> 10	8.7	300	10.5	7.9	295	67 <	0.25	230	238		281	0	12	40	53	26						
7																								
8																								
9	9/20/93	> 10	8.1	444	7	8.5	235	10 <	0.3	177	197		216	0	13	33	41	23						
10																								
11	11/17/93	> 10	7.2	605	-1	7.8	370	4 <	0.28	272	287		327	2.2	18	63	58	34						
12																								
94																								
2																								
3	3/24/94	> 10	7.61	1069	4	7.8	367	43 <	0.3	254	276		310	0	22	71	40	40						
4																								
5																								
6	6/14/94	> 10	7.67	460	14	7.8	241	2		193	199		235	0	9.3	35	52	17						
7																								
8																								
9	9/7/94	> 10	7.74	473	13	8.1	194	4 <	1	132	155		132	0	9	43	34	17						
10																								
11	11/29/94	> 10	7.8	640	0	7	310 <	0.5		230	258		230	0	15	40	57	28						
12																								
95																								
2																								
3	3/13/95	14	8.76	1330	11	9.6	360	72	0	281	324		0	0	22	70	71.1	35.7						
4																								
5																								
6	6/7/95	> 10	8.4	870	7	8	250	182	0	231	351		231	0	9	30	96.6	26.6						
7																								
8																								
9	9/13/95	6	8.5	750	8	9	210	28	4	171	195		161	10	8	33	50.4	16.8						
10																								
11	11/27/95	3	7.63	511	5	8	314	14	0	222	268		217	5	14	5	59.8	28.8						
12																								
96																								
END DATA																								
Count		73	24	24	24	24	92	24	22	24	24	12	24	24	24	24	24	24	0	0	0	0	0	
Minimum		< 1.7	7.2	300.0	-1.0	7.0	188.0	< 0.5	< 0.0	132.0	155.0	0.0	0.0	0.0	7.1	5.0	34.0	16.8	ERR	ERR	ERR	ERR	ERR	
Maximum		< 812	8.8	1330.0	52.0	10.0	1090.0	< 5280.0	< 20.8	294.0	351.0	0.0	359.0	20.4	42.0	87.6	96.6	40.0	ERR	ERR	ERR	ERR	ERR	
Average		< 50.832	8.0	642.6	7.4	8.4	308.4	< 314.6	< 2.9	215.4	244.6	0.0	236.3	1.9	15.5	51.2	55.7	26.6	ERR	ERR	ERR	ERR	ERR	
Std. Dev		< 91.824	0.4	258.0	10.3	0.7	106.8	< 1051.6	< 4.5	41.0	47.4	0.0	71.6	4.5	7.7	19.6	13.3	6.3	ERR	ERR	ERR	ERR	ERR	
Avg -1 Std		< -41.19	7.7	384.6	-3.0	7.7	201.6	< -736.9	< -1.6	174.4	197.2	0.0	164.7	-2.6	7.8	31.5	42.4	19.3	ERR	ERR	ERR	ERR	ERR	
Avg +1 Std		< 142.46	8.4	900.6	17.7	9.1	415.2	< 1366.2	< 7.4	256.4	292.0	0.0	307.9	6.4	23.2	70.8	69.0	31.9	ERR	ERR	ERR	ERR	ERR	
Avg -2 Std		< -133	7.3	126.5	-13.3	7.0	94.8	< ********	< -6.1	133.4	149.8	0.0	93.1	-7.2	0.1	11.9	29.1	12.9	ERR	ERR	ERR	ERR	ERR	
Avg +2 Std		< 234.28	8.7	1158.6	28.0	9.8	522.0	< 2417.7	< 11.9	297.3	339.4	0.0	379.5	10.9	30.8	90.4	82.3	36.2	ERR	ERR	ERR	ERR	ERR	

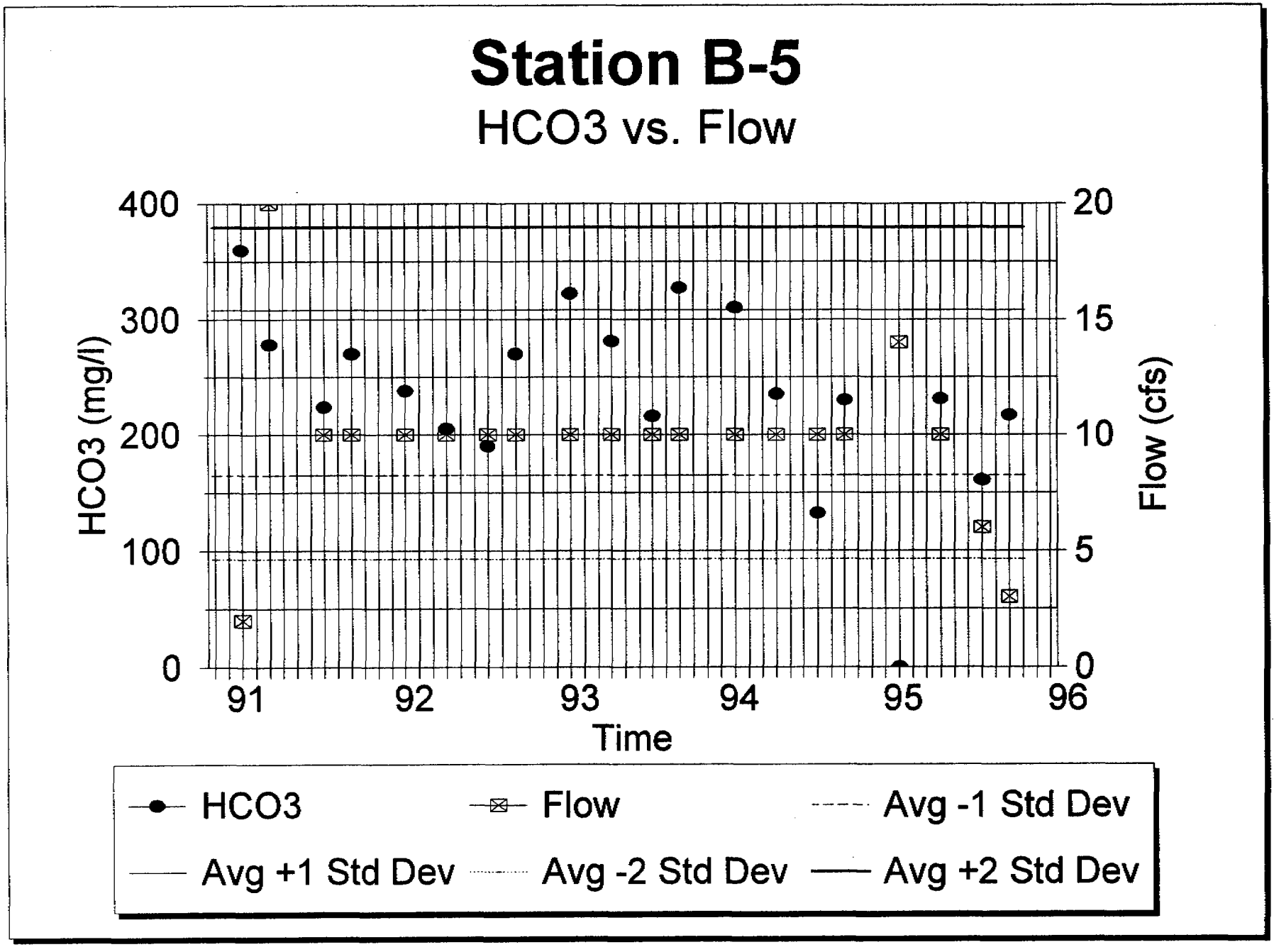
NOTE: The "<" symbol indicates that "Less Than" data was found in the data set, statistics are approximate.

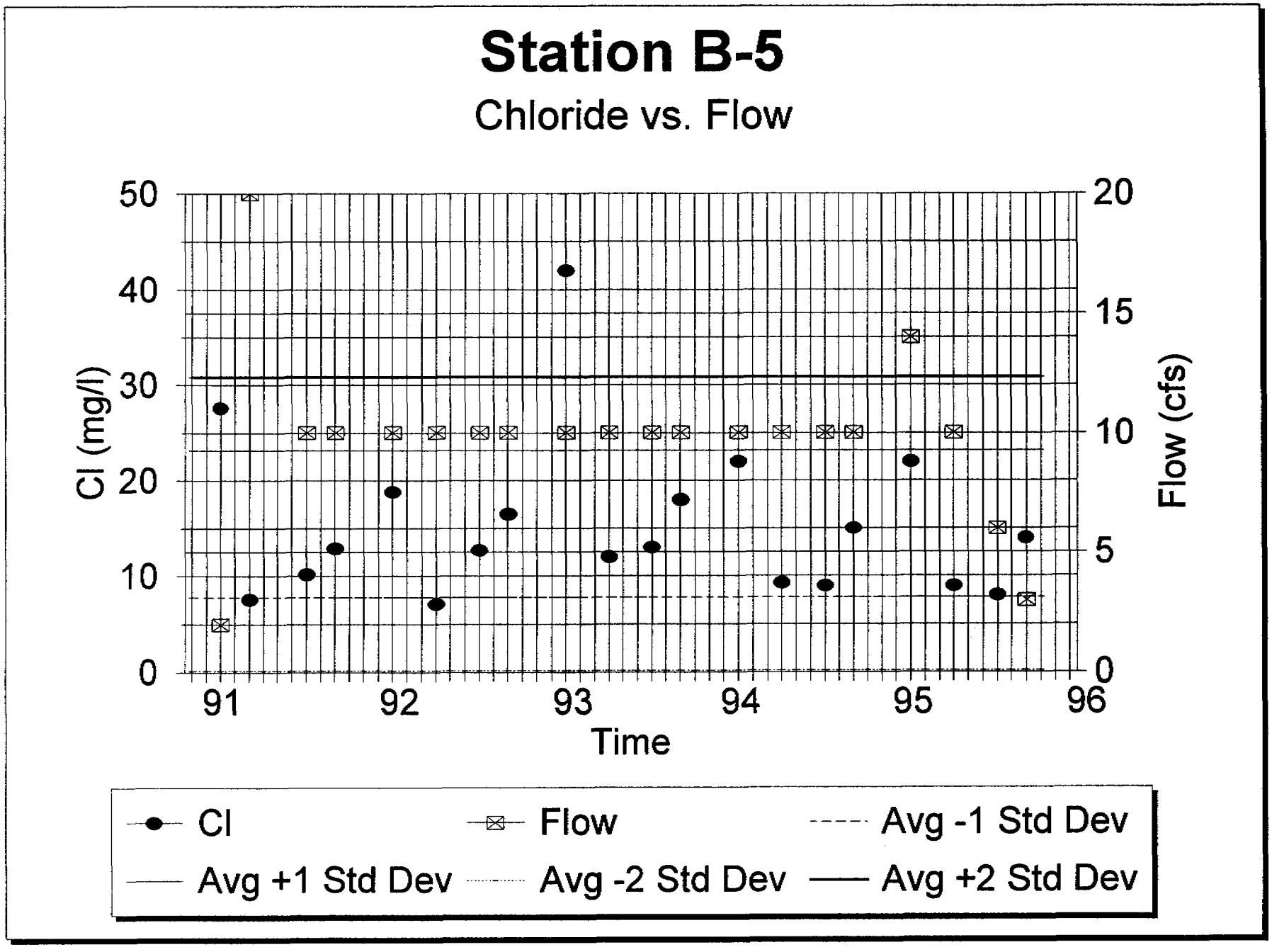

Station B-5
Precip. vs. Flow
Monthly Precip. (in)
0
1
2
3
4
Flow (cfs)
700
600
500
400
300
200
100
0
77
79
81
83
85
87
89
91
93
95
Time
Precip.
Flow

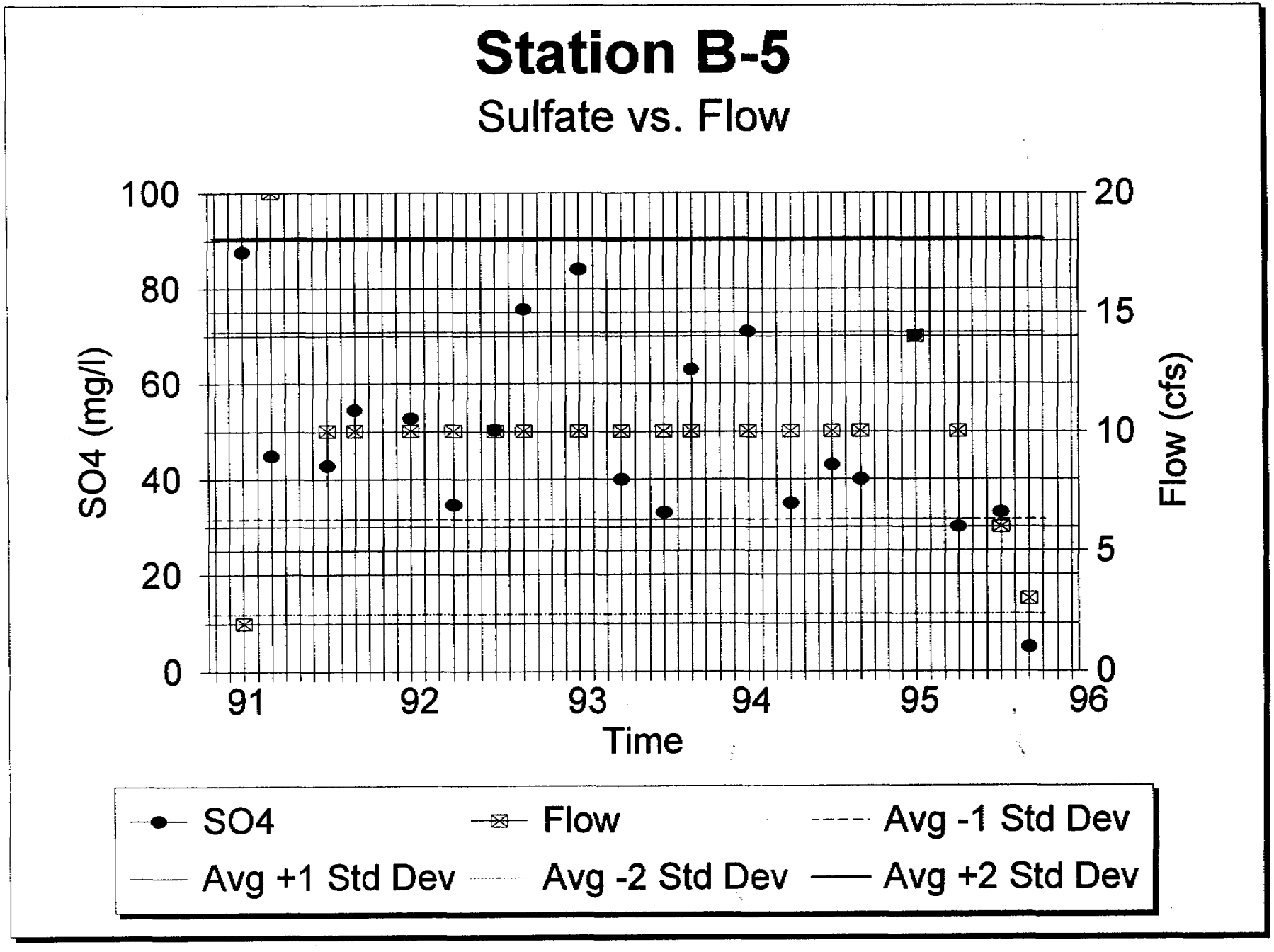

Station B-5
pH vs. Flow
Ph Units
8.8
8.6
8.4
8.2
8
7.8
7.6
7.4
7.2
Flow (cfs)
20
15
10
5
0
91
92
93
94
95
96
Time
pH
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg-2 Std Dev
Avg +2 Std Dev

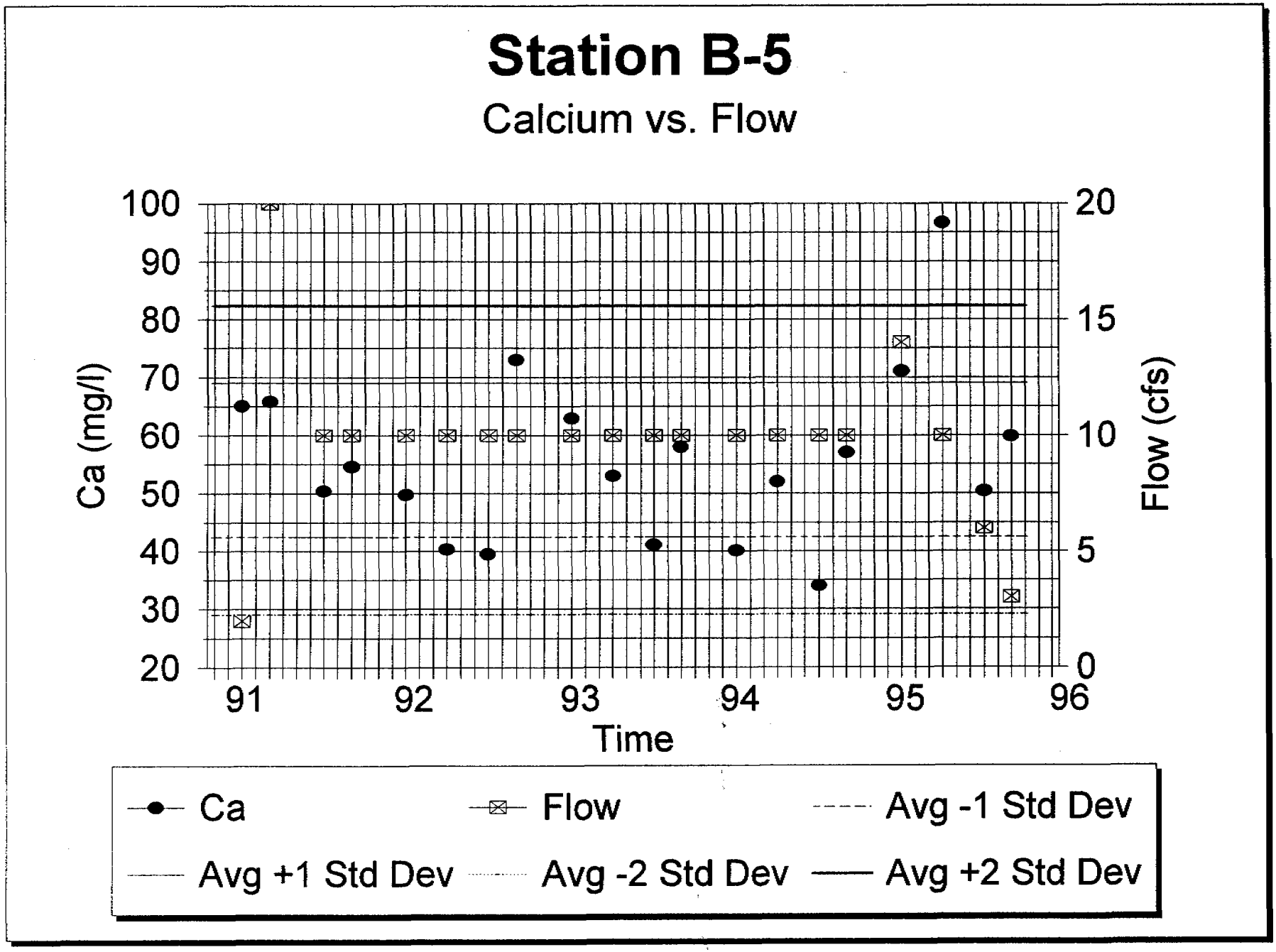

Station B-5
TDS vs. Flow
TDS (mg/l)
Flow (cfs)
Time
1200
1000
800
600
400
200
0
700
600
500
400
300
200
100
0
77
79
81
83
85
87
89
91
93
95
TDS
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-5
O&G vs. Flow
O&G in mg/l
Flow (cfs)
Time
15
10
5
0
-5
-10
20
15
10
5
0
91
92
93
94
95
96
O&G
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-5
HCO3 vs. Flow
400
300
200
100
0
HCO3 (mg/l)
20
15
10
5
0
Flow (cfs)
91
92
93
94
95
96
Time
HCO3
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

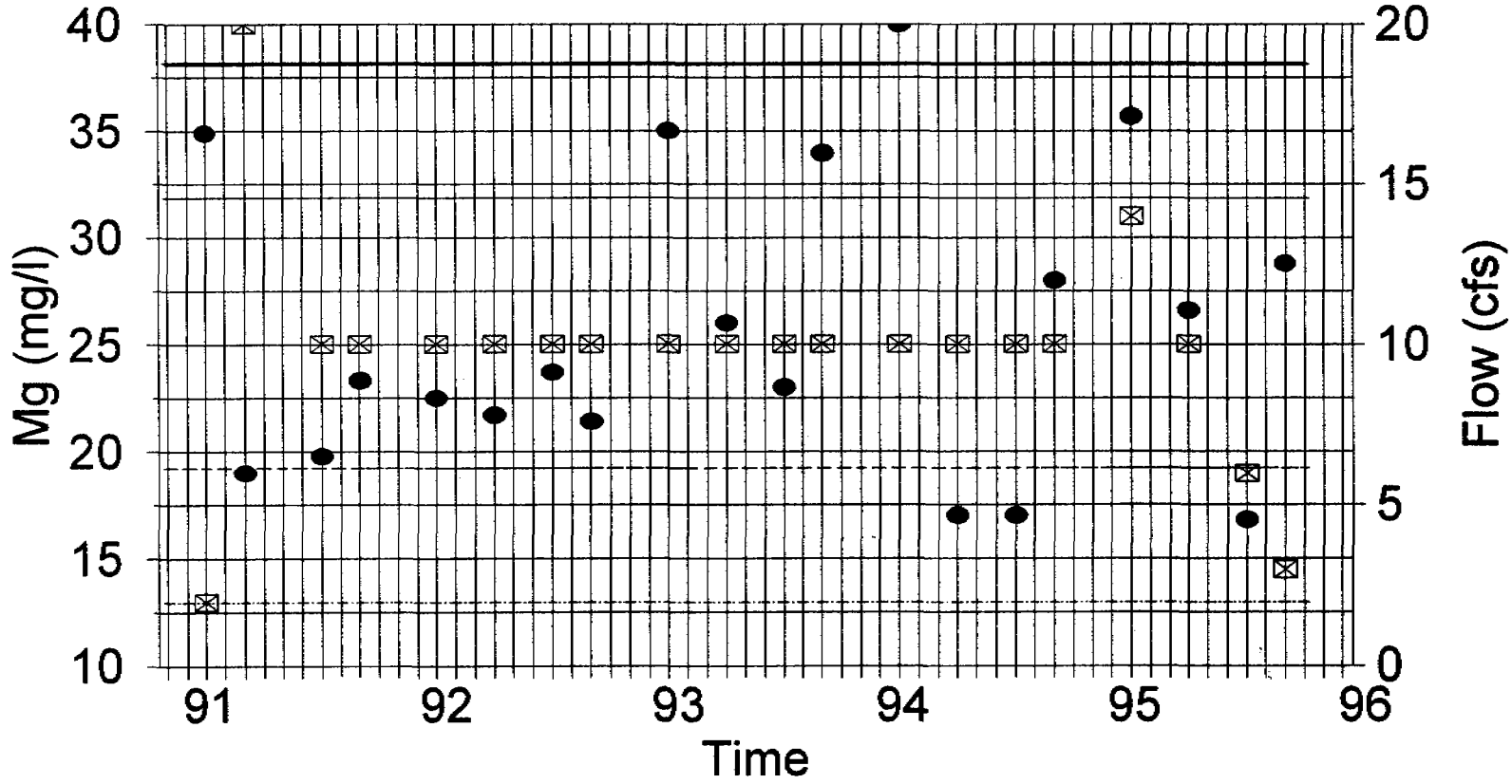

Station B-5
Chloride vs. Flow
Cl (mg/l)
Flow (cfs)
50
40
30
20
10
0
20
15
10
5
0
91
92
93
94
95
96
Time
Cl
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-5
Sulfate vs. Flow
SO4 (mg/l)
Flow (cfs)
Time
100
80
60
40
20
0
20
15
10
5
0
91
92
93
94
95
96
SO4
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-5
Calcium vs. Flow
Ca (mg/l)
100
90
80
70
60
50
40
30
20
Flow (cfs)
20
15
10
5
0
91
92
93
94
95
96
Time
Ca
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Station B-5

Magnesium vs. Flow



Mg | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev

Cyprus Plateau Mining Company - Water Quality Data

Print Date 05/02/96

Station: S-6 | Property: Castle Gate | Location: SE1/4, NE1/4, Sec 35, T12 S, R9 E | Station Type: River | Sampling Frequency: Quarterly | Formation: | Elevation: 6050

Date		Field Measurements					Laboratory Measurements																		
Yr-Mo	Sample Date	Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ao-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
77																									
2																									
3																									
4	4/13/77	87					370																		
5	5/9/77	178					321																		
6	6/1/77	64					330																		
7	7/6/77	28					298																		
8	8/3/77	20					210																		
9	9/8/77	21					218																		
10	10/12/77	7					375																		
11	11/9/77	5					485																		
12	12/14/77	19.6					325																		
78	1/11/78	4					307																		
2	2/8/78	5.7					315																		
3	3/8/78	17					701																		
4	4/12/78	131					385																		
5	5/10/78	149					320																		
6	6/14/78	255					291																		
7																									
8	8/9/78	108					210																		
9																									
10	10/11/78	75					250																		
11																									
12	12/13/78	23					460																		
79																									
2	2/15/79	42.5					426																		
3																									
4	4/18/79	223					328																		
5																									
6	6/13/79	255					260																		
7																									
8	8/8/79	133					374																		
9																									
10	10/30/79	9.6					450																		
11																									
12	12/28/79	13.3					377																		
80																									
2	2/13/80						340																		
3																									
4	4/17/80	340					265																		
5																									
6	6/5/80	612					230																		
7																									
8	8/7/80	126					220																		
9																									
10	10/28/80	25					340																		
11																									
12	12/29/80	10					370																		
81																									
2	2/4/81						330																		
3																									
4	4/7/81	24					300																		
5																									
6	6/23/81						194																		
7																									
8	8/27/81	136					190																		
9																									
10	10/29/81						285																		
11																									
12	12/3/81						358																		
82																									
2	2/15/82						344																		
3																									
4	4/14/82						910																		
5																									
6	6/14/82						277																		
7																									
8	8/3/82						288																		
9																									
10	10/7/82						280																		
11																									
12	12/21/82						365																		
83																									
2	2/24/83						240																		
3																									
4	4/21/83						335																		
5																									
6	6/28/83						253																		
7																									
8	8/17/83						236																		
9																									
10	10/18/83																								

Cyprus Plateau Mining Company - Water Quality Data

Print Date 06/02/98

Station: B-8 | Property: Castle Gate | Location: SE1/4, NE1/4, Sec 36, T12 S, R9 E | Station Type: River | Sampling Frequency: Quarterly | Formation: | Elevation: 6080

Date Yr-Mo	Sample Date	Field Measurements Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	Laboratory Measurements TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
11																								
12																								
84																								
2																								
3																								
4																								
5																								
6	6/19/84						240																	
7																								
8																								
9	9/7/84						209																	
10																								
11																								
12																								
85																								
2																								
3	3/30/85	< 10					295																	
4																								
5																								
6	6/15/85	< 10					243																	
7																								
8																								
9	9/30/85	< 10					266																	
10																								
11	11/30/85	< 10					382																	
12																								
86																								
2																								
3																								
4	4/3/86	< 10					302																	
5																								
6	8/23/86	< 10					224																	
7																								
8																								
9	9/25/86	< 10					222																	
10																								
11	11/24/86	< 10					475																	
12																								
87																								
2																								
3	3/26/87	> 10					420																	
4																								
5	5/22/87	> 10					265																	
6																								
7																								
8	8/10/87	> 10					158																	
9																								
10	10/13/87	> 10					479																	
11																								
12																								
88																								
2																								
3	3/22/88	> 10					330																	
4																								
5																								
6	6/13/88	> 10					236																	
7																								
8	9/14/88	> 100					202																	
9																								
10																								
11	11/30/88	> 100					252																	
12																								
89																								
2																								
3																								
4	4/10/89	> 10					236																	
5																								
6	6/21/89	< 100					218																	
7																								
8																								
9	9/21/89	< 100					214																	
10																								
11																								
12																								
90																								
2																								
3	3/9/90	> 5	7.8	1250	2	9	381	17		244.48	288.41	0	298.3	0	36.4	85.4	72.4	26.2						
4																								
5	5/30/90	> 10	8	540	3	10	234	101	5	191	210.84	0	214.4	9.2	12.8	36.2	36.1	29.3						
6																								
7																								
8																								

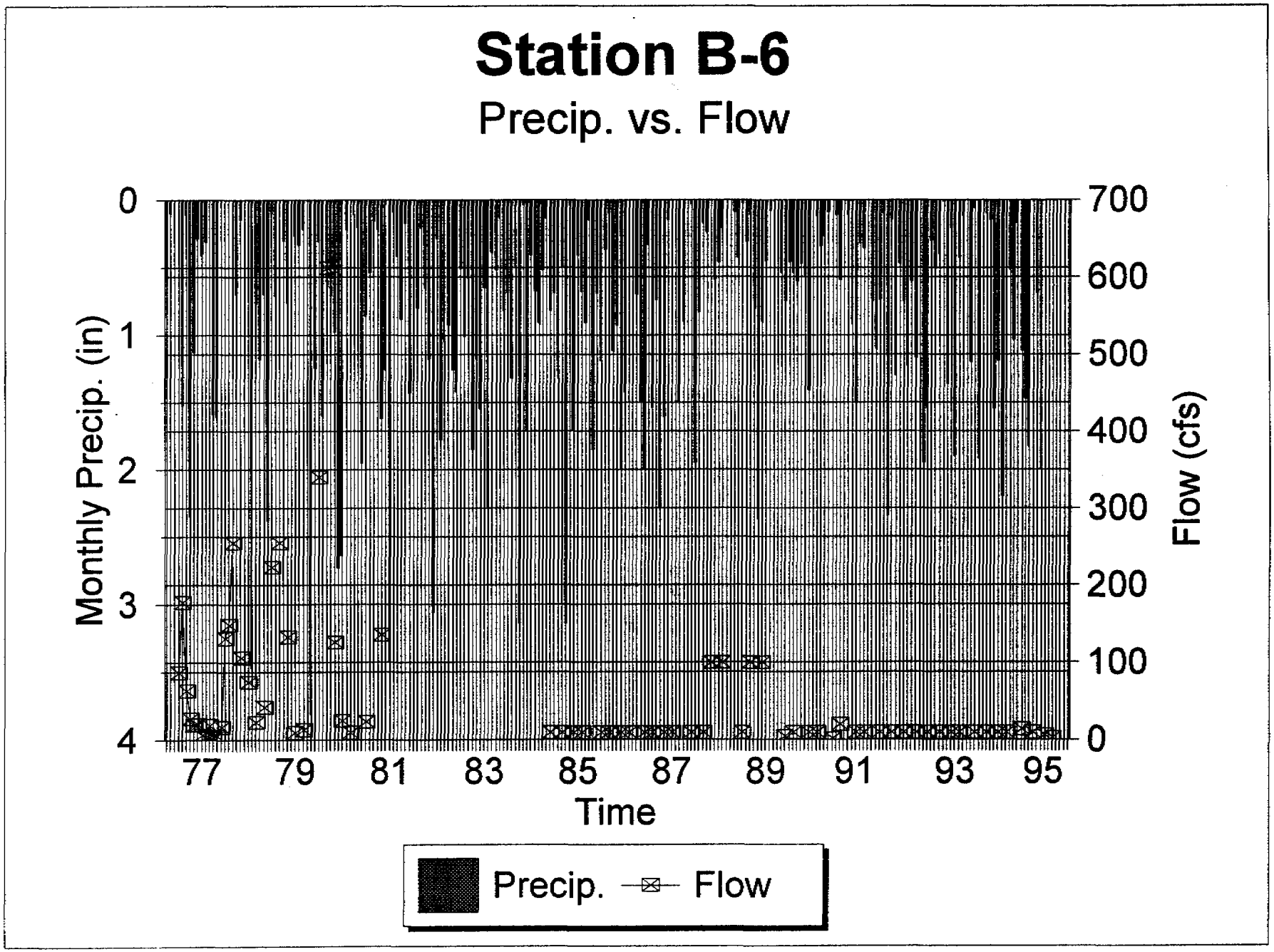
Cyprus Plateau Mining Company - Water Quality Data

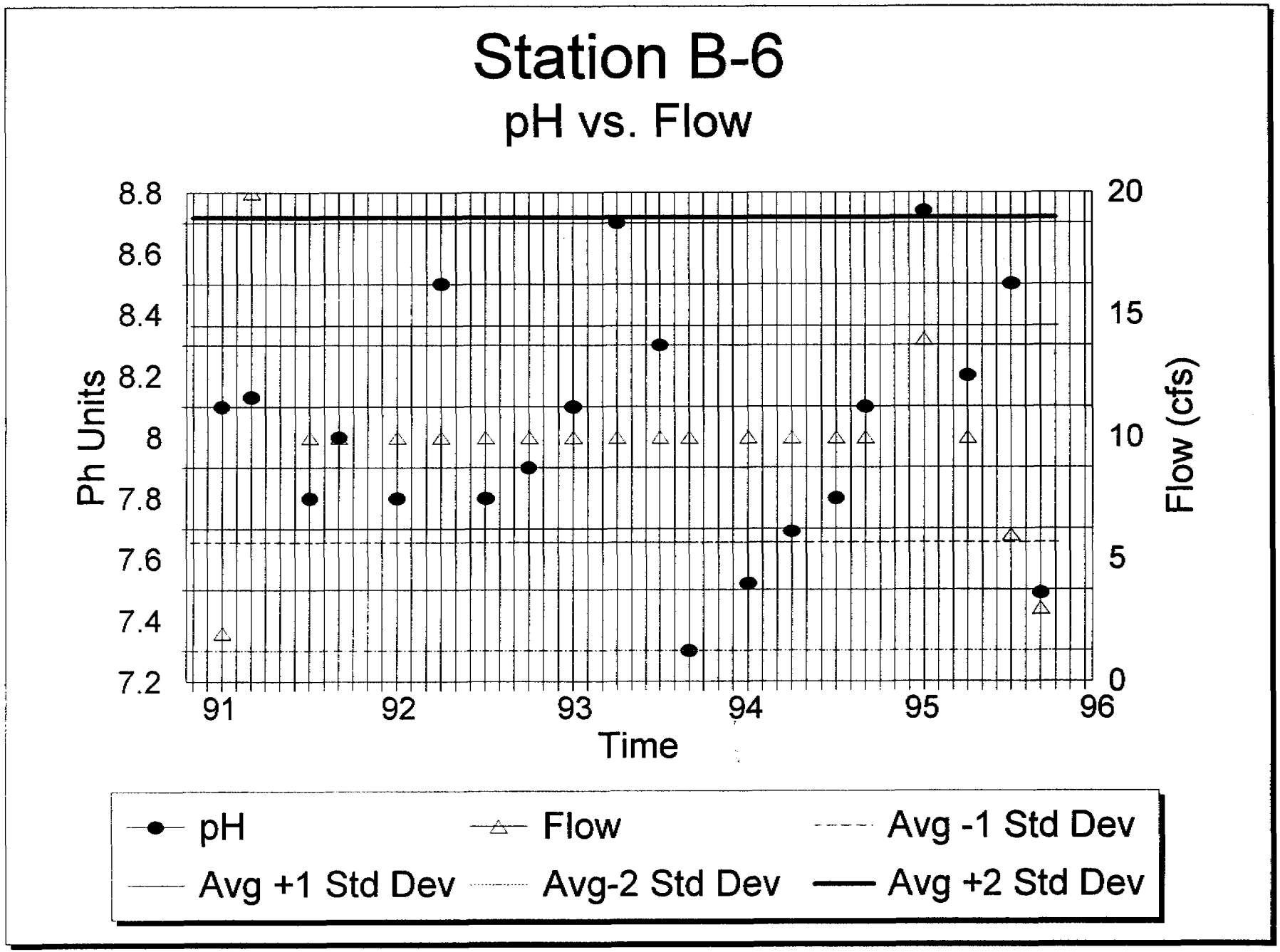
Print Date 05/02/96

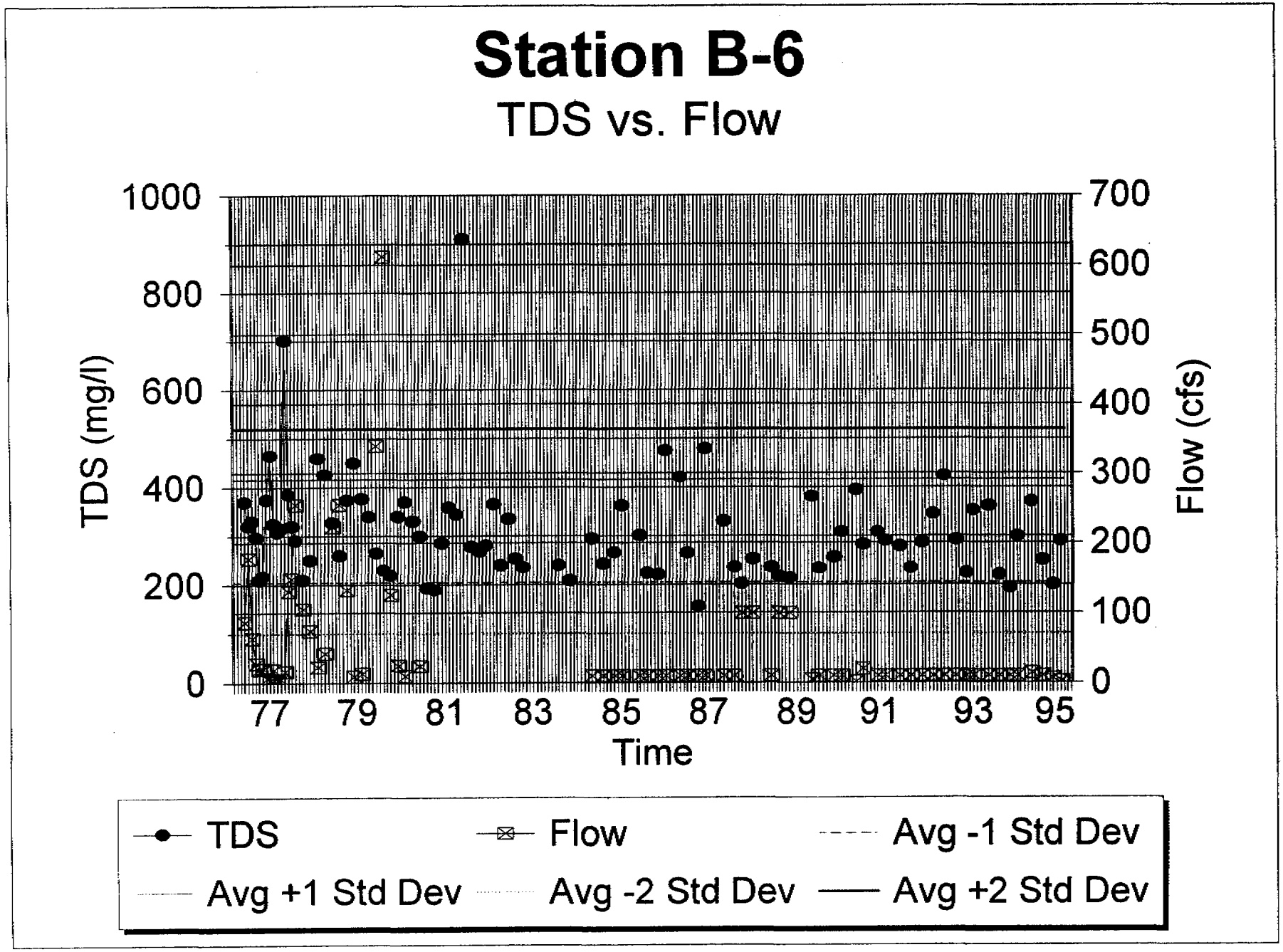
Station: B-6 | Property: Castle Gate | Location: SE1/4, NE1/4, Sec 35, T12 S, R9 E | Station Type: River | Sampling Frequency: Quarterly | Formation: | Elevation: 6050

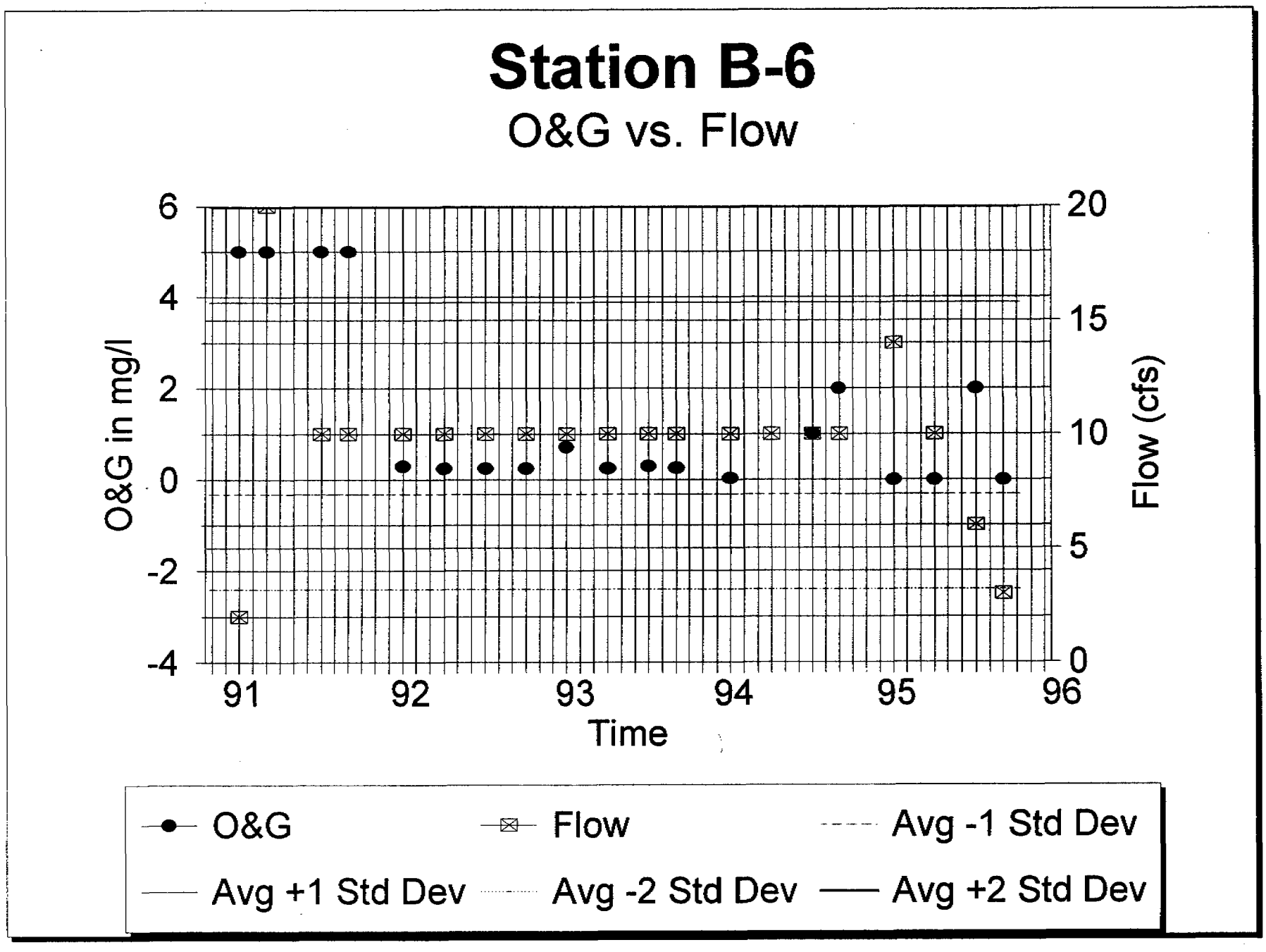
Date		Field Measurements					Laboratory Measurements																		
Yr-Mo	Sample Date	Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
9	9/29/90	> 10	7.9	410	5	9	256	54		192	213	0	234	0	14.7	37.9	49.8	21.5						
10																								
11	11/26/90	> 10	8.04	490	2.4	9	308	30 <	5	257	281	0	313	0	18.4	49.8	60.3	19.6						
12																								
91																								
2																								
3	3/13/91	< 2	8.1	700	2	9	394	3 <	5	270	306	0	329	0	23.5	71.6	68.2	33.1						
4																								
5	5/26/91	> 20	8.13	635	55	9	282	244 <	5	215	245	0	262	0	7.91	42	63.2	21.2						
6																								
7																								
8																								
9	9/11/91	> 10	7.6	450	12	9	308	6380 <	5	178	198	0	217	0	8.78	39.9	50.1	17.7						
10																								
11	11/22/91	> 10	8	640	1	9	290	19 <	5	217	231	0	265	0	13.5	55.4	55.8	22.3						
12																								
92																								
2																								
3	3/4/92	< 10	7.8	600	1	8	278	244	0.3	195	208	0	238	0	17.7	53.1	48.3	21.3						
4																								
5																								
6	6/8/92	> 10	8.5	464	8	8	234	205 <	0.25	164	191	0	199	0	11.1	41.6	41.1	21.4						
7																								
8																								
9	9/3/92	> 10	7.8	940	9	9	286	21 <	0.25	155	196	0	189	0	13	51.2	41	22.8						
10																								
11																								
12	12/7/92	> 10	7.9	690	0	8	345	54 <	0.25	221	274	0	270		15.7	75.7	74.8	21.2						
93																								
2																								
3	3/30/93	> 10	8.1	740	1	8	423	760	0.71	264	302		322	0	40	83	63	35						
4																								
5																								
6	6/14/93	> 10	8.7	300	11	7.8	292	62 <	0.25	230	227		281	0	12	40	51	24						
7																								
8																								
9	9/20/93	> 10	8.3	570	9	7.8	224	20 <	0.3	176	196		215	0	5.2	33	41	23						
10																								
11	11/17/93	> 10	7.3	612	-1	6	353	11 <	0.26	284	279		335	5.8	6.2	57	58	31						
12																								
94																								
2																								
3	3/24/94	> 10	7.52	1780	2	7.6	361	64 <	0.03	244	277		298	0	21	72	46	40						
4																								
5																								
6	6/14/94	> 10	7.69	470	14	8	221	12		170	199		208	0	8.2	30	52	17						
7																								
8																								
9	9/7/94	> 10	7.8	403	13	8.2	194	32 <	1	132	152		132	0	9	43	33	17						
10																								
11	11/29/94	> 10	8.1	710	0	7	300		2	230	251		230	0	14	40	56	27						
12																								
95																								
2																								
3	3/13/95	14	8.74	2430	4	9.8	370	82	0	277	318		0	0	21	90	68.5	35.6						
4																								
5																								
6	6/7/95	> 10	8.2	780	7	8	250	182	0	256	325		256	0	9	20	87.9	25.7						
7																								
8																								
9	9/13/95	6	8.5	560	9	9	200	22	2	170	197		160	10	8	26	51	16.9						
10																								
11	11/27/95	3	7.49	600	4	8	290	0	0	220	262		215	5	14	52	58.6	26.1						
12																								
96																								
END DATA																								
Count		74	24	24	24	24	91	23	21	24	24	12	24	23	24	24	24	24	0	0	0	0	0	
Minimum		< 2	7.3	300.0	-1.0	6.0	156.0	0.0	< 0.0	132.0	152.0	0.0	0.0	0.0	5.2	20.0	33.0	16.9	ERR	ERR	ERR	ERR	ERR	
Maximum		< 612	8.7	2430.0	55.0	10.0	910.0	6380.0	< 5.0	284.0	325.0	0.0	335.0	10.0	40.0	90.0	87.9	40.0	ERR	ERR	ERR	ERR	ERR	
Average		< 53.036	8.0	740.2	7.2	8.3	310.1	374.7	< 1.8	214.7	242.8	0.0	236.7	1.3	15.0	50.2	56.1	24.9	ERR	ERR	ERR	ERR	ERR	
Std. Dev		< 94.704	0.4	462.5	10.9	1.0	104.8	1290.1	< 2.1	41.4	46.6	0.0	71.6	3.0	8.5	17.8	13.8	6.2	ERR	ERR	ERR	ERR	ERR	
Avg -1 Std		< -41.67	7.7	277.7	-3.7	7.3	205.2	-915.4	< -0.3	173.2	196.2	0.0	165.1	-1.7	6.6	32.4	42.4	18.7	ERR	ERR	ERR	ERR	ERR	
Avg +1 Std		< 147.74	8.4	1202.7	18.1	9.3	414.9	1664.9	< 3.9	256.1	289.4	0.0	308.3	4.3	23.5	68.1	69.9	31.2	ERR	ERR	ERR	ERR	ERR	
Avg -2 Std		< -136.4	7.3	-184.9	-14.6	6.3	100.4	*********	< -2.4	131.8	149.5	0.0	93.5	-4.7	-1.9	14.8	28.6	12.4	ERR	ERR	ERR	ERR	ERR	
Avg +2 Std		< 242.45	8.7	1665.2	29.0	10.3	519.7	2955.0	< 6.0	297.6	336.1	0.0	379.9	7.3	31.9	85.9	83.6	37.4	ERR	ERR	ERR	ERR	ERR	

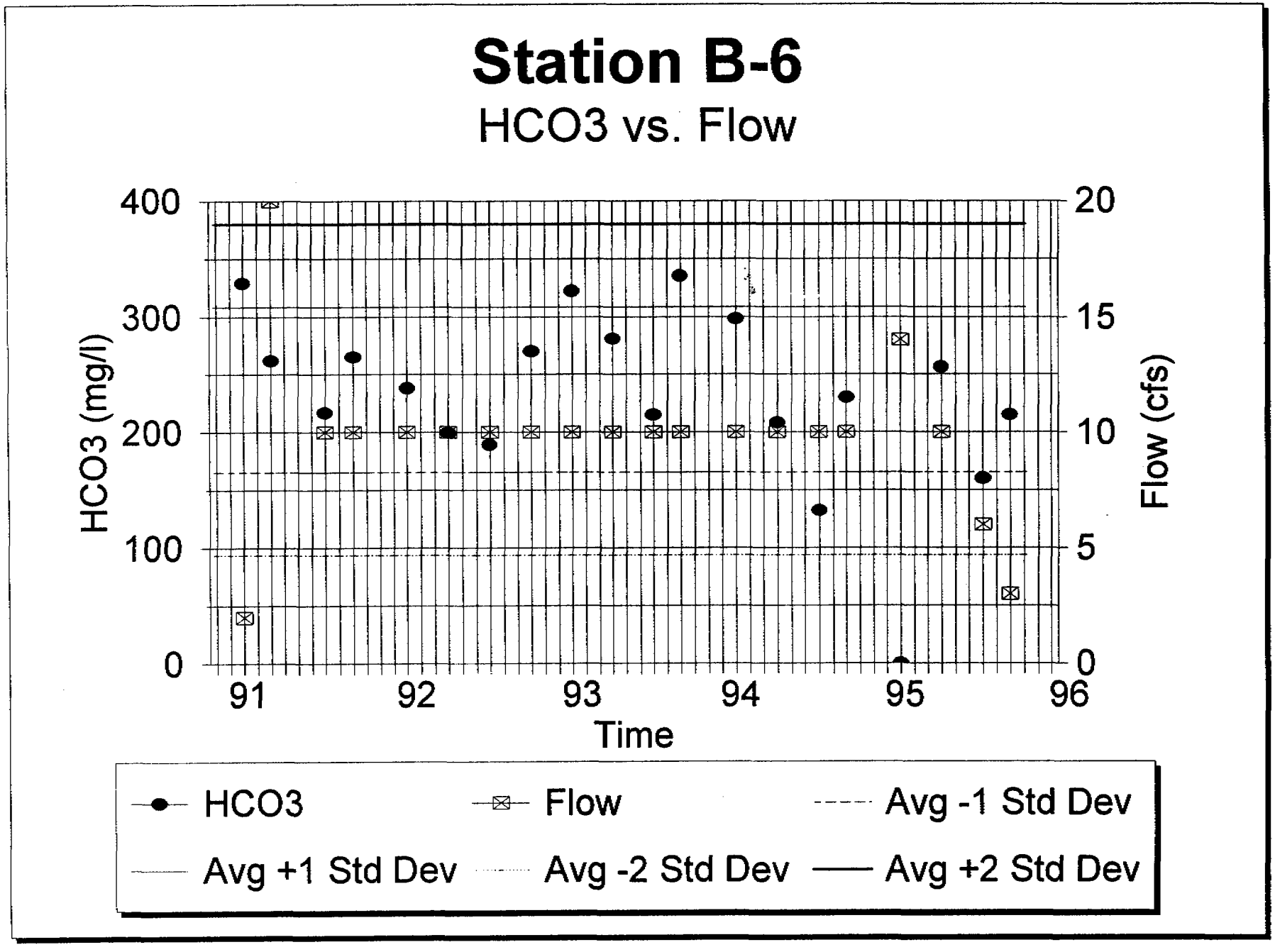
NOTE: The "<" symbol indicates that "Less Than" data was found in the data set, statistics are approximate.

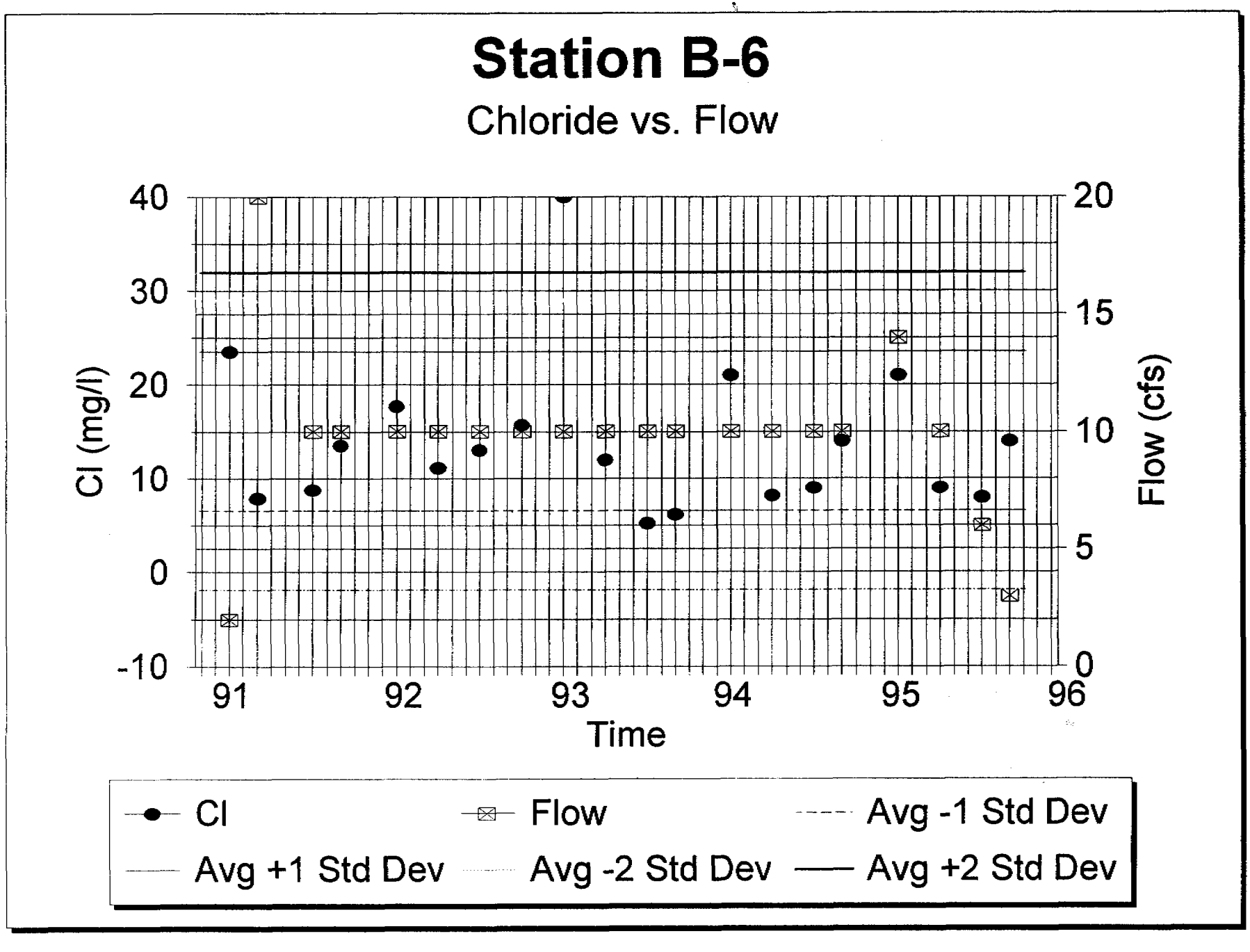

Station B-6
Precip. vs. Flow
Monthly Precip. (in)
0
1
2
3
4
Flow (cfs)
700
600
500
400
300
200
100
0
77
79
81
83
85
87
89
91
93
95
Time
Precip.
Flow

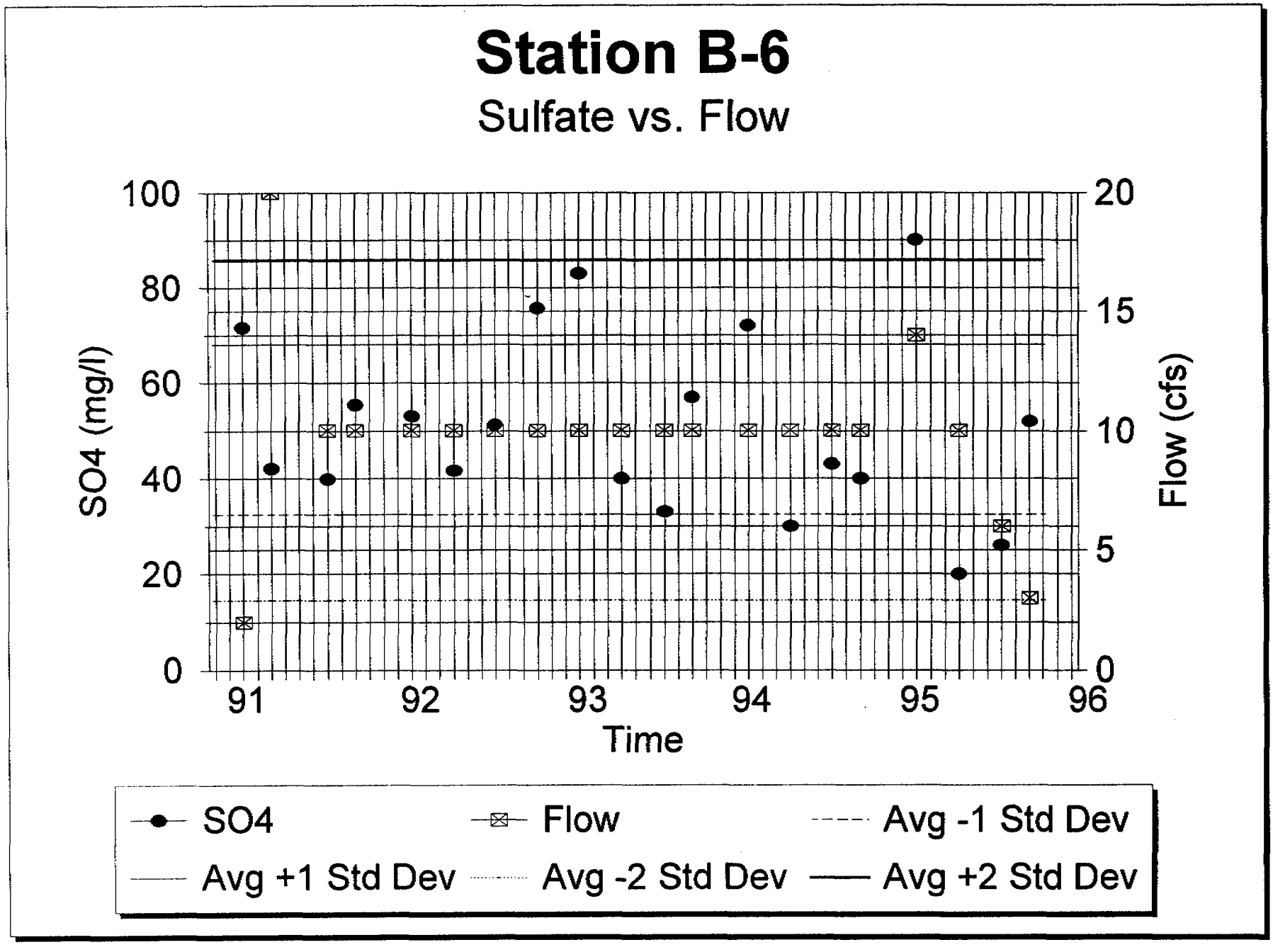

Station B-6
pH vs. Flow
Ph Units
8.8
8.6
8.4
8.2
8
7.8
7.6
7.4
7.2
Flow (cfs)
20
15
10
5
0
91
92
93
94
95
96
Time
pH
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg-2 Std Dev
Avg +2 Std Dev

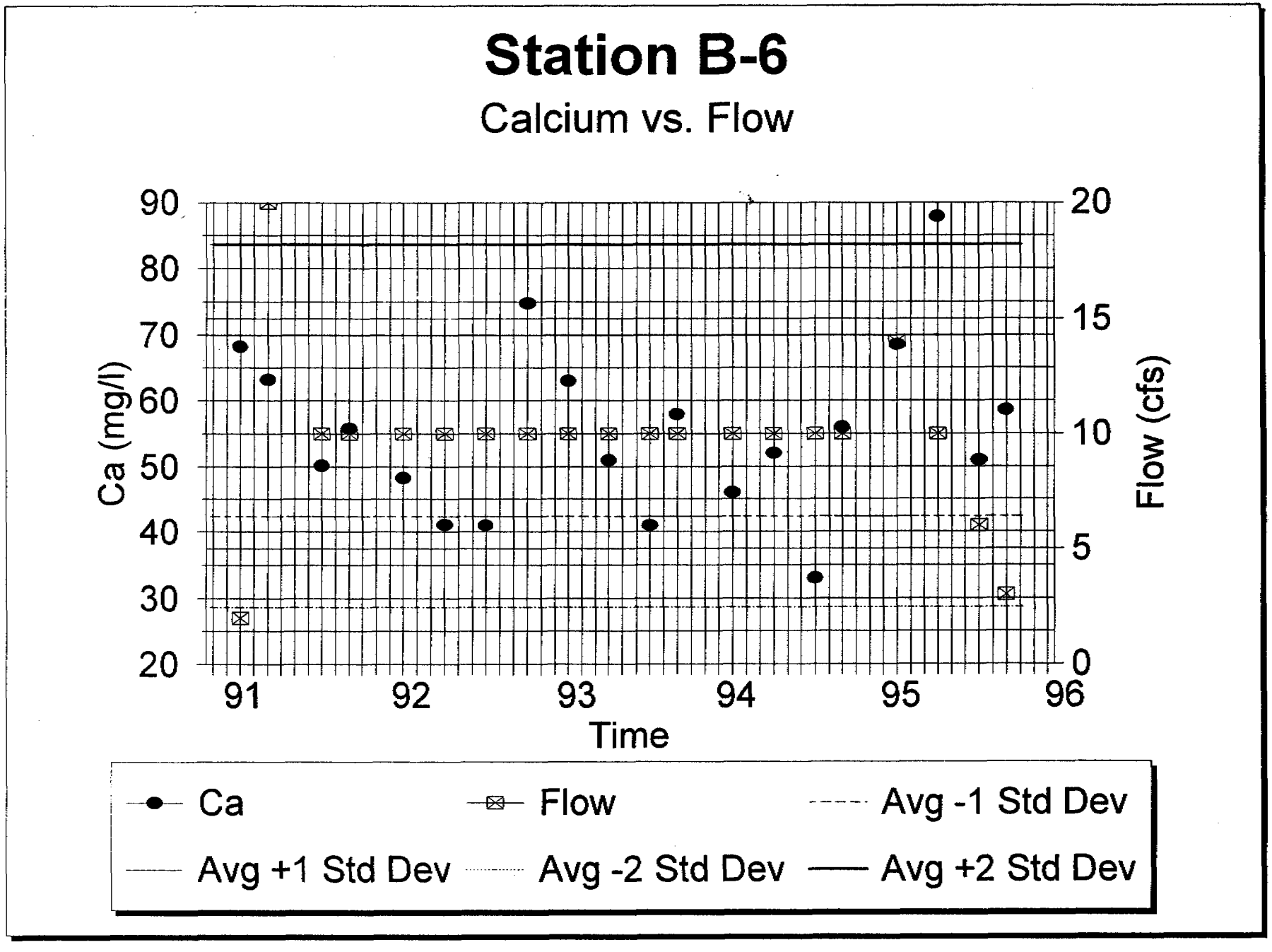

Station B-6
TDS vs. Flow
TDS (mg/l)
1000
800
600
400
200
0
Flow (cfs)
700
600
500
400
300
200
100
0
77
79
81
83
85
87
89
91
93
95
Time
TDS
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-6
O&G vs. Flow
O&G in mg/l
Flow (cfs)
Time
6
4
2
0
-2
-4
20
15
10
5
0
91
92
93
94
95
96
O&G
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-6
HCO3 vs. Flow
400
300
200
100
0
HCO3 (mg/l)
20
15
10
5
0
Flow (cfs)
91
92
93
94
95
96
Time
HCO3
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

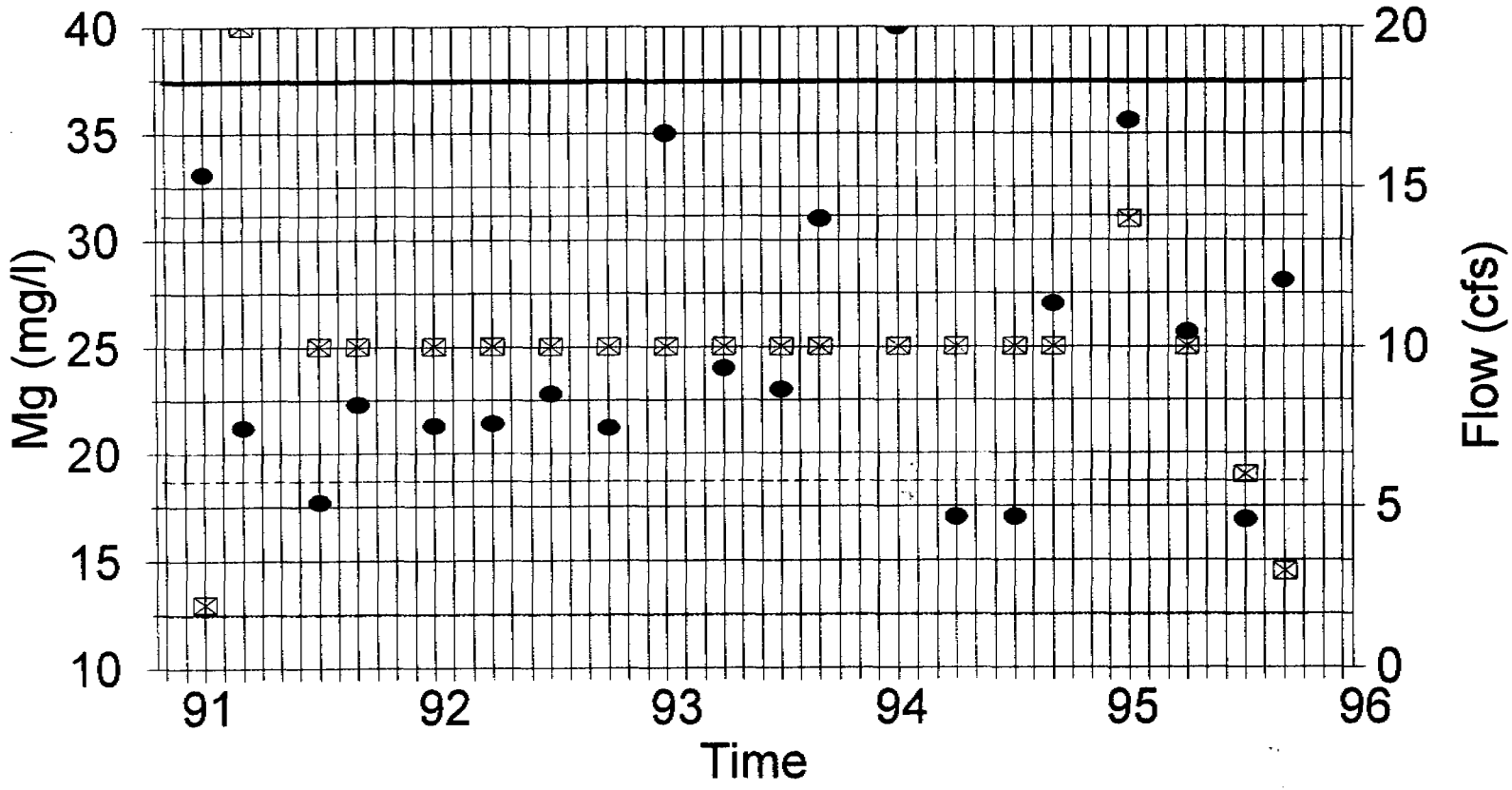

Station B-6
Chloride vs. Flow
Cl (mg/l)
Flow (cfs)
Time
40
30
20
10
0
-10
20
15
10
5
0
91
92
93
94
95
96
Cl
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-6
Sulfate vs. Flow
SO4 (mg/l)
Flow (cfs)
Time
100
80
60
40
20
0
20
15
10
5
0
91
92
93
94
95
96
SO4
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-6
Calcium vs. Flow
Ca (mg/l)
90
80
70
60
50
40
30
20
Flow (cfs)
20
15
10
5
0
91
92
93
94
95
96
Time
Ca
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Station B-6

Magnesium vs. Flow



Mg | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev

Cyprus Plateau Mining Company - Water Quality Data

Print Date 04/10/96

Station: B-11 Property: Castle Gate Location: NW1/4, SE1/4, Sec 10, T13 S, R9 E Station Type Int. Stream Sampling Frequency: Quarterly Formation: Elevation: 6550

Date		Field Measurements					Laboratory Measurements																	
Yr-Mo	Sample Date	Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
77																								
2																								
3																								
4	4/13/77	0					755																	
5	5/9/77	0					830																	
6	6/1/77	0					1260																	
7	7/6/77	0																						
8	8/3/77	0																						
9	9/8/77	0																						
10	10/12/77	0.001					365																	
11	11/9/77	0																						
12	12/14/77	0																						
78	1/11/78	0																						
2	2/8/78	0																						
3	3/8/78	0.03					339																	
4	4/12/78	0.02					1210																	
5	5/10/78	0.1					418																	
6	6/14/78	0.01					470																	
7																								
8	8/9/78	0.005					410																	
9																								
10	10/10/78	0.05					520																	
11																								
12	12/13/78	0																						
79																								
2	2/14/79	0.03					414																	
3																								
4	4/18/79	0.19					608																	
5																								
6	6/13/79	0																						
7																								
8	8/8/79	0.07					536																	
9																								
10	10/30/79	0.04					930																	
11																								
12	12/26/79	0																						
80																								
2	2/13/80	0																						
3																								
4	4/17/80	0.01					648																	
5																								
6	6/5/80	0																						
7																								
8	8/7/80	0																						
9																								
10	10/28/80	0.01					360																	
11																								
12	12/29/80	0																						
81																								
2	2/4/81	0																						
3																								
4	4/7/81	0																						
5																								
6	6/23/81	0																						
7																								
8	8/27/81	0																						
9																								
10																								
11	11/29/81	0																						
12	12/3/81	0																						
82																								
2	2/15/82	0																						
3																								
4	4/14/82	0																						
5																								
6	6/14/82	0																						
7																								
8	8/3/82	0																						
9																								
10	10/7/82	0																						
11																								
12	12/21/82	0																						
83																								
2	2/24/83	0																						
3																								
4	4/21/83	0																						
5																								
6	6/28/83	0																						
7																								
8	8/17/83	0																						
9																								
10	10/18/83	0																						

Cyprus Plateau Mining Company - Water Quality Data

Print Date 04/10/98

Station: B-11 Property: Castle Gate Location: NW1/4, SE1/4, Sec 10, T13 S, R9 E Station Type Int. Stream Sampling Frequency: Quarterly Formation: Elevation: 6660

Date		Field Measurements					Laboratory Measurements																	
Yr-Mo	Sample Date	Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Nd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
11																								
12																								
84																								
2																								
3																								
4																								
5																								
6	6/19/84	0																						
7																								
8																								
9	9/7/84	0																						
10																								
11																								
12																								
85																								
2																								
3	3/30/85	0																						
4																								
5																								
6	6/15/85	0																						
7																								
8																								
9	9/30/85	0																						
10																								
11	11/30/85	0																						
12																								
86																								
2																								
3	3/31/86	0																						
4																								
5																								
6	6/30/86	0																						
7																								
8																								
9	9/25/86	0																						
10																								
11																								
12	11/24/86	0																						
87																								
2																								
3	3/26/87	0																						
4																								
5	5/22/87	0																						
6																								
7																								
8	8/10/87	0																						
9																								
10	10/13/87	0																						
11																								
12																								
88																								
2																								
3	3/22/88	0																						
4																								
5																								
6	6/14/88	0																						
7																								
8																								
9	9/26/88	0																						
10																								
11	11/30/88	0																						
12																								
89																								
2																								
3																								
4																								
5																								
6	6/21/89	0																						
7																								
8																								
9	9/21/89	0																						
10																								
11																								
12																								
90																								
2																								
3	3/9/90	0																						
4																								
5	5/30/90	0																						
6																								
7																								
8																								

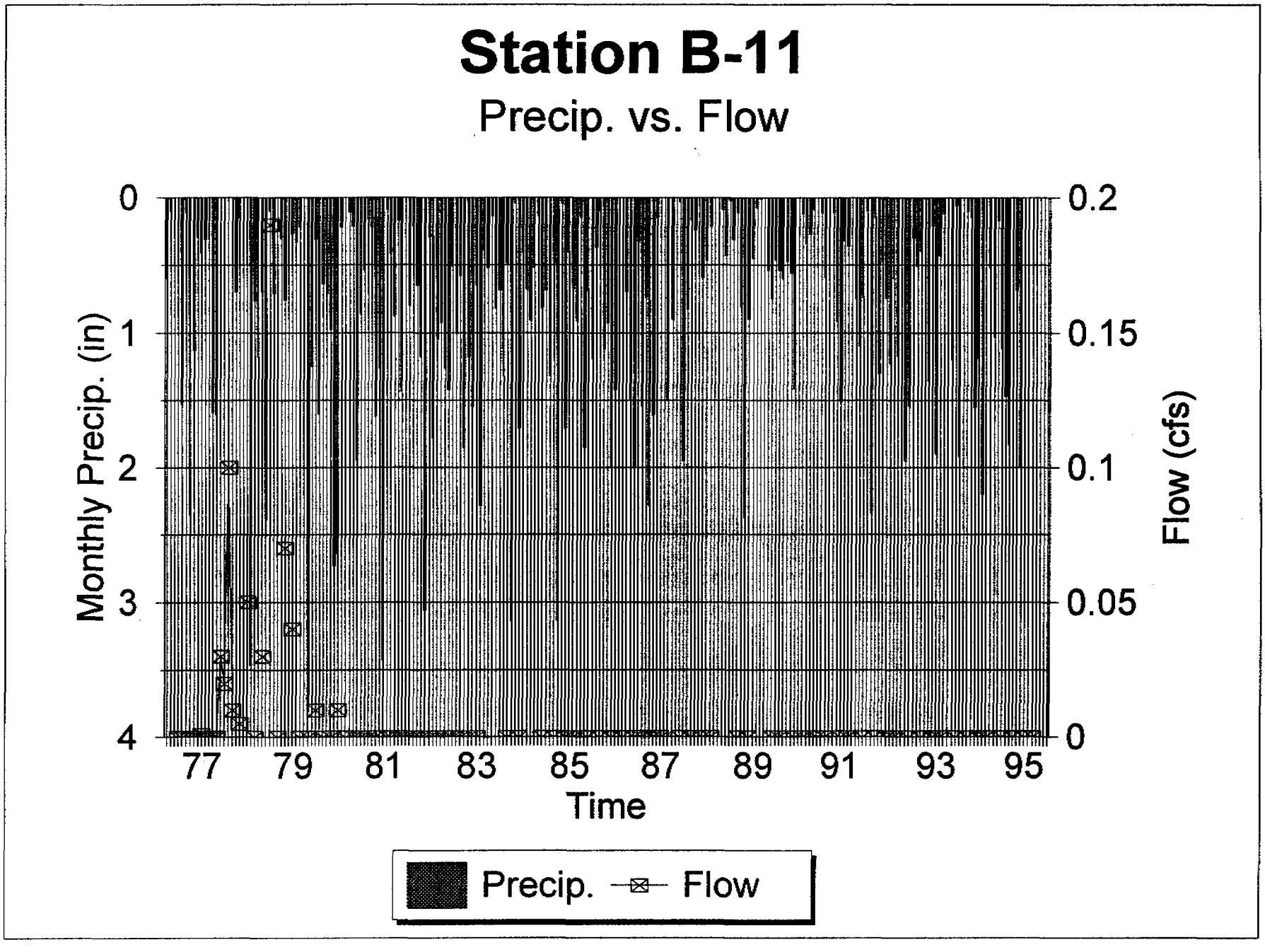
Cyprus Plateau Mining Company - Water Quality Data

Print Date 04/10/96

Station: B-11 | Property: Castle Gate | Location: NW1/4, SE1/4, Sec 10, T13 S, R9 E | Station Type Int. Stream | Sampling Frequency: Quarterly | Formation: | Elevation: 6560

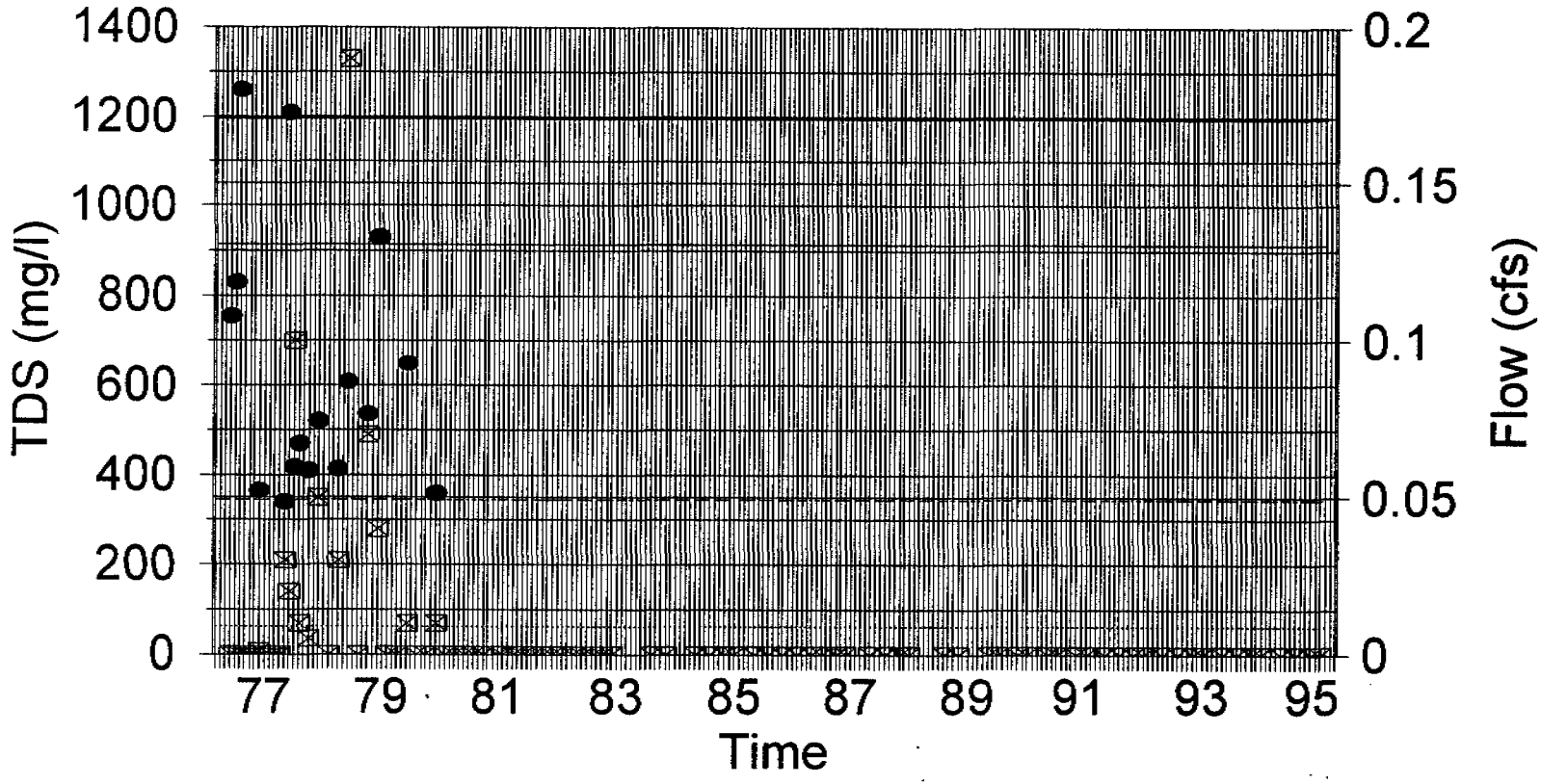
Date		Field Measurements					Laboratory Measurements																		
Yr-Mo	Sample Date	Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
9	9/29/90	0																						
10																								
11	11/28/90	0																						
12																								
91																								
2																								
3	3/13/93	0																						
4																								
5	5/26/91	0																						
6																								
7																								
8																								
9	9/11/91	0																						
10																								
11	11/22/91	0																						
12																								
92																								
2																								
3	3/4/92	0																						
4																								
5																								
6	6/8/92	0																						
7																								
8																								
9	9/3/92	0																						
10																								
11	11/14/92	0																						
12																								
93																								
2																								
3	3/30/93	0																						
4																								
5																								
6	6/15/93	0																						
7																								
8																								
9	9/20/93	0																						
10																								
11	11/17/93	0																						
12																								
94																								
2																								
3	3/24/94	0																						
4																								
5																								
6	6/14/94	0																						
7																								
8																								
9	9/7/94	0																						
10																								
11	11/28/94	0																						
12																								
95																								
2																								
3	3/13/95	0																						
4																								
5																								
6	6/7/95	0																						
7																								
8																								
9	9/13/95	0																						
10																								
11	11/22/95	0																						
12																								
96																								
END DATA																								
Count		91	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Minimum		0	ERR	ERR	ERR	ERR	339.0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Maximum		0.19	ERR	ERR	ERR	ERR	1260.0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Average		0.0062	ERR	ERR	ERR	ERR	629.6	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Std. Dev		0.0244	ERR	ERR	ERR	ERR	284.4	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Avg -1 Std		-0.018	ERR	ERR	ERR	ERR	345.2	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Avg +1 Std		0.0306	ERR	ERR	ERR	ERR	914.0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Avg -2 Std		-0.043	ERR	ERR	ERR	ERR	60.8	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Avg +2 Std		0.055	ERR	ERR	ERR	ERR	1198.3	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	

NOTE: The "<" symbol indicates that "Less Than" data was found in the data set, statistics are approximate.


Station B-11
Precip. vs. Flow
Monthly Precip. (in)
0
1
2
3
4
Flow (cfs)
0.2
0.15
0.1
0.05
0
77
79
81
83
85
87
89
91
93
95
Time
Precip.
Flow

Station B-11

TDS vs. Flow



TDS | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev

Cyprus Plateau Mining Company - Water Quality Data

Print Date 04/10/96

Station: B-12 Property: Castle Gate Location: NE1/4, SW1/4, Sec 3, T13 S, R9 E Station Type Int. Stream Sampling Frequency: Quarterly Formation: Elevation: 6950

Date		Field Measurements					Laboratory Measurements																	
Yr-Mo	Sample Date	Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
77																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
78																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
79																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
80																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
81																								
2																								
3																								
4	4/7/81	0																						
5																								
6	6/23/81	0																						
7																								
8	8/27/81	0																						
9																								
10	10/29/81	0																						
11																								
12	12/3/81	0																						
82																								
2	2/15/82	0																						
3																								
4	4/14/82	0																						
5																								
6	6/14/82	0																						
7																								
8	8/3/82	0																						
9																								
10	10/7/82	0																						
11																								
12	12/21/82	0																						
83																								
2	2/24/83	0																						
3																								
4	4/21/83	0																						
5																								
6	6/28/83	0																						
7																								
8	8/17/83	0																						
9																								
10	10/18/83	0																						

Cyprus Plateau Mining Company - Water Quality Data

Print Date 04/10/98

Station: B-12 | Property: Castle Gate | Location: NE1/4, SW1/4, Sec 3, T13 S, R9 E | Station Type Int. Stream | Sampling Frequency: Quarterly | Formation: | Elevation: 6950

Date		Field Measurements					Laboratory Measurements																	
Yr-Mo	Sample Date	Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
11																								
12																								
84																								
2																								
3																								
4																								
5																								
6	6/19/84	0																						
7																								
8																								
9	9/7/84	0																						
10																								
11																								
12																								
85																								
2																								
3	3/30/85	0																						
4																								
5																								
6	6/15/85	0																						
7																								
8																								
9	9/30/85	0																						
10																								
11	11/30/85	0																						
12																								
86																								
2																								
3	3/31/86	0																						
4																								
5																								
6	6/30/86	0																						
7																								
8																								
9	9/25/86	0																						
10																								
11																								
12	11/24/86	0																						
87																								
2																								
3	3/27/87	0																						
4																								
5	5/22/87	0																						
6																								
7																								
8	8/10/87	0																						
9																								
10	10/13/87	0																						
11																								
12																								
88																								
2																								
3	3/22/88	0																						
4																								
5																								
6	6/14/88	0																						
7																								
8																								
9	9/28/88	0																						
10																								
11	11/30/88	0																						
12																								
89																								
2																								
3																								
4																								
5																								
6	6/21/89	0																						
7																								
8																								
9	9/21/89	0																						
10																								
11																								
12																								
90																								
2																								
3	3/9/90	0																						
4																								
5	5/14/90	0																						
6																								
7																								
8																								

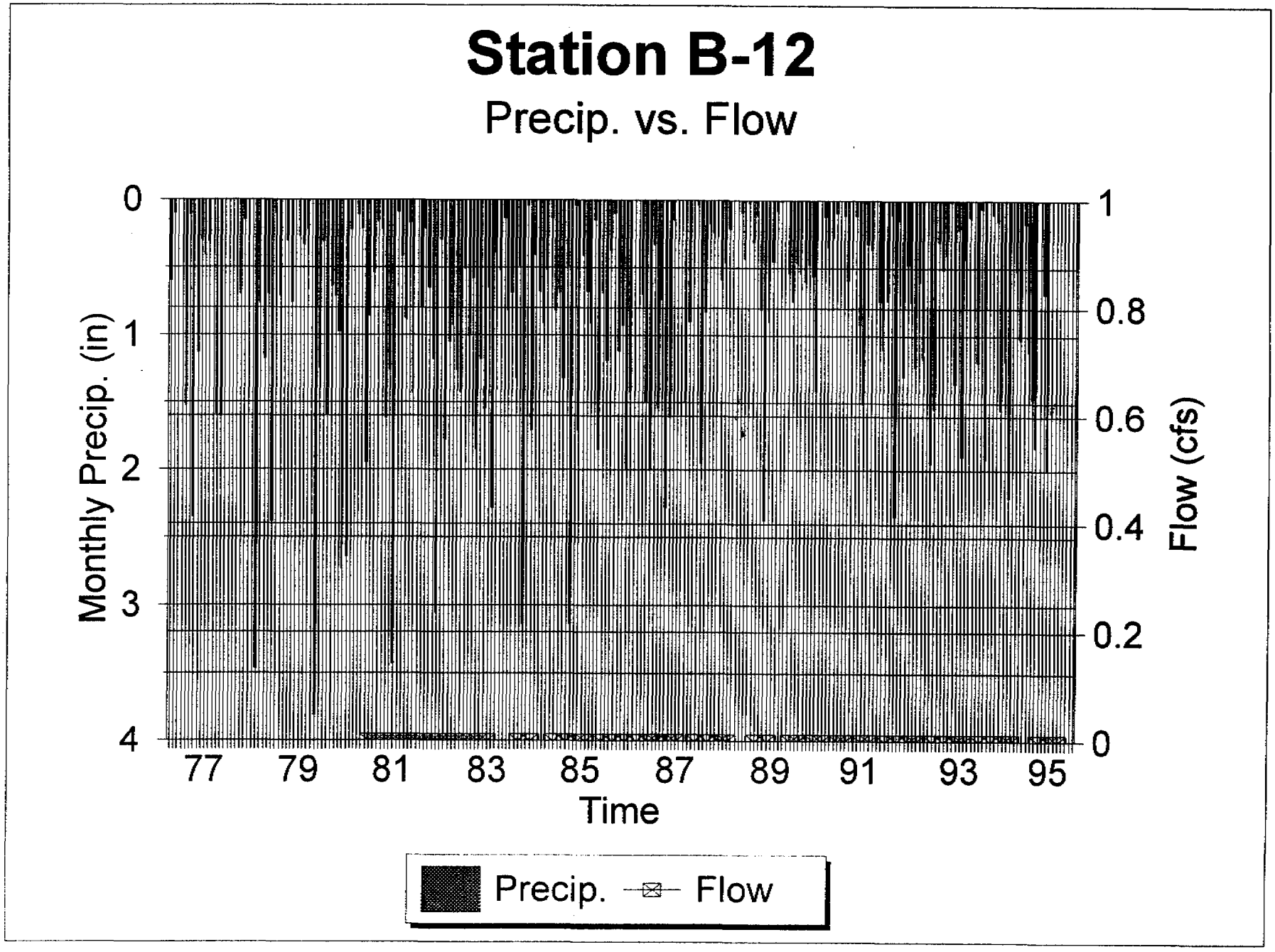
Cyprus Plateau Mining Company - Water Quality Data

Station: B-12 Property: Castle Gate Location: NE1/4, SW1/4, Sec 3, T13 S, R9 E Station Type Int. Stream Sampling Frequency: Quarterly Formation: Elevation: 6960

Print Date 04/10/96

Date		Field Measurements					Laboratory Measurements																	
Yr-Mo	Sample Date	Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
9	9/28/90	0																						
10																								
11	11/26/90	0																						
12																								
91																								
2																								
3	3/13/93	0																						
4																								
5	5/26/91	0																						
6																								
7																								
8																								
9	9/11/91	0																						
10																								
11	11/22/91	0																						
12																								
92																								
2																								
3	3/4/92	0																						
4																								
5																								
6	6/8/92	0																						
7																								
8																								
9	9/3/92	0																						
10																								
11	11/14/92	0																						
12																								
93																								
2																								
3	3/30/93	0																						
4																								
5																								
6	6/15/93	0																						
7																								
8																								
9	9/20/93	0																						
10																								
11	11/17/93	0																						
12																								
94																								
2																								
3	3/24/94	0																						
4																								
5																								
6	6/14/94	0																						
7																								
8																								
9	9/7/94	0																						
10																								
11	11/28/94	0																						
12																								
95																								
2																								
3	3/13/95																							
4																								
5																								
6	6/7/95	0																						
7																								
8																								
9	9/13/95	0																						
10																								
11	11/22/95	0																						
12																								
96																								
END DATA																								
Count		59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Minimum		0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Maximum		0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Average		0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Std. Dev		0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Avg -1 Std		0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Avg +1 Std		0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Avg -2 Std		0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Avg +2 Std		0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	

NOTE: The "<" symbol indicates that "Less Than" data was found in the data set, statistics are approximate.


Station B-12
Precip. vs. Flow
Monthly Precip. (in)
0
1
2
3
4
Flow (cfs)
1
0.8
0.6
0.4
0.2
0
77
79
81
83
85
87
89
91
93
95
Time
Precip.
Flow

Cyprus Plateau Mining Company - Water Quality Data

Print Date 04/10/96

Station: B-17 Property: Castle Gate Location: NW1/4, NE1/4, Sec 16, T13 S, R9 E Station Type Int. Stream Sampling Frequency: Quarterly Formation: Elevation: 6650

Date		Field Measurements					Laboratory Measurements																		
Yr-Mo	Sample Date	Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
77																									
2																									
3																									
4																									
5																									
6																									
7	7/6/77	0.1					1540																		
8	8/3/77	0																							
9	9/8/77	0																							
10	10/12/77	0																							
11	11/9/77	0																							
12	12/14/77	0																							
78	1/11/78	0																							
2	2/8/78	0																							
3	3/8/78	0																							
4	4/12/78	0																							
5	5/10/78	0																							
6	6/14/78	0.1					967																		
7																									
8	8/9/78	0.1					1310																		
9																									
10	10/10/78	0																							
11																									
12	12/13/78	0																							
79																									
2	2/14/79	0																							
3																									
4	4/18/79	0																							
5																									
6	6/13/79	0.05					1605																		
7																									
8	8/8/79	0.34					1835																		
9																									
10	10/30/79	0.16					1655																		
11																									
12	12/28/79	0.009					1510																		
80																									
2	2/13/80	0																							
3																									
4	4/17/80	0																							
5																									
6	6/5/80	0																							
7																									
8	8/7/80	0																							
9																									
10	10/28/80	0																							
11																									
12	12/29/80	0																							
81																									
2	2/4/81	0																							
3																									
4	4/7/81	0																							
5																									
6	6/23/81	0																							
7																									
8	8/27/81	0																							
9																									
10	10/29/81	0																							
11																									
12	12/3/81	0																							
82																									
2	2/15/82	0																							
3																									
4	4/14/82	0																							
5																									
6	6/14/82	0																							
7																									
8	8/3/82	0																							
9																									
10	10/7/82	0																							
11																									
12	12/21/82	0																							
83																									
2	2/24/83	0.04					1220																		
3																									
4	4/21/83	0.03					1588																		
5																									
6	6/28/83	0.03					1510																		
7																									
8	8/17/83	0																							
9																									
10	10/18/83	0.14					1586																		

Cyprus Plateau Mining Company - Water Quality Data

Print Date 04/10/98

Station: B-17 | Property: Castle Gate | Location: NW1/4, NE1/4, Sec 18, T13 S, R9 E | Station Type Int. Stream | Sampling Frequency: Quarterly | Formation: | Elevation: 6650

Date Yr-Mo	Sample Date	Field Measurements Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	Laboratory Measurements TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
11																								
12																								
84																								
2																								
3																								
4																								
5																								
6	6/19/84	0																						
7																								
8																								
9	9/7/84	0.166					1650																	
10																								
11																								
12																								
85																								
2																								
3	3/30/85	0																						
4																								
5																								
6	6/15/85	0.013					1560																	
7																								
8																								
9	9/30/85	0.008					1520																	
10																								
11	11/30/85	0																						
12																								
86																								
2																								
3	3/31/86	0																						
4																								
5																								
6	6/30/86	0																						
7																								
8																								
9	9/25/86	0																						
10																								
11																								
12	11/24/86	0																						
87																								
2																								
3	3/26/87	0																						
4																								
5	5/22/87	0																						
6																								
7																								
8	8/10/87	0																						
9																								
10	10/13/87	0.0138					784																	
11																								
12																								
88																								
2																								
3	3/22/88	0																						
4																								
5																								
6	6/14/88	0																						
7																								
8																								
9	9/28/88	0																						
10																								
11	11/30/88	0																						
12																								
89																								
2																								
3																								
4																								
5																								
6	6/21/89	0																						
7																								
8																								
9	9/21/89	0																						
10																								
11																								
12																								
90																								
2																								
3	3/9/90	0																						
4																								
5	5/30/90	0																						
6																								
7																								
8																								

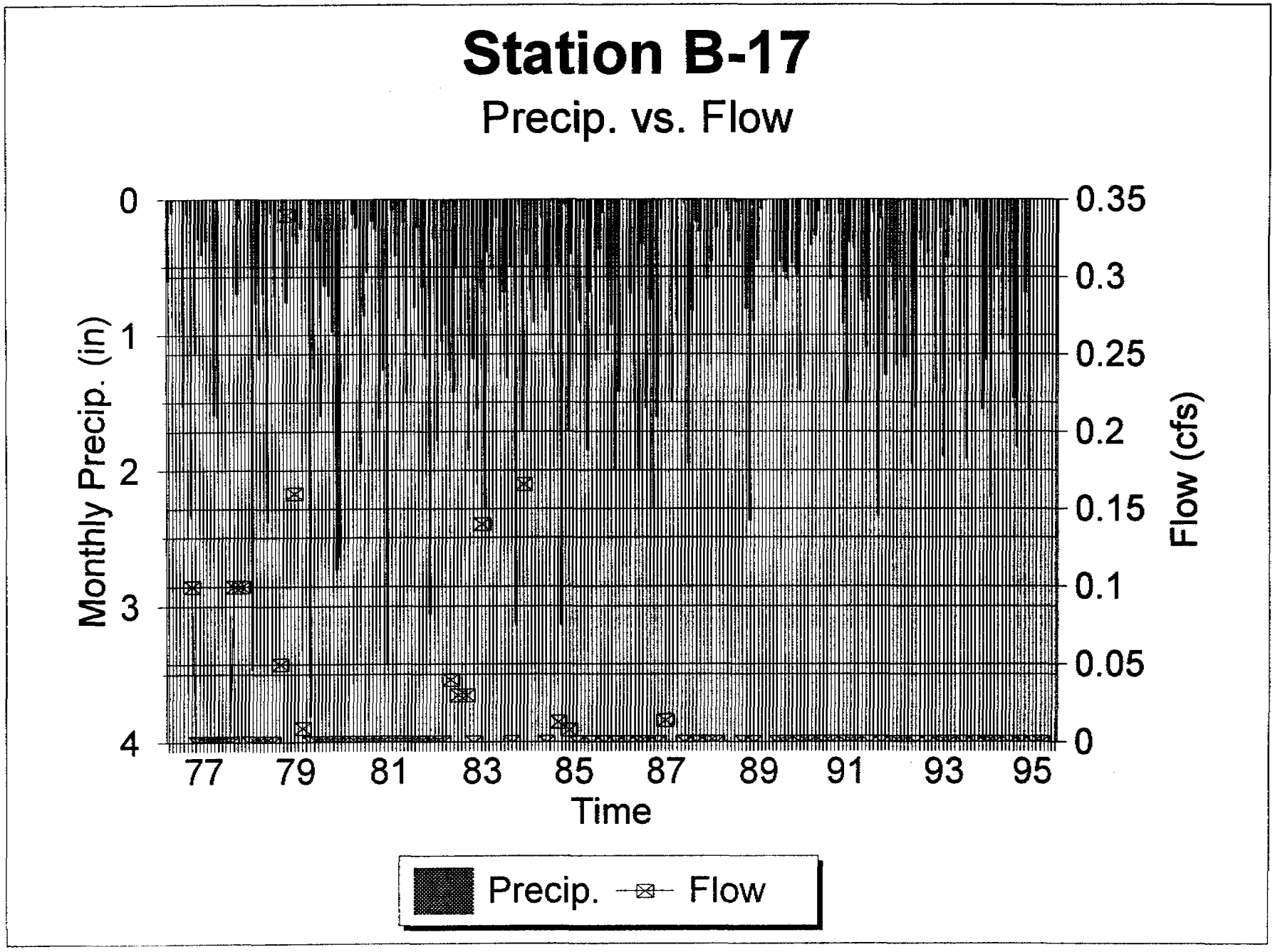
Cyprus Plateau Mining Company - Water Quality Data

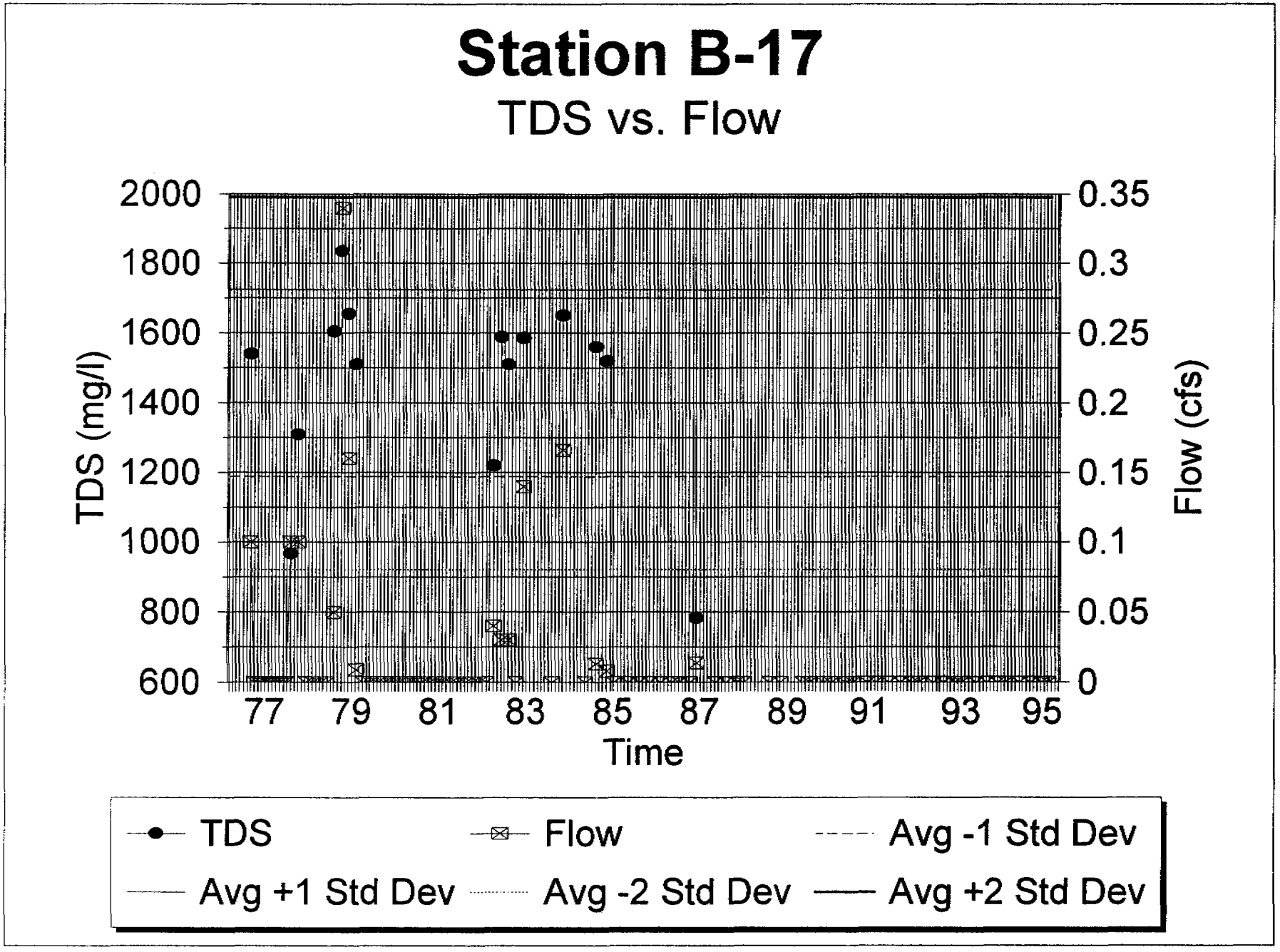
Print Date 04/10/98

Station: B-17 | Property: Castle Gate | Location: NW1/4, NE1/4, Sec 16, T13 S, R9 E | Station Type Int. Stream | Sampling Frequency: Quarterly | Formation: | Elevation: 6550

Date		Field Measurements					Laboratory Measurements																		Comments
Yr-Mo	Sample Date	Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)		
9	9/28/90	0																							
10																									
11	11/26/90	0																							
12																									
91																									
2																									
3	3/13/93	0																							
4																									
5	5/26/91	0																							
6																									
7																									
8																									
9	9/5/91	0																							
10																									
11	11/22/91	0																							
12																									
92																									
2																									
3	3/4/92	0																							
4																									
5																									
6	6/8/92	0																							
7																									
8																									
9	9/3/92	0																							
10																									
11	11/14/92	0																							
12																									
93																									
2																									
3	3/30/93	0																							
4																									
5																									
6	6/15/93	0																							
7																									
8																									
9	9/20/93	0																							
10																									
11	11/17/93	0																							
12																									
94																									
2																									
3	3/24/94	0																							
4																									
5																									
6	6/14/94	0																							
7																									
8																									
9	9/7/94	0																							
10																									
11	11/28/94	0																							
12																									
95																									
2																									
3	3/13/95	0																							
4																									
5																									
6	6/7/95	0																							
7																									
8																									
9	9/13/95	0																							
10																									
11	11/22/95	0																							
12																									
96																									
END DATA																									
	Count	88	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Minimum	0	ERR	ERR	ERR	ERR	784.0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR		
	Maximum	0.34	ERR	ERR	ERR	ERR	1835.0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR		
	Average	0.0148	ERR	ERR	ERR	ERR	1456.0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR		
	Std. Dev	0.0463	ERR	ERR	ERR	ERR	287.4	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR		
	Avg -1 Std	-0.034	ERR	ERR	ERR	ERR	1188.6	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR		
	Avg +1 Std	0.0631	ERR	ERR	ERR	ERR	1723.4	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR		
	Avg -2 Std	-0.082	ERR	ERR	ERR	ERR	921.1	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR		
	Avg +2 Std	0.1114	ERR	ERR	ERR	ERR	1990.9	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR		

NOTE: The "<" symbol indicates that "Less Than" data was found in the data set, statistics are approximate.


Station B-17
Precip. vs. Flow
Monthly Precip. (in)
0
1
2
3
4
Flow (cfs)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
77
79
81
83
85
87
89
91
93
95
Time
Precip.
Flow


Station B-17
TDS vs. Flow
TDS (mg/l)
2000
1800
1600
1400
1200
1000
800
600
Flow (cfs)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
77
79
81
83
85
87
89
91
93
95
Time
TDS
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Cyprus Plateau Mining Company - Water Quality Data

Print Date 04/10/96

Station: B-25 | Property: Castle Gate | Location: NW1/4, SW1/4, Sec 28, T12 S, R9 E | Station Type Int. Stream | Sampling Frequency: Quarterly | Formation: | Elevation: 6900

Date		Field Measurements					Laboratory Measurements																		Comments
Yr-Mo	Sample Date	Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)		
77																									
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									
78																									
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									
79																									
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									
80																									
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									
81																									
2																									
3																									
4	4/7/81	0																							
5																									
6	6/23/81	0																							
7																									
8	8/27/81	0																							
9																									
10	10/29/81	0																							
11																									
12	12/3/81	0																							
82																									
2	2/15/82	0																							
3																									
4	4/14/82	0																							
5																									
6	6/14/82	0																							
7																									
8	8/3/82	0																							
9																									
10	10/7/82	0																							
11																									
12																									
83																									
2	2/24/83	0																							
3																									
4	4/21/83	0																							
5																									
6	6/28/83	450					410																		
7																									
8	8/17/83	0																							
9																									
10	10/18/83	0																							

Cyprus Plateau Mining Company - Water Quality Data

Print Date 04/10/98

Station: B-25 | Property: Castle Gate | Location: NW1/4, SW1/4, Sec 28, T12 S, R9 E | Station Type Int. Stream | Sampling Frequency: Quarterly | Formation: | Elevation: 6900

Date		Field Measurements					Laboratory Measurements																	
Yr-Mo	Sample Date	Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
11																								
12																								
84																								
2																								
3																								
4																								
5	5/24/84	146					357																	
6																								
7																								
8																								
9	9/10/84	0																						
10																								
11																								
12																								
85																								
2																								
3	3/30/85	0																						
4																								
5																								
6	6/15/85	0																						
7																								
8																								
9	9/30/85	0.15					276																	
10																								
11	11/30/85	0																						
12																								
86																								
2																								
3	3/31/86	192					200																	
4																								
5																								
6	6/23/86	10					437																	
7																								
8																								
9	9/25/86	27.9					138																	
10																								
11																								
12	11/24/86	0																						
87																								
2																								
3	3/26/87	0																						
4																								
5	5/22/87	9.8					433																	
6																								
7																								
8	8/10/87	0																						
9																								
10	10/13/87	2.1					118																	
11																								
12																								
88																								
2																								
3	3/22/88	0																						
4																								
5																								
6	6/13/88	0																						
7																								
8																								
9	9/28/88	0																						
10																								
11	11/30/88	0																						
12																								
89																								
2																								
3																								
4																								
5																								
6	6/21/89	0																						
7																								
8																								
9	9/21/89	0																						
10																								
11																								
12																								
90																								
2																								
3	3/9/90	0																						
4																								
5	5/30/90	0																						
6																								
7																								
8																								

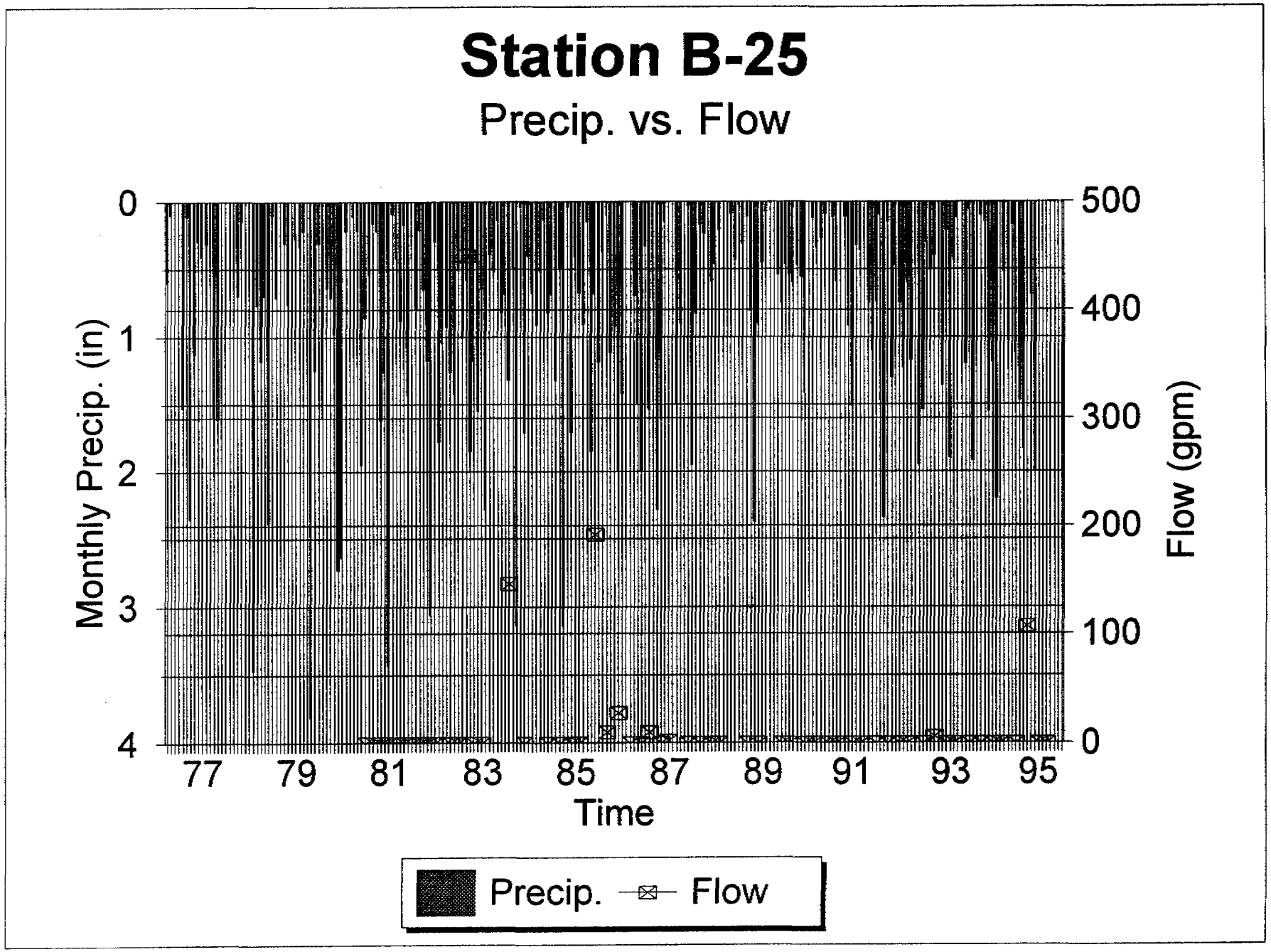
Cyprus Plateau Mining Company - Water Quality Data

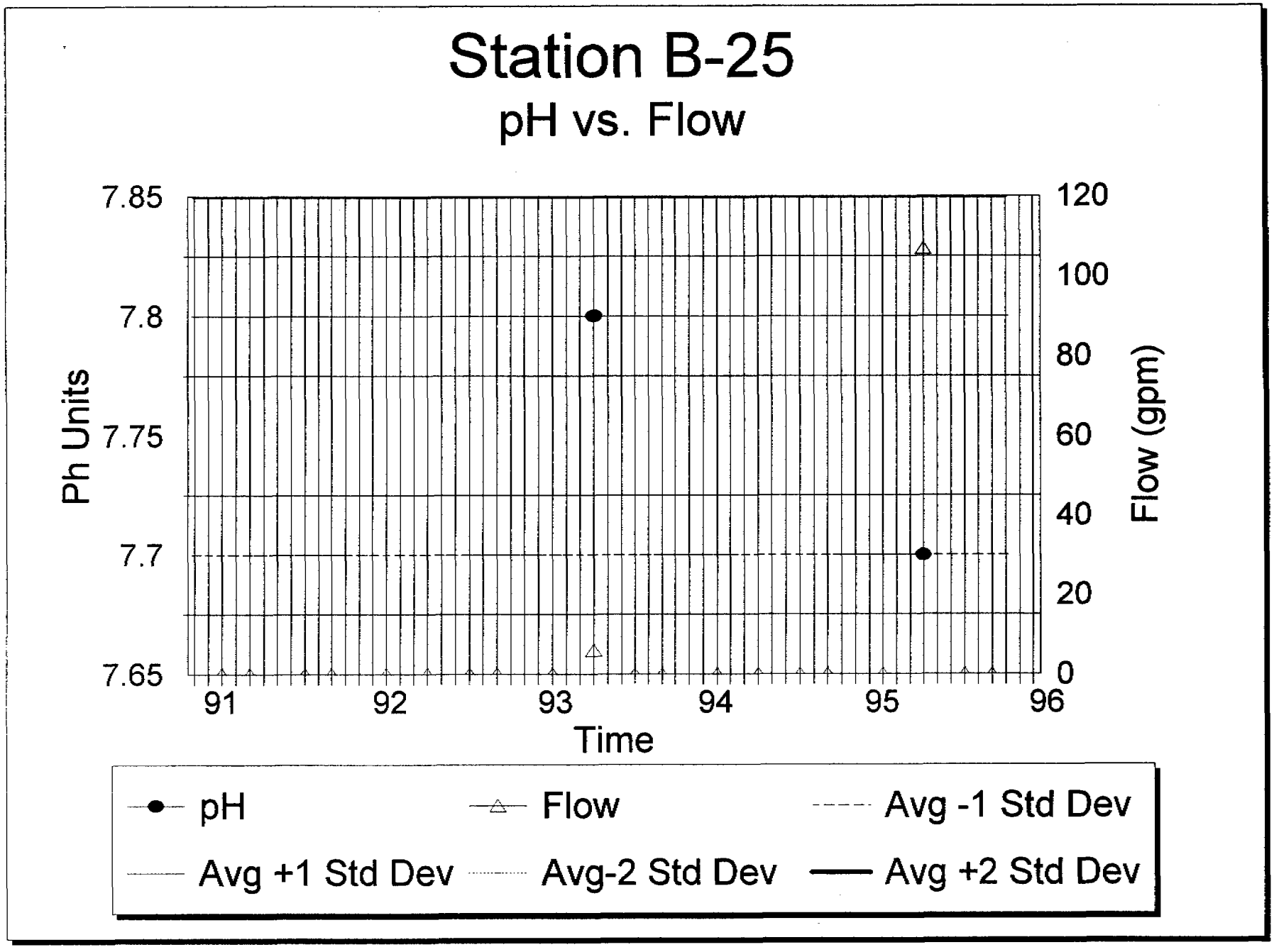
Print Date 04/10/96

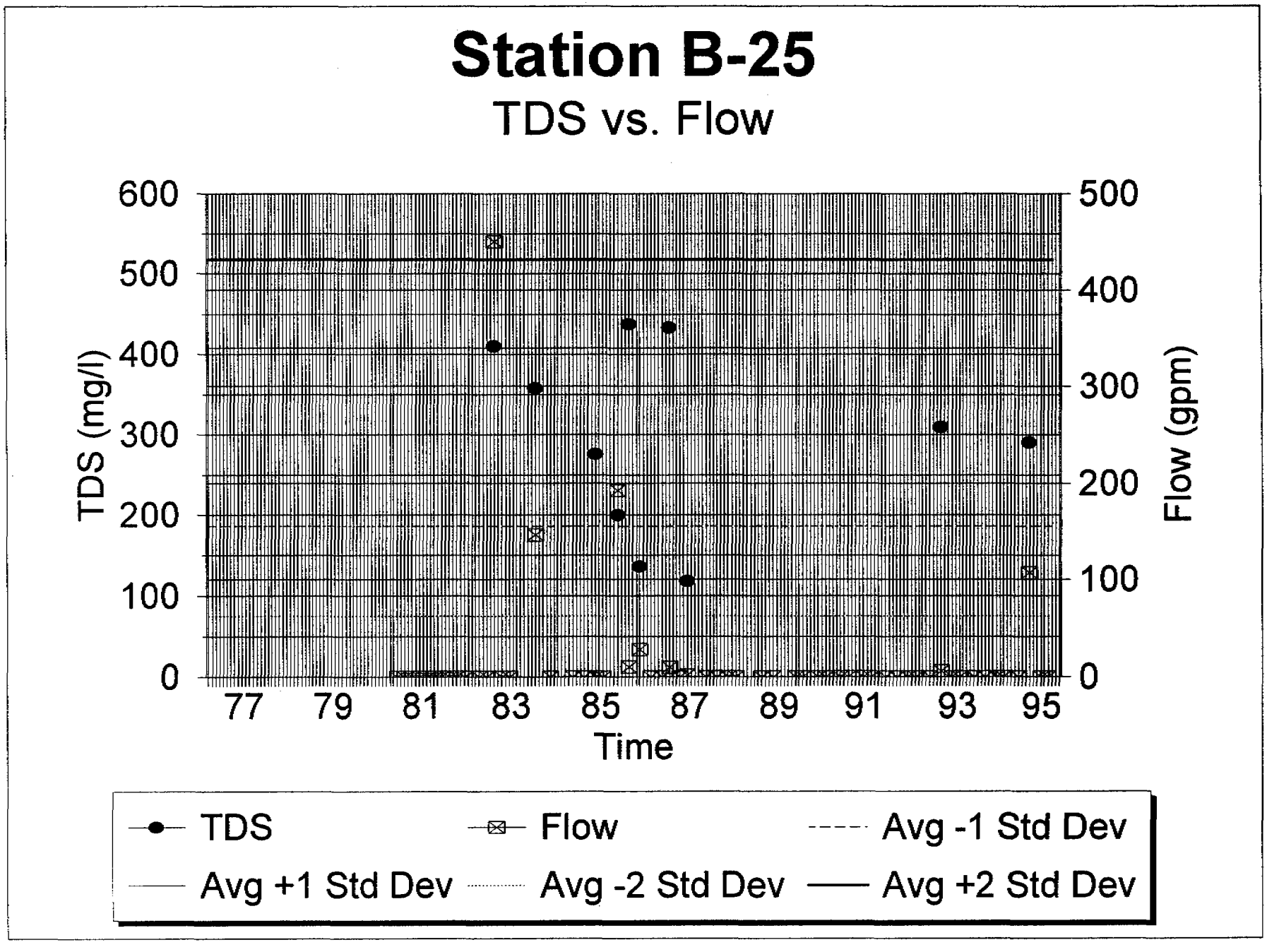
Station: B-25 | Property: Castle Gate | Location: NW1/4, SW1/4, Sec 28, T12 S, R9 E | Station Type Int. Stream | Sampling Frequency: Quarterly | Formation: | Elevation: 6900

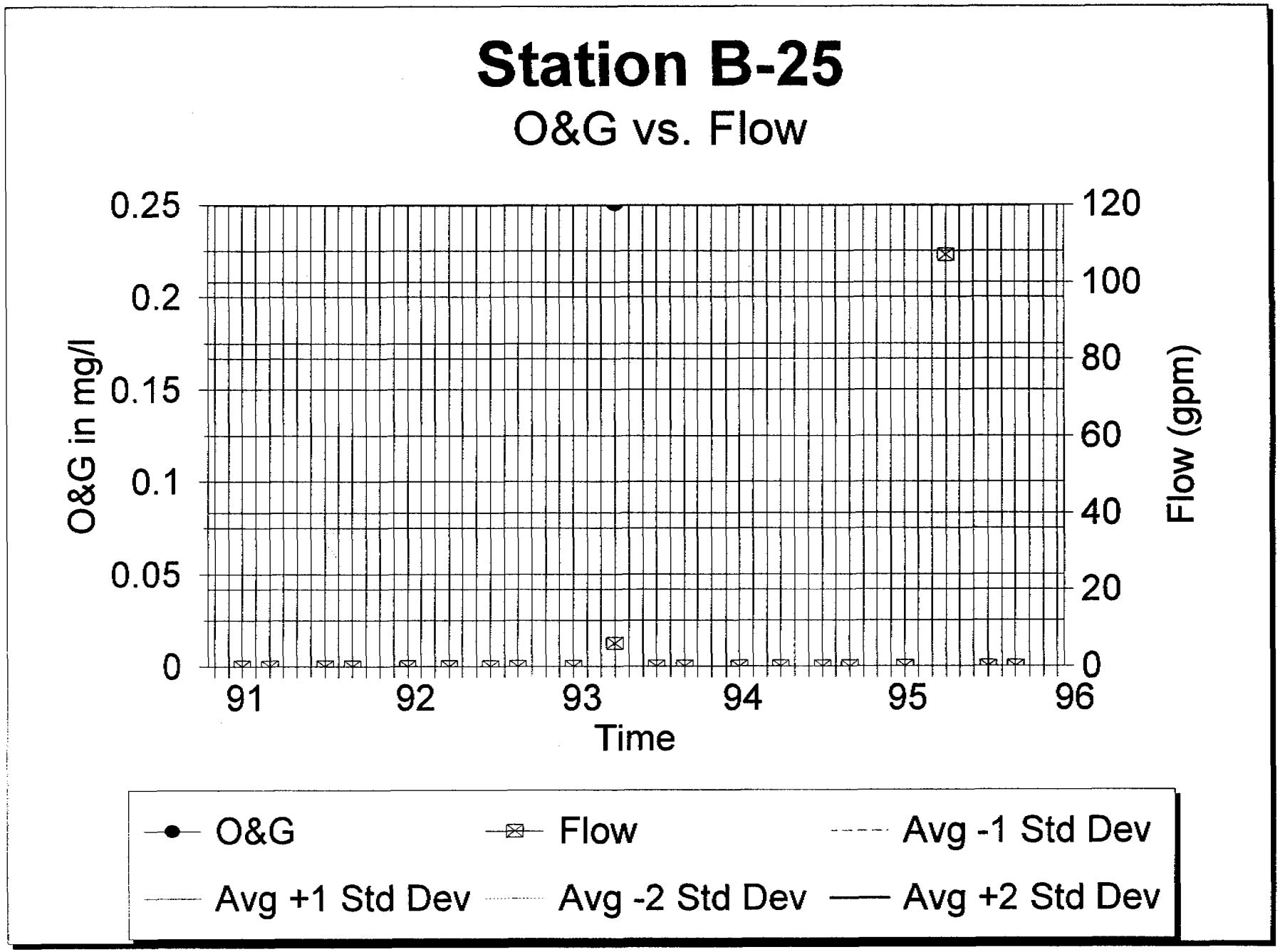
Date		Field Measurements					Laboratory Measurements																		
Yr-Mo	Sample Date	Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Alt-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ao-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
9	9/29/90	0																						
10																								
11	11/26/90	0																						
12																								
91																								
2																								
3	3/13/91	0																						
4																								
5	5/28/91	0																						
6																								
7																								
8																								
9	9/11/91	0																						
10																								
11	11/22/91	0																						
12																								
92																								
2																								
3	3/4/92	0																						
4																								
5																								
6	6/8/92	0																						
7																								
8																								
9	9/3/92	0																						
10																								
11	11/14/92	0																						
12																								
93																								
2																								
3	3/30/93	0																						
4																								
5																								
6	6/14/93	6	7.8	400	21	8.4	309	15 <	0.25	282	296		318	13	7	36	27	56						
7																								
8																								
9	9/20/93	0																						
10																								
11	11/17/93	0																						
12																								
94																								
2																								
3	3/24/94	0																						
4																								
5																								
6	6/14/94	0																						
7																								
8																								
9	9/7/94	0																						
10																								
11	11/28/94	0																						
12																								
95																								
2																								
3	3/13/95	0																						
4																								
5																								
6	6/7/95	107	7.7	837	9	7.2	290	20		292	360		282	10	5	30	49	57.7						
7																								
8																								
9	9/13/95	0																						
10																								
11	11/27/95	0																						
12																								
96																								
END DATA																								
Count		59	2	2	2	2	10	2	1	2	2	0	2	2	2	2	2	2	0	0	0	0	0	
Minimum		0	7.7	400.0	9.0	7.2	118.0	15.0	< 0.3	282.0	296.0	ERR	282.0	10.0	5.0	30.0	27.0	56.0	ERR	ERR	ERR	ERR	ERR	
Maximum		450	7.8	837.0	21.0	8.4	437.0	20	< 0.3	292.0	360.0	ERR	318.0	13.0	7.0	36.0	49.0	57.7	ERR	ERR	ERR	ERR	ERR	
Average		16.118	7.8	618.5	15.0	7.8	296.6	18	< 0.3	287.0	328.0	ERR	300.0	11.5	6.0	33.0	38.0	56.9	ERR	ERR	ERR	ERR	ERR	
Std. Dev		66.104	0.0	218.5	6.0	0.6	110.7	3	< 0.0	5.0	32.0	ERR	18.0	1.5	1.0	3.0	11.0	0.9	ERR	ERR	ERR	ERR	ERR	
Avg -1 Std		-49.99	7.7	400.0	9.0	7.2	185.9	15	< 0.3	282.0	296.0	ERR	282.0	10.0	5.0	30.0	27.0	56.0	ERR	ERR	ERR	ERR	ERR	
Avg +1 Std		82.222	7.8	837.0	21.0	8.4	407.3	20	< 0.3	292.0	360.0	ERR	318.0	13.0	7.0	36.0	49.0	57.7	ERR	ERR	ERR	ERR	ERR	
Avg -2 Std		-116.1	7.7	181.5	3.0	6.6	75.3	13	< 0.3	277.0	264.0	ERR	264.0	8.5	4.0	27.0	16.0	55.2	ERR	ERR	ERR	ERR	ERR	
Avg +2 Std		148.33	7.9	1055.5	27.0	9.0	517.9	23	< 0.3	297.0	392.0	ERR	336.0	14.5	8.0	39.0	60.0	58.6	ERR	ERR	ERR	ERR	ERR	

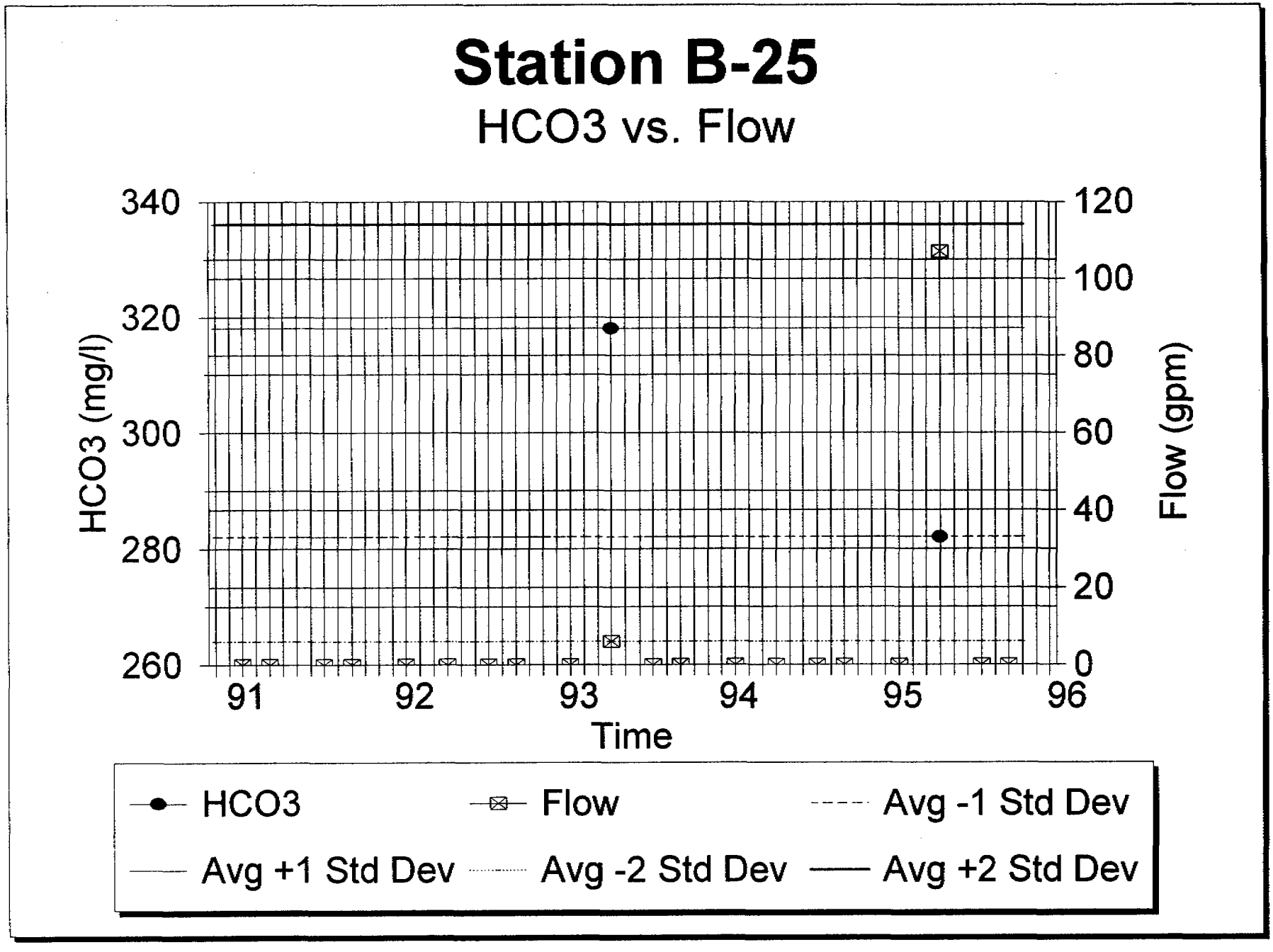
NOTE: The "<" symbol indicates that "Less Than" data was found in the data set, statistics are approximate.

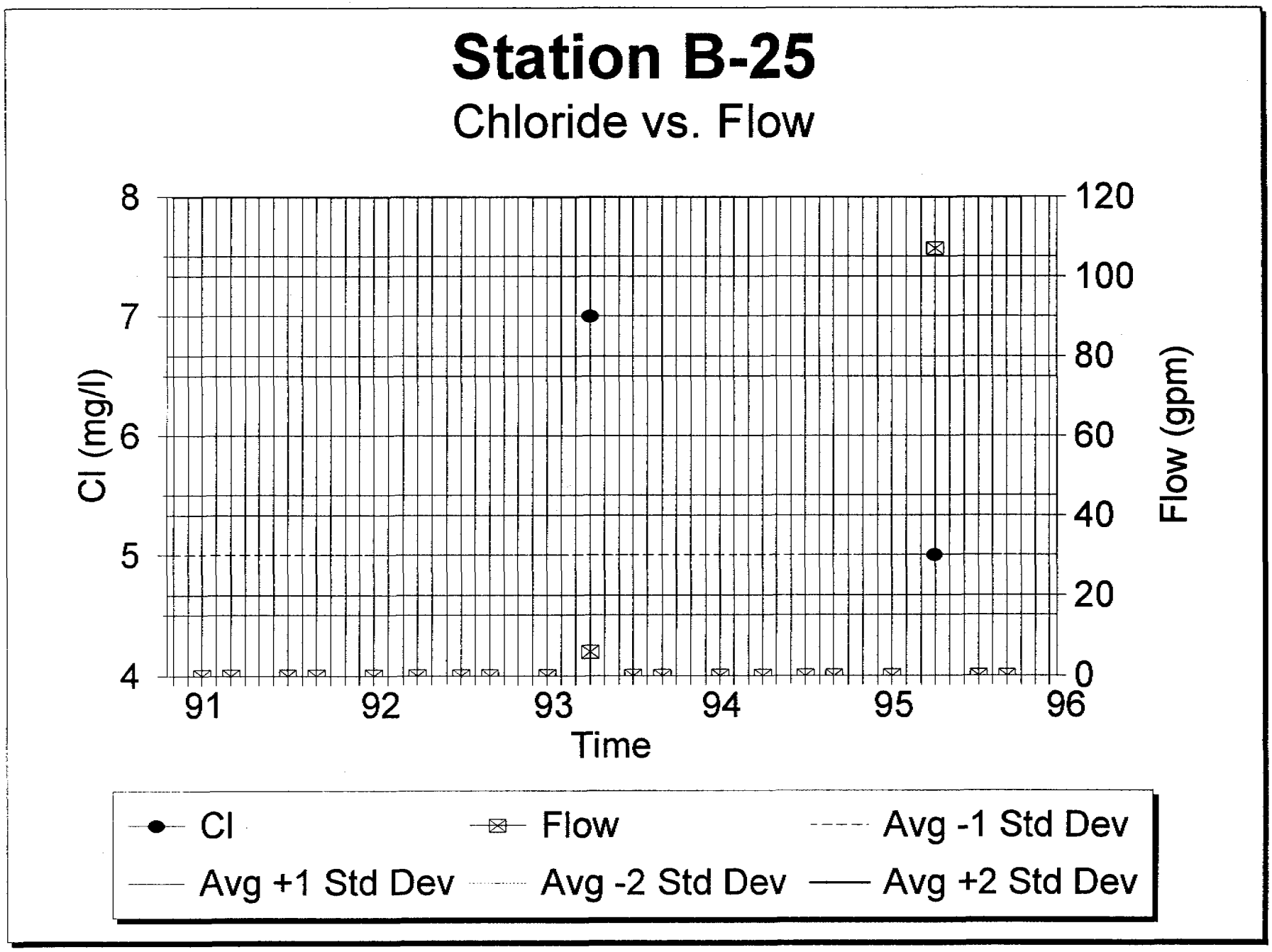

Station B-25
Precip. vs. Flow
Monthly Precip. (in)
0
1
2
3
4
Flow (gpm)
500
400
300
200
100
0
77
79
81
83
85
87
89
91
93
95
Time
Precip.
Flow


Station B-25
pH vs. Flow
7.85
7.8
7.75
7.7
7.65
Ph Units
120
100
80
60
40
20
0
Flow (gpm)
91
92
93
94
95
96
Time
pH
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg-2 Std Dev
Avg +2 Std Dev


Station B-25
TDS vs. Flow
600
500
400
300
200
100
0
TDS (mg/l)
500
400
300
200
100
0
Flow (gpm)
77
79
81
83
85
87
89
91
93
95
Time
TDS
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

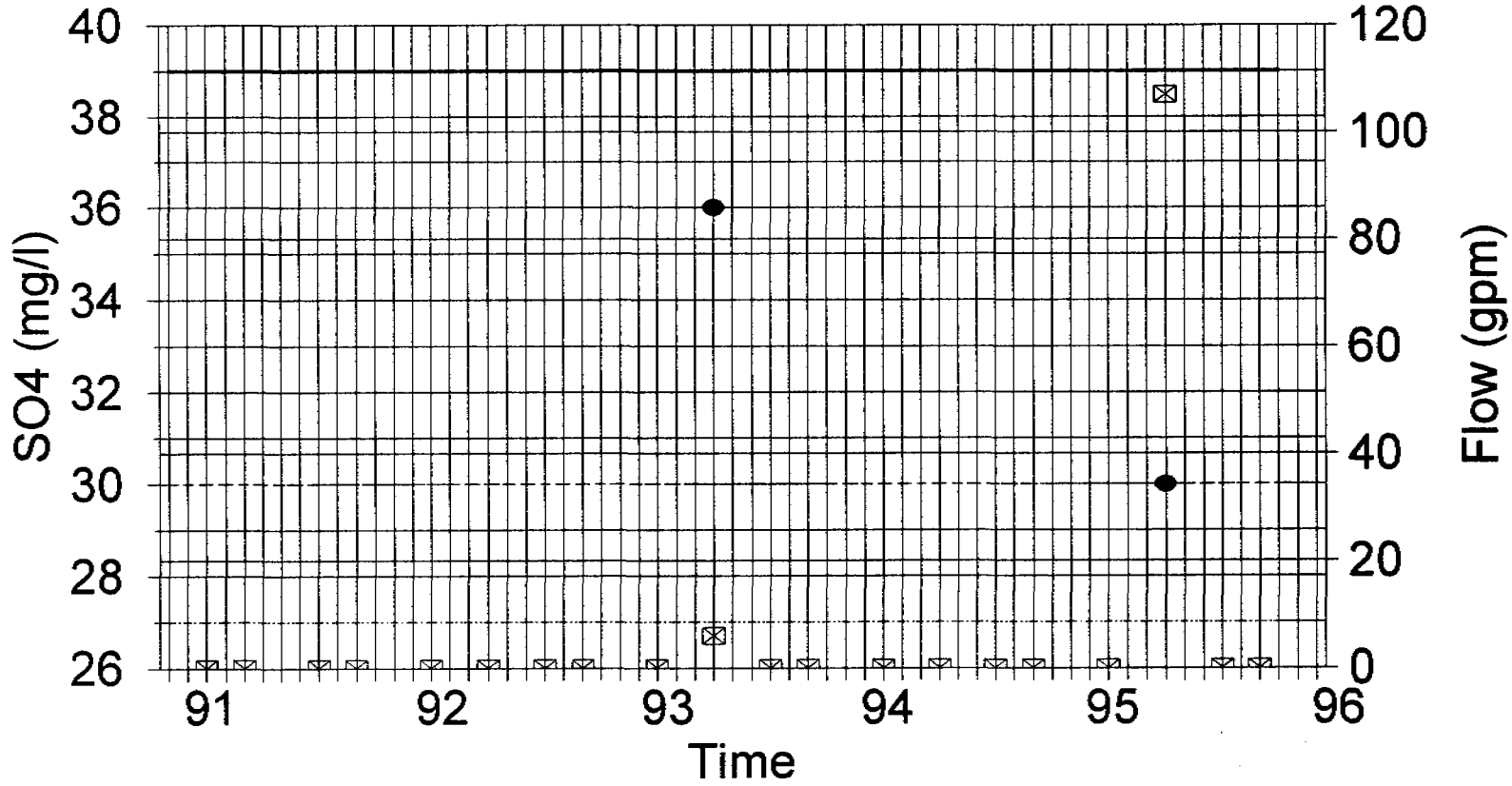

Station B-25
O&G vs. Flow
0.25
0.2
0.15
0.1
0.05
0
O&G in mg/l
120
100
80
60
40
20
0
Flow (gpm)
91
92
93
94
95
96
Time
O&G
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-25
HCO3 vs. Flow
340
320
300
280
260
HCO3 (mg/l)
120
100
80
60
40
20
0
Flow (gpm)
91
92
93
94
95
96
Time
HCO3
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

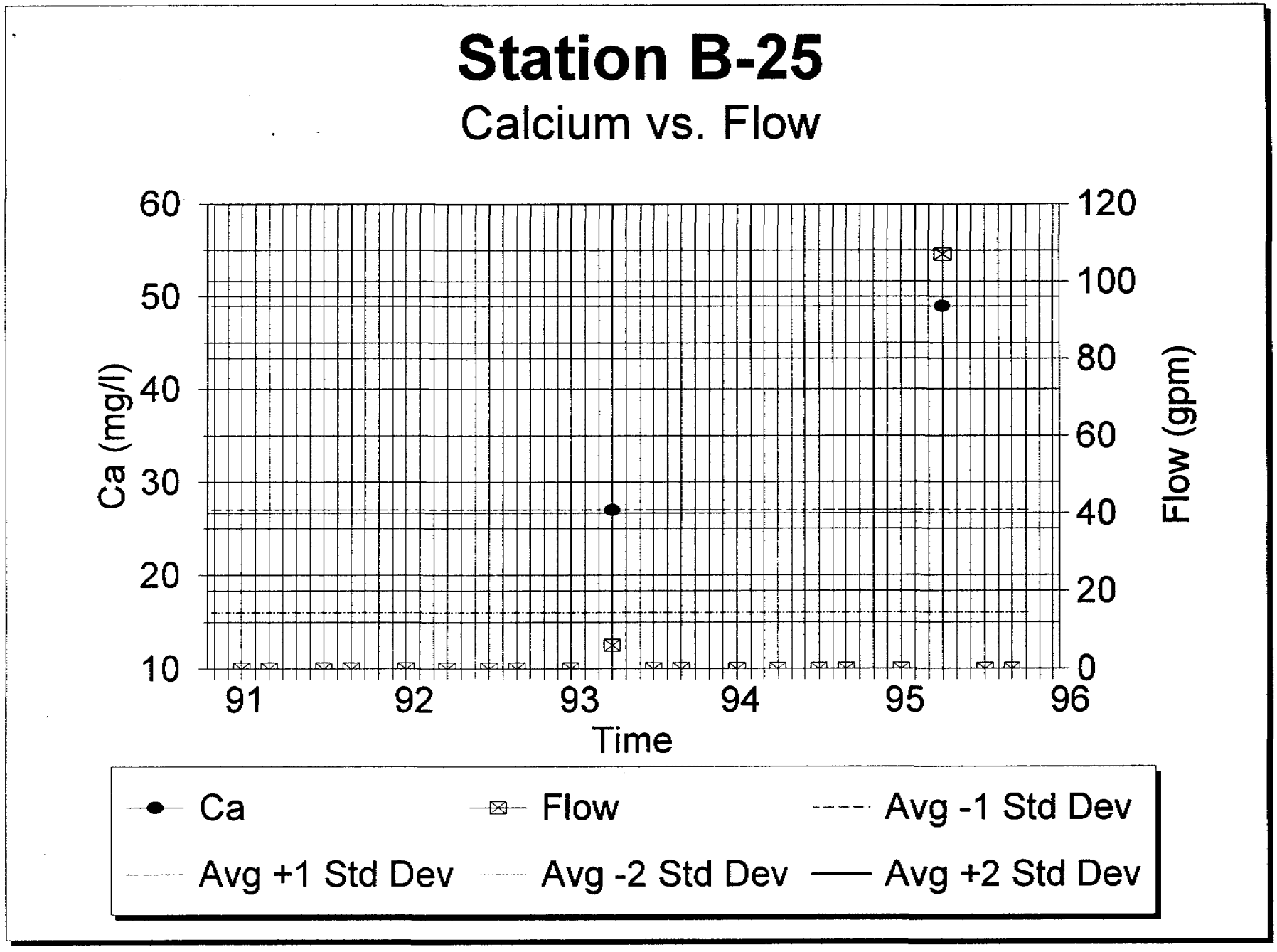

Station B-25
Chloride vs. Flow
Cl (mg/l)
8
7
6
5
4
120
100
80
60
40
20
0
Flow (gpm)
91
92
93
94
95
96
Time
Cl
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Station B-25

Sulfate vs. Flow

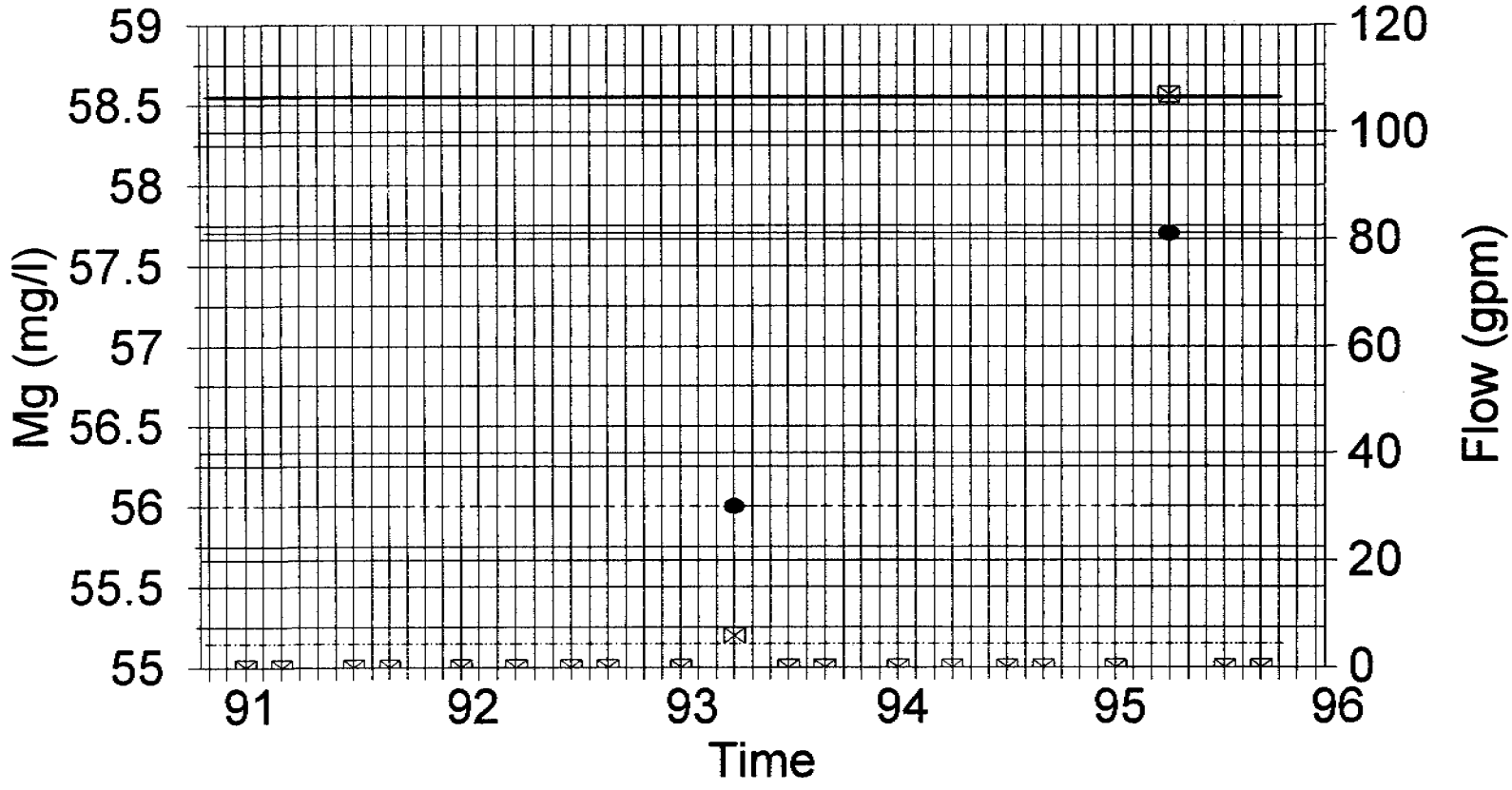


SO4 | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev


Station B-25
Calcium vs. Flow
Ca (mg/l)
60
50
40
30
20
10
Flow (gpm)
120
100
80
60
40
20
0
91
92
93
94
95
96
Time
Ca
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Station B-25

Magnesium vs. Flow



Mg | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev

Cyprus Plateau Mining Company - Water Quality Data

Print Date 05/02/96

Station: B-26 Property: Castle Gate Location: NE1/4, SE1/4, Sec 28, T12 S, R9 E Station Type Int. Stream Sampling Frequency: Quarterly Formation: Elevation: 6700

Date		Field Measurements					Laboratory Measurements																		
Yr-Mo	Sample Date	Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
77																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
78																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
79																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
80																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
81																								
2																								
3																								
4	4/7/81	0																						
5																								
6	6/23/81	0																						
7																								
8	8/27/81	0																						
9																								
10	10/29/81	0.1					625																	
11																								
12	12/3/81	0																						
82																								
2	2/15/82	0																						
3																								
4	4/14/82	0.13					910																	
5																								
6	6/14/82	0.1					1480																	
7																								
8	8/3/82	0																						
9																								
10	10/7/82	0																						
11																								
12	12/21/82	0																						
83																								
2	2/24/83	0																						
3																								
4	4/21/83	0.03					395																	
5																								
6	6/28/83	1					458																	
7																								
8	8/17/83	0																						
9																								
10	10/18/83	0.01																						

Cyprus Plateau Mining Company - Water Quality Data

Print Date 05/02/96

Station: B-26 | Property: Castle Gate | Location: NE1/4, SE1/4, Sec 28, T12 S, R9 E | Station Type Int. Stream | Sampling Frequency: Quarterly | Formation: | Elevation: 5700

Date		Field Measurements					Laboratory Measurements																		
Yr-Mo	Sample Date	Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
11																									
12																									
84																									
2																									
3																									
4																									
5	5/24/84	0.86					347																		
6																									
7																									
8																									
9	9/10/84	0																							
10																									
11																									
12																									
85																									
2																									
3	3/30/85	0.0008					820																		
4																									
5																									
6	6/15/85	0.0134					1020																		
7																									
8																									
9	9/30/85	0																							
10																									
11	11/30/85	0.0036					846																		
12																									
86																									
2																									
3																									
4	4/4/86	0.0002					924																		
5																									
6	6/23/86	0.0079					772																		
7																									
8																									
9	9/25/86	0.0152					882																		
10																									
11																									
12	11/24/86	0																							
87																									
2																									
3	3/27/87	0.0007					892																		
4																									
5	5/22/87	0																							
6																									
7																									
8	8/10/87	0.0004					936																		
9																									
10	10/13/87	0																							
11																									
12																									
88																									
2																									
3	3/22/88	0.0038					978																		
4																									
5																									
6	6/13/88	0																							
7																									
8																									
9	9/28/88	0																							
10																									
11	11/30/88	0																							
12																									
89																									
2																									
3																									
4																									
5																									
6	6/21/89	0																							
7																									
8																									
9	9/21/89	1					270																		
10																									
11																									
12																									
90																									
2																									
3	3/8/90	0																							
4																									
5	5/30/90	0																							
6																									
7																									
8																									

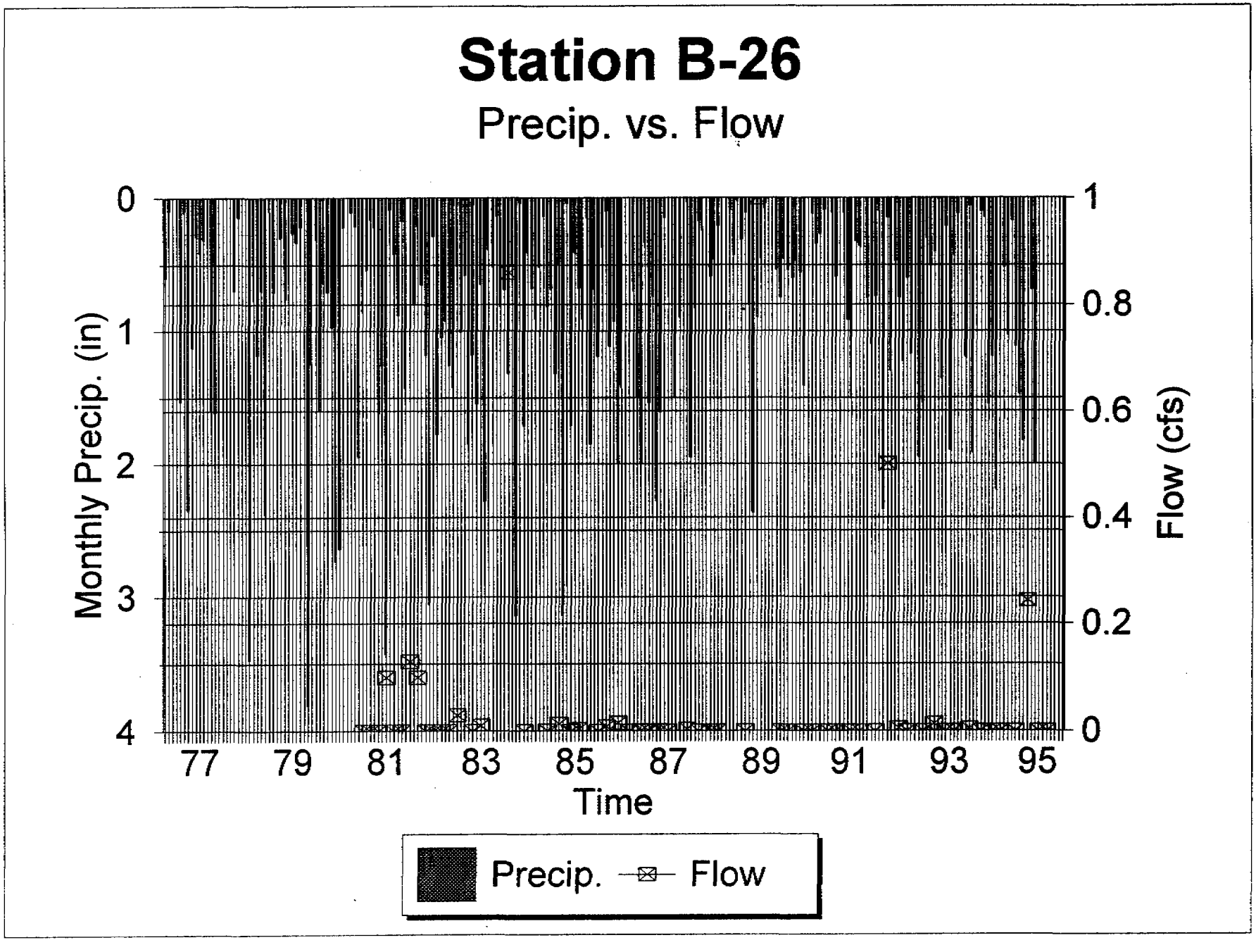
Cyprus Plateau Mining Company - Water Quality Data

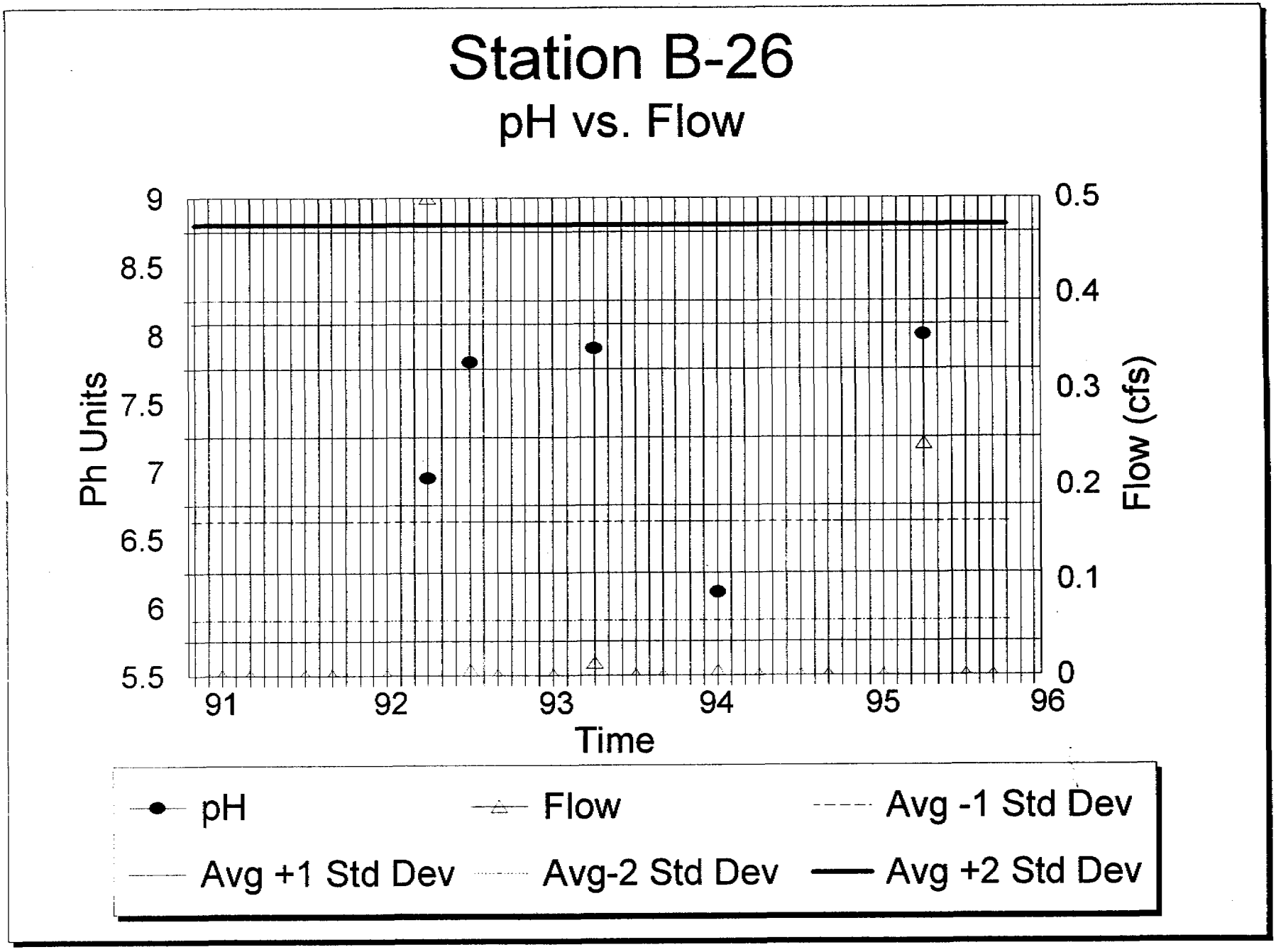
Station: B-26 | Property: Castle Gate | Location: NE1/4, SE1/4, Sec 28, T12 S, R9 E | Station Type: Int. Stream | Sampling Frequency: Quarterly | Formation: | Elevation: 6700

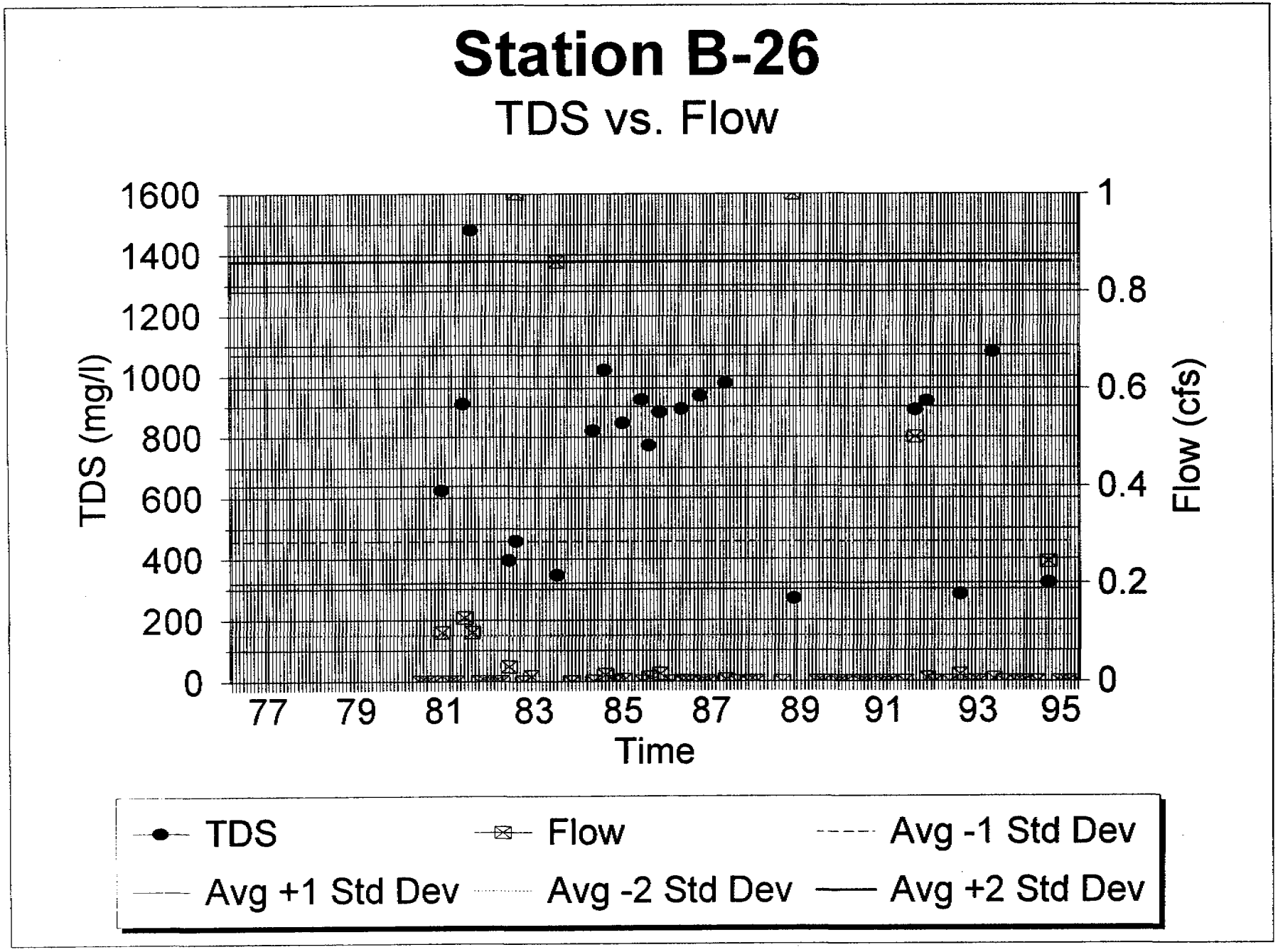
Print Date 05/02/96

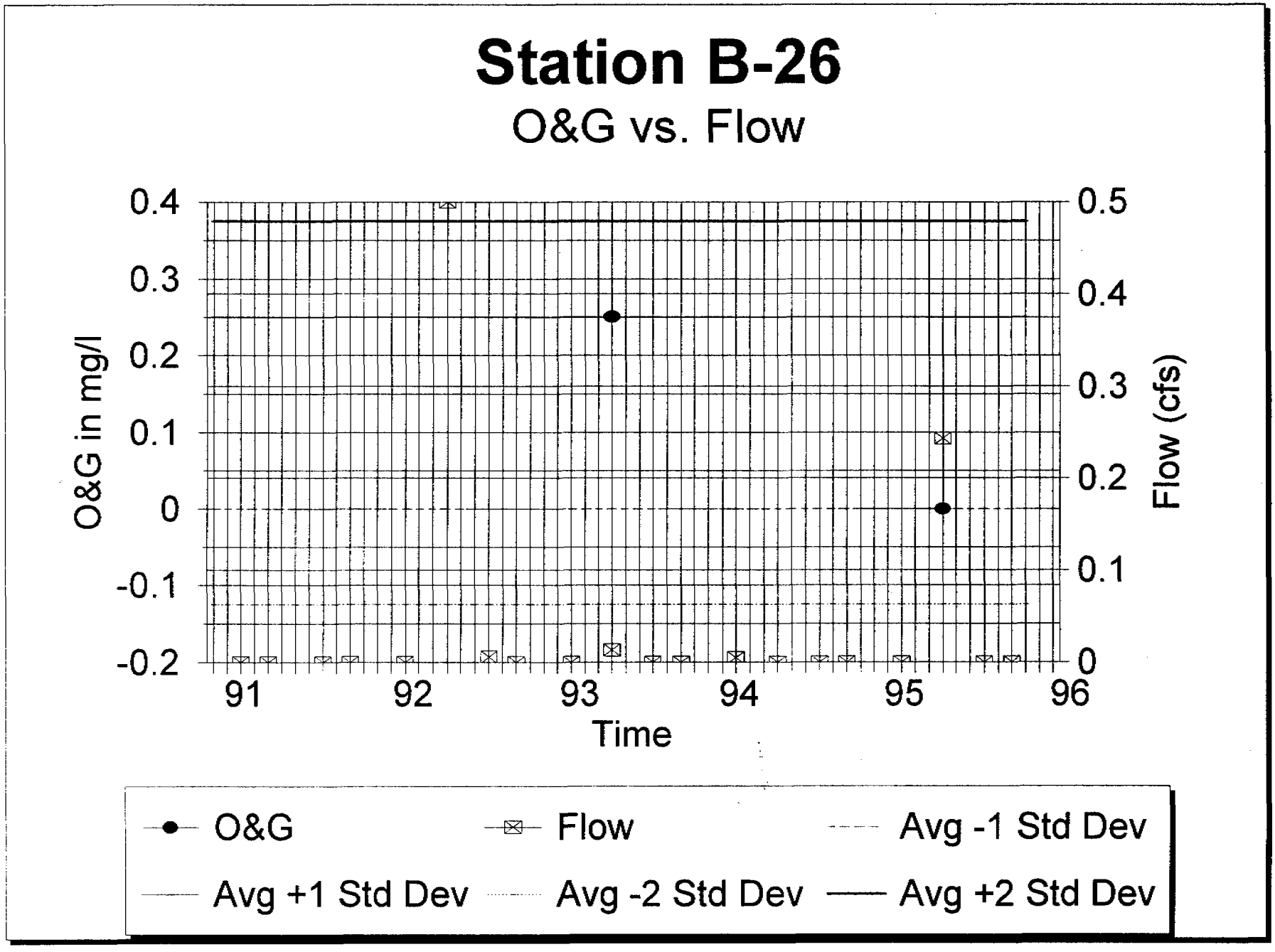
Date Yr-Mo	Sample Date	Field Measurements: Flow (cfs)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	Laboratory Measurements: TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
9	9/29/90	0																						
10																								
11	11/28/90	0																						
12																								
91																								
2																								
3	3/13/91	0																						
4																								
5	5/26/91	0																						
6																								
7																								
8																								
9	9/11/91	0																						
10																								
11	11/26/91	0																						
12																								
92																								
2																								
3	3/4/92	0																						
4																								
5																								
6	6/8/92	< 0.5	6.95	2010	6		890	4		370	685	0	451	0	26.1	333	130	87.6						
7																								
8																								
9	9/3/92	0.0055	7.8	1200	11	8	918	< 1		331	615	0	403	0.1	26	303	98.1	90						
10																								
11	11/14/92	0																						
12																								
93																								
2																								
3	3/30/93	0																						
4																								
5																								
6	6/14/93	0.0134	7.9	300	14.5	8.1	284	2 <	0.25	256	267		294	9.2	5.2	31	29	47						
7																								
8																								
9	9/20/93	0																						
10																								
11	11/17/93	0																						
12																								
94																								
2																								
3	3/24/94	0.0045	6.11	2380	0		1080	54		480	931		586	0	24	448	140	142						
4																								
5																								
6	6/14/94	0																						
7																								
8																								
9	9/7/94	0																						
10																								
11	11/28/94	0																						
12																								
95																								
2																								
3	3/13/95	0																						
4																								
5																								
6	6/7/95	0.2433	8	943	10		320	12	0	267	387		277	10	6	80	55	60.8						
7																								
8																								
9	9/13/95	0																						
10																								
11	11/27/95	0																						
12																								
96																								
END DATA																								
Count		60	5	5	5	2	21	5	2	5	5	2	5	5	5	5	5	5	0	0	0	0	0	
Minimum		< 0	6.1	300.0	0.0	8.0	270.0	< 1.0	< 0.0	256.0	267.0	0.0	277.0	0.0	5.2	31.0	29.0	47.0	ERR	ERR	ERR	ERR	ERR	
Maximum		< 1	8.0	2380.0	14.5	8.1	1480.0	< 54	< 0.3	480.0	931.0	0.0	586.0	10.0	26.1	448.0	140.0	142.0	ERR	ERR	ERR	ERR	ERR	
Average		< 0.0674	7.4	1366.6	8.3	8.1	764.1	< 15	< 0.1	344.8	577.0	0.0	402.2	3.9	17.5	235.0	90.4	85.5	ERR	ERR	ERR	ERR	ERR	
Std. Dev		< 0.2166	0.7	746.4	5.0	0.0	306.7	< 20	< 0.1	77.9	232.6	0.0	112.7	4.7	9.7	162.4	42.7	32.6	ERR	ERR	ERR	ERR	ERR	
Avg -1 Std		< -0.149	6.6	620.2	3.3	8.0	457.5	< -5	< 0.0	266.9	344.4	0.0	289.5	-0.8	7.7	72.6	47.7	52.9	ERR	ERR	ERR	ERR	ERR	
Avg +1 Std		< 0.284	8.1	2113.0	13.3	8.1	1070.8	< 35	< 0.3	422.7	809.6	0.0	514.9	8.6	27.2	397.4	133.1	118.1	ERR	ERR	ERR	ERR	ERR	
Avg -2 Std		< -0.366	5.9	-126.3	-1.6	8.0	150.8	< -26	< -0.1	189.0	111.7	0.0	176.7	-5.5	-2.0	-89.8	5.0	20.3	ERR	ERR	ERR	ERR	ERR	
Avg +2 Std		< 0.5006	8.8	2859.5	18.2	8.2	1377.4	< 55	< 0.4	500.6	1042.3	0.0	627.7	13.2	36.9	559.8	175.8	150.7	ERR	ERR	ERR	ERR	ERR	

NOTE: The "<" symbol indicates that "Less Than" data was found in the data set, statistics are approximate.


Station B-26
Precip. vs. Flow
Monthly Precip. (in)
0
1
2
3
4
Flow (cfs)
1
0.8
0.6
0.4
0.2
0
77
79
81
83
85
87
89
91
93
95
Time
Precip.
Flow

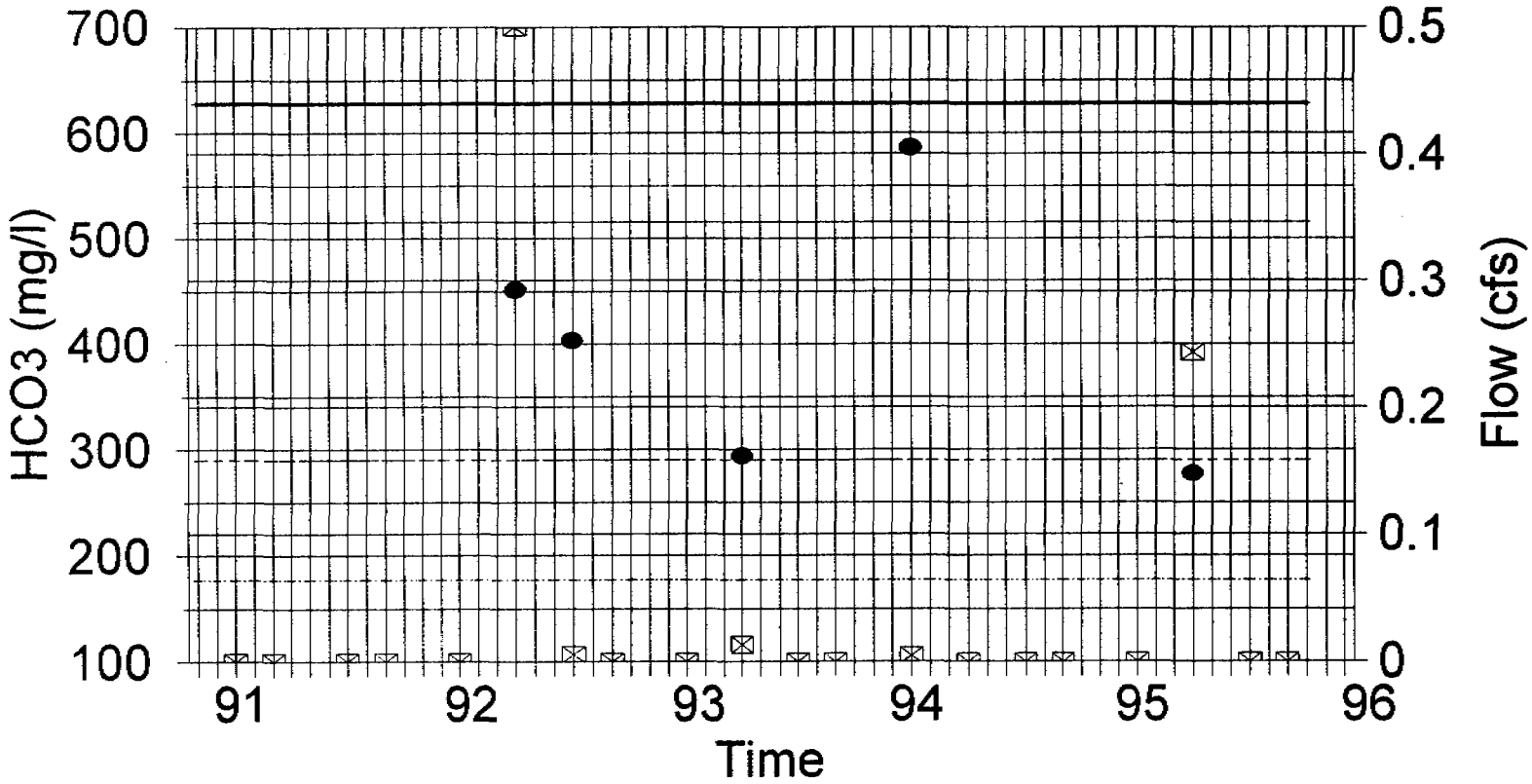

Station B-26
pH vs. Flow
Ph Units
9
8.5
8
7.5
7
6.5
6
5.5
Flow (cfs)
0.5
0.4
0.3
0.2
0.1
0
91
92
93
94
95
96
Time
pH
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg-2 Std Dev
Avg +2 Std Dev


Station B-26
TDS vs. Flow
TDS (mg/l)
1600
1400
1200
1000
800
600
400
200
0
Flow (cfs)
1
0.8
0.6
0.4
0.2
0
77
79
81
83
85
87
89
91
93
95
Time
TDS
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

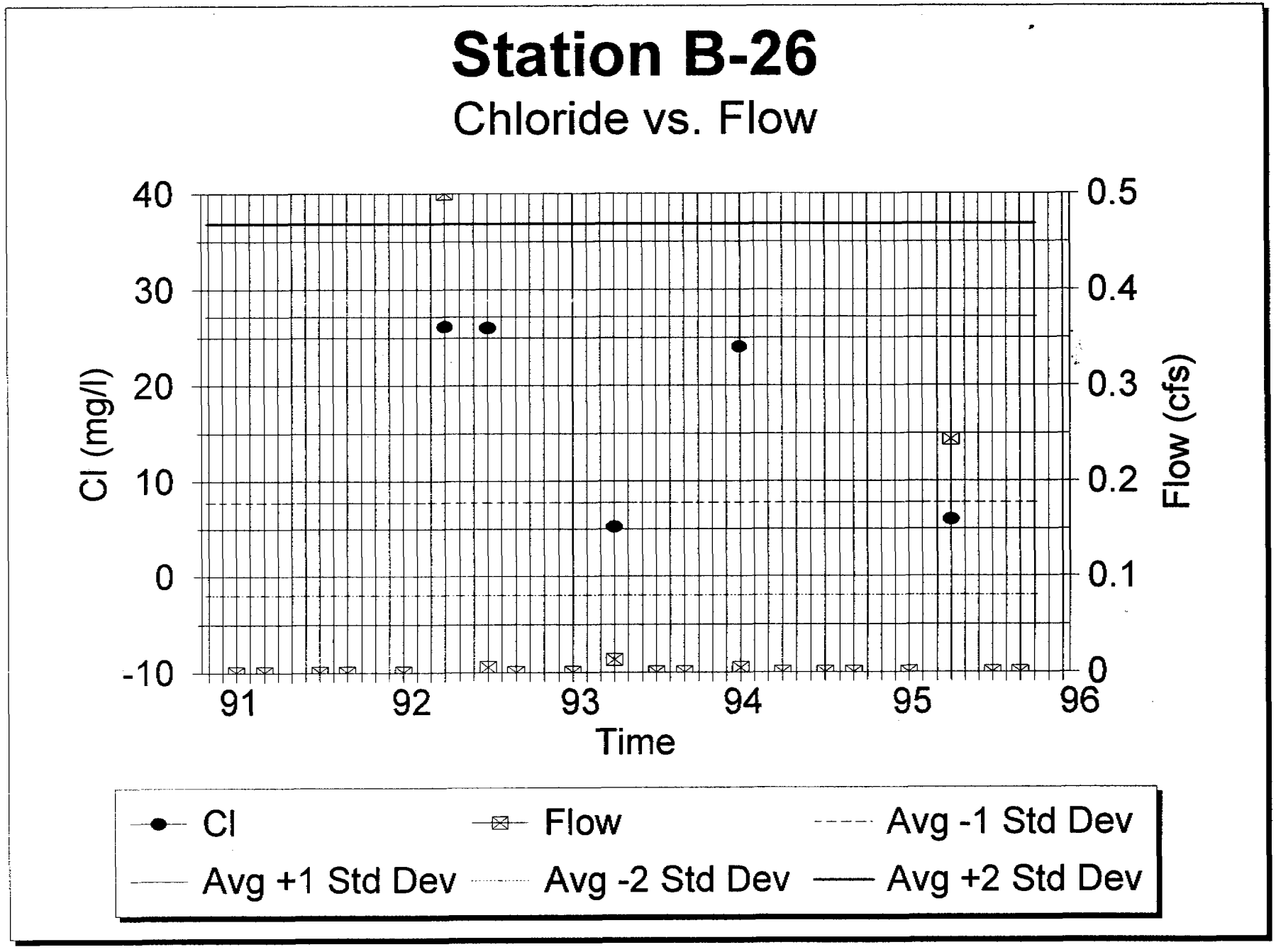

Station B-26
O&G vs. Flow
0.4
0.3
0.2
0.1
0
-0.1
-0.2
O&G in mg/l
0.5
0.4
0.3
0.2
0.1
0
Flow (cfs)
91
92
93
94
95
96
Time
O&G
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Station B-26

HCO3 vs. Flow

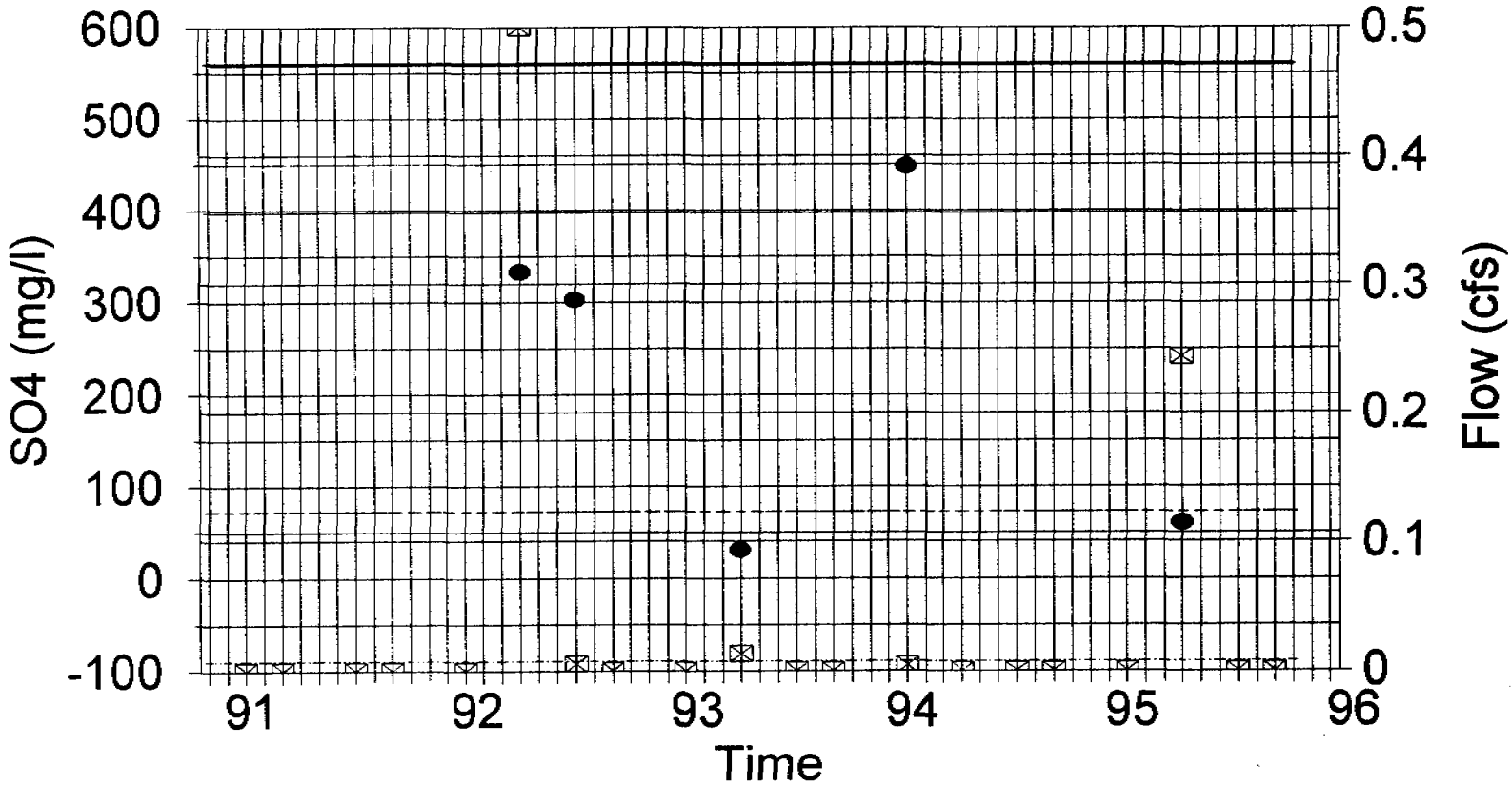


HCO3 | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev

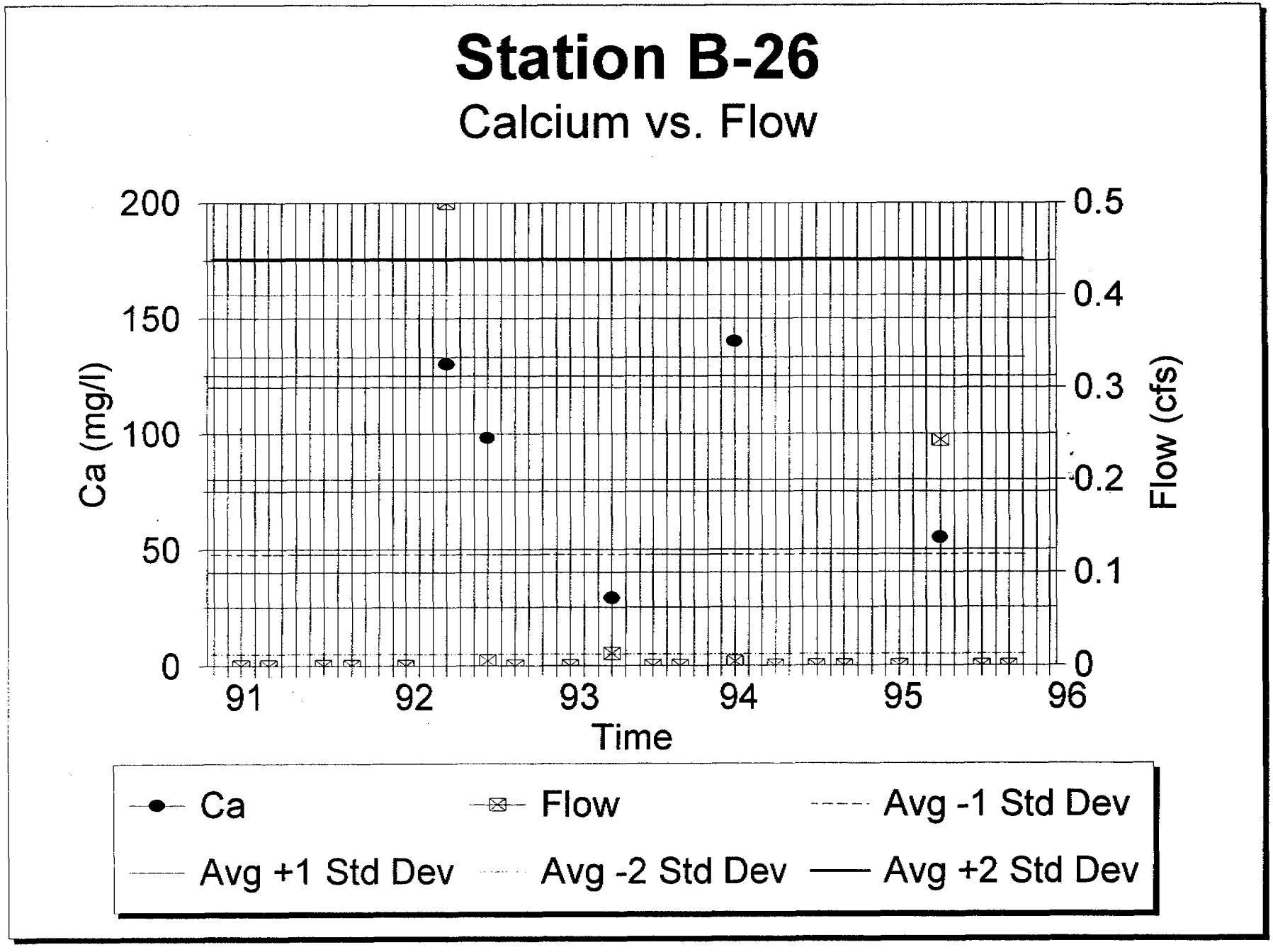

Station B-26
Chloride vs. Flow
Cl (mg/l)
40
30
20
10
0
-10
Flow (cfs)
0.5
0.4
0.3
0.2
0.1
0
91
92
93
94
95
96
Time
Cl
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

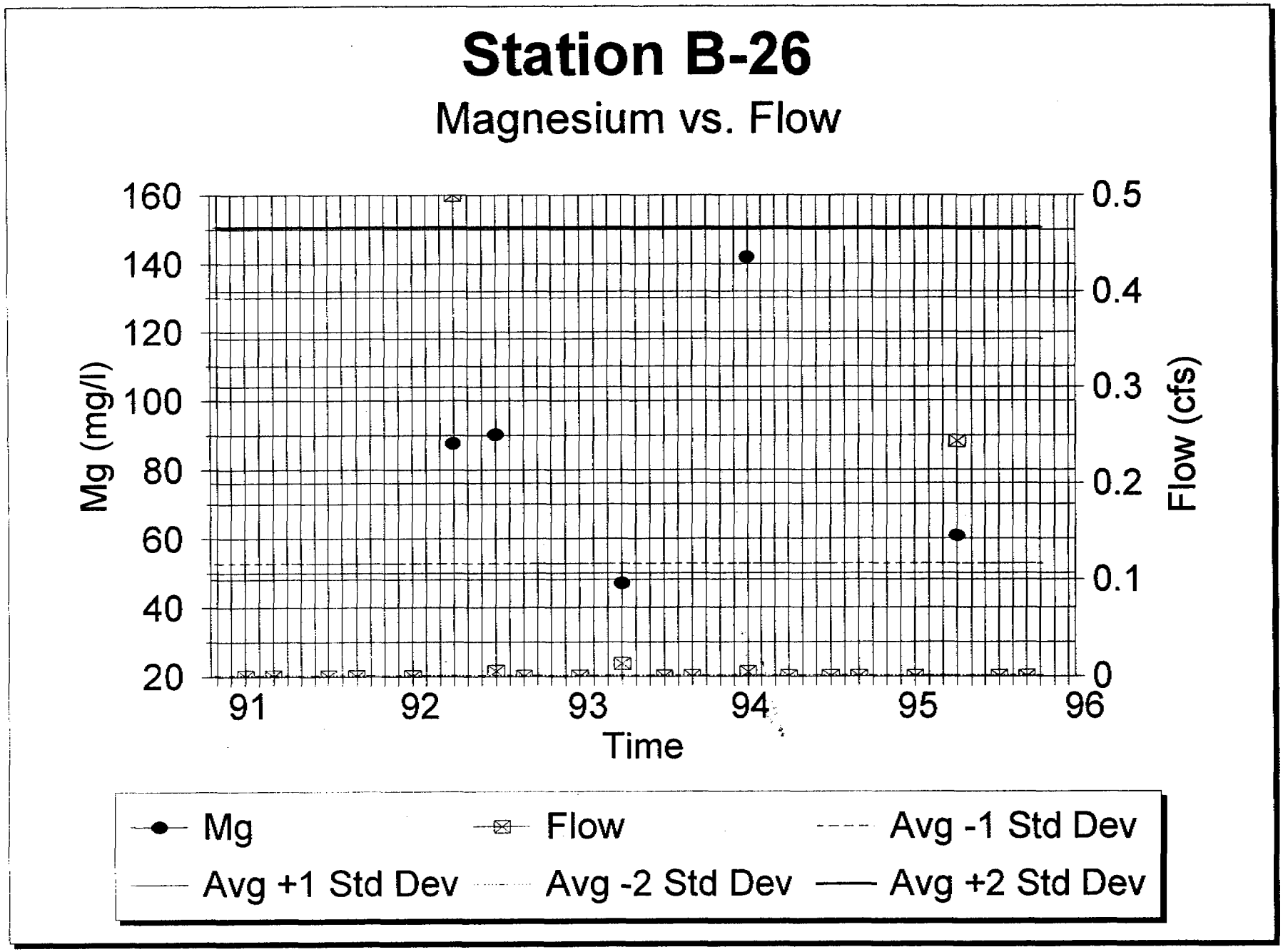
Station B-26

Sulfate vs. Flow



SO4 | Flow | Avg -1 Std Dev | Avg +1 Std Dev | Avg -2 Std Dev | Avg +2 Std Dev


Station B-26
Calcium vs. Flow
200
150
100
50
0
Ca (mg/l)
0.5
0.4
0.3
0.2
0.1
0
Flow (cfs)
91
92
93
94
95
96
Time
Ca
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev


Station B-26
Magnesium vs. Flow
160
140
120
100
80
60
40
20
Mg (mg/l)
0.5
0.4
0.3
0.2
0.1
0
Flow (cfs)
91
92
93
94
95
96
Time
Mg
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev

Cyprus Plateau Mining Company - Water Quality Data

Print Date 04/10/98

Station: B-28 Property: Castle Gate Location: NW1/4, SW1/4, Sec 4, T13 S, R9 E Station Type Int. Stream Sampling Frequency: Quarterly Formation: Elevation: 7160

Date		Field Measurements					Laboratory Measurements																	
Yr-Mo	Sample Date	Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
77																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
78																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
79																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
80																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
81																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
82																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							
	11																							
	12																							
83																								
	2																							
	3																							
	4																							
	5																							
	6																							
	7																							
	8																							
	9																							
	10																							

Cyprus Plateau Mining Company - Water Quality Data

Print Date 04/10/96

Station: B-28 | Property: Castle Gate | Location: NW1/4, SW1/4, Sec 4, T13 S, R9 E | Station Type Int. Stream | Sampling Frequency: Quarterly | Formation: | Elevation: 7150

Date Yr-Mo	Sample Date	Field Measurements Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	Laboratory Measurements TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	As-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	Comments
11																								
12																								
84																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
85																								
2																								
3	3/30/85	0																						
4																								
5																								
6	6/15/85	0																						
7																								
8																								
9	9/30/85	0																						
10																								
11	11/30/85	0																						
12																								
86																								
2																								
3																								
4	4/4/86	0																						
5																								
6	6/23/86	0																						
7																								
8																								
9	9/25/86	0																						
10																								
11																								
12	11/24/86	0																						
87																								
2																								
3	3/27/87	0																						
4																								
5	5/22/87	0																						
6																								
7																								
8	8/10/87	0																						
9																								
10	10/13/87	4.7					71																	
11																								
12																								
88																								
2																								
3																								
4																								
5																								
6	6/14/88	0																						
7																								
8																								
9	9/28/88	0																						
10																								
11	11/30/88	0																						
12																								
89																								
2																								
3																								
4																								
5																								
6	6/21/89	0																						
7																								
8																								
9	9/21/89	0																						
10																								
11																								
12																								
90																								
2																								
3	3/9/90	0																						
4																								
5	5/30/90	0																						
6																								
7																								
8																								

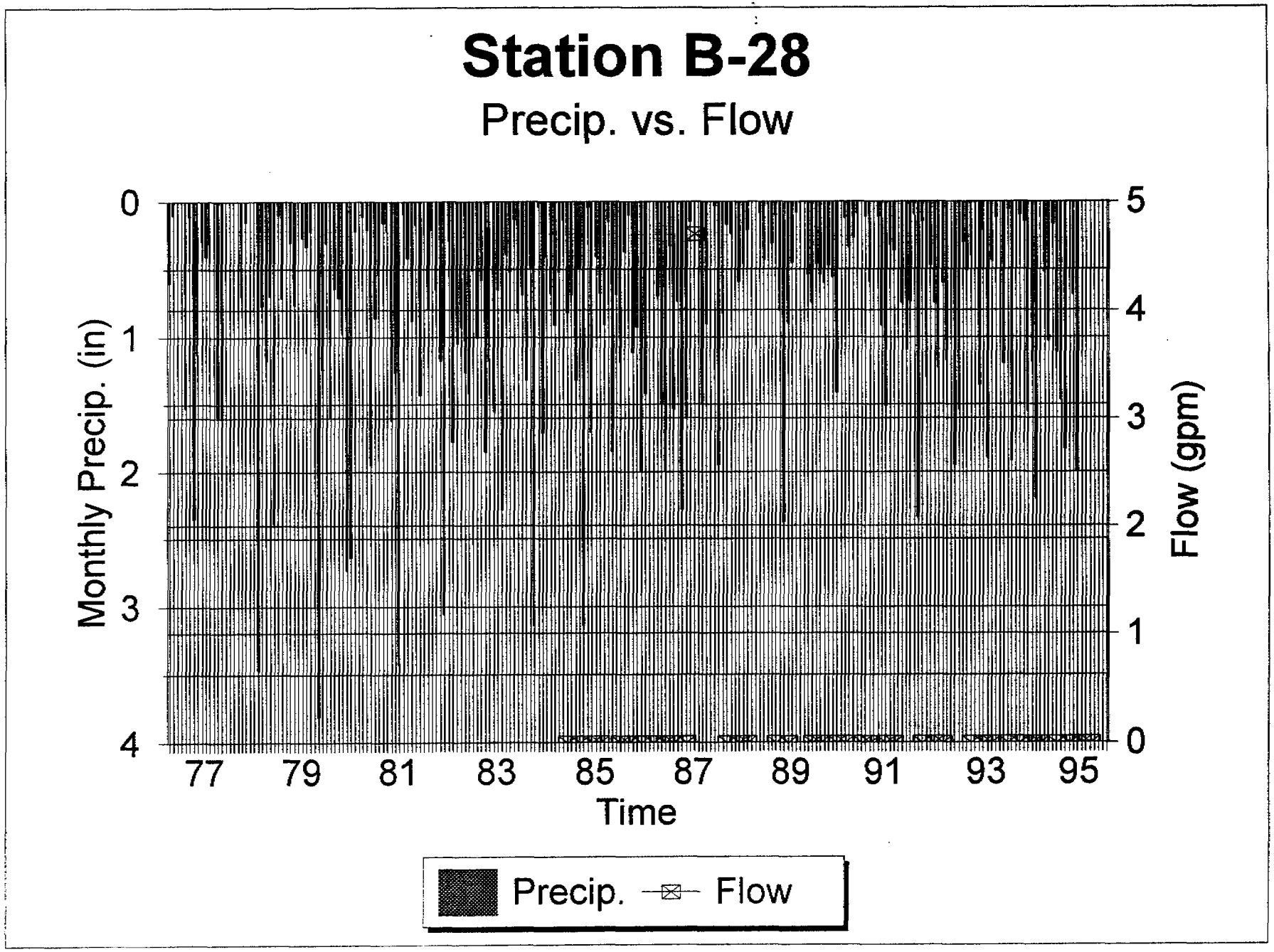
Cyprus Plateau Mining Company - Water Quality Data

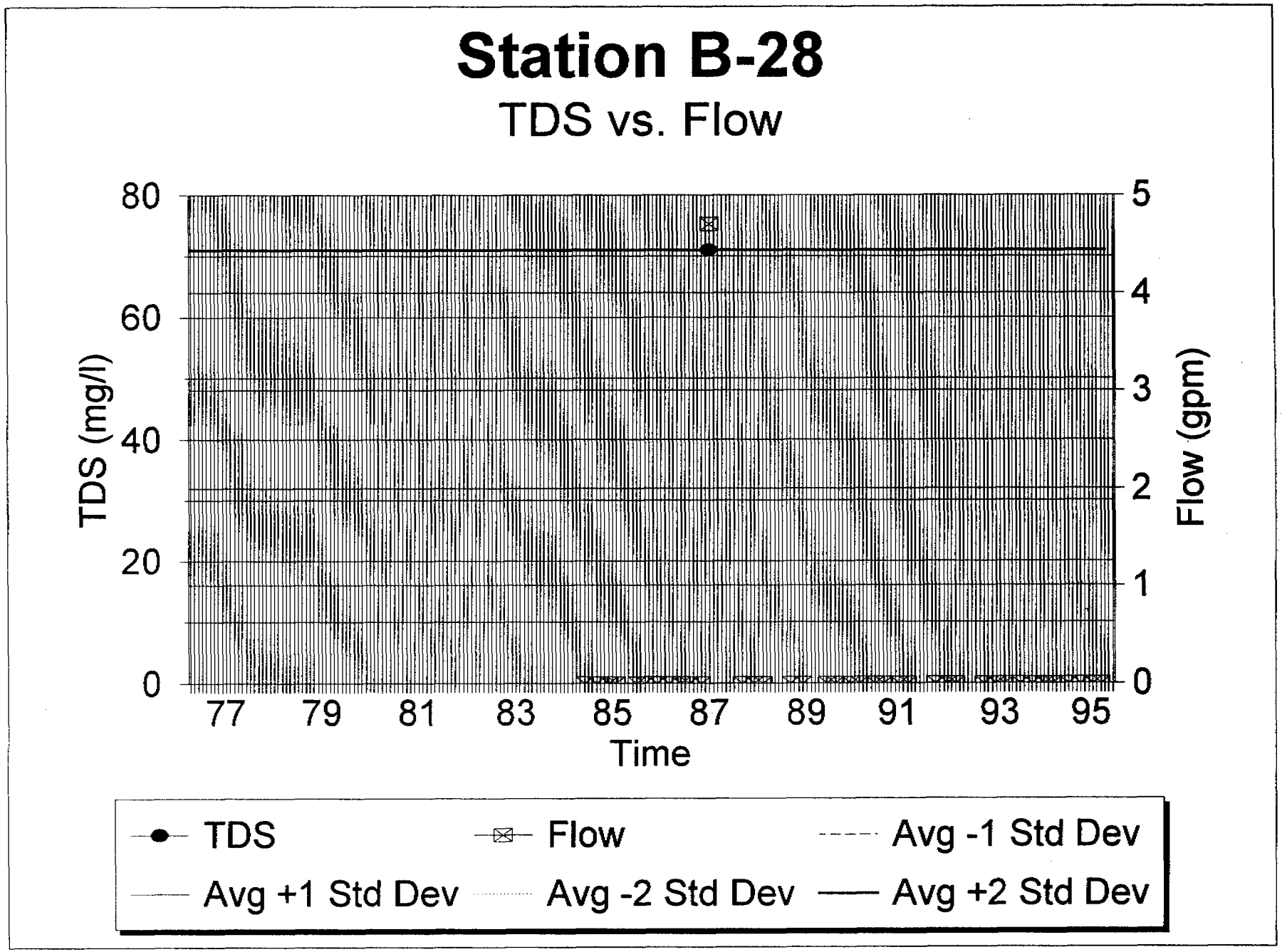
Print Date 04/10/96

Station: B-28 | Property: Castle Gate | Location: NW1/4, SW1/4, Sec 4, T13 S, R9 E | Station Type Int. Stream | Sampling Frequency: Quarterly | Formation: | Elevation: 7160

Date		Field Measurements					Laboratory Measurements																	Comments
Yr-Mo	Sample Date	Flow (gpm)	Ph (units)	Sp. Cond. (ohms)	Temp. (C)	Diss. O (ppm)	TDS (mg/l)	TSS (mg/l)	O&G (mg/l)	Al-CaCO3 (mg/l)	Hd-CaCO3 (mg/l)	Ac-CaCO3 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)	Cl (mg/l)	SO4 (mg/l)	Ca (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Cat/An (meq/l)	Fe (mg/l)	Mn (mg/l)	
9	9/29/90	0																						
10																								
11	11/28/90	0																						
12																								
91																								
2																								
3	3/13/93	0																						
4																								
5	5/26/91	0																						
6																								
7																								
8																								
9	9/11/91	0																						
10																								
11	11/22/91	0																						
12																								
92																								
2																								
3	3/4/92																							
4																								
5																								
6	6/8/92	0																						
7																								
8																								
9	9/3/92	0																						
10																								
11	11/16/92	0																						
12																								
93																								
2																								
3	3/30/93																							
4																								
5																								
6	6/15/93	0																						
7																								
8																								
9	9/20/93	0																						
10																								
11	11/17/93	0																						
12																								
94																								
2																								
3	3/24/94	0																						
4																								
5																								
6	6/14/94	0																						
7																								
8																								
9	9/7/94	0																						
10																								
11	11/28/94	0																						
12																								
95																								
2																								
3	3/13/95	0																						
4																								
5																								
6	6/7/95	0																						
7																								
8																								
9	9/13/95	0																						
10																								
11	11/27/95	0																						
12																								
96																								
END DATA																								
Count		39	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Minimum		0	ERR	ERR	ERR	ERR	71.0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Maximum		4.7	ERR	ERR	ERR	ERR	71.0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Average		0.1205	ERR	ERR	ERR	ERR	71.0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Std. Dev		0.7429	ERR	ERR	ERR	ERR	0.0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Avg -1 Std		-0.622	ERR	ERR	ERR	ERR	71.0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Avg +1 Std		0.8634	ERR	ERR	ERR	ERR	71.0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Avg -2 Std		-1.365	ERR	ERR	ERR	ERR	71.0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	
Avg +2 Std		1.6063	ERR	ERR	ERR	ERR	71.0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	

NOTE: The "<" symbol indicates that "Less Than" data was found in the data set, statistics are approximate.


Station B-28
Precip. vs. Flow
Monthly Precip. (in)
0
1
2
3
4
Flow (gpm)
5
4
3
2
1
0
77
79
81
83
85
87
89
91
93
95
Time
Precip.
Flow


Station B-28
TDS vs. Flow
TDS (mg/l)
Flow (gpm)
Time
80
60
40
20
0
5
4
3
2
1
0
77
79
81
83
85
87
89
91
93
95
TDS
Flow
Avg -1 Std Dev
Avg +1 Std Dev
Avg -2 Std Dev
Avg +2 Std Dev