

**SUSITNA  
HYDROELECTRIC PROJECT**

FEDERAL ENERGY REGULATORY COMMISSION  
PROJECT No. 7114

**TECHNICAL MEMORANDUM  
TOTAL DISSOLVED GAS ANALYSIS**

**1984**

**FINAL REPORT**

**HARZA-EBASCO  
SUSITNA JOINT VENTURE**

**MARCH 1986  
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***Alaska Power Authority***

**SUSITNA HYDROELECTRIC PROJECT**

**TECHNICAL MEMORANDUM  
TOTAL DISSOLVED GAS ANALYSIS 1984**

Report by  
**Harza-Ebasco Susitna Joint Venture**

Prepared for  
**Alaska Power Authority**

**NOTICE**

**ANY QUESTIONS OR COMMENTS CONCERNING  
THIS REPORT SHOULD BE DIRECTED TO  
THE ALASKA POWER AUTHORITY  
SUSITNA PROJECT OFFICE**

## TOTAL DISSOLVED GAS ANALYSIS 1984

### Introduction

Saturation levels of dissolved gases in water can be critical to fish development and survival. Insufficient concentrations of dissolved oxygen can delay embryo development, increase vulnerability to diseases, and cause mortality. Extremely high or supersaturated gas levels can cause embolisms known as gas bubble disease. The symptoms of gas bubble disease may range from blisters to blindness and can result in death.

Water may become supersaturated naturally when flowing through rapids, or artificially when flowing over dam spillways. In the Susitna River, natural concentrations of dissolved gas below Devil Canyon sometimes exceed the Alaska State water quality standards of 110% saturation (ADF&G 1983). Construction of the proposed dam on the river could alter the seasonal concentrations of dissolved gases. Discharges through fixed-cone valves will be used as a mitigation measure to avoid total dissolved gas supersaturation downstream. In order to establish baseline data on natural conditions, total dissolved gas (mmHg) and dissolved oxygen were monitored at several sites below Devil Canyon in 1981 and 1982 (ADF&G 1983). Because dissolved oxygen saturation closely paralleled total dissolved gas concentrations, only the latter was monitored in 1982 (ADF&G 1983) and 1984. Supersaturation of total dissolved gas was found above the State water quality limits at Devil Canyon but decayed at a predictable rate down river (ADF&G 1983).

In 1984 total dissolved gas was monitored at one site about 15 miles below Devil Canyon. The objective was to continue recording historic levels of dissolved gas saturation at natural flows, particularly noting supersaturation levels above the State water quality limit. Regression equations were developed to predict supersaturation concentrations over the range of natural discharges during the open water season.

### Methods

Date, time, total dissolved gas (mmHg) and water temperature (°C) were monitored from July 15 to September 21, 1984. A Common Sensing Inc. total dissolved gas and temperature monitor (model TGT-F) was attached to a datalogger recorder that recorded hourly readings. This recorder was located on the mainstem Susitna near Gold Creek at river mile 136. The elevation of the site is approximately 675 feet. Barometric pressures from the Talkeetna weather station (elevation 356 feet) were converted to local Gold Creek barometric pressures by the formula in Colt (1984). Percent saturation was calculated by the following formula:

$$\text{Percent Saturation} = \frac{\text{Total Dissolved Gas}}{\text{Local Barometric Pressure}} \times 100$$

Water vapor pressure was used in calculations in previous reports, but not in the current analysis. This is to bring the reporting in agreement with the recommendations of Colt (1984). Percent saturation is about 1.5 percent higher when calculated without water vapor pressure.

Regression equations were developed to describe the relationship of percent saturation to mainstem Susitna River discharge at Gold Creek. Water temperature was not used in the regression analysis because previous findings indicated that changes in water temperature have an insignificant effect on the variability of dissolved gas concentrations recorded (ADF&G 1983). Mean daily values were used for all variables. When hourly data was missing, the mean of existing data (generally 19 or 23 hours) was used.

### Results

Raw data composed of the hourly dissolved gas reading, corresponding water temperature, and barometric pressure used to compute percent dissolved gas saturations are presented in Table 1. Plots of mean daily discharge at Gold Creek, mean daily percent dissolved gas saturation and surface water temper-

ature over time are presented in Figure 1. These plots present the general trends of discharge, dissolved gas and water temperature. The relationship of mean daily percent saturation to mean daily discharge is clear. The pattern of temperature changes over time does not appear to have a direct relationship to either discharge or percent saturation. A plot of mean daily total dissolved gas versus mainstem discharge is presented in Figure 2, which shows an apparent linear relationship. This linear regression gives an  $r^2$  value of 0.73. The scatter of data seen in this figure is reduced in Figure 3 when barometric pressure is taken into account to compute mean daily percent saturation. The regression equation for this relationship shows an  $r^2$  value of 0.87, indicating that percent saturation can be predicted reasonably well on the basis of discharge. Figure 4 presents the hourly percent saturation data versus discharge. Although there is scatter in the data, the linear trend seen in the mean values is apparent.

#### Discussion

Although supersaturation of dissolved gases was present throughout the sample period, concentrations rarely exceeded the State water quality limit of 110 percent. Supersaturation greater than 110 percent occurred only at discharges greater than 32,000 cfs.

Results of the regression analysis supported the 1982 conclusions (ADF&G 1983), indicating that total dissolved gas levels can be predicted from discharge. Only one site was sampled in 1984, precluding any analysis of decay rate of supersaturation downstream. Previous studies indicated that supersaturation levels decay at a predictable rate below the Devil Canyon rapids (ADF&G 1983). Therefore, the sample taken at Gold Creek probably represents some decay in dissolved gas levels. The Gold Creek sample does suggest that supersaturation levels are not usually dangerous to fish at, or below Gold Creek under natural conditions.

In the Columbia River, Oregon, high salmon mortality rates were found at supersaturation levels greater than 120 percent. These levels were caused by water flowing over spillways (Weitkamp and Katz 1980). At saturations of 105-118 percent, no evidence of gas bubble disease was found (May 1973). In a review of dissolved gas supersaturation literature, Weitkamp and Katz (1980) concluded that total gas pressure (TGP) was the important factor in causing gas bubble disease, rather than partial pressures of oxygen or nitrogen.

The critical concentration of TGP will vary with factors such as water depth, temperature, photosynthesis, species and life stage, and length of exposure. As water depth increases, the increased pressure causes increased gas solubility; meaning that gas bubbles are slower to form in the tissues. Fish that can escape to deeper water can tolerate high TGP's (Weitkamp and Katz 1980).

As water temperature increases, gas becomes more soluble. Increased water temperature from hydroelectric and thermal power plants may cause higher levels of supersaturation (Weitkamp and Katz 1980).

Total gas pressures in Susitna River at Gold Creek are currently below the State water quality standard. However, at high discharges a critical supersaturation level is approached. If the proposed hydroelectric project is built, TGP should be monitored to ensure that the mitigation measures (fixed-cone values) proposed for the dams meet this intended objective.

DG Analysis 1984/QUANE2/Deidre

10/9/85 a.m.

Literature Cited

- Alaska Department of Fish and Game (ADF&G). 1983. Aquatic habitat and instream flow studies, 1982. Susitna Hydro Aquatic Studies. Phase 2 basic data report. Volume 4 (1 of 3: Parts I and II). Alaska Department of Fish and Game, Anchorage, Alaska.
- Colt, J. 1984. Computation of dissolved gas concentrations in water as functions of temperature, salinity, and pressure. American Fisheries Society Special Publication 14. Bethesda, Maryland. 154 pp.
- May, B. 1973. Evaluation on the effects of gas bubble disease on fish populations in the Kootenai River below Libby dam. Proc. 53rd Ann. Conf. West Assoc. Fish and Game Commissioners: pp. 525-540.
- Weithamp, D.E. and M. Katz. 1980. A review of dissolved gas supersaturation literature. Trans. Amer. Fish Soc. Vol 109(6): 659-702.

Table 1. Total dissolved gas concentrations at Gold Creek, RM 156, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mmHg)	MEAN TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY % SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY % SATURATION
84187	1600	810	13.0	22400	742.1205	109.1466	743.2497		
84187	1700	808	13.0	22400	742.1205	108.8771	743.2497		
84187	1800	806	13.0	22400	742.1205	108.6076	743.2497		
84187	1900	804	13.0	22400	741.8696	108.3748	743.2497		
84187	2000	802	13.0	22400	741.8696	108.1052	743.2497		
84187	2100	800	13.0	22400	741.8696	107.8356	743.2497		
84187	2200	798	13.0	22400	742.1205	107.5296	743.2497		
84187	2300	798	13.5	22400	742.1205	107.5296	743.2497		
84187	2400	800	13.5	22400	742.4969	107.7445	743.2497		
84188	100	798	13.5	22300	742.3714	107.4933	740.9913		
84188	200	798	13.5	22300	742.3714	107.4933	740.9913		
84188	300	796	13.0	22300	742.6224	107.1877	740.9913		
84188	400	796	13.0	22300	742.6224	107.1877	740.9913		
84188	500	796	13.0	22300	742.6224	107.1877	740.9913		
84188	600	796	13.0	22300	742.6224	107.1877	740.9913		
84188	700	796	13.0	22300	742.6224	107.1877	740.9913		
84188	800	798	13.0	22300	742.3714	107.4933	740.9913		
84188	900	800	13.0	22300	742.6224	107.7263	740.9913		
84188	1000	802	13.0	22300	742.1205	108.0686	740.9913		
84188	1100	804	13.0	22300	742.1205	108.3381	740.9913		
84188	1200	806	13.0	22300	741.3677	108.7179	740.9913		
84188	1300	808	13.5	22300	741.3677	108.9877	740.9913		
84188	1400	808	13.5	22300	740.8639	109.0615	740.9913		
84188	1500	804	13.5	22300	740.3640	108.5952	740.9913		
84188	1600	800	13.0	22300	740.1131	108.0915	740.9913		
84188	1700	798	13.0	22300	739.6112	107.8943	740.9913		
84188	1800	798	13.0	22300	739.2348	107.9494	740.9913		
84188	1900	798	13.0	22300	738.7330	108.0227	740.9913		
84188	2000	796	13.0	22300	738.3566	107.8069	740.9913		
84188	2100	794	13.5	22300	738.4821	107.5178	740.9913		
84188	2200	794	13.5	22300	739.6112	107.3536	740.9913		
84188	2300	792	13.0	22300	739.3603	107.1196	740.9913		
84188	2400	792	13.0	22300	739.3603	107.1196	740.9913	798.6666	107.7835
84189	100	792	13.0	21900	739.3603	107.1196	738.7330		
84189	200	792	13.0	21900	739.6112	107.0832	738.7330		
84189	300	790	13.0	21900	740.1131	106.7404	738.7330		
84189	400	790	12.5	21900	740.6150	106.6681	738.7330		
84189	500	790	12.5	21900	740.6150	106.6681	738.7330		
84189	600	790	12.5	21900	740.8659	106.6319	738.7330		
84189	700	794	12.5	21900	740.8639	107.1718	738.7330		
84189	800	796	12.0	21900	740.6150	107.4782	738.7330		
84189	900	798	12.5	21900	740.3640	107.7848	738.7330		
84189	1000	900	12.5	21900	740.3640	108.0549	738.7330		
84189	1100	802	12.0	21900	740.1131	108.3618	738.7330		
84189	1200	802	12.5	21900	737.8622	108.3983	738.7330		
84189	1300	804	12.5	21900	739.3603	108.7426	738.7330		
84189	1400	800	12.5	21900	739.1094	108.2383	738.7330		
84189	1500	800	12.5	21900	738.6075	108.3119	738.7330		
84189	1600	800	12.5	21900	738.1057	108.3835	738.7330		
84189	1700	800	12.5	21900	737.7293	108.4408	738.7330		
84189	1800	798	12.5	21900	737.2274	108.2433	738.7330		
84189	1900	796	12.5	21900	736.7256	108.0456	738.7330		
84189	2000	794	13.0	21900	736.2237	107.8476	738.7330		
84189	2100	792	12.5	21900	735.9728	107.6126	738.7330		
84189	2200	790	12.5	21900	735.9728	107.3409	738.7330		
84189	2300	798	12.5	21900	736.2237	107.0326	738.7330		
84189	2400	798	12.5	21900	735.9728	107.0691	738.7330	795.2500	107.6505
84190	100	796	12.5	21500	735.9728	106.7974	734.4672		

Table 1. Total dissolved gas concentrations at Gold Creek, RM 126, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mmHg)	MEAN TEMP (C)	DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY % SATURATION
84190	200	738	12.5	21500	733.9728	107.0691	734.4672		
84190	300	786	12.5	21500	733.7218	106.8338	734.4672		
84190	400	786	12.5	21500	733.4709	106.8792	734.4672		
84190	500	786	12.5	21500	733.4709	106.8702	734.4672		
84190	600	738	12.0	21500	733.4709	107.1422	734.4672		
84190	700	786	12.0	21500	733.4709	107.1422	734.4672		
84190	800	790	12.0	21500	733.4709	107.4141	734.4672		
84190	900	792	12.0	21500	733.2200	107.7228	734.4672		
84190	1000	792	12.0	21500	733.2200	107.7228	734.4672		
84190	1100	794	12.0	21500	734.9691	108.0317	734.4672		
84190	1200	794	12.0	21500	734.7181	108.0686	734.4672		
84190	1300	794	12.0	21500	734.4672	108.1035	734.4672		
84190	1400	796	12.0	21500	734.2163	108.4149	734.4672		
84190	1500	796	12.0	21500	733.9633	108.4519	734.4672		
84190	1600	798	12.5	21500	733.7144	108.7616	734.4672		
84190	1700	796	12.5	21500	733.7144	108.4890	734.4672		
84190	1800	794	12.5	21500	733.4635	108.2535	734.4672		
84190	1900	792	12.5	21500	733.2126	108.0177	734.4672		
84190	2000	790	12.5	21500	733.2126	107.7450	734.4672		
84190	2100	788	12.5	21500	733.2126	107.4722	734.4672		
84190	2200	786	12.5	21500	733.2126	107.1994	734.4672		
84190	2300	786	12.5	21500	733.2126	107.1994	734.4672		
84190	2400	784	12.5	21500	733.4635	108.8901	734.4672	790.4166	107.6176
84191	100	784	12.5	21400	733.4635	106.8901	733.2126		
84191	200	784	12.0	21400	733.4635	106.8901	733.2126		
84191	300	784	12.0	21400	733.4635	106.8901	733.2126		
84191	400	784	12.0	21400	733.4635	106.8901	733.2126		
84191	500	786	12.0	21400			733.2126		
84191	600	786	12.0	21400	733.4635	107.1627	733.2126		
84191	700	786	12.0	21400	733.4635	107.1627	733.2126		
84191	800	788	11.5	21400	733.2126	107.4722	733.2126		
84191	900	790	11.5	21400	732.9616	107.7818	733.2126		
84191	1000	792	11.5	21400	732.7107	108.0917	733.2126		
84191	1100	792	11.5	21400	732.7107	108.0917	733.2126		
84191	1200	794	11.5	21400	732.4598	108.4018	733.2126		
84191	1300	796	11.5	21400	732.7107	108.6376	733.2126		
84191	1400	796	12.0	21400	732.7107	108.6376	733.2126		
84191	1500	798	12.0	21400	732.7107	108.9106	733.2126		
84191	1600	798	12.0	21400	732.9616	108.8733	733.2126		
84191	1700	796	12.0	21400	732.9616	108.6004	733.2126		
84191	1800	794	12.0	21400	732.9616	108.5276	733.2126		
84191	1900	792	12.0	21400	732.9616	108.0547	733.2126		
84191	2000	790	12.0	21400	733.2126	107.7450	733.2126		
84191	2100	788	12.0	21400	733.4635	107.4354	733.2126		
84191	2200	786	12.0	21400	733.7144	107.1261	733.2126		
84191	2300	786	12.0	21400	733.9633	107.0893	733.2126		
84191	2400	784	12.0	21400	734.3417	106.7622	733.2126	789.7500	107.7109
84192	100	794	11.5	21200					
84192	200	784	11.5	21200					
84192	300	784	11.5	21200					
84192	400	784	11.5	21200					
84192	500	786	11.5	21200					
84192	600	786	11.5	21200	734.4672	107.0164			
84192	700	788	11.5	21200	734.7181	107.2520			
84192	800	790	11.5	21200	734.7181	107.5242			
84192	900	792	11.5	21200	734.7181	107.7964			
84192	1000	792	11.5	21200	734.9691	107.7596			
84192	1100	792	11.5	21200	734.9691	107.7596			

Table 1. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mg/l)	TEMP (C)	MEAN DAILY Q (cfs)	BP AT GOLD CREEK	HOURLY BP AT GOLD CREEK	HOURLY SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY SATURATION
84192	1200	794	11.5	21200	735.4709	107.9580				
84192	1300	796	11.5	21200	735.4709	108.2300				
84192	1400	800	12.0	21200	735.7218	108.7368				
84192	1500	798	12.0	21200	735.5964	108.4834				
84192	1600	796	12.0	21200	735.3435	108.2484				
84192	1700	792	12.0	21200	735.3455	107.7045				
84192	1800	792	12.0	21200	735.5964	107.6677				
84192	1900	790	12.0	21200	736.2237	107.3043				
84192	2000	792	12.0	21200	736.4746	107.5394				
84192	2100	792	12.0	21200	736.8510	107.4844				
84192	2200	792	12.0	21200	737.4783	107.3930				
84192	2300	790	12.0	21200	737.9802	107.0489				
84192	2400	790	12.0	21200	738.2311	107.0125	733.8077	790.6666	107.4534	
84193	100	792	12.0	23100	738.6075	107.2287	739.2348			
84193	200	792	12.0	23100	738.8585	107.1923	739.2348			
84193	300	792	12.0	23100	739.1094	107.1539	739.2348			
84193	400	792	12.0	23100	739.4858	107.1014	739.2348			
84193	500	792	11.5	23100			739.2348			
84193	600	794	11.5	23100	739.4858	107.3719	739.2348			
84193	700	796	11.5	23100	739.4858	107.6423	739.2348			
84193	800	798	11.5	23100	739.7367	107.8762	739.2348			
84193	900	798	11.5	23100	739.9876	107.8396	739.2348			
84193	1000	802	11.5	23100	739.7367	108.4169	739.2348			
84193	1100	804	12.0	23100	739.7367	108.4873	739.2348			
84193	1200	804	12.0	23100	739.7367	108.4873	739.2348			
84193	1300	804	12.0	23100	739.7367	108.4873	739.2348			
84193	1400	806	12.0	23100	739.6112	108.9761	739.2348			
84193	1500	806	12.5	23100	739.2348	109.0316	739.2348			
84193	1600	808	13.0	23100	739.9839	109.3393	739.2348			
84193	1700	808	13.0	23100	739.1094	109.3207	739.2348			
84193	1800	808	13.0	23100	738.9839	109.0686	739.2348			
84193	1900	804	13.0	23100	739.1094	108.7795	739.2348			
84193	2000	800	12.5	23100	739.1094	108.2383	739.2348			
84193	2100	798	12.5	23100	739.1094	107.9677	739.2348			
84193	2200	796	12.5	23100	739.1094	107.6971	739.2348			
84193	2300	794	12.5	23100	739.4858	107.3719	739.2348			
84193	2400	792	12.5	23100	739.7367	107.0451	739.2348	799.0833	108.0959	
84194	100	792	12.5	21900	739.7367	107.0651	739.7367			
84194	200	792	12.5	21900	739.7367	107.0651	739.7367			
84194	300	792	12.5	21900	739.7367	107.0651	739.7367			
84194	400	792	12.0	21900	739.7367	107.0651	739.7367			
84194	500	792	12.0	21900			739.7367			
84194	600	792	12.0	21900	739.9876	107.0288	739.7367			
84194	700	794	12.0	21900	739.9876	107.2990	739.7367			
84194	800	796	11.5	21900	739.6112	107.6241	739.7367			
84194	900	798	11.5	21900	739.6112	107.8945	739.7367			
84194	1000	800	12.0	21900	739.6112	108.1649	739.7367			
84194	1100	802	12.0	21900	739.4858	108.8537	739.7367			
84194	1200	804	12.0	21900	739.4858	108.9946	739.7367			
84194	1300	810	12.5	21900	738.9839	109.6099	739.7367			
84194	1400	810	12.5	21900	738.7330	109.6471	739.7367			
84194	1500	802	12.5	21900	738.7330	108.5642	739.7367			
84194	1600	798	12.5	21900	738.9839	107.9861	739.7367			
84194	1700	798	12.5	21900	739.1094	107.9677	739.7367			
84194	1800	798	12.5	21900	739.7367	107.8762	739.7367			
84194	1900	798	12.5	21900	740.1131	107.8213	739.7367			
84194	2000	798	12.5	21900	740.2386	107.8050	739.7367			
84194	2100	798	12.5	21900	740.3640	107.5146	739.7367			

Table I. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mg/l)	TEMP (C)	MEAN DAILY Q (cfs)	BP AT GOLD CREEK	HOURLY % SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY % SATURATION
84194	2200	794	12.5	21900	740.3640	107.2445	739.7367		
84194	2300	794	12.5	21900	740.6150	107.2981	739.7367		
84194	2400	794	12.5	21900	740.8659	107.1718	739.7367	797.4166	107.7973
84195	100	792	12.5	21200	741.1168	106.8657	742.9988		
84195	200	792	12.5	21200	741.3677	106.8295	742.9988		
84195	300	792	12.5	21200	741.6187	106.7934	742.9988		
84195	400	794	12.5	21200	741.9931	107.0087	742.9988		
84195	500	794	12.5	21200	741.9931	107.0087	742.9988		
84195	600	794	12.5	21200	741.9931	107.0087	742.9988		
84195	700	794	12.5	21200	741.7441	107.0449	742.9988		
84195	800	796	12.5	21200	741.9931	107.2783	742.9988		
84195	900	796	12.5	21200	742.2460	107.2420	742.9988		
84195	1000	796	12.5	21200	742.7478	107.1496	742.9988		
84195	1100	798	12.5	21200	742.9988	107.4025	742.9988		
84195	1200	800	12.5	21200	742.9988	107.6717	742.9988		
84195	1300	804	12.5	21200	743.6261	108.1188	742.9988		
84195	1400	804	12.5	21200	743.6261	108.1188	742.9988		
84195	1500	804	12.5	21200	743.6261	108.1188	742.9988		
84195	1600	804	13.0	21200	743.6261	108.1188	742.9988		
84195	1700	804	13.0	21200	743.6261	108.1188	742.9988		
84195	1800	804	13.0	21200	743.3752	108.1553	742.9988		
84195	1900	802	13.0	21200	743.3752	107.8862	742.9988		
84195	2000	800	13.0	21200	743.3752	107.6172	742.9988		
84195	2100	800	13.0	21200	743.8770	107.5446	742.9988		
84195	2200	798	13.0	21200	743.8770	107.2737	742.9988		
84195	2300	798	12.5	21200	744.3789	107.2034	742.9988	798.2500	107.4362
84196	2400	798	12.5	21200	744.6298	107.1673	742.9988		
84196	100	798	12.5	21200	744.8907	107.1312	746.2608		
84196	200	798	12.5	21200	745.3826	107.0591	746.2608		
84196	300	800	12.5	21200	745.6333	107.2913	746.2608		
84196	400	800	12.5	21200	745.6333	107.2913	746.2608		
84196	500	800	12.5	21200	745.6333	107.2913	746.2608		
84196	600	802	12.5	21200	745.7390	107.5414	746.2608		
84196	700	802	12.5	21200	746.0099	107.3052	746.2608		
84196	800	804	12.5	21200	746.2608	107.7371	746.2608		
84196	900	806	12.5	21200	746.2608	108.0051	746.2608		
84196	1000	810	12.5	21200	746.2608	108.5411	746.2608		
84196	1100	810	12.5	21200	746.0099	108.5776	746.2608		
84196	1200	810	12.5	21200	746.0099	108.5776	746.2608		
84196	1300	808	12.5	21200	746.0099	108.3095	746.2608		
84196	1400	810	12.5	21200	746.0099	108.5776	746.2608		
84196	1500	812	12.5	21200	746.0099	108.8457	746.2608		
84196	1600	810	12.5	21200	746.2608	108.5411	746.2608		
84196	1700	808	12.5	21200	746.5118	108.2367	746.2608		
84196	1800	808	12.5	21200	746.7627	108.2003	746.2608		
84196	1900	806	12.5	21200	746.7627	107.9325	746.2608		
84196	2000	804	12.5	21200	747.0136	107.6285	746.2608		
84196	2100	802	12.5	21200	747.3900	107.3067	746.2608		
84196	2200	802	12.5	21200	747.6409	107.2707	746.2608		
84196	2300	802	12.0	21200	748.1428	107.1987	746.2608		
84196	2400	800	12.0	21200	748.1428	106.9314	746.2608	804.5666	107.3264
84197	100	800	12.0	19400	748.6447	106.8597	744.5043		
84197	200	800	12.5	19400	748.6447	106.8597	744.5043		
84197	300	800	12.5	19400	748.6447	106.8597	744.5043		
84197	400	800	12.5	19400	748.6447	106.8597	744.5043		
84197	500	800	12.0	19400	748.2683	106.9135	744.5043		
84197	600	800	12.5	19400	748.0173	106.9493	744.5043		
84197	700	802	12.0	19400	748.0173	107.2167	744.5043		

Table 1. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mmHg)	MEAN DAILY TEMP (C)	DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY SATURATION %	MEAN DAILY BF AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY SATURATION %
84197	800	802	12.0	19400	748.0173	107.2167	744.5043		
84197	900	804	12.0	19400	747.5155	107.5562	744.5043		
84197	1000	804	12.0	19400	747.3900	107.5743	744.5043		
84197	1100	806	12.0	19400	747.0136	107.8962	744.5043		
84197	1200	808	12.0	19400	746.2608	108.2731	744.5043		
84197	1300	812	12.0	19400	745.5081	108.9190	744.5043		
84197	1400	812	12.5	19400	744.5043	109.0658	744.5043		
84197	1500	812	12.5	19400	743.6261	109.1946	744.5043		
84197	1600	812	12.5	19400	742.6224	109.3422	744.5043		
84197	1700	810	13.0	19400	741.7441	109.2020	744.5043		
84197	1800	808	13.0	19400	740.7404	109.0800	744.5043		
84197	1900	804	13.0	19400	740.2386	108.6136	744.5043		
84197	2000	802	13.0	19400	739.7367	108.4169	744.5043		
84197	2100	798	13.0	19400	739.2348	107.9494	744.5043		
84197	2200	794	13.0	19400	738.9839	107.4448	744.5043		
84197	2300	792	12.5	19400	738.7330	107.2105	744.5043		
84197	2400	792	13.0	19400	738.4821	107.2470	744.5043	803.0833	107.8681
84198	100	790	12.5	18600	738.2311	107.0125	739.7367		
84198	200	790	12.5	18600	737.9802	107.0489	739.7367		
84198	300	790	12.5	18600	737.9802	107.0489	739.7367		
84198	400	788	12.5	18600	737.7293	106.8142	739.7367		
84198	500	788	12.5	18600			739.7367		
84198	600	788	12.5	18600	737.9802	106.7779	739.7367		
84198	700	788	12.5	18600	738.2311	106.7416	739.7367		
84198	800	790	12.0	18600	738.7330	106.9398	739.7367		
84198	900	792	12.0	18600	739.2348	107.1377	739.7367		
84198	1000	792	12.5	18600	739.4858	107.1014	739.7367		
84198	1100	794	12.5	18600	739.7367	107.3334	739.7367		
84198	1200	798	12.5	18600	739.9876	107.8396	739.7367		
84198	1300	800	13.0	18600	739.9876	108.1099	739.7367		
84198	1400	802	13.0	18600	739.9876	108.3801	739.7367		
84198	1500	800	13.0	18600	740.4893	108.0366	739.7367		
84198	1600	796	13.0	18600	740.3640	107.5146	739.7367		
84198	1700	794	13.0	18600	740.6150	107.2081	739.7367		
84198	1800	790	12.5	18600	740.6150	106.8681	739.7367		
84198	1900	790	12.5	18600	740.7404	106.6500	739.7367		
84198	2000	788	12.5	18600	740.8659	106.3620	739.7367		
84198	2100	788	12.5	18600	740.7404	106.3800	739.7367		
84198	2200	788	12.5	18600	741.1168	106.3260	739.7367		
84198	2300	788	12.5	18600	741.3677	106.2900	739.7367		
84198	2400	788	12.5	18600	741.6187	106.2540	739.7367	791.5666	107.0200
84199	100	790	12.5	20500					
84199	200	790	12.5	20500					
84199	300	790	12.5	20500					
84199	400	792	12.0	20500					
84199	500	792	12.0	20500					
84199	600	792	12.0	20500	741.9951	106.7392			
84199	700	792	12.0	20500	741.9951	106.7392			
84199	800	794	12.0	20500	741.9951	107.0088			
84199	900	794	12.0	20500	742.2460	106.9726			
84199	1000	794	12.0	20500	742.6224	106.9184			
84199	1100	796	11.5	20500	742.6224	107.1877			
84199	1200	796	11.5	20500	742.8733	107.1515			
84199	1300	798	11.5	20500	743.1242	107.3845			
84199	1400	798	11.5	20500	743.5006	107.3301			
84199	1500	798	11.5	20500	743.6261	107.3120			
84199	1600	798	11.5	20500	743.7516	107.2939			
84199	1700	800	11.5	20500	743.7516	107.5628			

Table 1. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mg/l)	TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY % SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY % SATURATION
84199	1800	800	11.5	20500	743.6261	107.5809			
84199	1900	800	11.0	20500	743.6261	107.5809			
84199	2000	798	11.0	20500	743.3752	107.3482			
84199	2100	798	11.0	20500	743.6261	107.3120			
84199	2200	798	11.0	20500	744.0023	107.2577			
84199	2300	798	11.0	20500	743.8770	107.2758			
84199	2400	798	10.5	20500	743.8770	107.2757	743.1639	795.5833	107.0535
84200	100	798	10.5	21700	743.8770	107.2757	742.9988		
84200	200	798	10.5	21700	743.8770	107.2757	742.9988		
84200	300	798	10.5	21700	743.8770	107.2757	742.9988		
84200	400	798	10.5	21700	743.6261	107.3119	742.9988		
84200	500	798	10.0	21700			742.9988		
84200	600	798	10.0	21700	743.3752	107.3482	742.9988		
84200	700	798	10.0	21700	743.3752	107.3482	742.9988		
84200	800	798	10.0	21700	743.3752	107.3482	742.9988		
84200	900	800	10.0	21700	743.3752	107.6172	742.9988		
84200	1000	800	10.0	21700	743.3752	107.6172	742.9988		
84200	1100	802	10.0	21700	743.3752	107.9862	742.9988		
84200	1200	802	10.0	21700	743.1242	107.9227	742.9988		
84200	1300	804	10.0	21700	743.1242	108.1918	742.9988		
84200	1400	802	10.0	21700	743.1242	107.9227	742.9988		
84200	1500	802	10.0	21700	742.8733	107.9391	742.9988		
84200	1600	802	10.0	21700	742.8733	107.9391	742.9988		
84200	1700	802	10.0	21700	742.6224	107.9956	742.9988		
84200	1800	800	10.0	21700	742.3714	107.7627	742.9988		
84200	1900	800	10.0	21700	742.3714	107.7627	742.9988		
84200	2000	800	10.0	21700	742.3714	107.7627	742.9988		
84200	2100	800	10.0	21700	742.3714	107.7627	742.9988		
84200	2200	798	10.0	21700	742.6224	107.4570	742.9988		
84200	2300	798	10.0	21700	742.8733	107.4207	742.9988		
84200	2400	798	10.0	21700	743.1242	107.3844	742.9988	799.7500	107.6381
84201	100	798	10.0	21600	743.1242	107.3844	744.7553		
84201	200	798	9.5	21600	743.1242	107.3844	744.7553		
84201	300	798	9.5	21600	743.1242	107.3844	744.7553		
84201	400	798	9.5	21600	743.1242	107.3844	744.7553		
84201	500	798	9.5	21600			744.7553		
84201	600	798	9.5	21600	743.6261	107.3119	744.7553		
84201	700	798	9.5	21600	743.6261	107.3119	744.7553		
84201	800	800	9.5	21600	743.8770	107.5446	744.7553		
84201	900	800	9.5	21600	744.1279	107.5083	744.7553		
84201	1000	800	9.5	21600	744.3789	107.4721	744.7553		
84201	1100	802	9.5	21600	744.3789	107.7408	744.7553		
84201	1200	802	9.5	21600	744.6298	107.7045	744.7553		
84201	1300	804	9.5	21600	744.8807	107.9367	744.7553		
84201	1400	802	9.5	21600	745.0062	107.6501	744.7553		
84201	1500	802	9.5	21600	745.1317	107.6319	744.7553		
84201	1600	802	9.5	21600	745.3826	107.5957	744.7553		
84201	1700	802	9.5	21600	745.5081	107.5776	744.7553		
84201	1800	802	9.5	21600	745.6333	107.5595	744.7553		
84201	1900	802	9.5	21600	745.6333	107.5595	744.7553		
84201	2000	800	9.5	21600	745.7590	107.2732	744.7553		
84201	2100	800	9.5	21600	745.8844	107.2532	744.7553		
84201	2200	800	9.5	21600	746.1354	107.2191	744.7553		
84201	2300	798	9.5	21600	746.3863	106.9151	744.7553		
84201	2400	798	9.5	21500	746.5863	106.9151	744.7553	800.0833	107.4290
84202	100	798	9.5	21100	746.8882	106.8432	747.2646		
84202	200	798	10.0	21100	746.8882	106.8432	747.2646		
84202	300	798	10.0	21100	747.1371	106.8074	747.2646		

Table 1. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mmHg)	TEMP (C)	MEAN DAILY GOLD CREEK Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY SATURATION	MEAN DAILY	MEAN DAILY	MEAN DAILY
							BP AT TOTAL GOLD CREEK	TOTAL DIS. GAS	% SATURATION
84202	400	798	10.0	21100	747.1391	106.8074	747.2646		
84202	500	798	10.0	21100	747.1391	106.8074	747.2646		
84202	600	798	10.0	21100	747.1391	106.8074	747.2646		
84202	700	798	9.5	21100	747.1391	106.8074	747.2646		
84202	800	800	9.5	21100	747.3900	107.0391	747.2646		
84202	900	800	9.5	21100	747.3900	107.0391	747.2646		
84202	1000	800	9.5	21100	747.5153	107.0211	747.2646		
84202	1100	800	9.5	21100	747.5153	107.0211	747.2646		
84202	1200	802	9.5	21100	747.5153	107.2887	747.2646		
84202	1300	802	9.5	21100	747.5153	107.2887	747.2646		
84202	1400	802	9.5	21100	747.2846	107.3247	747.2646		
84202	1500	802	9.5	21100	747.5153	107.2887	747.2646		
84202	1600	800	9.5	21100	747.5153	107.0211	747.2646		
84202	1700	800	9.5	21100	747.2846	107.0571	747.2646		
84202	1800	800	9.5	21100	747.0136	107.0930	747.2646		
84202	1900	798	9.5	21100	746.7827	106.8612	747.2646		
84202	2000	798	9.5	21100	746.7827	106.8612	747.2646		
84202	2100	798	9.5	21100	747.0136	106.8753	747.2646		
84202	2200	796	9.5	21100	747.0136	106.5576	747.2646		
84202	2300	796	9.5	21100	746.8882	106.5753	747.2646		
84202	2400	796	9.5	21100	746.8882	106.5755	747.2646	799.0000	106.9233
84203	100	794	9.5	22300	746.8882	106.3077	746.2608		
84203	200	794	9.5	22300	746.8882	106.3077	746.2608		
84203	300	794	9.5	22300	746.6372	106.3434	746.2608		
84203	400	794	9.5	22300	746.6372	106.3434	746.2608		
84203	500	794	9.5	22300	746.6372	106.3434	746.2608		
84203	600	794	9.5	22300	746.6372	106.3434	746.2608		
84203	700	794	9.5	22300	746.6372	106.3434	746.2608		
84203	800	794	9.0	22300	746.3863	106.3792	746.2608		
84203	900	794	9.0	22300	746.6372	106.3434	746.2608		
84203	1000	796	9.0	22300	746.8882	106.5755	746.2608		
84203	1100	796	9.0	22300	746.8882	106.5755	746.2608		
84203	1200	796	9.0	22300	746.8882	106.5755	746.2608		
84203	1300	796	9.5	22300	746.8882	106.5755	746.2608		
84203	1400	798	9.5	22300	746.6372	106.8792	746.2608		
84203	1500	796	9.5	22300	746.6372	106.6113	746.2608		
84203	1600	796	9.5	22300	746.3863	106.6471	746.2608		
84203	1700	798	9.5	22300	745.8844	106.9870	746.2608		
84203	1800	798	9.5	22300	745.6335	107.0230	746.2608		
84203	1900	796	9.5	22300	745.8844	106.7189	746.2608		
84203	2000	796	9.5	22300	745.6335	106.7548	746.2608		
84203	2100	794	9.5	22300	745.6335	106.4866	746.2608		
84203	2200	794	9.5	22300	745.6335	106.4866	746.2608		
84203	2300	794	9.5	22300	745.6335	106.4866	746.2608		
84203	2400	792	9.5	22300	745.6335	106.2183	746.2608	795.0833	106.5422
84204	100	792	9.5	23000	745.6335	106.2183	744.7553		
84204	200	794	9.5	23000	745.6335	106.4866	744.7553		
84204	300	794	9.5	23000	745.6335	106.4866	744.7553		
84204	400	794	9.5	23000	745.6335	106.4866	744.7553		
84204	500	794	9.5	23000	745.3826	106.5224	744.7553		
84204	600	794	9.5	23000	745.3826	106.5224	744.7553		
84204	700	794	9.5	23000	745.3826	106.5224	744.7553		
84204	800	794	9.5	23000	745.3826	106.5224	744.7553		
84204	900	794	9.5	23000	745.3826	106.5224	744.7553		
84204	1000	796	9.5	23000	745.3826	106.7907	744.7553		
84204	1100	798	9.5	23000	745.3826	107.0591	744.7553		
84204	1200	800	9.5	23000	745.1317	107.3635	744.7553		
84204	1300	802	10.0	23000	745.1317	107.6319	744.7553		

Table i. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mmHg)	TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY % SATURATION	MEAN DAILY BP AT GOLD CREEK			MEAN DAILY % SATURATION
							BP AT	%	TOTAL	
84204	1400	804	10.0	23000	744.6298	107.9731	744.7553			
84204	1500	804	10.0	23000	744.5789	108.0095	744.7553			
84204	1600	804	10.0	23000	744.3789	108.0095	744.7553			
84204	1700	804	10.5	23000	744.1279	108.0439	744.7553			
84204	1800	802	10.5	23000	744.1279	107.7771	744.7553			
84204	1900	802	10.5	23000	743.8770	107.8133	744.7553			
84204	2000	800	10.5	23000	743.6261	107.5809	744.7553			
84204	2100	798	10.5	23000	743.8770	107.2757	744.7553			
84204	2200	796	10.5	23000	743.8770	107.0049	744.7553			
84204	2300	796	10.0	23000	744.1279	106.9708	744.7553			
84204	2400	794	10.0	23000	744.1279	106.7020	744.7553			
84205	100	794	10.0	23500	744.1279	106.7020	743.5006	797.6666	107.1045	
84205	200	794	10.0	23500	744.1279	106.7020	743.5006			
84205	300	796	10.0	23500	744.3789	106.9347	743.5006			
84205	400	796	10.0	23500	744.3789	106.9347	743.5006			
84205	500	796	10.0	23500			743.5006			
84205	600	800	10.0	23500	744.1279	107.5063	743.5006			
84205	700	796	10.0	23500	744.1279	106.9708	743.5006			
84205	800	798	10.0	23500	744.1279	107.2396	743.5006			
84205	900	800	10.0	23500	743.8770	107.5446	743.5006			
84205	1000	804	10.5	23500	743.6261	108.1188	743.5006			
84205	1100	806	10.5	23500	743.6261	108.3877	743.5006			
84205	1200	808	11.0	23500	743.3752	108.6934	743.5006			
84205	1300	810	11.0	23500	743.1242	108.9992	743.5006			
84205	1400	810	11.0	23500	742.8733	109.0360	743.5006			
84205	1500	810	11.5	23500	742.6224	109.0729	743.5006			
84205	1600	810	12.0	23500	742.6224	109.0729	743.5006			
84205	1700	806	12.0	23500	742.6224	108.5342	743.5006			
84205	1800	806	12.0	23500	742.6224	108.5342	743.5006			
84205	1900	802	12.0	23500	742.6224	107.9956	743.5006			
84205	2000	800	12.0	23500	743.1242	107.6535	743.5006			
84205	2100	798	12.5	23500	743.2497	107.3663	743.5006			
84205	2200	796	12.0	23500	743.3752	107.0791	743.5006			
84205	2300	796	12.5	23500	743.6261	107.0430	743.5006			
84205	2400	794	12.5	23500	744.1279	106.7020	743.5006	801.0833	107.7448	
84206	100	794	12.5	21600						
84206	200	794	12.5	21600						
84206	300	794	12.5	21600						
84206	400	794	12.5	21600						
84206	500	796	12.5	21600						
84206	600	796	12.5	21600	744.7553	106.8807				
84206	700	796	12.0	21600	745.0062	107.1132				
84206	800	796	12.0	21600	745.0062	107.1132				
84206	900	800	12.0	21600	745.0062	107.3817				
84206	1000	800	12.0	21600	745.0062	107.3817				
84206	1100	802	12.0	21600	745.0062	107.6501				
84206	1200	802	12.0	21600	745.6333	107.5395				
84206	1300	804	12.0	21600	745.6333	107.8278				
84206	1400	804	12.0	21600	745.5081	107.8439				
84206	1500	802	12.5	21600	745.3826	107.5958				
84206	1600	802	12.0	21600	745.1317	107.6320				
84206	1700	800	12.5	21600	744.8807	107.3997				
84206	1800	800	12.5	21600	744.7553	107.4178				
84206	1900	800	12.5	21600	744.7553	107.4178				
84206	2000	798	12.5	21600	744.7553	107.1493				
84206	2100	796	12.5	21600	744.6298	106.8988				
84206	2200	794	12.5	21600	744.8807	106.5943				
84206	2300	794	12.5	21600	744.8807	106.5943				

Table I. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mg/l)	MEAN DAILY TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY Z SATURATION	MEAN DAILY MEAN DAILY MEAN DAILY		
							BP AT GOLD CREEK	TOTAL DIS. GAS	SATURATION
84206	2400	794	12.5	21600	744.8807	106.5942	745.0260	798.1666	107.1327
84207	100	792	12.5	22800	745.3826	106.2541	745.5081		
84207	200	792	13.0	22800	745.3826	106.2541	745.5081		
84207	300	792	13.0	22800	745.3826	106.2541	745.5081		
84207	400	792	12.5	22800	745.3826	106.2541	745.5081		
84207	500	794	12.5	22800			745.5081		
84207	600	794	12.5	22800	745.3826	106.5224	745.5081		
84207	700	796	12.5	22800	745.3826	106.7907	745.5081		
84207	800	796	12.5	22800	745.3826	106.7907	745.5081		
84207	900	796	12.5	22800	745.6335	106.7548	745.5081		
84207	1000	798	12.5	22800	745.7590	107.0050	745.5081		
84207	1100	798	12.5	22800	745.7590	107.0050	745.5081		
84207	1200	798	12.0	22800	745.7590	107.0050	745.5081		
84207	1300	798	12.0	22800	745.7590	107.0050	745.5081		
84207	1400	800	12.0	22800	745.7590	107.2732	745.5081		
84207	1500	800	12.0	22800	745.6335	107.2913	745.5081		
84207	1600	800	12.0	22800	745.6335	107.2913	745.5081		
84207	1700	800	12.0	22800	745.3826	107.3274	745.5081		
84207	1800	800	12.0	22800	745.2571	107.3454	745.5081		
84207	1900	800	12.0	22800	745.2571	107.3454	745.5081		
84207	2000	800	12.0	22800	745.2571	107.3454	745.5081		
84207	2100	798	12.0	22800	745.1317	107.0951	745.5081		
84207	2200	798	12.0	22800	745.1317	107.0951	745.5081		
84207	2300	798	12.0	22800	745.1317	107.0951	745.5081		
84207	2400	798	11.5	22800	745.1317	107.0951	745.5081	797.0000	106.9069
84208	100	800	11.5	30500	745.1317	107.3635	745.5006		
84208	200	800	11.5	30500	744.8807	107.3997	745.5006		
84208	300	800	11.5	30500	744.6298	107.4359	745.5006		
84208	400	800	11.5	30500	744.3789	107.4721	745.5006		
84208	500	802	11.0	30500			745.5006		
84208	600	802	11.0	30500	744.3789	107.7408	745.5006		
84208	700	802	11.0	30500	744.3789	107.7408	745.5006		
84208	800	804	11.0	30500	744.3789	108.0093	745.5006		
84208	900	804	11.0	30500	744.3789	108.0093	745.5006		
84208	1000	806	11.0	30500	744.1279	108.3146	745.5006		
84208	1100	806	11.0	30500	743.8770	108.3512	745.5006		
84208	1200	806	11.0	30500	743.6261	108.6567	745.5006		
84208	1300	810	11.0	30500	743.3732	108.9624	745.5006		
84208	1400	810	11.0	30500	743.3732	108.9624	745.5006		
84208	1500	812	11.0	30500	743.1242	109.2683	745.5006		
84208	1600	812	11.0	30500	742.6224	109.3422	745.5006		
84208	1700	812	11.0	30500	742.4969	109.3607	745.5006		
84208	1800	810	11.0	30500	742.2460	109.1282	745.5006		
84208	1900	810	11.0	30500	742.1205	109.1466	745.5006		
84208	2000	810	10.5	30500	742.1205	109.1466	745.5006		
84208	2100	810	10.5	30500	742.1205	109.1466	745.5006		
84208	2200	810	10.5	30500	742.1205	109.1466	745.5006		
84208	2300	810	10.5	30500	742.3714	109.1097	745.5006		
84208	2400	812	10.5	30500	742.6224	109.1422	745.5006	306.7500	108.5069
84209	100	812	10.5	34200	742.6224	109.1422	745.3752		
84209	200	812	10.5	34200	742.8733	109.3053	745.3752		
84209	300	814	10.0	34200	742.8733	109.5745	745.3752		
84209	400	814	10.0	34200	742.8733	109.5745	745.3752		
84209	500	814	10.0	34200			745.3752		
84209	600	814	10.0	34200			745.3752		
84209	700	816	10.0	34200			745.3752		
84209	800	816	10.0	34200	744.1279	109.6585	745.3752		
84209	900	816	10.0	34200	743.3752	109.7696	745.3752		

Table 1. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mmHg)	TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY % SATURATION	MEAN DAILY MEAN DAILY MEAN DAILY		
							TOTAL BP AT GOLD CREEK	DIS. GAS	SATURATION
84209	1000	818	10.0	34200	743.6261	109.0015	743.3752		
84209	1100	818	10.0	34200	743.8770	109.9644	743.3752		
84209	1200	818	10.0	34200	743.8770	109.9644	743.3752		
84209	1300	820	10.0	34200	743.6261	110.2704	743.3752		
84209	1400	820	10.5	34200	743.6261	110.2704	743.3752		
84209	1500	822	10.5	34200	743.3752	110.5767	743.3752		
84209	1600	820	10.5	34200	743.3752	110.3076	743.3752		
84209	1700	818	10.5	34200	743.1242	110.0757	743.3752		
84209	1800	818	11.0	34200	743.1242	110.0757	743.3752		
84209	1900	816	11.0	34200	743.1242	109.8066	743.3752		
84209	2000	814	11.0	34200	743.1242	109.3375	743.3752		
84209	2100	814	11.0	34200	743.3752	109.5005	743.3752		
84209	2200	812	11.0	34200	743.6261	109.1946	743.3752		
84209	2300	812	11.5	34200	743.8770	109.1578	743.3752		
84209	2400	812	11.5	34200	744.1279	109.1210	743.3752		
84210	100	812	11.5	31000	744.3789	109.0842	743.7516	815.8333	109.7471
84210	200	812	11.5	31000	744.3789	109.0842	743.7516		
84210	300	812	11.5	31000	744.6298	109.0474	743.7516		
84210	400	812	11.5	31000	744.8807	109.0107	743.7516		
84210	500	810	11.5	31000	744.8807	108.7422	743.7516		
84210	600	812	11.5	31000	744.8807	109.0107	743.7516		
84210	700	812	11.5	31000	744.8807	109.0107	743.7516		
84210	800	812	11.5	31000	744.8807	109.0107	743.7516		
84210	900	810	11.0	31000	744.8807	108.7422	743.7516		
84210	1000	812	11.0	31000	744.8807	109.0107	743.7516		
84210	1100	814	11.0	31000	744.8807	109.2792	743.7516		
84210	1200	814	11.0	31000	744.6298	109.3160	743.7516		
84210	1300	814	11.0	31000	744.6298	109.3160	743.7516		
84210	1400	818	11.0	31000	744.1279	109.9273	743.7516		
84210	1500	812	11.0	31000	743.6261	109.1946	743.7516		
84210	1600	812	11.0	31000	743.1242	109.2483	743.7516		
84210	1700	812	11.5	31000	742.8733	109.3053	743.7516		
84210	1800	810	11.5	31000	742.6224	109.0729	743.7516		
84210	1900	808	11.5	31000	742.3714	108.8403	743.7516		
84210	2000	808	11.5	31000	742.3714	108.8403	743.7516		
84210	2100	806	11.5	31000	742.3714	108.5709	743.7516		
84210	2200	806	11.5	31000	742.3714	108.5709	743.7516		
84210	2300	804	11.5	31000	742.3714	108.3015	743.7516		
84210	2400	804	11.5	31000	742.6224	108.2649	743.7516	810.7500	109.0081
84211	100	804	12.0	28500	742.6224	108.2649	742.4969		
84211	200	802	12.0	28500	742.6224	107.9956	742.4969		
84211	300	802	12.0	28500	742.3714	108.0321	742.4969		
84211	400	802	12.0	28500	742.3714	108.0321	742.4969		
84211	500	804	12.0	28500	742.3714		742.4969		
84211	600	804	12.0	28500	742.3714	108.3015	742.4969		
84211	700	804	12.0	28500	742.3714	108.3015	742.4969		
84211	800	804	12.0	28500	742.3714	108.3015	742.4969		
84211	900	804	11.5	28500	742.3714	108.3015	742.4969		
84211	1000	804	11.5	28500	742.1205	108.3381	742.4969		
84211	1100	804	11.5	28500	742.1205	108.3381	742.4969		
84211	1200	806	11.5	28500	742.1205	108.6076	742.4969		
84211	1300	806	11.5	28500	742.1205	108.6076	742.4969		
84211	1400	804	11.5	28500	742.3714	108.3015	742.4969		
84211	1500	806	12.0	28500	742.6224	108.5742	742.4969		
84211	1600	804	12.0	28500	742.6224	108.2649	742.4969		
84211	1700	804	12.0	28500	742.6224	108.2649	742.4969		
84211	1800	804	12.0	28500	742.6224	108.2649	742.4969		
84211	1900	804	12.0	28500	742.8733	108.2284	742.4969		

Table I. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mg/m <sup>3</sup> )	TEMP (C)	MEAN DAILY Q (cfs)	GOLD CREEK	HOURLY BP AT GOLD CREEK	HOURLY Z SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY Z SATURATION
84211	2000	804	11.5	28500	742.8733	108.2284	742.4969			
84211	2100	804	11.5	28500	743.1242	108.1918	742.4969			
84211	2200	804	11.5	28500	743.1242	108.1918	742.4969			
84211	2300	802	11.5	28500	743.6261	107.8498	742.4969			
84211	2400	802	11.5	28500	743.6261	107.8498	742.4969			
84212	100	804	11.5	27500	743.6261	108.1188	744.2534	803.8333	108.2608	
84212	200	804	11.0	27500	743.8770	108.0823	744.2534			
84212	300	802	11.0	27500	744.1279	107.7771	744.2534			
84212	400	804	11.0	27500	743.8770	108.0823	744.2534			
84212	500	804	11.0	27500			744.2534			
84212	600	804	11.0	27500	744.1279	108.0459	744.2534			
84212	700	804	11.0	27500	744.1279	108.0459	744.2534			
84212	800	806	11.0	27500	744.6298	108.2416	744.2534			
84212	900	806	10.5	27500	744.7353	108.2234	744.2534			
84212	1000	806	11.0	27500	744.7353	108.2234	744.2534			
84212	1100	806	11.0	27500	744.7353	108.4920	744.2534			
84212	1200	808	11.0	27500	744.7353	108.4920	744.2534			
84212	1300	810	11.0	27500	744.6298	108.7788	744.2534			
84212	1400	812	11.5	27500	744.3789	109.0842	744.2534			
84212	1500	812	11.5	27500	744.3789	109.0842	744.2534			
84212	1600	812	11.5	27500	744.1279	109.1210	744.2534			
84212	1700	810	12.0	27500	744.0025	108.8705	744.2534			
84212	1800	808	12.6	27500	743.8770	108.6200	744.2534			
84212	1900	806	11.5	27500	744.0025	108.3329	744.2534			
84212	2000	804	11.5	27500	744.0025	108.0641	744.2534			
84212	2100	802	11.5	27500	744.1279	107.7771	744.2534			
84212	2200	800	11.5	27500	744.2534	107.4902	744.2534			
84212	2300	800	11.5	27500	744.2534	107.4902	744.2534			
84212	2400	800	11.5	27500	744.2534	107.4902	744.2534	805.6666	108.2516	
84213	100	798	11.5	25300						
84213	200	798	11.5	25300						
84213	300	800	11.5	25300						
84213	400	800	11.0	25300						
84213	500	800	11.0	25300						
84213	600	800	11.0	25300	744.6298	107.4339				
84213	700	800	11.0	25300	744.6298	107.4339				
84213	800	800	11.0	25300	744.6298	107.4339				
84213	900	800	11.0	25300	744.6298	107.4339				
84213	1000	806	11.0	25300	744.3789	107.4721				
84213	1100	802	11.0	25300	744.3789	107.7408				
84213	1200	802	11.0	25300	744.0025	107.7933				
84213	1300	802	11.0	25300	743.8770	107.8133				
84213	1400	802	11.0	25300	743.8770	107.8133				
84213	1500	802	11.0	25300	743.7316	107.8317				
84213	1600	802	11.0	25300	743.6261	107.8499				
84213	1700	802	11.0	25300	743.5006	107.8681				
84213	1800	800	11.0	25300	743.3752	107.6173				
84213	1900	798	11.0	25300	743.3752	107.6173				
84213	2000	798	11.0	25300	743.2497	107.3663				
84213	2100	796	11.0	25300	743.3752	107.0792				
84213	2200	796	11.0	25300	743.3752	107.0792				
84213	2300	796	11.0	25300	743.3752	107.0792				
84213	2400	794	11.0	25300	743.3752	106.8101	743.8638	799.5833	107.4905	
84214	100	796	11.0	23400	743.3752	107.0791	744.0025			
84214	200	796	11.0	23400	743.3752	107.0791	744.0025			
84214	300	796	11.0	23400	743.1242	107.1153	744.0025			
84214	400	794	11.0	23400	743.1242	106.8461	744.0025			
84214	500	795	11.0	23400			744.0025			

Table I. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mg/m <sup>3</sup> )	MEAN DAILY TEMP GOLD CREEK (°C)	MEAN DAILY Q (cfs)	HOURLY DP AT GOLD CREEK	HOURLY SATURATION (%)	MEAN DAILY DP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY SATURATION (%)
							DP AT 10°C	TOTAL DIS. GAS	SATURATION
84214	600	794	11.0	23400	743.1242	106.8461	744.0025		
84214	700	796	11.0	23400	743.1242	107.1153	744.0025		
84214	800	796	11.0	23400	743.1242	107.1153	744.0025		
84214	900	796	11.0	23400	743.3752	107.0791	744.0025		
84214	1000	796	11.0	23400	743.3752	107.0791	744.0025		
84214	1100	798	11.0	23400	743.3752	107.3482	744.0025		
84214	1200	798	11.0	23400	743.6261	107.3119	744.0025		
84214	1300	798	11.0	23400	743.6261	107.3119	744.0025		
84214	1400	800	11.0	23400	743.8770	107.5446	744.0025		
84214	1500	798	11.0	23400	744.0025	107.2576	744.0025		
84214	1600	798	11.0	23400	744.0025	107.2576	744.0025		
84214	1700	798	11.0	23400	744.1279	107.2396	744.0025		
84214	1800	798	11.0	23400	744.2534	107.2215	744.0025		
84214	1900	796	11.0	23400	744.3789	106.9347	744.0025		
84214	2000	796	11.0	23400	744.6298	106.8987	744.0025		
84214	2100	796	11.0	23400	745.1317	106.8267	744.0025		
84214	2200	796	11.0	23400	745.3826	106.7907	744.0025		
84214	2300	796	11.0	23400	745.6335	106.7348	744.0025		
84214	2400	796	11.0	23400	745.8844	106.7189	744.0025	796.5833	107.0672
84215	100	796	11.0	22000	746.3863	106.6471	748.2683		
84215	200	796	11.0	22000	746.3863	106.6471	748.2683		
84215	300	796	11.0	22000	746.3863	106.6471	748.2683		
84215	400	796	11.0	22000	746.6372	106.6113	748.2683		
84215	500	796	11.0	22000	747.1391		748.2683		
84215	600	796	11.0	22000	747.1391	106.5397	748.2683		
84215	700	796	11.0	22000	747.3900	106.7715	748.2683		
84215	800	798	11.0	22000	747.5153	106.7536	748.2683		
84215	900	798	11.0	22000	748.0173	106.6820	748.2683		
84215	1000	798	11.0	22000	748.2683	106.6442	748.2683		
84215	1100	800	11.0	22000	748.5192	106.8776	748.2683		
84215	1200	800	11.0	22000	748.7701	106.8418	748.2683		
84215	1300	802	11.0	22000	749.0211	107.0730	748.2683		
84215	1400	804	11.0	22000	749.0211	107.3401	748.2683		
84215	1500	804	11.0	22000	749.0211	107.3401	748.2683		
84215	1600	804	11.0	22000	749.8956	107.3380	747.7021	798.8750	106.8025
84226	1500	808	11.0	17600	744.6298	108.5102	745.1317		
84226	1600	804	12.0	17600	744.6298	107.9731	745.1317		
84226	1700	806	12.0	17500	744.5043	107.4540	745.1317		
84226	1800	796	12.0	17600	744.5043	106.9167	745.1317		
84226	1900	792	12.0	17600	744.6298	106.3615	745.1317		
84226	2000	790	12.0	17600	744.6298	106.0929	745.1317		
84226	2100	786	12.0	17600	744.8807	105.5202	745.1317		
84226	2200	784	12.0	17600	745.1317	105.2162	745.1317		
84226	2300	782	11.5	17600	745.2571	104.9302	745.1317		
84226	2400	782	11.5	17600	745.3081	104.8949	745.1317	792.4000	106.3436
84227	100	782	11.0	16100					
84227	200	780	11.0	16100					
84227	300	782	11.0	16100					
84227	400	782	11.0	16100					
84227	500	782	11.0	16100					
84227	600	782	11.0	16100	746.6372	104.7363			
84227	700	782	11.0	16100	746.6372	104.7363			
84227	800	784	11.0	16100	746.8882	104.9689			
84227	900	788	11.0	16100	746.8882	105.5044			
84227	1000	790	11.0	16100	746.8882	105.7722			
84227	1100	794	11.5	16100	746.1354	106.4150			
84227	1200	796	11.5	16100	745.8844	106.7190			
84227	1300	800	11.5	16100	745.8844	107.2332			

Table I. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS : mmHg	TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY % SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY % SATURATION
84227	1400	802	11.5	16100	745.2571	107.6139			
84227	1500	798	11.5	16100	745.0062	107.1132			
84227	1600	796	11.5	16100	744.3789	106.9348			
84227	1700	796	11.5	16100	744.1279	106.9709			
84227	1800	792	12.0	16100	744.0023	106.4513			
84227	1900	790	12.0	16100	743.6261	106.2362			
84227	2000	786	12.0	16100	743.3752	105.7340			
84227	2100	784	11.5	16100	743.3752	105.4649			
84227	2200	780	11.5	16100	743.3752	104.9268			
84227	2300	778	11.5	16100	743.3006	104.6401			
84227	2400	778	11.5	16100	743.6261	104.6224	743.0260	787.6666	105.7233
84228	100	778	11.5	15100	743.6261	104.6224	742.4969		
84228	200	776	11.5	15100	743.6261	104.3335	742.4969		
84228	300	776	11.5	15100	743.8770	104.3183	742.4969		
84228	400	776	11.0	15100	743.8770	104.3183	742.4969		
84228	500	776	11.0	15100			742.4969		
84228	600	776	11.0	15100	743.8770	104.3183	742.4969		
84228	700	776	11.0	15100	743.8770	104.3183	742.4969		
84228	800	778	11.0	15100	743.8770	104.3871	742.4969		
84228	900	782	11.5	15100	743.5752	105.1958	742.4969		
84228	1000	784	11.5	15100	743.3752	105.4649	742.4969		
84228	1100	788	11.5	15100	742.9733	106.0746	742.4969		
84228	1200	790	12.0	15100	742.6224	106.3797	742.4969		
84228	1300	794	12.0	15100	742.3714	106.9545	742.4969		
84228	1400	796	12.0	15100	742.1203	107.2601	742.4969		
84228	1500	794	12.5	15100	741.9951	107.0087	742.4969		
84228	1600	794	12.5	15100	741.6187	107.0431	742.4969		
84228	1700	792	12.5	15100	741.2423	106.8476	742.4969		
84228	1800	788	12.5	15100	741.1168	106.3260	742.4969		
84228	1900	786	12.5	15100	740.8659	106.0920	742.4969		
84228	2000	782	12.5	15100	740.8659	105.5521	742.4969		
84228	2100	780	12.5	15100	740.8659	105.2822	742.4969		
84228	2200	778	12.5	15100	741.2423	104.7589	742.4969		
84228	2300	776	12.5	15100	741.3677	104.6713	742.4969		
84228	2400	774	12.5	15100	741.5677	104.4016	742.4969	782.9166	105.4437
84229	100	774	12.5	14500	741.6187	104.3662	740.6150		
84229	200	774	12.5	14500	741.3677	104.4016	740.6150		
84229	300	774	12.5	14500	741.6187	104.3662	740.6150		
84229	400	774	12.5	14500	741.6187	104.3662	740.6150		
84229	500	774	12.0	14500			740.6150		
84229	600	774	12.0	14500	741.6187	104.3662	740.6150		
84229	700	774	12.0	14500	741.6187	104.3662	740.6150		
84229	800	776	12.5	14500	741.6187	104.6359	740.6150		
84229	900	778	12.5	14500	741.6187	104.9056	740.6150		
84229	1000	780	12.5	14500	741.6187	105.1753	740.6150		
84229	1100	782	12.5	14500	741.6187	105.4450	740.6150		
84229	1200	784	12.5	14500	741.1168	105.7862	740.6150		
84229	1300	786	12.5	14500	741.1168	106.0361	740.6150		
84229	1400	790	13.0	14500	740.6150	106.6681	740.6150		
84229	1500	790	13.0	14500	740.3640	106.7042	740.6150		
84229	1600	788	13.0	14500	740.1131	106.4702	740.6150		
84229	1700	788	13.0	14500	739.6112	106.5424	740.6150		
84229	1800	784	13.0	14500	739.3603	106.0376	740.6150		
84229	1900	782	13.0	14500	739.3603	105.7670	740.6150		
84229	2000	778	12.5	14500	739.1094	105.2618	740.6150		
84229	2100	776	12.5	14500	739.3603	104.9353	740.6150		
84229	2200	774	12.5	14500	739.3603	104.6850	740.6150		
84229	2300	774	13.0	14500	739.3603	104.6850	740.6150		

Table I. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mg/m <sup>3</sup> )	MEAN DAILY		HOURLY BP AT GOLD CREEK	HOURLY SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY % SATURATION
			TEMP (C)	Q (cfs)					
84229	2400	774	13.0	14500	739.3603	104.6850	740.6150	779.2500	105.2166
84230	100	774	13.0	14800	739.3603	104.6850	737.4783		
84230	200	774	13.0	14800	739.1094	104.7206	737.4783		
84230	300	772	13.0	14800	738.8585	104.4854	737.4783		
84230	400	772	13.0	14800	738.7530	104.5032	737.4783		
84230	500	772	13.0	14800	738.4821	104.5387	737.4783		
84230	600	772	13.0	14800	738.2311	104.5742	737.4783		
84230	700	774	13.0	14800	737.9802	104.8808	737.4783		
84230	800	774	13.0	14800	737.9802	104.8808	737.4783		
84230	900	774	13.0	14800	737.9802	104.8808	737.4783		
84230	1000	776	13.0	14800	737.7293	105.1876	737.4783		
84230	1100	776	13.0	14800	737.7293	105.1876	737.4783		
84230	1200	776	13.0	14800	737.7293	105.1876	737.4783		
84230	1300	776	13.0	14800	737.2274	105.2392	737.4783		
84230	1400	778	13.0	14800	736.9765	105.5644	737.4783		
84230	1500	778	12.5	14800	736.6746	105.6383	737.4783		
84230	1600	778	12.5	14800	736.2237	105.6743	737.4783		
84230	1700	778	12.5	14800	736.2237	105.6743	737.4783		
84230	1800	776	12.5	14800	735.9728	105.4586	737.4783		
84230	1900	774	12.5	14800	735.7218	105.2027	737.4783		
84230	2000	774	12.5	14800	735.7218	105.2027	737.4783		
84230	2100	774	12.5	14800	735.7218	105.2027	737.4783		
84230	2200	772	12.5	14800	735.4709	104.9667	737.4783		
84230	2300	772	12.5	14800	735.4709	104.9667	737.4783		
84230	2400	772	12.5	14800	735.4709	104.9667	737.4783	774.5000	105.0200
84231	100	772	12.5	15600	735.4709	104.9667	733.9653		
84231	200	772	12.0	15600	735.4709	104.9667	733.9653		
84231	300	772	12.0	15600	735.4709	104.9667	733.9653		
84231	400	772	12.0	15600	735.2200	105.0025	733.9653		
84231	500	772	12.0	15600	734.7181	105.0743	733.9653		
84231	600	772	12.0	15600	734.7181	105.0743	733.9653		
84231	700	772	12.0	15600	734.7181	105.0743	733.9653		
84231	800	772	12.0	15600	734.7181	105.0743	733.9653		
84231	900	774	12.0	15600	734.7181	105.3465	733.9653		
84231	1000	774	12.0	15600	734.4672	105.3825	733.9653		
84231	1100	776	12.5	15600	734.4672	105.6548	733.9653		
84231	1200	776	12.5	15600	734.4672	105.6548	733.9653		
84231	1300	776	12.3	15600	734.2163	105.6909	733.9653		
84231	1400	776	12.0	15600	734.2163	105.6909	733.9653		
84231	1500	776	12.0	15600	733.9653	105.7270	733.9653		
84231	1600	776	12.0	15600	733.7144	105.7632	733.9653		
84231	1700	776	12.0	15600	733.2126	105.8356	733.9653		
84231	1800	776	12.0	15600	732.9616	105.8718	733.9653		
84231	1900	774	12.0	15600	732.4598	105.6713	733.9653		
84231	2000	772	12.0	15600	732.2089	105.4343	733.9653		
84231	2100	772	12.0	15600	732.2089	105.4343	733.9653		
84231	2200	770	12.0	15600	731.7579	105.1972	733.9653		
84231	2300	770	12.0	15600	731.7579	105.1972	733.9653		
84231	2400	770	12.0	15600	731.7070	105.2333	733.9653	773.3333	105.3637
84232	100	768	11.5	17400	731.7070	105.2333	733.7144		
84232	200	768	11.5	17400	731.7070	104.9600	733.7144		
84232	300	768	11.5	17400	731.4561	104.9960	733.7144		
84232	400	768	11.5	17400	730.9542	105.0681	733.7144		
84232	500	768	11.0	17400	731.2051	105.0220	733.7144		
84232	600	768	11.0	17400	730.9542	105.0681	733.7144		
84232	700	768	11.0	17400	730.7542	105.0681	733.7144		
84232	800	768	11.0	17400	731.4561	104.9960	733.7144		
84232	900	770	11.0	17400	731.7070	105.2333	733.7144		

Table 1. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mg/l)	TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY % SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY % SATURATION
84232	1000	770	11.0	17400	732.2089	105.1612	733.7144		
84232	1100	772	11.0	17400	732.7107	105.3621	733.7144		
84232	1200	772	11.0	17400	733.4635	105.2540	733.7144		
84232	1300	774	11.0	17400	733.9653	105.4545	733.7144		
84232	1400	774	11.0	17400	734.2163	105.4185	733.7144		
84232	1500	776	11.0	17400	734.4672	105.6548	733.7144		
84232	1600	776	11.0	17400	735.2200	105.5466	733.7144		
84232	1700	776	11.0	17400	735.2200	105.5466	733.7144		
84232	1800	776	11.0	17400	735.4709	105.5106	733.7144		
84232	1900	776	11.0	17400	735.7218	105.4746	733.7144		
84232	2000	774	11.0	17400	735.9728	105.1649	733.7144		
84232	2100	774	10.5	17400	736.2237	105.1310	733.7144		
84232	2200	774	10.5	17400	736.7256	105.0594	733.7144		
84232	2300	774	10.5	17400	737.2274	104.9879	733.7144		
84232	2400	774	10.5	17400	737.4783	104.9522	733.7144		
84233	100	774	10.5	18500	737.7293	104.9163	740.9913		
84233	200	774	10.5	18500	737.7902	104.8900	740.9913		
84233	300	774	10.5	18500	738.2311	104.8432	740.9913		
84233	400	774	10.5	18500	738.4821	104.8075	740.9913		
84233	500	774	10.5	18500			740.9913		
84233	600	774	10.5	18500	739.2348	104.7028	740.9913		
84233	700	774	10.5	18500	739.4858	104.6673	740.9913		
84233	800	776	10.5	18500	739.9876	104.8666	740.9913		
84233	900	776	10.5	18500	740.3640	104.8132	740.9913		
84233	1000	778	10.5	18500	740.6150	105.0478	740.9913		
84233	1100	780	10.5	18500	741.1168	105.2465	740.9913		
84233	1200	782	10.5	18500	741.6187	105.4430	740.9913		
84233	1300	782	10.5	18500	741.8676	105.4073	740.9913		
84233	1400	784	10.5	18500	741.8676	105.6789	740.9913		
84233	1500	784	11.0	18500	742.1205	105.6432	740.9913		
84233	1600	786	11.0	18500	742.1205	105.9127	740.9913		
84233	1700	786	11.0	18500	742.3714	105.8769	740.9913		
84233	1800	786	11.0	18500	742.3714	105.8769	740.9913		
84233	1900	786	10.5	18500	742.4969	105.8590	740.9913		
84233	2000	784	10.5	18500	742.3714	105.6073	740.9913		
84233	2100	784	10.5	18500	742.7478	105.5539	740.9913		
84233	2200	784	10.5	18500	742.8733	105.5361	740.9913		
84233	2300	784	10.5	18500	742.8733	105.5361	740.9913		
84233	2400	784	10.5	18500	742.9988	105.5183	740.9913	780.1666	105.2868
84234	100	784	10.5	19900					
84234	200	784	10.5	19900					
84234	300	784	10.5	19900					
84234	400	784	10.5	19900					
84234	500	784	10.5	19900					
84234	600	786	10.5	19900	742.3714	105.8769			
84234	700	786	10.0	19900	742.3714	105.8769			
84234	800	786	10.0	19900	742.6224	105.8411			
84234	900	788	10.0	19900	742.3714	106.1463			
84234	1000	788	10.0	19900	742.3714	106.1463			
84234	1100	790	10.0	19900	742.3714	106.4157			
84234	1200	790	10.0	19900	742.3714	106.4157			
84234	1300	790	10.0	19900	742.1205	106.4517			
84234	1400	792	10.0	19900	741.9951	106.7392			
84234	1500	790	10.5	19900	741.4932	106.5418			
84234	1600	790	10.5	19900	741.1168	106.3939			
84234	1700	790	10.5	19900	740.8639	106.6320			
84234	1800	790	10.5	19900	740.4895	106.6862			
84234	1900	788	10.5	19900	740.1131	106.4702			

Table I. Total dissolved gas concentrations at Gold Creek, RM 130, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mmHg)	MEAN DAILY TEMP GOLD CREEK (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY SATURATION %
							BP AT I	TOTAL	
84234	2000	786	10.5	19900	740.1131	106.2000			
84234	2100	786	10.0	19900	740.1131	106.2000			
84234	2200	784	10.0	19900	740.1131	105.9298			
84234	2300	784	10.0	19900	739.8622	105.9657			
84234	2400	784	10.0	19900	739.8622	105.9656	741.3215	787.0833	106.1729
84235	100	784	10.0	19100	739.6112	106.0016	738.3566		
84235	200	784	10.0	19100	739.3603	106.0376	738.3566		
84235	300	782	10.0	19100	739.3603	105.7670	738.3566		
84235	400	782	10.0	19100	739.2348	105.7850	738.3566		
84235	500	782	10.0	19100			738.3566		
84235	600	782	10.0	19100	738.9839	105.8209	738.3566		
84235	700	782	10.0	19100	738.9839	105.8209	738.3566		
84235	800	784	10.0	19100	738.7330	106.1276	738.3566		
84235	900	784	9.5	19100	738.7330	106.1276	738.3566		
84235	1000	784	9.5	19100	738.7330	106.1276	738.3566		
84235	1100	784	10.0	19100	738.4821	106.1637	738.3566		
84235	1200	786	10.0	19100	738.4821	106.4345	738.3566		
84235	1300	786	10.0	19100	738.2311	106.4707	738.3566		
84235	1400	786	10.0	19100	738.1057	106.4868	738.3566		
84235	1500	786	10.0	19100	737.8547	106.5250	738.3566		
84235	1600	786	10.0	19100	737.8547	106.5250	738.3566		
84235	1700	784	10.0	19100	737.6038	106.2901	738.3566		
84235	1800	782	10.0	19100	737.6038	106.0189	738.3566		
84235	1900	782	10.0	19100	737.4783	106.0370	738.3566		
84235	2000	780	10.0	19100	737.6038	105.7478	738.3566		
84235	2100	778	10.0	19100	737.6038	105.4766	738.3566		
84235	2200	778	10.0	19100	737.8547	105.4408	738.3566		
84235	2300	778	10.5	19100	737.8547	105.4408	738.3566		
84235	2400	776	10.0	19100	737.8547	105.4408	738.3566	782.6666	106.0011
84236	100	776	10.0	17900	737.8547	105.1697	737.1020		
84236	200	776	10.0	17900	737.8547	105.1697	737.1020		
84236	300	776	10.0	17900	737.8547	105.1697	737.1020		
84236	400	776	10.0	17900	737.8547	105.1697	737.1020		
84236	500	776	10.0	17900			737.1020		
84236	600	776	10.0	17900	737.9802	105.1518	737.1020		
84236	700	776	10.0	17900	737.9802	105.1518	737.1020		
84236	800	776	10.0	17900	737.9802	105.1518	737.1020		
84236	900	776	10.0	17900	737.9802	105.1518	737.1020		
84236	1000	776	10.0	17900	737.9802	105.1518	737.1020		
84236	1100	776	10.0	17900	737.9802	105.1518	737.1020		
84236	1200	778	10.0	17900	737.7293	105.4587	737.1020		
84236	1300	780	10.0	17900	737.7293	105.7298	737.1020		
84236	1400	780	10.0	17900	737.4783	105.7658	737.1020		
84236	1500	780	10.0	17900	736.9765	105.8378	737.1020		
84236	1600	782	10.5	17900	736.6001	106.1634	737.1020		
84236	1700	780	10.5	17900	736.2237	105.9460	737.1020		
84236	1800	778	10.0	17900	735.9728	105.7104	737.1020		
84236	1900	776	10.0	17900	736.3492	105.3847	737.1020		
84236	2000	774	10.0	17900	736.0982	105.1490	737.1020		
84236	2100	772	10.0	17900	736.7218	104.9309	737.1020		
84236	2200	770	10.0	17900	735.7218	104.6591	737.1020		
84236	2300	770	10.0	17900	735.7218	104.6591	737.1020		
84236	2400	770	10.0	17900	735.7218	104.6591	737.1020	776.0833	105.2884
84237	100	770	10.0	22700	735.7218	104.6591	727.6921		
84237	200	768	10.0	22700	735.7453	104.4407	727.6921		
84237	300	768	10.0	22700	735.2200	104.4585	727.6921		
84237	400	768	10.0	22700	734.7671	104.3941	727.6921		
84237	500	768	10.0	22700	734.4672	104.3655	727.6921		

Table 1. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mg/l)	TEMP (°C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY SATURATION
84237	600	770	9.5	22700	733.9653	104.9095	727.6921		
84237	700	770	9.5	22700	733.2126	105.0172	727.6921		
84237	800	772	9.5	22700	732.4598	105.3982	727.6921		
84237	900	772	9.5	22700	731.4561	105.5429	727.6921		
84237	1000	774	9.5	22700	730.7053	105.9253	727.6921		
84237	1100	774	9.5	22700	729.4486	106.1075	727.6921		
84237	1200	774	9.5	22700	728.6959	106.2171	727.6921		
84237	1300	774	9.0	22700	727.6921	106.3636	727.6921		
84237	1400	774	9.0	22700	726.4375	106.5473	727.6921		
84237	1500	774	9.0	22700	725.1829	106.7316	727.6921		
84237	1600	772	9.0	22700	723.9282	106.6404	727.6921		
84237	1700	772	9.0	22700	723.1754	106.7514	727.6921		
84237	1800	770	9.0	22700	722.1717	106.6228	727.6921		
84237	1900	770	9.0	22700	721.6699	106.6969	727.6921		
84237	2000	768	9.0	22700	721.1680	106.4939	727.6921		
84237	2100	766	9.0	22700	720.5687	106.3999	727.6921		
84238	2200	766	9.0	22700	719.7879	106.4202	727.6921		
84238	2300	766	9.0	22700	719.5370	106.4573	727.6921		
84238	2400	766	9.0	22700	719.2860	106.4944	727.6921	770.2500	105.8483
84238	100	766	9.0	29800	719.0351	106.5316	723.1754		
84238	200	766	9.0	29800	719.0351	106.5316	723.1754		
84238	300	766	9.0	29800	719.0351	106.5316	723.1754		
84238	400	766	8.5	29800	719.0351	106.5316	723.1754		
84238	500	766	8.5	29800	719.0351	106.5316	723.1754		
84238	600	768	8.5	29800	719.0351	106.8097	723.1754		
84238	700	768	8.5	29800	719.0351	106.8097	723.1754		
84238	800	768	8.5	29800	719.0351	106.8097	723.1754		
84238	900	768	8.5	29800	719.0351	106.8097	723.1754		
84238	1000	770	8.5	29800	719.2860	107.0505	723.1754		
84238	1100	772	8.5	29800	719.2860	107.3286	723.1754		
84238	1200	772	8.5	29800	719.7879	107.2538	723.1754		
84238	1300	772	8.5	29800	720.7916	107.1044	723.1754		
84238	1400	772	8.5	29800	723.0500	106.7699	723.1754		
84238	1500	772	8.5	29800	724.6810	106.5296	723.1754		
84238	1600	776	8.5	29800	725.4338	106.9704	723.1754		
84238	1700	776	8.5	29800	726.1866	106.8395	723.1754		
84238	1800	778	8.0	29800	726.6884	107.0610	723.1754		
84238	1900	780	8.0	29800	727.4412	107.2231	723.1754		
84238	2000	782	8.0	29800	728.1940	107.3889	723.1754		
84238	2100	784	8.0	29800	729.1977	107.5154	723.1754		
84238	2200	784	8.0	29800	730.2014	107.3676	723.1754		
84238	2300	786	8.0	29800	730.9542	107.5306	723.0918		
84238	2400	786	7.5	29800	731.7070	107.4200	723.0918	773.5000	106.5711
84239	100	788	7.5	31700	732.7107	107.5458	740.3913		
84239	200	788	7.5	31700	733.7144	107.3987	740.9913		
84239	300	790	7.5	31700	734.2163	107.5977	740.9913		
84239	400	792	7.0	31700	735.2200	107.7228	740.9913		
84239	500	792	7.0	31700	735.7218	107.6493	740.9913		
84239	600	794	7.0	31700	736.9765	107.7374	740.9913		
84239	700	796	7.0	31700	737.9802	107.8619	740.9913		
84239	800	796	7.0	31700	738.7330	107.7520	740.9913		
84239	900	798	6.5	31700	739.7367	107.8762	740.9913		
84239	1000	802	7.0	31700	740.4895	108.3067	740.9913		
84239	1100	806	7.0	31700	741.1168	108.7547	740.9913		
84239	1200	808	7.0	31700	741.8676	108.9140	740.9913		
84239	1300	810	7.0	31700	742.1205	109.1466	740.9913		
84239	1400	812	7.5	31700	742.3714	109.3791	740.9913		
84239	1500	814	7.5	31700	742.3733	109.3745	740.9913		

Table I. Total dissolved gas concentrations at Gold Creek, RM 136, 1934.

DATE	TIME	TOTAL DISSOLVED GAS (mg)	TEMP (C)	MEAN DAILY GOLD CREEK Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY % SATURATION	MEAN DAILY % BP AT GOLD CREEK		
							TOTAL DIS. GAS	MEAN DAILY DIS. GAS	MEAN DAILY SATURATION
84239	1600	812	7.5	31700	743.3732	109.2315	740.9913		
84239	1700	812	7.5	31700	743.8770	109.1578	740.9913		
84239	1800	810	7.5	31700	744.8298	108.7788	740.9913		
84239	1900	808	7.5	31700	745.1317	108.4372	740.9913		
84239	2000	808	7.0	31700	745.1317	108.4372	740.9913		
84239	2100	806	7.0	31700	745.6333	108.0959	740.9913		
84239	2200	808	7.0	31700	746.6372	108.2185	740.9913		
84239	2300	808	7.0	31700	746.6372	108.2185	740.9913		
84239	2400	808	6.5	31700	746.3863	108.2549	740.9913		
84240	100	808	6.5	27700	746.3863	108.2549	744.2534	802.7500	108.3345
84240	200	808	6.5	27700	746.3863	108.2549	744.2534		
84240	300	808	6.5	27700	746.3863	108.2549	744.2534		
84240	400	808	6.0	27700	746.1334	108.2913	744.2534		
84240	500	806	6.0	27700			744.2534		
84240	600	806	5.5	27700	745.8844	108.0596	744.2534		
84240	700	806	5.5	27700	745.3826	108.1323	744.2534		
84240	800	808	5.5	27700	745.1317	108.4372	744.2534		
84240	900	808	5.5	27700	744.8807	108.4737	744.2534		
84240	1000	810	5.5	27700	744.8807	108.7422	744.2534		
84240	1100	812	5.5	27700	744.8298	109.0474	744.2534		
84240	1200	814	5.5	27700	744.1279	109.3897	744.2534		
84240	1300	816	5.5	27700	743.8770	109.6955	744.2534		
84240	1400	814	6.0	27700	743.1242	109.5375	744.2534		
84240	1500	812	6.0	27700	743.1242	109.2683	744.2534		
84240	1600	812	6.5	27700	743.1242	109.2683	744.2534		
84240	1700	808	6.5	27700	742.8733	108.7668	744.2534		
84240	1800	806	6.5	27700	743.1242	108.4609	744.2534		
84240	1900	802	6.5	27700	743.1242	107.9227	744.2534		
84240	2000	800	6.5	27700	743.2497	107.6354	744.2534		
84240	2100	798	6.5	27700	743.3752	107.3482	744.2534		
84240	2200	796	6.5	27700	743.3752	107.0791	744.2534		
84240	2300	794	6.5	27700	743.3752	106.8101	744.2534		
84240	2400	794	6.5	27700	743.3752	106.8101	744.2534	806.4166	108.3524
84241	100	792	6.5	21000					
84241	200	792	6.0	21000					
84241	300	792	6.0	21000					
84241	400	792	6.0	21000					
84241	500	792	6.0	21000					
84241	600	792	5.5	21000	743.2497	106.5591			
84241	700	792	5.5	21000	742.9988	106.5951			
84241	800	792	5.5	21000	742.9988	106.5951			
84241	900	794	5.5	21000	742.7478	106.9004			
84241	1000	796	5.5	21000	742.4969	107.2058			
84241	1100	798	5.5	21000	742.2460	107.5115			
84241	1200	800	6.0	21000	741.9951	107.8174			
84241	1300	802	6.0	21000	741.4932	108.1601			
84241	1400	802	6.0	21000	740.9913	108.2534			
84241	1500	802	6.0	21000	740.8459	108.2517			
84241	1600	800	6.5	21000	740.4893	108.0366			
84241	1700	798	6.5	21000	740.2386	107.9031			
84241	1800	794	6.5	21000	740.2386	107.2627			
84241	1900	790	6.5	21000	740.1131	106.7404			
84241	2000	788	6.5	21000	740.2386	106.4522			
84241	2100	786	6.5	21000	740.7404	106.1100			
84241	2200	784	6.5	21000	741.1168	105.7863			
84241	2300	782	6.5	21000	741.2677	105.4807			
84241	2400	782	6.5	21000	741.8696	105.4093	741.4998	793.0833	106.7556
84242	100	782	6.5	17400	742.1005	105.3757	741.8696		

Table 1. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mg/l)	TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY % SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY DIS. GAS	MEAN DAILY % SATURATION
							TOTAL	BP AT	%
84242	200	782	6.0	17400	742.1205	105.3737	741.8696		
84242	300	782	6.0	17400	742.3714	105.3380	741.8696		
84242	400	782	6.0	17400	742.6224	105.3025	741.8696		
84242	500	782	6.0	17400				741.8696	
84242	600	782	6.0	17400	742.8733	105.2669	741.8696		
84242	700	782	5.5	17400	742.8733	105.2669	741.8696		
84242	800	782	5.5	17400	743.1242	105.2313	741.8696		
84242	900	784	6.0	17400	743.1242	105.5005	741.8696		
84242	1000	788	6.0	17400	743.1242	106.0387	741.8696		
84242	1100	792	6.0	17400	742.8733	106.6130	741.8696		
84242	1200	794	6.5	17400	742.6224	106.9183	741.8696		
84242	1300	796	6.0	17400	742.1205	107.2601	741.8696		
84242	1400	798	6.5	17400	741.8696	107.5660	741.8696		
84242	1500	798	6.5	17400	741.6187	107.6024	741.8696		
84242	1600	796	6.5	17400	741.1168	107.4034	741.8696		
84242	1700	794	6.5	17400	740.8659	107.1718	741.8696		
84242	1800	792	7.0	17400	740.8659	106.9019	741.8696		
84242	1900	790	6.5	17400	740.6150	106.6681	741.8696		
84242	2000	786	6.5	17400	740.6150	106.1280	741.8696		
84242	2100	782	6.5	17400	740.8659	105.3521	741.8696		
84242	2200	780	6.5	17400	740.8659	105.2822	741.8696		
84242	2300	780	6.5	17400	740.8659	105.2822	741.8696		
84242	2400	780	6.5	17400	741.1168	105.2465	741.8696	786.9166	106.0720
84243	100	778	6.0	15300	741.2423	104.9589	740.7404		
84243	200	778	6.0	15300	741.2423	104.9589	740.7404		
84243	300	778	6.0	15300	741.2423	104.9589	740.7404		
84243	400	778	6.0	15300	740.8659	105.0122	740.7404		
84243	500	778	6.0	15300				740.7404	
84243	600	778	6.0	15300	740.8659	105.0122	740.7404		
84243	700	778	6.0	15300	740.8659	105.0122	740.7404		
84243	800	778	6.0	15300	740.8659	105.0122	740.7404		
84243	900	780	6.0	15300	740.8659	105.2822	740.7404		
84243	1000	782	6.0	15300	740.6150	105.3879	740.7404		
84243	1100	786	6.0	15300	740.6150	106.1280	740.7404		
84243	1200	788	6.5	15300	740.3640	106.4341	740.7404		
84243	1300	792	6.5	15300	740.3640	106.9743	740.7404		
84243	1400	792	6.5	15300	740.1131	107.0106	740.7404		
84243	1500	792	6.5	15300	740.1131	107.0106	740.7404		
84243	1600	792	7.0	15300	740.1131	107.0106	740.7404		
84243	1700	790	7.0	15300	740.3640	106.7042	740.7404		
84243	1800	788	7.0	15300	740.7404	106.3800	740.7404		
84243	1900	784	7.0	15300	740.7404	105.8400	740.7404		
84243	2000	782	6.5	15300	740.8659	105.3521	740.7404		
84243	2100	780	6.5	15300	741.1168	105.2465	740.7404		
84243	2200	778	6.5	15300	741.3677	104.9411	740.7404		
84243	2300	776	6.5	15300	741.3677	104.6713	740.7404		
84243	2400	776	6.5	15300	741.1168	104.7068	740.7404	782.5833	105.6487
84244	100	778	6.5	15600	741.1168	104.9766	739.9876		
84244	200	778	6.5	15600	741.1168	104.9766	739.9876		
84244	300	776	6.5	15600	740.8659	104.7422	739.9876		
84244	400	776	6.5	15600	740.6150	104.7777	739.9876		
84244	500	776	6.5	15600	740.6150	104.7777	739.9876		
84244	600	776	6.5	15600	740.6150	104.7777	739.9876		
84244	700	776	6.5	15600	740.4895	104.7933	739.9876		
84244	800	776	6.5	15600	740.2386	104.8310	739.9876		
84244	900	778	6.5	15600	739.9876	105.1368	739.9876		
84244	1000	778	6.5	15600	739.7567	105.1723	739.9876		
84244	1100	780	6.5	15600	739.4858	105.4786	739.9876		

Table I. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mg/m <sup>3</sup> )	TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY % SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY % SATURATION
84244	1200	782	7.0	13600	739.4858	105.7491	739.9876		
84244	1300	782	7.0	13600	739.4858	105.7491	739.9876		
84244	1400	782	7.0	13600	739.2348	105.7850	739.9876		
84244	1500	784	7.0	13600	739.2348	106.0535	739.9876		
84244	1600	784	7.0	13600	739.2348	106.0535	739.9876		
84244	1700	784	7.0	13600	739.2348	106.0535	739.9876		
84244	1800	782	7.0	13600	739.2348	105.7850	739.9876		
84244	1900	780	7.0	13600	739.2348	105.5144	739.9876		
84244	2000	778	7.0	13600	739.4858	105.2082	739.9876		
84244	2100	778	6.5	13600	739.9876	105.1348	739.9876		
84244	2200	776	6.5	13600	740.2386	104.8310	739.9876		
84244	2300	776	6.5	13600	740.3640	104.8132	739.9876		
84244	2400	776	6.5	13600	740.7404	104.7600	739.9876	778.8333	105.2493
84245	100	776	6.5	12700	740.8439	104.7622	742.4969		
84245	200	774	6.5	12700	741.1168	104.4349	742.4969		
84245	300	774	6.5	12700	741.4932	104.3839	742.4969		
84245	400	774	6.5	12700	741.4932	104.3839	742.4969		
84245	500	774	6.5	12700	741.8496	104.3309	742.4969		
84245	600	774	6.0	12700	742.1205	104.2957	742.4969		
84245	700	774	6.0	12700	742.6224	104.2252	742.4969		
84245	800	774	6.0	12700	742.6224	104.2252	742.4969		
84245	900	778	6.0	12700	742.6224	104.7638	742.4969		
84245	1000	780	6.5	12700	742.9988	104.3799	742.4969		
84245	1100	784	6.5	12700	742.9988	105.5183	742.4969		
84245	1200	788	6.5	12700	742.9988	106.0566	742.4969		
84245	1300	792	7.0	12700	742.7478	106.6310	742.4969		
84245	1400	794	7.0	12700	742.4969	106.9364	742.4969		
84245	1500	794	7.5	12700	742.4969	106.9364	742.4969		
84245	1600	792	7.5	12700	742.4969	106.6671	742.4969		
84245	1700	790	7.5	12700	742.1205	106.4517	742.4969		
84245	1800	788	7.5	12700	742.4969	106.1283	742.4969		
84245	1900	784	7.5	12700	742.4969	105.5896	742.4969		
84245	2000	780	7.5	12700	742.4969	105.0509	742.4969		
84245	2100	778	7.5	12700	742.6224	104.7638	742.4969		
84245	2200	776	7.5	12700	743.1242	104.4239	742.4969		
84245	2300	774	7.0	12700	743.3732	104.1196	742.4969		
84245	2400	774	7.0	12700	743.8770	104.0494	742.4969	780.8333	105.1631
84246	100	774	7.0	11800	744.1279	104.0143	745.0062		
84246	200	774	7.0	11800	744.3789	103.9793	745.0062		
84246	300	774	7.0	11800	744.6298	103.9442	745.0062		
84246	400	774	7.0	11800	744.8807	103.9092	745.0062		
84246	500	774	7.0	11800	745.2571	103.8567	745.0062		
84246	600	774	7.0	11800	745.5081	103.8218	745.0062		
84246	700	774	6.5	11800	745.6335	103.8043	745.0062		
84246	800	776	7.0	11800	745.8844	104.0375	745.0062		
84246	900	778	7.0	11800	745.8844	104.3056	745.0062		
84246	1000	782	7.0	11800	745.8844	104.8419	745.0062		
84246	1100	786	7.5	11800	745.8844	105.3782	745.0062		
84246	1200	788	7.5	11800	745.6335	105.6819	745.0062		
84246	1300	790	8.0	11800	745.3826	105.9858	745.0062		
84246	1400	792	8.0	11800	745.1317	106.2899	745.0062		
84246	1500	792	8.0	11800	744.6298	106.3615	745.0062		
84246	1600	792	8.0	11800	744.3789	106.3974	745.0062		
84246	1700	790	8.0	11800	744.3789	106.1287	745.0062		
84246	1800	788	8.0	11800	744.3789	105.8600	745.0062		
84246	1900	784	8.0	11800	743.8770	105.3937	745.0062		
84246	2000	780	8.0	11800	743.8770	104.8960	745.0062		
84246	2100	778	8.0	11800	744.3789	104.5166	745.0062		

Table I. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mmHg)	MEAN DAILY TEMP GOLD CREEK (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY % SATURATION	MEAN DAILY BP AT GOLD CREEK		
							TOTAL DIS. GAS	MEAN DAILY SATURATION	%
84246	2200	776	9.0	11800	744.6298	104.2128	745.0062		
84246	2300	776	9.0	11800	744.6298	104.2128	745.0062		
84246	2400	776	8.0	11800	744.6298	103.9442	745.0062	780.8333	104.8089
84247	100	774	8.0	11200	744.5789	103.9793	741.2423		
84247	200	774	7.5	11200	744.1279	104.0143	741.2423		
84247	300	774	7.5	11200	744.1279	104.0143	741.2423		
84247	400	774	7.5	11200	743.8770	104.0444	741.2423		
84247	500	774	7.0	11200			741.2423		
84247	600	772	7.0	11200	743.3752	103.8506	741.2423		
84247	700	772	7.0	11200	743.3752	103.8506	741.2423		
84247	800	774	7.0	11200	743.3752	104.1196	741.2423		
84247	900	774	7.0	11200	743.1242	104.1548	741.2423		
84247	1000	778	7.5	11200	742.4969	104.7815	741.2423		
84247	1100	782	7.5	11200	741.7441	105.4271	741.2423		
84247	1200	784	8.0	11200	741.1168	105.7862	741.2423		
84247	1300	788	8.0	11200	740.8150	106.3900	741.2423		
84247	1400	790	8.5	11200	740.1131	106.7404	741.2423		
84247	1500	788	8.5	11200	739.9876	106.4982	741.2423		
84247	1600	786	8.0	11200	739.6112	106.2720	741.2423		
84247	1700	782	8.0	11200	739.4958	105.7491	741.2423		
84247	1800	780	8.0	11200	739.3603	105.4963	741.2423		
84247	1900	778	8.0	11200	739.2348	105.2439	741.2423		
84247	2000	776	8.0	11200	739.3603	104.9333	741.2423		
84247	2100	774	8.0	11200	739.3603	104.6830	741.2423		
84247	2200	772	8.0	11200	739.4858	104.3968	741.2423		
84247	2300	770	8.0	11200	739.6112	104.1087	741.2423		
84247	2400	770	8.0	11200	739.6112	104.1087	741.2423	777.5000	104.8914
84248	100	770	7.5	10800					
84248	200	770	7.5	10800					
84248	300	770	7.5	10800					
84248	400	770	7.5	10800					
84248	500	770	7.5	10800					
84248	600	770	7.5	10800	738.9839	104.1971			
84248	700	770	7.5	10800	739.2348	104.1618			
84248	800	770	7.5	10800	739.2348	104.1618			
84248	900	770	7.5	10800	739.2348	104.1618			
84248	1000	772	7.5	10800	739.2348	104.4323			
84248	1100	774	7.5	10800	738.9839	104.7384			
84248	1200	780	8.0	10800	738.4821	105.6221			
84248	1300	782	8.5	10800	738.2311	105.9289			
84248	1400	784	8.5	10800	737.7293	106.2720			
84248	1500	786	9.0	10800	737.4783	106.3794			
84248	1600	784	9.0	10800	736.8510	106.3987			
84248	1700	782	9.0	10800	736.4746	106.1813			
84248	1800	778	9.0	10800	736.3492	105.6564			
84248	1900	776	9.0	10800	736.0982	105.4207			
84248	2000	774	8.5	10800	735.9728	105.1669			
84248	2100	770	8.5	10800	735.8473	104.6413			
84248	2200	768	8.5	10800	736.2237	104.3161			
84248	2300	768	8.5	10800	736.2237	104.3161			
84248	2400	766	8.5	10800	736.2237	104.0444	737.5312	773.9166	104.9334
84249	100	766	8.5	10400	736.4746	104.5090	735.4709		
84249	200	766	8.0	10400	736.4746	104.0070	735.4709		
84249	300	766	8.0	10400	736.2237	104.0444	735.4709		
84249	400	765	8.0	10400	736.2237	104.0444	735.4709		
84249	500	766	8.0	10400	736.2237	104.0444	735.4709		
84249	600	766	8.0	10400	736.2237	104.0444	735.4709		
84249	700	766	8.0	10400	736.2237	104.0444	735.4709		

Table I. Total dissolved gas concentrations at Gold Creek, RM 126, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mmHg)	TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY SATURATION	MEAN DAILY	MEAN DAILY	MEAN DAILY
							TOTAL BP AT GOLD CREEK	DIS. GAS	% SATURATION
84249	800	768	8.0	10400	736.2237	104.3161	733.4709		
84249	900	770	8.0	10400	736.2237	104.3877	733.4709		
84249	1000	772	8.5	10400	735.9728	104.8951	733.4709		
84249	1100	774	9.5	10400	735.7218	105.2027	733.4709		
84249	1200	776	8.5	10400	735.7218	105.4746	733.4709		
84249	1300	780	9.0	10400	735.4709	106.0544	733.4709		
84249	1400	780	9.0	10400	735.4709	106.0544	733.4709		
84249	1500	778	9.0	10400	735.2200	105.8186	733.4709		
84249	1600	778	9.0	10400	734.8436	105.8728	733.4709		
84249	1700	776	9.0	10400	734.5927	105.6367	733.4709		
84249	1800	772	9.0	10400	734.5927	105.0922	733.4709		
84249	1900	770	9.0	10400	734.4672	104.8378	733.4709		
84249	2000	768	8.5	10400	734.4672	104.5655	733.4709		
84249	2100	768	9.0	10400	734.4672	104.5655	733.4709		
84249	2200	766	9.0	10400	734.7181	104.2576	733.4709		
84249	2300	766	9.0	10400	734.9691	104.2220	733.4709		
84249	2400	764	9.0	10400	735.2200	103.9144	733.4709	770.3333	104.7401
84250	100	764	9.0	10300	735.2200	103.9144	733.4709		
84250	200	764	9.0	10300	735.4709	103.8790	733.4709		
84250	300	764	8.5	10300	735.4709	103.8790	733.4709		
84250	400	764	8.5	10300	735.7218	103.8435	733.4709		
84250	500	764	8.5	10300			733.4709		
84250	600	764	8.5	10300	735.7218	103.8435	733.4709		
84250	700	766	8.5	10300	735.7218	104.1154	733.4709		
84250	800	766	8.5	10300	735.9728	104.0799	733.4709		
84250	900	766	8.5	10300	735.9728	104.0799	733.4709		
84250	1000	768	8.5	10300	735.9728	104.3516	733.4709		
84250	1100	770	9.0	10300	735.9728	104.6234	733.4709		
84250	1200	774	9.0	10300	735.7218	105.2027	733.4709		
84250	1300	774	9.5	10300	735.7218	105.2027	733.4709		
84250	1400	776	9.5	10300	735.4709	105.5106	733.4709		
84250	1500	778	9.5	10300	735.2200	105.8186	733.4709		
84250	1600	778	10.0	10300	734.9691	105.8547	733.4709		
84250	1700	776	9.5	10300	734.7181	105.6187	733.4709		
84250	1800	774	9.5	10300	734.7181	105.3465	733.4709		
84250	1900	772	9.5	10300	734.7181	105.0743	733.4709		
84250	2000	768	9.5	10300	734.9691	104.4941	733.4709		
84250	2100	766	9.0	10300	735.7218	104.1154	733.4709		
84250	2200	764	9.0	10300	735.9728	103.8081	733.4709		
84250	2300	764	9.0	10300	736.4746	103.7574	733.4709		
84250	2400	764	9.0	10300	736.7256	103.7021	733.4709	768.6666	104.5135
84251	100	764	9.0	10700	736.7256	103.7021	736.0982		
84251	200	766	9.0	10700	736.9765	103.9381	736.0982		
84251	300	766	9.0	10700	736.9765	103.9381	736.0982		
84251	400	766	9.0	10700	736.7256	103.9735	736.0982		
84251	500	766	9.0	10700	736.7256	103.9735	736.0982		
84251	600	766	9.0	10700	736.7256	103.9735	736.0982		
84251	700	766	9.0	10700	736.9765	103.9381	736.0982		
84251	800	768	9.5	10700	736.9765	104.2095	736.0982		
84251	900	768	9.5	10700	736.9765	104.2095	736.0982		
84251	1000	770	9.5	10700	736.9765	104.4809	736.0982		
84251	1100	770	9.0	10700	736.9765	104.4809	736.0982		
84251	1200	772	9.0	10700	736.7256	104.7879	736.0982		
84251	1300	774	9.0	10700	736.4746	105.0952	736.0982		
84251	1400	776	9.0	10700	736.2237	105.4027	736.0982		
84251	1500	776	9.0	10700	735.7218	105.4746	736.0982		
84251	1600	776	9.0	10700	735.7218	105.4746	736.0982		
84251	1700	774	9.5	10700	735.2200	105.2746	736.0982		

Table I. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mmHg)	TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY SATURATION I	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY SATURATION
							BP AT GOLD CREEK	TOTAL DIS. GAS	SATURATION
84251	1800	772	9.0	10700	733.2200	105.0023	736.0982		
84251	1900	772	9.0	10700	734.9691	105.0384	736.0982		
84251	2000	768	9.0	10700	734.7181	104.5298	736.0982		
84251	2100	768	9.0	10700	734.9691	104.4941	736.0982		
84251	2200	768	9.0	10700	734.7181	104.5298	736.0982		
84251	2300	766	9.0	10700	734.7181	104.2376	736.0982		
84251	2400	766	9.0	10700	734.9691	104.2220	736.0982	769.3333	104.5150
84252	100	766	9.0	10900	734.9691	104.2220	735.7218		
84252	200	766	8.5	10900	734.9691	104.2220	735.7218		
84252	300	766	8.5	10900	734.9691	104.2220	735.7218		
84252	400	766	8.5	10600	734.9691	104.2220	735.7218		
84252	500	766	8.0	10900	734.9691	104.2220	735.7218		
84252	600	764	8.0	10900	734.9691	103.9499	735.7218		
84252	700	764	8.0	10900	735.2200	103.9144	735.7218		
84252	800	766	8.0	10900	735.4709	104.1509	735.7218		
84252	900	766	8.0	10900	735.4709	104.4228	735.7218		
84252	1000	770	8.5	10900	735.4709	104.6948	735.7218		
84252	1100	774	8.5	10900	735.4709	105.2386	735.7218		
84252	1200	778	9.0	10900	735.2200	105.8186	735.7218		
84252	1300	780	9.0	10900	735.2200	106.0906	735.7218		
84252	1400	782	9.0	10900	735.2200	106.3627	735.7218		
84252	1500	782	9.0	10900	735.2200	106.3627	735.7218		
84252	1600	780	9.0	10900	735.2200	106.0906	735.7218		
84252	1700	780	9.0	10900	735.4709	106.0544	735.7218		
84252	1800	778	9.0	10900	735.7218	105.7464	735.7218		
84252	1900	774	8.5	10900	735.7218	105.2027	735.7218		
84252	2000	770	8.5	10900	735.9728	104.6234	735.7218		
84252	2100	768	8.5	10900	736.7256	104.2450	735.7218		
84252	2200	768	8.5	10900	736.9763	104.2095	735.7218		
84252	2300	766	8.0	10900	737.3529	103.8851	735.7218		
84252	2400	766	8.0	10900	737.9802	103.7968	735.7218	771.1686	104.8176
84253	100	766	7.5	10600	738.2311	103.7615	739.2348		
84253	200	768	7.5	10600	738.7330	103.9617	739.2348		
84253	300	768	7.0	10600	738.8585	103.9441	739.2348		
84253	400	768	7.0	10600	738.8585	103.9441	739.2348		
84253	500	768	6.5	10600	739.2348	103.8911	739.2348		
84253	600	766	6.5	10600	739.2348	103.6206	739.2348		
84253	700	768	6.0	10600	739.4838	103.8559	739.2348		
84253	800	768	6.0	10600	739.7367	103.8207	739.2348		
84253	900	770	6.5	10600	739.4838	104.1264	739.2348		
84253	1000	772	6.5	10600	739.4838	104.3968	739.2348		
84253	1100	776	7.0	10600	739.4838	104.9377	739.2348		
84253	1200	780	8.0	10600	739.4838	105.4786	739.2348		
84253	1300	782	8.0	10600	739.4838	105.7491	739.2348		
84253	1400	784	8.5	10600	739.2348	106.0555	739.2348		
84253	1500	784	8.5	10600	739.2348	106.0555	739.2348		
84253	1600	784	8.5	10600	738.9839	106.0916	739.2348		
84253	1700	782	8.5	10600	738.7330	105.8569	739.2348		
84253	1800	780	8.0	10600	738.9839	105.5503	739.2348		
84253	1900	778	8.5	10600	738.9839	105.2796	739.2348		
84253	2000	774	8.0	10600	738.9839	104.7384	739.2348		
84253	2100	772	8.0	10600	739.2348	104.4322	739.2348		
84253	2200	770	7.5	10600	739.7367	104.0910	739.2348		
84253	2300	770	7.5	10600	739.9876	104.0557	739.2348		
84253	2400	768	7.5	10600	740.2386	103.7503	739.2348	771.5833	104.6464
84254	100	766	7.0	9890	740.7404	103.6800	739.4858		
84254	200	766	7.0	9890	740.7404	103.6800	739.4858		
84254	300	768	6.5	9890	740.7404	103.6800	739.4858		

Table 1. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mg/l)	TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY SATURATION	MEAN DAILY	MEAN DAILY	MEAN DAILY
							BP AT GOLD CREEK	TOTAL DIS. GAS	% SATURATION
84254	400	768	6.5	9890	740.2386	103.7503	739.4858		
84254	500	768	6.0	9890	740.8639	103.6624	739.4858		
84254	600	768	6.0	9890	741.1168	103.6273	739.4858		
84254	700	768	5.5	9890	741.1168	103.6273	739.4858		
84254	800	768	5.5	9890	740.8639	103.9324	739.4858		
84254	900	770	6.0	9890	740.8639	104.2023	739.4858		
84254	1000	772	6.5	9890	740.8639	104.7600	739.4858		
84254	1100	776	6.5	9890	740.7404	104.2178	739.4858		
84254	1200	780	7.0	9890	739.9876	105.4071	739.4858		
84254	1300	784	7.5	9890	739.4858	106.0196	739.4858		
84254	1400	786	8.0	9890	738.9839	106.3622	739.4858		
84254	1500	784	8.0	9890	738.7330	104.1276	739.4858		
84254	1600	784	8.0	9890	738.1057	104.2178	739.4858		
84254	1700	782	8.0	9890	737.8547	105.9829	739.4858		
84254	1800	780	8.0	9890	737.8547	105.7118	739.4858		
84254	1900	776	7.5	9890	737.7293	105.1876	739.4858		
84254	2000	772	7.5	9890	737.9802	104.6098	739.4858		
84254	2100	770	7.5	9890	738.1057	104.3210	739.4858		
84254	2200	768	7.0	9890	738.3566	104.0147	739.4858		
84254	2300	766	7.0	9890	738.3566	103.7439	739.4858		
84254	2400	766	6.5	9890	738.6075	103.7086	739.4858	773.3333	104.5771
84255	100	766	6.5	9330					
84255	200	766	6.0	9330					
84255	300	764	6.0	9330					
84255	400	764	5.5	9330					
84255	500	764	5.5	9330					
84255	600	764	5.0	9330	738.2311	103.4906			
84255	700	764	5.0	9330	738.2311	103.4906			
84255	800	764	5.0	9330	738.2311	103.4906			
84255	900	766	5.0	9330	738.2311	103.7615			
84255	1000	768	5.5	9330	738.2311	104.0325			
84255	1100	772	6.0	9330	737.9802	104.6099			
84255	1200	776	6.5	9330	737.7293	105.1876			
84255	1300	778	6.5	9330	737.4783	105.4946			
84255	1400	780	7.0	9330	737.2274	105.8018			
84255	1500	780	7.0	9330	736.9763	105.8378			
84255	1600	782	7.0	9330	736.6001	106.1634			
84255	1700	780	7.0	9330	736.6001	105.8919			
84255	1800	776	7.0	9330	736.8510	105.3130			
84255	1900	774	7.0	9330	736.9763	105.0237			
84255	2000	770	6.5	9330	737.4783	104.4099			
84255	2100	768	6.5	9330	737.9802	104.0678			
84255	2200	766	6.5	9330	738.2311	103.7615			
84255	2300	764	6.0	9330	738.7330	103.4203			
84255	2400	764	6.0	9330	738.8585	103.8027	737.7293	770.0000	104.3743
84256	100	764	5.5	9080	739.2348	103.3500	741.7441		
84256	200	766	5.5	9080	739.7367	103.5503	741.7441		
84256	300	766	5.5	9080	739.9876	103.5152	741.7441		
84256	400	766	5.5	9080	740.1151	103.4976	741.7441		
84256	500	766	5.0	9080			741.7441		
84256	600	766	5.5	9080	740.3640	103.4626	741.7441		
84256	700	768	5.5	9080	740.6150	103.6976	741.7441		
84256	800	768	5.5	9080	741.1168	103.6273	741.7441		
84256	900	768	5.5	9080	741.6187	103.5572	741.7441		
84256	1000	770	5.5	9080	741.8696	103.7718	741.7441		
84256	1100	772	5.5	9080	742.1205	104.0262	741.7441		
84256	1200	774	5.5	9080	742.3714	104.2604	741.7441		
84256	1300	778	6.0	9080	742.3714	104.7792	741.7441		

Table 1. Total dissolved gas concentrations at Gold Creek, RM 156, 1984.

DATE	TIME	TOTAL DISSOLVED GAS : mmHg	TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY Z	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY SATURATION
									%
84236	1400	780	6.0	9080	742.3714	105.0686	741.7441		
84236	1500	780	6.5	9080	742.3714	105.0686	741.7441		
84236	1600	780	6.5	9080	742.3714	105.0686	741.7441		
84236	1700	780	7.0	9080	742.3714	105.0686	741.7441		
84236	1800	778	7.0	9080	742.3714	104.7992	741.7441		
84236	1900	778	6.5	9080	742.3714	104.7992	741.7441		
84236	2000	774	6.5	9080	742.6224	104.2252	741.7441		
84236	2100	772	6.5	9080	742.8733	103.9208	741.7441		
84236	2200	772	6.0	9080	743.6261	103.8156	741.7441		
84236	2300	772	6.5	9080	743.8770	103.7805	741.7441		
84236	2400	772	6.0	9080	743.8770	103.7805	741.7441		
84237	100	772	6.0	9000	744.1279	103.7455	742.4969	772.0833	104.0902
84237	200	772	6.0	9000	744.1279	103.7455	742.4969		
84237	300	772	6.0	9000	743.8770	103.7805	742.4969		
84237	400	772	6.0	9000	743.8770	103.7805	742.4969		
84237	500	772	6.0	9000			742.4969		
84237	600	772	5.5	9000	743.8770	103.7805	742.4969		
84237	700	772	6.0	9000	743.6261	103.8156	742.4969		
84237	800	772	5.5	9000	743.8770	103.7805	742.4969		
84237	900	772	5.5	9000	744.1279	103.7455	742.4969		
84237	1000	774	5.5	9000	744.1279	104.0143	742.4969		
84237	1100	774	5.5	9000	744.1279	104.0143	742.4969		
84237	1200	774	5.5	9000	744.1279	104.0143	742.4969		
84237	1300	776	5.5	9000	744.1279	104.2831	742.4969		
84237	1400	778	6.0	9000	743.7516	104.6048	742.4969		
84237	1500	780	6.0	9000	743.3752	104.7268	742.4969		
84237	1600	780	6.0	9000	742.8733	104.9977	742.4969		
84237	1700	780	6.0	9000	742.2460	105.0864	742.4969		
84237	1800	778	6.0	9000	741.6187	104.7056	742.4969		
84237	1900	776	6.0	9000	740.3659	104.7422	742.4969		
84237	2000	774	5.5	9000	740.1131	104.5786	742.4969		
84237	2100	770	5.5	9000	739.3603	104.1440	742.4969		
84237	2200	770	5.5	9000	738.8585	104.2148	742.4969		
84237	2300	768	5.0	9000	737.9802	104.0678	742.4969		
84237	2400	768	5.0	9000	736.9765	104.2095	742.4969	773.5566	104.1977
84258	100	766	5.0	8800	735.7218	104.1134	728.4449		
84258	200	766	4.5	8800	734.7181	104.2576	728.4449		
84258	300	764	4.5	8800	733.9653	104.0921	728.4449		
84258	400	764	4.5	8800	732.9616	104.2346	728.4449		
84258	500	762	4.5	8800	732.4598	104.0330	728.4449		
84258	600	762	4.0	8800	731.4381	104.1737	728.4449		
84258	700	762	4.0	8800	730.7053	104.2830	728.4449		
84258	800	762	4.0	8800	730.2014	104.3547	728.4449		
84258	900	762	4.0	8800	729.4486	104.4624	728.4449		
84258	1000	762	4.0	8800	729.4486	104.4624	728.4449		
84258	1100	766	4.5	8800	728.6759	105.1192	728.4449		
84258	1200	768	5.0	8800	727.6721	105.5391	728.4449		
84258	1300	768	6.0	8800	727.1903	105.6119	728.4449		
84258	1400	770	6.0	8800	726.1866	106.0333	728.4449		
84258	1500	768	6.0	8800	725.6847	105.8210	728.4449		
84258	1600	766	6.5	8800	725.1829	105.6285	728.4449		
84258	1700	764	6.5	8800	725.1829	105.3527	728.4449		
84258	1800	762	6.5	8800	725.1829	105.0769	728.4449		
84258	1900	760	6.0	8800	725.1829	104.8011	728.4449		
84258	2000	756	6.0	8800	725.1829	104.2455	728.4449		
84258	2100	754	6.0	8800	725.1829	103.9737	728.4449		
84258	2200	754	6.0	8800	725.1829	103.9737	728.4449		
84258	2300	752	5.5	8800	724.9319	103.7938	728.4449		

Table 1. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mgHg)	MEAN DAILY TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY % SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY % SATURATION
84258	2400	752	5.5	8800	725.0574	103.7159	728.4449	762.1666	104.6292
84259	100	752	5.5	8520	725.0574	103.7159	725.4338		
84259	200	752	5.0	8520	725.0574	103.7159	725.4338		
84259	300	750	5.0	8520	725.0574	103.4400	725.4338		
84259	400	750	5.0	8520	724.3063	103.4758	725.4338		
84259	500	750	5.0	8520	724.4301	103.5296	725.4338		
84259	600	750	5.0	8520	724.4301	103.5296	725.4338		
84259	700	750	5.0	8520	724.3063	103.4758	725.4338		
84259	800	750	5.0	8520	724.0065	103.4758	725.4338		
84259	900	750	5.0	8520	725.0574	103.4400	725.4338		
84259	1000	752	5.0	8520	725.3083	103.6800	725.4338		
84259	1100	752	5.5	8520	725.3593	103.6441	725.4338		
84259	1200	758	5.5	8520	725.8102	104.4350	725.4338		
84259	1300	762	6.0	8520	725.8102	104.9861	725.4338		
84259	1400	764	6.5	8520	725.8102	105.2616	725.4338		
84259	1500	762	6.5	8520	725.3593	105.9224	725.4338		
84259	1700	762	7.0	8520	725.8102	104.9861	725.4338		
84259	1800	760	7.0	8520	725.8102	104.7105	725.4338		
84259	1900	756	6.5	8520	725.8102	104.1594	725.4338		
84259	2000	754	6.5	8520	725.8102	103.8839	725.4338		
84259	2100	752	6.0	8520	725.8102	103.6083	725.4338		
84259	2200	750	6.0	8520	726.0611	103.2970	725.4338		
84259	2300	750	6.0	8520	726.0611	103.2970	725.4338		
84259	2400	750	6.0	8520	725.8102	103.3327	725.4338	753.8260	103.9138
84260	100	750	6.0	8280	725.8102	103.3327	727.9431		
84260	200	748	5.5	8280	725.8102	103.0572	727.9431		
84260	300	748	5.5	8280	725.8102	103.0572	727.9431		
84260	400	748	5.0	8280	725.8102	103.0572	727.9431		
84260	500	746	5.0	8280	725.9756	102.7639	727.9431		
84260	600	746	4.5	8280	726.4375	102.6929	727.9431		
84260	700	746	4.5	8280	726.6884	102.6574	727.9431		
84260	800	746	4.5	8280	726.9794	102.6220	727.9431		
84260	900	746	4.5	8280	727.1903	102.5866	727.9431		
84260	1000	748	5.0	8280	727.4412	102.8261	727.9431		
84260	1100	752	5.5	8280	727.6721	103.3403	727.9431		
84260	1200	758	6.0	8280	727.6921	104.1649	727.9431		
84260	1300	762	6.5	8280	727.9431	104.6785	727.9431		
84260	1400	764	6.5	8280	727.9431	104.9532	727.9431		
84260	1500	764	6.5	8280	727.9431	104.9532	727.9431		
84260	1600	764	7.0	8280	727.9431	104.9532	727.9431		
84260	1700	764	6.5	8280	727.9431	104.9532	727.9431		
84260	1800	760	6.0	8280	728.4449	104.3318	727.9431		
84260	1900	756	6.0	8280	728.9468	103.7112	727.9431		
84260	2000	754	5.5	8280	729.1977	103.4013	727.9431		
84260	2100	754	5.5	8280	729.6996	103.3301	727.9431		
84260	2200	752	5.5	8280	730.4524	102.9498	727.9431		
84260	2300	752	5.5	8280	731.2051	102.8439	727.9431		
84260	2400	752	5.0	8280	731.7070	102.7733	727.9431		
84261	100	750	5.0	8130	731.7070	102.5000	735.2200		
84261	200	750	4.5	8130	732.2089	102.4297	735.2200		
84261	300	750	4.5	8130	732.4598	102.3946	735.2200		
84261	400	750	4.5	8130	732.7107	102.3596	735.2200		
84261	500	750	4.0	8130			735.2200		
84261	600	750	4.0	8130	733.7144	102.2196	735.2200		
84261	700	750	3.5	8130	733.9653	102.1846	735.2200		
84261	800	750	3.5	8130	734.4672	102.1148	735.2200		
84261	900	752	3.5	8130	734.3691	102.3172	735.2200		
84261	1000	756	3.5	8130	735.2200	102.8263	735.2200		

Table 1. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mmHg)	TEMP (C)	MEAN DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY SATURATION
84261	1100	758	3.5	8130	735.4709	103.0632	735.2200		
84261	1200	764	4.0	8130	735.7218	103.8435	735.2200		
84261	1300	764	4.5	8130	735.7218	103.8435	735.2200		
84261	1400	766	4.5	8130	735.9728	104.0799	735.2200		
84261	1500	768	4.5	8130	736.2237	104.3161	735.2200		
84261	1600	770	5.0	8130	736.2237	104.5877	735.2200		
84261	1700	768	5.0	8130	736.2237	104.3161	735.2200		
84261	1800	768	5.0	8130	735.9728	104.3316	735.2200		
84261	1900	768	5.0	8130	735.9728	104.3316	735.2200		
84261	2000	766	5.0	8130	736.2237	104.0444	735.2200		
84261	2100	764	4.5	8130	736.4746	103.7374	735.2200		
84261	2200	764	4.5	8130	737.2274	103.6315	735.2200		
84261	2300	762	4.5	8130	737.2274	103.3602	735.2200		
84261	2400	762	4.5	8130	737.4783	103.3250	735.2200	759.1666	103.2570
84262	100	762	4.5	8370					
84262	200	760	4.5	8370					
84262	300	760	4.5	8370					
84262	400	760	4.5	8370					
84262	500	760	4.5	8370					
84262	600	762	4.5	8370	738.7330	103.1496			
84262	700	762	4.5	8370	738.9839	103.1146			
84262	800	762	4.5	8370	739.2348	103.0796			
84262	900	762	4.5	8370	739.4858	103.0446			
84262	1000	764	4.5	8370	739.9876	103.2450			
84262	1100	764	4.5	8370	740.2386	103.2100			
84262	1200	764	4.5	8370	740.2386	103.2100			
84262	1300	766	4.5	8370	740.4895	103.4451			
84262	1400	768	4.5	8370	740.6150	103.6976			
84262	1500	770	5.0	8370	740.8659	103.9324			
84262	1600	772	5.0	8370	740.8659	104.2024			
84262	1700	770	4.5	8370	740.8659	103.9324			
84262	1800	768	4.5	8370	740.9913	103.6449			
84262	1900	768	4.5	8370	741.2423	103.6098			
84262	2000	766	4.5	8370	741.6187	103.2876			
84262	2100	766	4.0	8370	741.6187	103.2876			
84262	2200	766	4.0	8370	741.8696	103.2526			
84262	2300	766	4.0	8370	741.8696	103.2526			
84262	2400	766	4.0	8370	742.1205	103.2177	740.6282	764.7500	1. .2569
84263	100	766	4.0	9390	742.4969	103.1634	742.4969		
84263	200	766	4.0	9390	742.6224	103.1479	742.4969		
84263	300	766	4.0	9390	742.8733	103.1131	742.4969		
84263	400	768	3.5	9390	742.8733	103.3823	742.4969		
84263	500	768	3.5	9390			742.4969		
84263	600	768	3.5	9390	742.8733	103.3823	742.4969		
84263	700	768	3.5	9390	742.8733	103.3823	742.4969		
84263	800	768	3.5	9390	742.8733	103.3823	742.4969		
84263	900	768	3.5	9390	743.1242	103.3474	742.4969		
84263	1000	770	3.5	9390	742.8733	103.6315	742.4969		
84263	1100	772	4.0	9390	742.8733	103.9208	742.4969		
84263	1200	774	4.0	9390	742.8733	104.1900	742.4969		
84263	1300	774	4.0	9390	742.6224	104.2252	742.4969		
84263	1400	776	4.0	9390	742.2460	104.5475	742.4969		
84263	1500	776	4.0	9390	742.2460	104.5475	742.4969		
84263	1600	774	4.0	9390	741.6187	104.3662	742.4969		
84263	1700	772	3.5	9390	741.6187	104.3966	742.4969		
84263	1800	770	3.5	9390	741.7441	103.8093	742.4969		
84263	1900	770	3.5	9390	742.4969	103.7041	742.4969		
84263	2000	768	3.0	9390	742.3714	103.4522	742.4969		

Table I. Total dissolved gas concentrations at Gold Creek, RM 136, 1984.

DATE	TIME	TOTAL DISSOLVED GAS (mmHg)	MEAN DAILY TEMP (C)	DAILY Q (cfs)	HOURLY BP AT GOLD CREEK	HOURLY SATURATION	MEAN DAILY BP AT GOLD CREEK	MEAN DAILY TOTAL DIS. GAS	MEAN DAILY % SATURATION
84263	2100	766	3.0	9390	742.3714	103.1828	742.4969		
84263	2200	766	3.0	9390	742.1205	103.2177	742.4969		
84263	2300	766	2.5	9390	742.1205	103.2177	742.4969		
84263	2400	766	2.5	9390	741.8696	103.2526	742.4969	769.4166	103.6255
84264	100	766	2.5	10400	741.8696	103.2526	744.5043		
84264	200	766	2.5	10400	741.8696	103.2526	744.5043		
84264	300	766	2.0	10400	741.6187	103.2875	744.5043		
84264	400	766	2.0	10400	741.3677	103.3225	744.5043		
84264	500	766	2.0	10400			744.5043		
84264	600	766	2.0	10400	741.8696	103.2526	744.5043		
84264	700	766	2.0	10400	742.1205	103.2177	744.5043		
84264	800	766	2.0	10400	742.8733	103.1131	744.5043		
84264	900	768	2.0	10400	743.3792	103.3125	744.5043		
84264	1000	770	2.5	10400	743.8770	103.3117	744.5043		
84264	1100	772	3.0	10400	744.1279	103.7455	744.5043		
84264	1200	776	3.5	10400	744.3789	104.2479	744.5043		
84264	1300	780	4.0	10400	744.3789	104.7853	744.5043		
84264	1400	784	4.0	10400	744.3789	105.3227	744.5043		
84264	1500	784	4.0	10400	744.5043	105.3049	744.5043		
84264	1600	782	4.0	10400	744.6298	105.0186	744.5043		
84264	1700	782	4.0	10400	744.8807	104.9832	744.5043		
84264	1800	780	3.5	10400	743.3826	104.6442	744.5043		
84264	1900	776	3.0	10400	743.8844	104.0375	744.5043		
84264	2000	774	3.0	10400	746.6372	103.6647	744.5043		
84264	2100	772	2.5	10400	747.1391	103.3274	744.5043		
84264	2200	770	2.5	10400	747.8919	102.9560	744.5043		
84264	2300	770	2.0	10400	748.1428	102.9215	744.5043		
84264	2400	770	2.0	10400	748.3937	102.8870	744.5043	772.4166	103.7431
84265	100	770	1.5	11400	748.6447	102.8525	749.7738		
84265	200	770	1.0	11400	748.6447	102.8525	749.7738		
84265	300	770	1.0	11400	748.6447	102.8525	749.7738		
84265	400	772	0.5	11400	748.8956	103.0831	749.7738		
84265	500	772	0.5	11400	748.8956	103.0831	749.7738		
84265	600	772	0.0	11400	748.8956	103.0831	749.7738		

1984 DISSOLVED GAS DATA

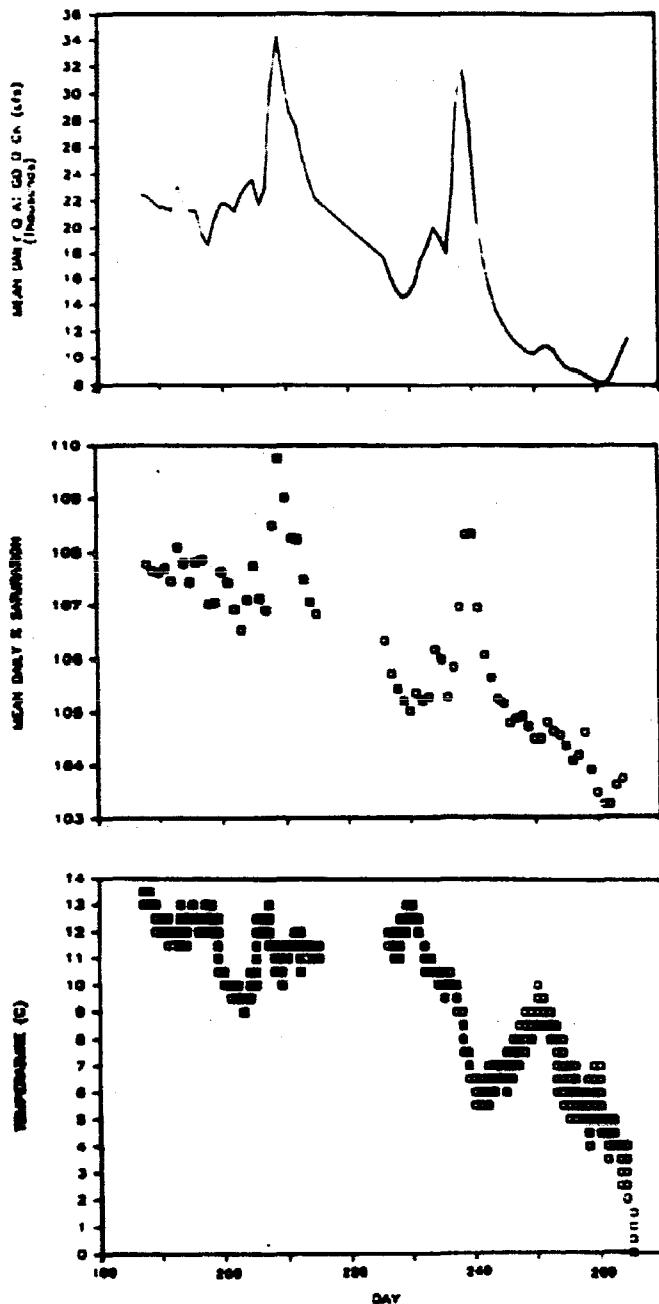


Figure 1. Mean daily discharge, percent saturation of total dissolved gas, and hourly water temperature measured at Gold Creek, July 5 to September 21, 1984.

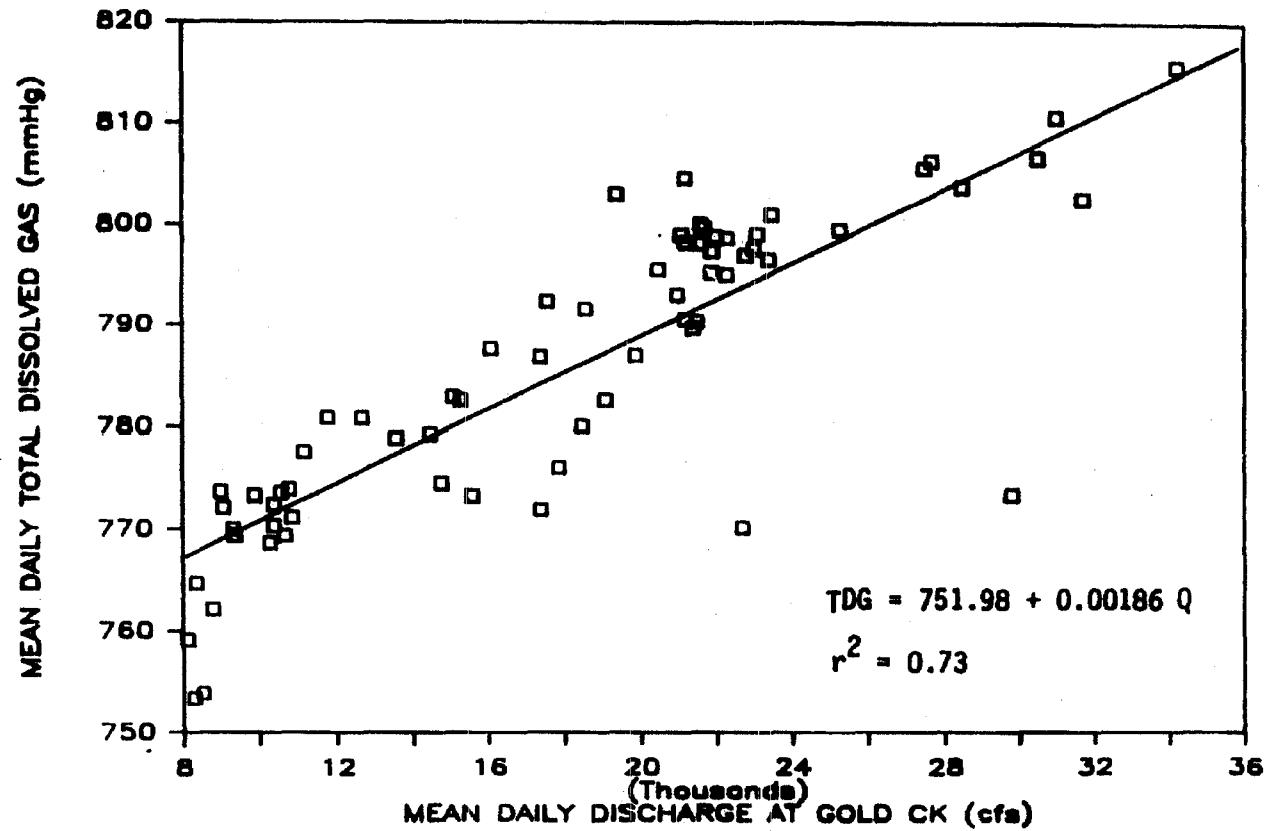


Figure 2. Mean daily total dissolved gas versus mean daily discharge measured at Gold Creek, July 5 to September 21, 1984.

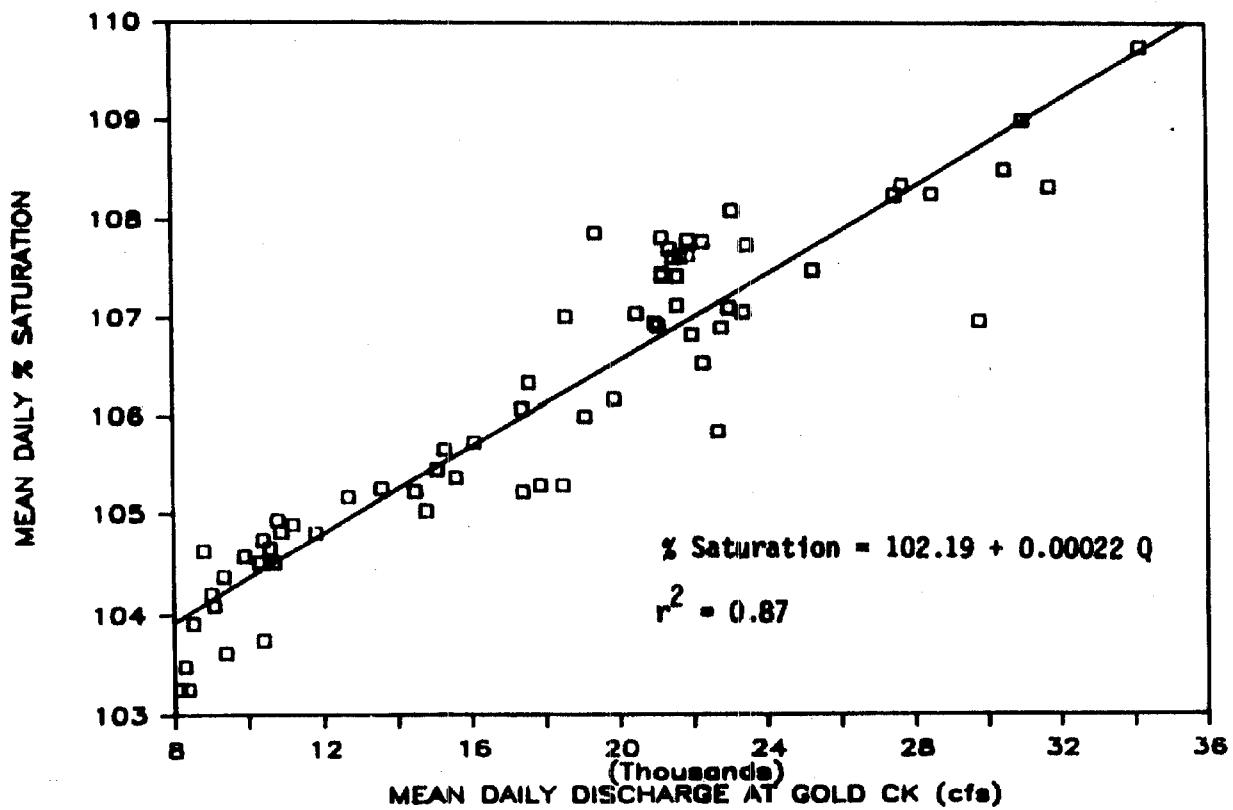


Figure 3. Mean daily percent saturation of total dissolved gas versus mean daily discharge measured at Gold Creek, July 5 to September 21, 1984.

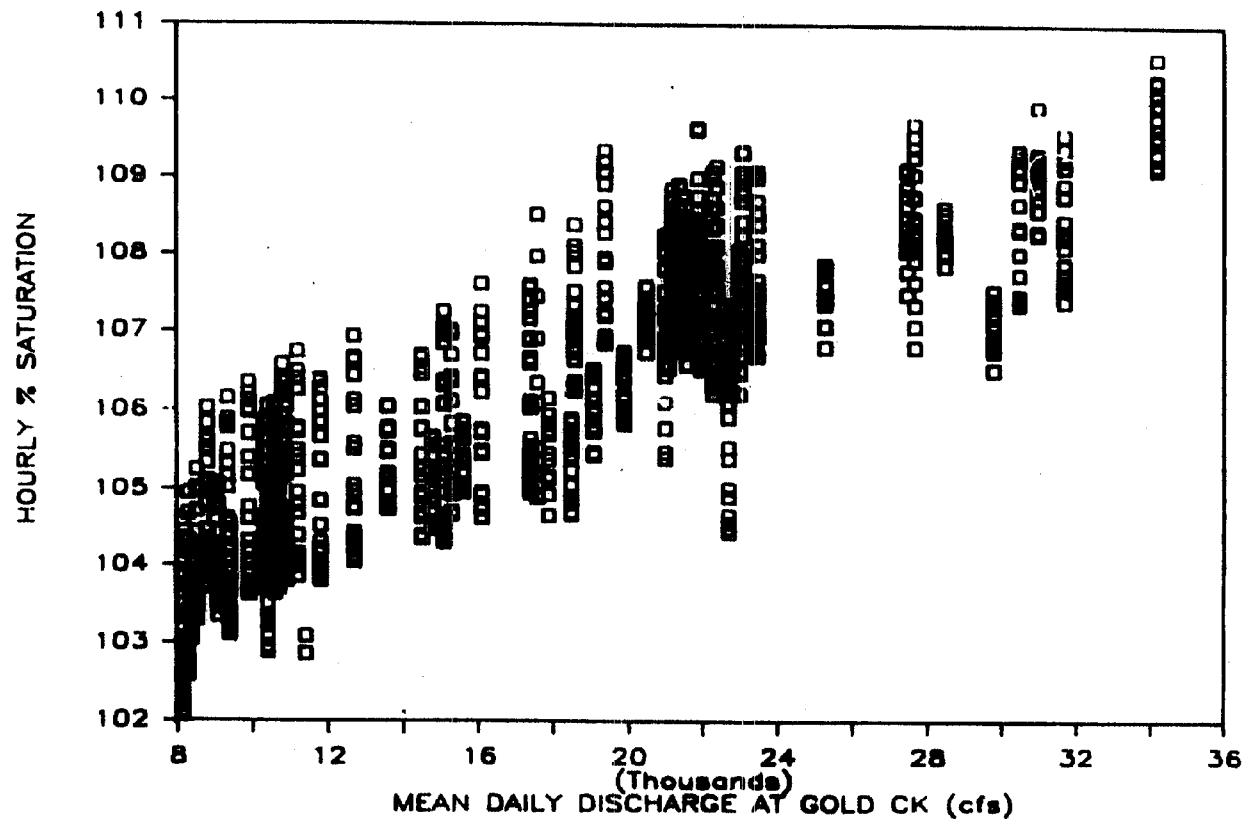


Figure 4. Hourly percent saturation of total dissolved gas versus mean daily discharge measured at Gold Creek, July 5 to September 21, 1984.