BNWL-1771
Special
Distribution
//

AN EXPERIMENTAL STUDY OF FLOW AND
PRESSURE IN ROD BUNDLE SUBCHANNELS
CONTAINING BLOCKAGES

D. S. Rowe, C. L. Wheeler
and D. E. Fitzsimmons

Battelle

Pacific Northwest Laboratories
Richland, Washington 99352

SEPTEMBER 1973

Prepared for the U.S. Atomic Energy
Commission under Contract AT(45-1):1830

BNWL-1771

NOTICE

The report was prepared as an account of work sponsored by the United States Government. Neither the United States nor the United States Atomic Energy Commission, nor any of their employees, nor any of their contractors, subcontractors, or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness or usefulness of any information, apparatus, product or process disclosed, or represents that its use would not infringe privately owned rights.

PACIFIC NORTHWEST LABORATORY
operated by
BATTELLE
for the
U.S. ATOMIC ENERGY COMMISSION
Under Contract AT(45-1)-1830

Printed in the United States of America
Available from
National Technical Information Service
U.S. Department of Commerce
5285 Port Royal Road
Springfield, Virginia 22151
Price: Printed Copy \$5.45; Microfiche \$0.95

3 3679 00062 2821

BNWL-1771
Special
Distribution

AN EXPERIMENTAL STUDY OF FLOW AND PRESSURE
IN ROD BUNDLE SUBCHANNELS CONTAINING BLOCKAGES

By

D. S. Rowe
C. L. Wheeler
D. E. Fitzsimmons

September 1973

BATTELLE
PACIFIC NORTHWEST LABORATORIES
RICHLAND, WASHINGTON

CONTENTS

	<u>Page</u>
LIST OF FIGURES	ii
LIST OF TABLES	iii
1.0 INTRODUCTION	1
2.0 SUMMARY	2
3.0 EXPERIMENTAL PROGRAM	3
3.1 DESCRIPTION OF TEST SECTION.	3
3.2 LASER-DOPPLER VELOCIMETER	6
3.3 METHOD OF DATA ACQUISITION AND REDUCTION	12
4.0 EXPERIMENTAL RESULTS.	14
4.1 TYPE I, SLEEVE BLOCKAGE	14
4.2 TYPE II, SLEEVE BLOCKAGE.	17
4.3 TYPE IV, PLATE BLOCKAGE	19
5.0 COMPARISON OF DATA WITH COBRA PREDICTIONS.	21
5.1 FLOW BLOCKAGE ANALYSIS EQUATION	21
5.2 SUBCHANNEL AVERAGE FLOWRATE ESTIMATES	24
5.3 COBRA INPUT MODEL AND PARAMETERS	27
5.3.1 Subchannel Friction Factor.	28
5.3.2 Blockage Models	28
5.3.3 Turbulent Mixing Parameter.	32
5.3.4 Transverse Momentum Parameters (s/ℓ) and K_{ij}	34
5.3.5 Gap Spacing Variation	35
5.4 RESULTS OF COBRA CALCULATIONS	35
6.0 CONCLUSIONS AND RECOMMENDATIONS	43
7.0 NOMENCLATURE	45
8.0 REFERENCES	46
APPENDIX A TABULATION OF REDUCED EXPERIMENTAL DATA	A-1

LIST OF FIGURES

	<u>Page</u>
3.1 Flow Housing Arrangement	4
3.2 Test Section Construction Details	5
3.3 Pressure Tap and Blockage Station Locations	7
3.4 Sleeve and Plate Blockage Insert Dimensions	8
3.5 Blockage Insert Configuration.	9
3.6 Two-Component Laser-Doppler Velocimeter Optical Arrangement.	11
4.1 Axial Velocity and Turbulence Intensity Vector Magnitude for Type I, Sleeve Blockage	15
4.2 Axial Velocity and Turbulence Intensity Vector Magnitude for Type II, Sleeve Blockage	18
4.3 Axial Velocity and Turbulence Intensity Vector Magnitude for Type IV, Plate Blockage	20
5.1 Subsection Definition for Polynominal Fit of Data to Obtain Subchannel Average Velocity	26
5.2 Definition of r and θ Coordinate for a Typical Subsection	26
5.3 Subchannel Area Reduction to Model the Blockages	29
5.4 Mixing Parameter β as a Function of Distance Downstream of the Blockage	33
5.5 Comparison of Experimental Flow Rate Estimates with the Prediction of the COBRA-IIIC Program for the Type I, Sleeve Blockage	36
5.6 Comparison of Experimental Flow Rate Estimates with the Prediction of the COBRA-IIIC Program for the Type II, Sleeve Blockage	37
5.7 Comparison of Experimental Flow Rate Estimates with the Prediction of the COBRA-IIIC Program for the Type IV, Plate Blockage	38
5.8 Comparison of Subchannel Pressure Data to Prediction of the COBRA-IIIC Program for the Type I, Sleeve Blockage	39
5.9 Comparison of Subchannel Pressure Data to Prediction of the COBRA-IIIC Program for the Type II, Sleeve Blockage	40
5.10 Comparison of Subchannel Pressure Data to Prediction of the COBRA-IIIC Program for the Type IV, Plate Blockage	41

LIST OF TABLES

	<u>Page</u>
3.1 Subchannel Blockage Designation	10
3.2 Axial Location of Blockage and Measurement Planes	11
5.1 Summary of Mass Balance Calculations Using Estimated Subchannel Average Velocities.	27
A-1 Tabulation of Velocity and Turbulence Data	A-1
A-2 Tabulation of Pressure Drop Data.	A-40

AN EXPERIMENTAL STUDY OF FLOW AND PRESSURE
IN ROD BUNDLE SUBCHANNELS CONTAINING BLOCKAGES

By

D. S. Rowe
C. L. Wheeler
D. E. Fitzsimmons

1.0 INTRODUCTION

The objective of this report is to present measurements of axial velocity, turbulence intensity and pressure distribution in a simple rod bundle model containing partial flow blockages. This information has been obtained to improve the understanding of flow in partially blocked rod bundles and to help verify the use of the COBRA computer program for flow blockage analysis.

Recently, the subchannel analysis computer program COBRA-III was modified to perform flow distribution analysis in rod bundles containing "resistance" type flow blockage. The primary modifications, now contained in the COBRA-IIIC computer program,⁽¹⁾ were a more complete transverse momentum equation and improved numerical methods to allow calculations with rather severe "resistance-type" blockages. The development of this capability has relied heavily upon assumptions concerning the inclusion of blockages because of the lack of applicable experimental data.

It was the intent of the present experimental study to evaluate the basic assumptions and suitability of the numerical model for flow blockage analysis. It was also the intent of this study to provide some basic information concerning the flow structure in partially blocked rod bundle channels. Although the present study is not concerned with heat transfer, the information developed could ultimately be used to improve the understanding of heat transfer in blocked bundles.

2.0 SUMMARY

Local flow velocity and turbulence intensity distributions were measured in the subchannels of a simple rod bundle flow model. The experiments were performed in water with a nominal Reynolds number of 105,000. Subchannel blockages up to approximately 90% area reduction were considered to be of the "swelling" and "plate" type. The extent of blockage was also considered by varying the number of blocked subchannels. Velocity and turbulence measurements were performed both upstream and downstream of the blockage with a laser-Doppler velocimeter.

The experimental results show that the introduction of a flow blockage causes a significant redistribution of flow. The flow reduction behind the blockage persists well downstream; however, the flow reduction is felt only a short distance upstream from the blockage. The turbulence intensity in the wake is very high and is limited to those subchannels experiencing the blockage. There is very little evidence of the turbulent wake being mixed into adjacent unblocked subchannels. The plate blockage definitely causes a larger flow reduction, higher intensity, and a more persistent wake than the sleeve blockage.

The experimental data were analyzed in considerable detail to evaluate the suitability of the COBRA-IIIC program for predicting the flow distribution in bundles containing blockages. To perform this analysis it was necessary to modify the numerical differencing scheme in COBRA to allow for a large subchannel area reduction and to allow for the possibility of flow reversal. It was also necessary to estimate the subchannel average velocity from the experimental data by using a numerical scheme to integrate the velocity field. The parameters of the mathematical model were evaluated and selected to obtain best agreement with the data. The comparisons between the calculated and the experimental values of subchannel flow and pressure were found to be excellent.

3.0 EXPERIMENTAL PROGRAM

Local flow velocity and turbulence intensity distribution were measured in the subchannels of a simple rod bundle flow model. The experiments were performed in water with a nominal Reynolds number of 105,000. Subchannel blockages up to approximately 90% area reduction were considered to be of the "swelling" and "plate" type. The extent of blockage was also considered by varying the number of blocked subchannels. Velocity and turbulence measurements were performed both upstream and downstream of the blockage with a laser-Doppler velocimeter.

3.1 DESCRIPTION OF TEST SECTION

Figure 3.1 shows a view of the test section used for the experimental program. Flow entered the bottom of the flow housing, flowed vertically up through the test section, emerged at the top of the flow housing, and returned to the flow loop. Rubber expansion bellows were used to help isolate the flow housing from the normal vibrations of the flow loop.

Figure 3.2 shows a cross-section view of the test section construction. It consisted of a front and back plate and flow housing body. The back plate contained the inlet and outlet nozzles and was permanently installed in the flow facility. The front plate was bolted to the back plate with the flow housing body placed between them. A continuous "O-ring" sealed the joint between the plates and the flow housing body. Dimensions of the test section (4.00 x 1.25 in.) were maintained by the restraining shoulder next to the "O-ring" groove on the front and back plates.

The front and back plate each contained 5 window ports 2 inches high by 4 inches wide located at 1 foot intervals for entrance and exit of the laser beam. Optically flat ($\lambda/4$) view windows were fabricated from quartz. Each window was sealed by an "O-ring" and was held in place by a thick cover plate. A shim was placed between the window and cover plate to make the window "flush" with the inner surface of the flow housing (± 0.001 in.).

An 8 in. long flow straightening section was placed at the inlet of the flow channel. It consisted of four eccentric screens (60% open) with 1/4 in. holes in a triangular array followed by a bank of 1/4 in. 0.020 in.

FIGURE 3.1. Flow Housing Arrangement

FIGURE 3.2. Test Section Construction Details

thick wall tubes 3-1/4 in. long. The screens tended to equalize the inlet velocity distribution and the tubes helped to establish a fixed scale of turbulence and straighten the flow. The inlet ends of the rod sectors had a 60° taper to minimize the flow disturbance due to flow area change upon entering the rod section.

Pressure taps 1/32 in. diameter were drilled into the back plate two inches below the three upper window ports to allow measurement of pressure differences over a 1 ft axial length and between the two adjacent internal subchannels as shown in Figure 3.3. The blockages were located on the left side of the test section.

Six half-rod inserts were used to form the flow channel model. These inserts were screwed to the front and back plates prior to installing the flow housing body and front plate. Four of the half-rod inserts contained small glass inserts at the 4th and 5th window elevations so that the laser beam could pass through the rods. These inserts and the rods had 1/8 in. wide flats to eliminate distortion of the laser beam. All rod inserts were 1 in. diameter and were made from stainless steel.

Blockages were placed into the flow channel by using the inserts shown in Figure 3.4. The insert dimension for the swelling blockage is for a nominal 90% area reduction based upon a uniform swelling of four adjacent rods. The plate was designed to provide a "sharp-edge" orifice with an open area equal to the equivalent swelling blockage. The inserts were placed in the test section to form the blockage configurations shown in Figure 3.5. The subchannel blockage fractions for each of these configurations is given in Table 3.1. Each of these configurations were placed at selected levels within the test section to vary the distance from the blockage to the fixed measurement planes at the windows. Table 3.2 summarizes the blockage placement for measurement planes considered.

3.2 LASER-DOPPLER VELOCIMETER

A two-component laser-Doppler velocimeter manufactured by Laser Systems and Electronics was used to perform measurements of turbulent velocities. A detailed description of this system is present in Reference 2.

FIGURE 3.3. Pressure Tap and Blockage Station Locations

(a) NOMINAL DIMENSIONS OF SLEEVE
BLOCKAGE INSERTS

(b) NOMINAL DIMENSIONS OF PLATE
BLOCKAGE INSERTS

FIGURE 3.4. Sleeve and Plate Blockage Insert Dimensions

TYPE I SLEEVE BLOCKAGE

TYPE II SLEEVE BLOCKAGE

TYPE IV PLATE BLOCKAGE

FIGURE 3.5. Blockage Insert Configuration

TABLE 3.1. Subchannel Blockage Designation

Configuration Type		Subchannel Reduction Fraction				
		A	B	C	D	
I		Sleeve	0.23	0.90	0.46	1.0
	Sleeve	0.23	0.46	1.	1.
IV		Plate	0.23	0.46	1.	1.

TABLE 3.2. Axial Location of Blockage and Measurement Planes

Measurement Plane, in.	Window	Station	Blockage Distance From Inlet	Blockage X/D from Inlet
-9 1/2	3	3	42 1/2	60
-6	3	2	39	51
-2 1/2	3	1	35	46
2 1/2	4	3	42 1/2	60
6	4	2	39	51
10	4	1	35	46
14 1/2	5	3	42 1/2	60
18	5	2	39	51
22	5	1	35	46

FIGURE 3.6. Two-Component Laser-Doppler Velocimeter Optical Arrangement

Most of the velocity measurements were performed with the two-component optical arrangement system shown in Figure 3.6. This was essentially two single-component optical arrangements located at right angles to each other. The position of the optics was rotated 45° about the laser beam axis for two-component measurement; therefore, the Doppler signals corresponded to the two velocity components each located 45° from vertical. These two velocities were resolved into the axial and lateral velocity components.

The measurement point was positioned within the flow channel by using a traversing system that moved the laser and receiving optics as an integral unit. The traversing system was supported on precision linear ball bearings and was driven by variable-speed servo-motors. The motor speed control and position readout could locate the measurement point to within 0.001 in. in both the z and y directions in a horizontal plane. The entire system was positioned vertically with a hydraulic lift system.

A Laser Systems and Electronics readout system was used to measure local instantaneous velocity consisting of the time average value plus the fluctuating component. The basic elements of the readout system is discussed in Reference 2. In addition to the readout system, auxiliary system, auxiliary readout instrumentation was used to measure the "rms" voltage of the turbulence velocity. This consisted of an amplifier, low pass filter and true rms meter.

3.3 METHOD OF DATA ACQUISITION AND REDUCTION

The flow loop was operated according to standard laboratory procedures. The loop had a very stable flow, pressure, and temperature control and did not require adjustment during data acquisition. Once the loop was operating at the selected conditions the optical system was adjusted to give an optimum Doppler signal. A small amount of milk was injected into the loop to provide scattering centers.

The two component velocity data was obtained from two traverses through the test section. Each traverse used an alternate optical channel but a common electronic readout channel. In this way the same velocity detection

circuit was used to provide a more accurate lateral velocity measurement than if two independent circuits were used.

A digital computer program ⁽²⁾ was used to reduce the recorded data. For each data point it was necessary to (1) shift the measurement location to a consistent set of coordinates and correct for refractive index; (2) convert the Doppler frequency to velocity; and (3) convert the rms voltage to turbulence intensity.

4.0 EXPERIMENTAL RESULTS

Experimental measurements of velocity, turbulence intensity and pressure were made before and after the three blockage types shown in Figure 3.5. The type I sleeve blockage is equivalent to a swelling of four adjacent rods. The type II sleeve blockage is a radially smaller blockage which is equivalent to a swelling of two adjacent rods. The type IV plate blockage has a subchannel open area fraction which is equal to the type II sleeve blockage.

4.1 TYPE I, SLEEVE BLOCKAGE

Figure 4.1 presents a vector magnitude summary of the axial velocity and intensity distribution at selected levels before and after the blockage. These data show symmetric side-to-side distribution of velocity and intensity ahead of the blockage. Axial turbulence intensities of about 0.03 near the subchannel centers compare well with the values measured in the same channel with fully developed flow. No significant change in the velocity and turbulence intensity occurs until the flow is quite close to the blockage. At 6.0 in. ($x/D = -7.9$) before the blockage a small velocity reduction is evident in the blocked channels. The next plane is located at 2.5 in. ($x/D = -3.3$) before the blockage and 1/2 in. from the leading edge of the blockage. Here the blocked channel velocity reduction is about 30% with a corresponding velocity increase in the unblocked channels. The axial turbulence intensity has increased slightly in the blocked channels and decreased in the unblocked channels as compared to the intensity values ahead of the blockage. Downstream of the blockage at 2 1/2 in. which is also 1/2 in. from trailing edge of the blockage, the velocity has decreased significantly. No data could be obtained in the wake of the blockage because of the high turbulence and chaotic flow. The Doppler signal in this region looked like a noise signal on the oscilloscope. The channel adjacent to the blockage shows a significant lateral gradient of intensity. The intensity is very high toward the blockage and near normal away from the blockage in that same channel. Another interesting feature of the data at this location is the significant reduction of axial turbulence intensity ($u'/\bar{u}$) in the region away from the blockage. The intensity near the center

FIGURE 4.1. Axial Velocity and Turbulence Intensity Vector Magnitude for Type I, Sleeve Blockage

of the wall channel has decreased by nearly a factor of three. This decrease in intensity is believed to result from two effects related to the acceleration of flow around the blockage. Reference 3 presents a discussion of the correlation $\bar{u}^2$ to show that it is a convected quantity and that the derivative $D\bar{u}^2/Dt$ is positive or negative depending upon the production, dissipation and diffusion processes in the flow. In the present situation, $\bar{u}^2$ would be reduced due to the action of a term $-\bar{u}^2 d\bar{U}/dx$ in the transport equation for $D\bar{u}^2/Dt$. In this case $\bar{u}^2$ is always positive; however, if $d\bar{U}/dx$ is positive then $D\bar{u}^2/Dt$ is negative and $\bar{u}^2$ decreases along a streamline. In the present situation the intensity $u'/\bar{U}$ would be further reduced by dividing $\sqrt{\bar{u}^2}$ by $\bar{u}$. Since $\bar{u}$ increases by about a factor of two, the further decrease by a factor of about 1.5 could be attributed to the interaction of the turbulence with the velocity gradient.

Reference 3 also points out that regions of high turbulent shear and lateral velocity gradient cause an increase of $\bar{u}^2$. This is the phenomenon that generates turbulence near the wall of pipe flow and would also exist in the flow passing through the blockage. This together with the decelerating flow through the blockage is believed to be the primary mechanisms for the greatly increased turbulence intensity[†] downstream of the blockage.

The flow pattern downstream of the blockage is quite similar at all levels but with the general trend of decreasing turbulence intensity and increasing velocity behind the blockage. This recovery is relatively slow as compared to the redistribution ahead of the blockage with low velocity and high turbulence intensity* persisting well downstream of the blockage. At 22 in. ($x/D = 30$) the velocities in the blocked channels are still only about 60% of their nominal values for fully developed flow. The turbulence intensities have decayed but are still higher than their nominal values.

*The plots have been arbitrarily limited to $u'/\bar{u} \leq 0.26$ as indicated by the "+" at the end of the plot vectors.

[†]Note that the intensity is defined as $u'/\bar{u} = \sqrt{\bar{u}^2}/\bar{u}$.

FIGURE 4.2. Axial Velocity and Turbulence Intensity Vector Magnitude for Type II, Sleeve Blockage

It is interesting to note the tendency of the high intensity zone to remain within the originally blocked subchannels. The highly turbulent wake does not diffuse into the flow of the unblocked channel. This implies that although the turbulent mixing processes may be very high in the blockage wake, there is not an enhanced turbulent crossflow mixing with the adjacent unblocked subchannels. Flow diversion into the wake from the unblocked channels would contribute to crossflow mixing; however, this same process provides a convective flow that apparently inhibits the spread of the turbulent wake. This same phenomena exists in all the blockage configurations considered in this study.

The most severe velocity reduction occurs in the blocked interior channel (91% blockage); however, in the recovery region it receives flow from both of its adjacent channels including the blocked wall channel. Once the interior channel velocity overtakes the wall channel velocity, the flow recovery slows down because both blocked channels must now receive flow from the unblocked channels.

4.2 TYPE II, SLEEVE BLOCKAGE

Figure 4.2 presents the velocity and intensity distribution for this blockage. This blockage is very similar to the previous blockage except it is smaller and represents the case of two swollen rods. The results for this case are very similar to the previous case; however, the perturbation of the velocity field is less as could be expected. The velocity reduction ahead of the blockage is only moderate and, at 1/2 in. from the leading edge, the velocity has reduced by about 25% in the more severely blocked wall subchannel and the wall channel turbulence intensity has increased by about 50%. Moderate reductions of turbulence intensity and increases of velocity occur in the unblocked channels prior to reaching the blockage. Downstream of the blockage at 2.5 in. ($x/D = 3.3$) the turbulence is very high in the wake. The recovery of the velocity is again slow but it is a little faster than for the larger Type I blockage. At 22 in. ($x/D = 30$) the wall channel velocity is about 70% of the nominal velocity for fully

FIGURE 4.3. Axial Velocity and Turbulence Intensity Vector Magnitude for Type IV, Plate Blockage

developed flow. The turbulence recovery downstream of the blockage is faster than for the larger Type I blockages. At 22 in. ($x/D = 30$) the turbulence has decayed to near nominal values.

4.3 TYPE IV, PLATE BLOCKAGE

Figure 4.3 presents the velocity and intensity distribution for this blockage. This blockage configuration was considered to determine the effect sleeve blockage. The primary difference here being an abrupt contraction and expansion rather than a gradual entry and exit from the blockage. The results in Figure 4.3 show that the velocity disturbances ahead of the blockage are very similar to the corresponding Type II sleeve blockage. Downstream of the blockage, however, the velocity is more severely reduced and the turbulence intensity is much higher. The intensity in the wake of the blockage is very high (> 0.26). For most of the downstream wake, the flow was so chaotic that measurements of velocity and intensity could not be made. It is interesting to note that the very high intensity in the wake of the blockage does not significantly affect the unblocked channels. The intensity distribution along the length of the unblocked channels for both the plate and sleeve blockages are very similar.

The flow recovery behind the plate blockage is considerably slower than for the sleeve blockage. The wall channel velocity at 22 in. ($x/D = 30$) is only about 40% of the nominal velocity as compared to 70% for the sleeve blockage.

5.0 COMPARISON OF DATA WITH COBRA PREDICTIONS

The experimental data were analyzed in considerable detail to evaluate the suitability of the COBRA-IIIC program for predicting the flow distribution in bundles containing blockages. To perform this analysis it was necessary to modify the numerical differencing scheme in COBRA to allow for a large subchannel area reduction and to allow for the possibility of flow reversal. It was also necessary to estimate the subchannel average velocity from the experimental data by using a numerical scheme to integrate the velocity field. The parameters of the mathematical model were evaluated and selected to obtain best agreement with the data. The comparisons between the calculated and the experimental values of subchannel flow and pressure were found to be excellent. These results were also rather insensitive to many of the mathematical model parameters.

5.1 FLOW BLOCKAGE ANALYSIS EQUATION

To perform an analysis of the experimental data with the COBRA computer program, it was necessary to modify the numerical solution. The starting point for this modification was the vector form of equations⁽¹⁾ for continuity, axial momentum and transverse momentum for steady-state and constant density conditions of the experiment.

The basic equations are:

Continuity

$$\frac{dm}{dx} = - S^T w \quad (5.1)$$

Axial Momentum

$$A \frac{dp}{dx} = - AK m^2 - \frac{dmu}{dx} - S^T u^* w - A\rho \cos \theta \quad (5.2)$$

Transverse Momentum

$$\frac{d(u^* w)}{dx} + \left(\frac{S}{\ell}\right) Cw = \left(\frac{S}{\ell}\right) S p \quad (5.3)$$

These are vector equations where S is a matrix transformation⁽¹⁾ to order the subchannels and S^T is the transpose of S .

For subchannel area variations, the value of the area A in Equation (5.2) is defined in a manner consistent with Bernoulli's equation for single channels without fluid friction and constant flow rate. Integrating Equation (5.2) under these conditions (i.e., $A \frac{dp}{dx} = - \frac{dmu}{dx}$) over a finite increment x_{j-1} to x_j gives

$$\int_{p_{j-1}}^{p_j} dp = -m^2_v \int_{A_{j-1}}^{A_j} \frac{1}{A} d\left(\frac{1}{A}\right) \quad (5.4)$$

or

$$p_j - p_{j-1} = \frac{m^2_v}{2} \left(\frac{1}{A_j^2} - \frac{1}{A_{j-1}^2} \right) \quad (5.5)$$

Equation (2) written as a finite difference for the same conditions and over the same increment ($\Delta x = x_j - x_{j-1}$) gives

$$A \frac{p_j - p_{j-1}}{\Delta x} = - \frac{m^2_v}{\Delta x} \left(\frac{1}{A_j} - \frac{1}{A_{j-1}} \right) \quad (5.6)$$

To obtain a proper relationship between the finite difference form and the integral form for single channels, the value of A is defined as

$$A \equiv \frac{2 A_j A_{j-1}}{A_j + A_{j-1}} \quad (5.7)$$

Therefore Equation (5.2) can be written in the finite difference form

$$\frac{p_j - p_{j-1}}{\Delta x} = - K_j m_j^2 - \frac{(m^2_v/A)_j - (m^2_v/A)_{j-1}}{A \Delta x} + \frac{1}{A} S^T u_j^* w_j - \rho_j \cos \theta \quad (5.8)$$

The first term on the right side of Equation (5.8) represents the fluid friction contribution to the pressure gradient. This term is flow direction dependent; therefore, the coefficient K is given a (+) sign if the flow is in the positive x direction and a (-) sign if the flow is negative.

By using the identity

$$m_j^2 - m_{j-1}^2 = (m_j + m_{j-1})(m_j - m_{j-1}) \quad (5.9)$$

and using a finite difference form of the continuity equation given by

$$\frac{m_j - m_{j-1}}{\Delta x} = - S^T w_j, \quad (5.10)$$

the friction term can be written as

$$-(\pm K_j) m_j^2 = -(\pm K_j)(m_{j-1}^2 - (m_j + m_{j-1}) S^T w_j \Delta x) \quad (5.11)$$

The second term on the right of Equation (5.8) can be factored into the form

$$\begin{aligned} - \frac{(m^2 v/A)_j - (m^2 v/A)_{j-1}}{A \Delta x} &= - m_{j-1}^2 \frac{(v/A)_j - (v/A)_{j-1}}{A \Delta x} \\ &\quad + \frac{1}{A} \left(\frac{v}{A}\right)_j (m_j + m_{j-1}) S^T w_j \end{aligned} \quad (5.12)$$

By substituting Equations (5.11) and 5.12) into Equation (5.8) the finite difference form of the axial momentum equation is

$$\begin{aligned} \frac{p_j - p_{j-1}}{\Delta x} &= -(\pm K + \frac{(v/A)_j - (v/A)_{j-1}}{A \Delta x}) m_{j-1}^2 - \rho_j \cos \theta \\ &\quad + \left(\frac{1}{A} \left(\frac{v}{A}\right)_j (m_j + m_{j-1}) S^T - \frac{1}{A} S^T u_j^* + (\pm K_j)(m_j + m_{j-1}) \Delta x S^T\right) w_j \end{aligned} \quad (5.13)$$

To perform the crossflow solution, pressure is eliminated from the two momentum equations. This is done by differentiating Equation (5.3)

$$\frac{d^2(u^* w)}{dx^2} + \left(\frac{S}{\ell}\right) \frac{d(cw)}{dx} = \left(\frac{S}{\ell}\right) S \frac{dp}{dx} \quad (5.14)$$

and using the finite difference analog

$$\frac{u_{j-1}^* w_{j-1} - 2 u_j^* w_j + u_{j+1}^* w_{j+1}}{\Delta x^2} + \left(\frac{S}{\ell}\right) \frac{C_{j+1} w_{j+1} - C_j w_j}{\Delta x} = \left(\frac{S}{\ell}\right) S \frac{p_j - p_{j-1}}{\Delta x}. \quad (5.15)$$

By substituting Equation (5.13) to eliminate $p_j - p_{j-1}$ the equation for the crossflow solution can be written as the set of simultaneous equations

$$\left[\frac{2u_j^*}{\Delta x^2} + \left(\frac{S}{\ell}\right) \frac{C_j}{\Delta x} + \left(\frac{S}{\ell}\right) S \left(\frac{1}{A} \left(\frac{v}{A_j} \right) (m_j + m_{j-1}) S^T - \frac{1}{A} S^T u_j^* + (+K)(m_j + m_{j-1}) \Delta x S^T \right) \right] w_j$$

$$= \frac{u_{j-1}^* w_{j-1}}{\Delta x^2} + \frac{u_{j+1}^* w_{j+1}}{\Delta x^2} + \left(\frac{S}{\ell}\right) \frac{C_{j+1} w_{j+1}}{\Delta x}$$

$$- \left(\frac{S}{\ell}\right) S \left[\left(-(+K) + \frac{(v/A)_j - (v/A)_{j-1}}{A \Delta x} \right) m_{j-1}^2 - \rho_j \cos \theta \right] \quad (5.16)$$

As in COBRA-IIIC, Gauss elimination is used to solve for w_j at each axial location x_j and iteration is used to sweep the computation from the inlet to the exit of the bundle. Previous iterate values of m_{j+1} , w_{j+1} and u_{j+1} are used to solve for w_j .

The boundary conditions used for the present study are:

1. Uniform exit pressure $Sp_N = 0$ or

$$\frac{u_{N+1}^* w_{N+1} - u_N^* w_N}{\Delta x} + \left(\frac{S}{\ell}\right) C_{N+L} w_{N+1} = 0$$

2. Inlet subchannel flow rates selected to give equal dp/dx across the first node.

5.2 SUBCHANNEL AVERAGE FLOWRATE ESTIMATES

Since the measured velocities were local or point velocities and could not be compared directly with the subchannel average velocities calculated by the COBRA code, a method of integrating the measured velocity distributions over the subchannel area was developed. The subchannels were first subdivided as shown in Figure 5.1. It was then assumed that the subchannel velocity distribution was symmetric about the longitudinal centerline and that the intra subsection velocity distribution could be represented by an empirical polynomial function of the form.

$$\bar{u}_k(r, \theta) = \sum_{i=1}^{N_\theta} \sum_{j=1}^{N_r} a_{ij} \theta^{(i-1)} r^{(j-1)} \quad (5.17)$$

Where $\bar{u}_k$ is the k^{th} subsection velocity distribution
 N_θ is the order of the polynomial in the θ direction
 N_r is the order of the polynomial in the r direction
 θ and r are defined in Figure 5.2 for a typical subsection

The coefficients in the base polynomial were first estimated by the method of least squares polynomial regression using only the measured data points. It was then assumed that the maximum velocities in each interior type of subsection would occur at the boundary between subsections and that the maximum velocity in the peripheral subsections occurs on a line which bisects the minimum distance between the wall and the rod. It is then assumed that the velocity distribution could be approximated by a simple 1/7th power law of the form

$$\frac{\bar{u}(r, \theta)}{\bar{u}_{\max}(\theta)} = \left(\frac{(r-r_o)}{(r_{\max}(\theta)-r_o)} \right)^{1/7} \quad (5.18)$$

where $\bar{u}_{\max}(\theta)$ was determined using the polynomial expression for $\bar{u}(r, \theta)$ and the assumed location of the line of maximum velocities. A polar grid was then set up which contained 5 equally spaced lines in the θ direction and 3 equally spaced lines in the r direction and the velocities were estimated at the intersection of the grid lines using the 1/7th power law distribution. The measured velocities were then assigned a relative weight of 5 and the calculated velocities from the 1/7th law were assigned a weight of 1 and the coefficient A_{ij} of the polynomial function were re-evaluated using the weighted combination of the measured and estimated velocities.

The polynomial using the coefficient derived from the weighted combinations set of data was then integrated numerically over the area of each subsection to determine the average velocity in each subsection. The calculated average velocity of each subsection in a subchannel were then averaged to obtain the average velocity in each subchannel.

The validity of this method was checked by performing a mass balance using the calculated subchannel velocities. The results of the mass balance calculations are shown in Table 5.1 for the five measurement

FIGURE 5.1. Subsection Definition for Polynominal Fit of Data to Obtain Subchannel Average Velocity

FIGURE 5.2 Definition of r and θ Coordinate For a Typical Subsection

planes that had enough data to determine the average velocities in all four subchannels. As shown in Table 5.1 the maximum error is -7.1% and the minimum error is 0.0%.

TABLE 5.1 Summary of Mass Balance Calculations
Using Estimated Subchannel Average
Velocities

<u>Blockage Configuration</u>	<u>Measurement Location (in.)</u>	<u>Integrated Average Velocity</u>	<u>Test Section Average Velocity</u>	<u>% Error</u>
I	22.0	16.2	17.0	-4.7
I	14.5	15.9	17.0	-7.1
II	18.0	17.0	17.0	0.0
II	14.5	16.2	17.0	-4.7
II	10.	16.0	17.0	-5.9
No Blockage ⁽²⁾	NA	17.7	16.6	+6.6

5.3 COBRA INPUT MODEL AND PARAMETERS

The input to the COBRA program was set up in a conventional manner. A four subchannel model was selected together with a 36 inch calculational length which was divided into one-inch axial nodes. The blockage plane was located 12.5 inches downstream from the inlet of the computational model.

As part of the selection of input data to COBRA, several input parameters were evaluated to obtain the best fit with the experimental data. These parameters included the subchannel friction factors, blockage area reduction and pressure loss coefficients, turbulent mixing parameter and transverse momentum equation parameters (s/l), K_{ij} , u^*).

5.3.1 Subchannel Friction Factor

The subchannel friction factors were determined by integrating the velocity data for an unblocked configuration⁽²⁾ to obtain interior and side subchannel average velocities. These velocities were then substituted into the equation:

$$\frac{\Delta p_i}{\Delta x_i} = \frac{f_i \rho u_i^2}{2 D_i g_c} \quad (5.19)$$

The pressure gradients in each subchannel were then equated to the pressure gradient of the complete assembly so that

$$\frac{f_i u_i^2}{D_i} = \frac{f U^2}{D} \quad (5.20)$$

$$\text{or } f_i = f \left(\frac{D_i}{D} \right) \left(\frac{U}{u_i} \right)^2 \quad (5.21)$$

where i refers to subchannel average values and the remaining quantities are channel average values. An expression for f_i was then determined using the empirical form⁽²⁾

$$f_i = A Re_i^{-.22} \quad (5.22)$$

where the exponent is the same as that in the bundle average friction factor. The resulting subchannel friction factors are

$$f_i = 0.225 Re_i^{-0.22} \quad (\text{interior subchannel}) \quad (5.23)$$

and

$$f_i = 0.217 Re_i^{-0.22} \quad (\text{wall subchannel}) \quad (5.24)$$

5.3.2 Blockage Models

Both the plate and sleeve blockages were modeled using a combination of subchannel area reduction and blockage loss coefficients. The approximations of the physical blockages are shown in Figure 5.3 for all three

FIGURE 5.3. Subchannel Area Reduction to Model the Blockages

blockage configurations. The area is considered to be continuous with respect to distance for both the plate and sleeve blockages; however, the area used for a particular node is a single value as determined by the position x_j .

The irrecoverable blockage pressure loss was included by the use of a subchannel pressure loss coefficient defined by

$$\Delta p_i = \frac{K_i \rho u_i^2}{2 g_c} \quad (5.25)$$

where Δp_i = irrecoverable pressure loss only

K_i = pressure loss coefficient

u_i = velocity in the minimum area region of the blockage

ρ = fluid density.

It is impossible to calculate an exact subchannel blockage coefficient from the above definitions because one would need to measure the irrecoverable pressure loss (separate from acceleration effects) in each blocked subchannel. It is also necessary to define a characteristic velocity for the blockage but the velocity in a particular blocked subchannel depends on the assembly geometry, and other subchannel blockages as well as the geometry of the particular blocked subchannel. Therefore, a simple method to approximate the subchannel loss coefficient was devised. This method consists of equating the differential forces (form drag losses only) across the blocked subchannels only to the differential forces (form only) acting on the complete rod assembly

i.e.,

$$\sum_{i=1}^{NB} A_i \Delta p_i = A \Delta p \quad (5.26)$$

where A_i = nominal flow area of blocked subchannel (away from blockage)

A = total flow area of assembly (away from blockage)

Δp_i = form pressure loss in the i th blocked subchannel

Δp = form pressure loss across assembly.

It was then assumed that the form pressure losses in the blocked subchannel are equal so that the pressure drop could be factored out of the summation. This results in

$$\Delta p_i \sum_{i=1}^{NB} A_i = A \Delta p \quad (5.27)$$

When the definition of the form pressure loss is substituted for the subchannel and assembly average pressure loss the following expression for the blocked subchannel loss coefficient is obtained.

$$K_i = K \left(\frac{U}{u_i} \right)^2 \frac{A}{\sum_{i=1}^{NB} A_i} \quad (5.28)$$

where K_i = form loss coefficient for the i th blocked subchannel

U = bundle average velocity in the blockage plane

u_i = subchannel velocity in the blockage plane

K = bundle average form loss coefficient

The terms U , A , and $\sum_{i=1}^{NB} A_i$ are easily determined from the assembly geometry and continuity. K is easily determined from the definition of the form loss coefficient and a measurement of the form pressure loss across the assembly. u_i is the only variable that is not readily available; however, the value of u_i is available from the preceding iteration during the computational sequence.

In this study K was determined by calculating the test assembly pressure loss using COBRA without the loss coefficient but with the area reduction model included. This calculated pressure drop was then subtracted from the measured assembly pressure drop to obtain the form pressure loss and K was evaluated from

$$K = - \frac{\Delta P_{\text{form}} 2g_c}{\rho U^2} \quad (5.29)$$

It was found that the value of K for a given blockage configuration was somewhat dependent of the values chosen for the other input parameters, but that the variation in K had little effect on calculated flow and pressure distributions as long as a K consistent with the other parameters was used. Over the range of parameters studied it was found that K varied from 0.03 to 0.12 for the Type I blockage (sleeve) and from 0.73 to 0.76 for the Type IV Blockage (plate). The variation of K was not examined for the Type II blockage. The reference values of K used in conjunction with the reference values of the other parameters are 0.08, 0.10, and 0.75 for the Type I, II and IV blockages, respectively.

It is important to note that the area reduction model is the major mechanism of providing forced flow diversion from the blocked subchannels and that the primary purpose of the blockage loss coefficient is to account for the irrecoverable form pressure loss. Therefore, blockage loss coefficients determined in the above manner and used by themselves without the proper area variation model would not produce a good approximation to the subchannel flow distribution in a blocked assembly. While the above procedure for pressure loss gave good results for the present experiments additional experimental data would be necessary to check its validity for other rod bundle geometry.

5.3.3 Turbulent Mixing Parameter. The reference turbulent mixing parameter β together with the parameter $f_T = 1$ accounts for the interfacial turbulent shear between adjacent subchannels. β was found to have an appreciable effect and was assumed to be a function of axial position only, as shown in Figure 5.4. The maximum value of β was assumed to occur at the blockage with a $\beta_{\max}$ of 0.10 for the Type I and IV Blockages and 0.05 for the Type II Blockage. The lower value of $\beta_{\max}$ for the Type II Blockage is consistent with the results of the turbulent intensity measurements which show that the transverse average of the axial turbulent intensity for the Type II Blockage is much less than that of the other two blockages downstream of the blockage. Not enough information is available from the data to justify a transverse β variation.

FIGURE 5.4. Mixing Parameter β as a Function of Distance Downstream of the Blockage

Two other values of β were examined to determine the importance of the selection of this parameter in making blockage studies. In the first case, β was assumed to have a constant value of 0.02 (typical of clean rod bundles) over the entire length of the model. This produced identical velocity distribution at the inlet* but the velocity distribution downstream of the inlet changed by approximately 7% with the higher velocity increasing and the lower velocity decreasing. The calculated pressure loss was also observed to change by 3%. The other model assumed a constant β of 0.12 over the entire length. This produced velocity and pressure distribution downstream of the blockage that deviated by less than 5% from those computed using the reference profile. The greatest effect occurred on the inlet flow split where velocity in the peripheral channels was increased by 12%.

Since the data suggested enhanced mixing downstream of the blockage it was desirable to use a larger mixing parameter than would nominally be assigned to a clean assembly, but higher mixing parameters produced unrealistic flow splits when used in conjunction with the equal dp/dx boundary condition at the inlet. This was the reason for choosing an axially varying β .

5.3.4 Transverse Momentum Parameters (s/l) and K_{ij}

The parameters (s/l) and K_{ij} were selected to be 0.25 and 0.15, respectively. The choice of these parameters has little effect on the calculated velocity distribution. The value of u^* equal to the velocity at the donor subchannel was found to give better agreement than using the average velocity of the two adjacent subchannels.

*Inlet velocity split to give equal subchannel pressure gradient.

5.3.5 Gap Spacing Variation

Gap variations were used for the sleeve type blockage in the reference calculations; however, it had a negligible effect on the calculated pressure and flow distribution.

5.4 RESULTS OF COBRA CALCULATIONS

The velocity and pressure distributions calculated with COBRA using the input discussed above are in excellent agreement with the measured distributions. The calculated velocity distributions are compared to the estimated average subchannel velocities in Figures 5.5, 5.6, and 5.7 for Type I, II, and IV blockage configuration, respectively. Two sets of calculated subchannel velocities are shown in these figures. The first set represented by a solid line, was calculated using both area reductions and subchannel loss coefficients. The second set represented by dashed lines were calculated using area reductions only.

The results given in Figures 5.5 and 5.6 show reasonably good agreement between the calculated and measured velocity distributions for the sleeve blockage regardless of whether the pressure loss coefficient model was included or omitted. However, as shown in Figure 5.7 the flow diversion from the blocked subchannel is underestimated for the plate blockage when the loss coefficient is omitted. Good agreement is observed when the loss coefficient is included. It should be noted that the use of the modified numerical scheme given in Section 5.1 calculates reverse flow recirculation downstream of the blockage in the 90% blocked subchannel of the Type I sleeve blockage.

The calculated axial pressure distributions of the two interior subchannels are compared to the measured pressure distribution in Figures 5.8, 5.9, and 5.10. The pressure distributions calculated using the subchannel pressure loss coefficients are in good agreement with the measured distribution. However, the results of the calculations when the loss coefficient model was omitted underpredict the measured loss by approximately 20% for the sleeve blockages and by 60% for the plate blockage. It is worth noting the ability of the COBRA code (using the loss coefficient model) to predict

FIGURE 5.5. Comparison of Experimental Flow Rate Estimates With the Prediction of the COBRA-IIIC Program for the Type I, Sleeve Blockage

FIGURE 5.6. Comparison of Experimental Flow Rate Estimates With the Prediction of the COBRA-IIIC Program for the Type II, Sleeve Blockage

FIGURE 5.7. Comparison of Experimental Flow Rate Estimates With the Prediction of the COBRA-IIIC Program for the Type IV, Plate Blockage

FIGURE 5.8. Comparison of Subchannel Pressure Data to Prediction of the COBRA-IIIC Program for the Type I, Sleeve Blockage

FIGURE 5.9. Comparison of Subchannel Pressure Data to Prediction of the COBRA-IIIC Program for the Type II, Sleeve Blockage

FIGURE 5.10. Comparison of Subchannel Pressure Data to Prediction of the COBRA-IIIC Program for the Type IV, Plate Blockage

the trends of the relative pressure differential between the two subchannels just downstream of the blockage. The calculations and measured data both show a slightly greater pressure drop in the left subchannel for the Type I and IV blockages and a slightly reduced loss in the left subchannel for the Type II blockage.

The results of the comparisons and the parameter studies discussed previously give credence to the models and numerical schemes used in the modified version of COBRA-IIIC to accurately calculate velocity distributions in blocked rod arrays. The primary factors which influence the calculated results are the flow areas in the blocked subchannels and the form (streamlines or abrupt) of the blockage. If only the velocity distributions are required and if the blockage is of the "swelling" type then adequate results may be obtained by using subchannel area variations only. However, if both velocity and pressure distributions are to be determined or if the blockage geometry is of the abrupt type then a blockage loss coefficient must be included for both velocity and pressure calculations. The method of assuming subchannel loss coefficients from a bundle average loss coefficient does account for the total pressure loss from the system, and it appears that it also produces the correct amount of diversion flow from the blocked subchannels.

In this study the bundle average loss coefficient was determined from the measured pressure loss. Ideally one would like to determine the bundle average loss coefficient from contraction and expansion coefficients similar to those given by Kays and London.⁽⁴⁾ However, for the plate type of blockage, Kays and London's coefficients gave a bundle average loss coefficient that was 60% lower than that calculated from the data.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Several conclusions can be made as a result of this study:

1. The laser-Doppler velocimeter proved to be an effective tool to measure velocity and turbulence; however, it could not provide measurements in extremely turbulent flows in the immediate wake of some blockages.
2. The introduction of a partial, but severe, flow blockage significantly perturbs the velocity field. This is seen as a major redistribution of flow and a significantly modified turbulence intensity distribution. The influence of the blockage persists well downstream with only a small perturbation of flow upstream of the blockage.
3. The plate type blockage causes a more severe flow reduction but a larger increase in turbulence than a corresponding sleeve blockage with the same area reduction. The blockage configuration, therefore, has an important effect on the downstream flow perturbation.
4. The COBRA-IIIC subchannel computer program can predict the flow and pressure distribution very well in the subchannels of the present experimental model. This could be accomplished with a minimum adjustment of empirical parameters. The most significant parameter is the subchannel pressure loss coefficient of the blockage.

The following recommendations are offered for future studies of flow blockage in rod bundles:

1. The effect of flow blockage should be investigated in larger bundles to determine the generality of the results obtained in this study with a simple flow model.
2. Since the effects of flow blockage are normally related to concerns of heat transfer, additional experiments combining

flow measurement and heat transfer should be performed for selected flow blockage configurations. While the LDV must presently be limited to single phase flows, it can be used to aid in the interpretation of flow blockage experiments and may be especially valuable for steam flows with entrained droplets.

3. "Real" flow blockages need to be defined with more accuracy to assist with the design of future experiments.

7.0 NOMENCLATURE

A	Flow area
C	Crossflow resistance function
D	Hydraulic diameter
f	friction factor
f_T	momentum turbulent factor
K	subchannel friction function or blockage loss coefficient
K_{ij}	Crossflow resistance factor
m	Subchannel flow rate
p	pressure
r, θ	polar coordinates
Re	Reynolds number
s	rod gap spacing
s/l	momentum equation parameter
S	matrix transformation
t	time
U	channel average velocity
$\bar{u}$	average axial velocity component
u'	"rms" fluctuating axial velocity
u^*	axial velocity carried by crossflow
u_j	Subchannel average velocity
w'	Turbulent crossflow mixing per unit length
u, v, w	velocity components in the x, y, z direction
v	specific volume
w	crossflow per unit length
x, y, z	Cartesian Coordinate Directions
β	Turbulent mixing parameter w'/GS
ρ	density

Subscripts

i	refers to subchannel value
j	axial position index along length of channel

8.0 REFERENCES

1. D. S. Rowe. COBRA-IIIC: A Digital Computer Program for Steady-State and Transient Thermal-Hydraulic Analysis of Rod Bundle Nuclear Fuel Elements. BNWL-1695. March 1973.
2. D. S. Rowe. Measurement of Turbulent Velocity, Intensity and Scale in Rod Bundle Flow Channels, BNWL-1736, May 1973.
3. D. S. Rowe and C. C. Chapman. Measurement of Turbulent Velocity, Intensity and Scale in Rod Bundle Flow Channels Containing a Grid Spacer, BNWL-1757, June 1973.
4. W. M. Kays and A. L. London. Compact Heat Exchangers. National Press, Inc., Palo Alto, California (1955).

APPENDIX A

TABULATION OF REDUCED EXPERIMENTAL DATA

TABLE A-1. Tabulation of Velocity and Turbulence Data

SECT B-B TYPE 1 BLOCK AT STA 3, WINDOW 3 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB3268	104904.	.579	.015	12.69	.747	-	-	-	-	3.
BB3269	104904.	.579	.070	15.19	.894	-	-	-	-	3.
BB3270	104904.	.579	.180	17.63	1.038	-	-	-	-	3.
BB3271	104904.	.579	.235	18.40	1.083	-	-	-	-	3.
BB3272	104904.	.579	.125	16.56	.975	1.10	.066	-	-	3.
BB3273	104904.	.512	.125	17.01	1.001	-	-	-	-	3.
BB3274	104904.	.445	.125	17.39	1.024	-	-	-	-	3.
BB3275	104904.	.310	.125	17.08	1.006	-	-	-	-	3.
BB3276	104904.	.176	.125	15.77	.928	-	-	-	-	3.
BB3277	104904.	.042	.125	14.05	.827	-	-	-	-	3.
BB3278	104904.	.713	.125	16.40	.966	-	-	-	-	3.
BB3279	104904.	.847	.125	16.32	.961	-	-	-	-	3.
BB3280	104904.	.982	.125	15.54	.915	-	-	-	-	3.
BB3281	104904.	1.116	.125	13.96	.822	-	-	-	-	3.

SECT B-B TYPE 1 BLOCK AT STA 3, WINDOW 3 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB3254	104904.	.582	1.265	20.52	1.208	-	-	-	-	3.
BB3255	104904.	.582	1.320	21.08	1.241	-	-	-	-	3.
BB3256	104904.	.582	1.430	21.50	1.265	-	-	-	-	3.
BB3257	104904.	.582	1.485	21.26	1.251	-	-	-	-	3.
BB3258	104904.	.582	1.375	21.39	1.259	.70	.033	-	-	3.
BB3259	104904.	.514	1.375	21.20	1.248	-	-	-	-	3.
BB3260	104904.	.447	1.375	20.69	1.218	-	-	-	-	3.
BB3261	104904.	.313	1.375	19.73	1.161	-	-	-	-	3.
BB3262	104904.	.179	1.375	18.63	1.097	-	-	-	-	3.
BB3263	104904.	.045	1.375	16.46	.969	-	-	-	-	3.
BB3264	104904.	.716	1.375	20.78	1.223	-	-	-	-	3.
BB3265	104904.	.850	1.375	19.60	1.154	-	-	-	-	3.
BB3266	104904.	.984	1.375	18.40	1.083	-	-	-	-	3.
BB3267	104904.	1.118	1.375	16.25	.956	-	-	-	-	3.

SECT B-B TYPE 1 BLOCK AT STA 3, WINDOW 3 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB3224	104904.	.576	2.625	22.05	1.298	.60	.027	-	-	3.
BB3225	104904.	.576	2.570	21.77	1.282	-	-	-	-	3.
BB3226	104904.	.576	2.515	21.26	1.251	-	-	-	-	3.
BB3227	104904.	.576	2.480	21.95	1.292	-	-	-	-	3.
BB3228	104904.	.576	2.735	21.45	1.263	-	-	-	-	3.
BB3229	104904.	.509	2.625	21.92	1.290	-	-	-	-	3.
BB3230	104904.	.442	2.625	21.47	1.264	-	-	-	-	3.
BB3231	104904.	.308	2.625	20.25	1.192	-	-	-	-	3.
BB3232	104904.	.174	2.625	18.83	1.108	-	-	-	-	3.
BB3233	104904.	.106	2.625	18.11	1.066	-	-	-	-	3.
BB3234	104904.	.710	2.625	21.21	1.249	-	-	-	-	3.
BB3235	104904.	.845	2.625	19.80	1.165	-	-	-	-	3.
BB3236	104904.	.979	2.625	18.49	1.085	-	-	-	-	3.
BB3237	104904.	1.113	2.625	16.43	.967	-	-	-	-	3.

SECT B-B TYPE 1 BLOCK AT STA 3, WINDOW 3 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB3239	104904.	.578	3.765	18.91	1.113	-	-	-	-	3.
BB3240	104904.	.578	3.820	18.37	1.081	-	-	-	-	3.
BB3241	104904.	.578	3.875	17.39	1.024	1.05	.060	-	-	3.
BB3242	104904.	.578	3.930	16.13	.949	-	-	-	-	3.
BB3243	104904.	.578	3.985	13.93	.820	-	-	-	-	3.
BB3244	104904.	.510	3.875	17.58	1.035	-	-	-	-	3.
BB3245	104904.	.443	3.875	17.62	1.037	-	-	-	-	3.
BB3246	104904.	.309	3.875	17.01	1.001	-	-	-	-	3.
BB3247	104904.	.175	3.875	15.85	.933	-	-	-	-	3.
BB3248	104904.	.041	3.875	14.34	.844	-	-	-	-	3.
BB3249	104904.	.712	3.875	17.43	1.026	-	-	-	-	3.
BB3250	104904.	.846	3.875	17.38	1.023	-	-	-	-	3.
BB3251	104904.	.980	3.875	16.31	.960	-	-	-	-	3.
BB3252	104904.	1.114	3.875	14.76	.869	-	-	-	-	3.
BB3253	104904.	1.231	3.875	9.01	.530	-	-	-	-	3.

SECT B-B TYPE 1 BLOCK AT STA 2, WINDOW 3 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB3324	104904.	.588	.015	10.65	.627	-	-	-	-	3.
BB3325	104904.	.588	.070	14.88	.876	-	-	-	-	3.
BB3326	104904.	.588	.180	17.18	1.011	-	-	-	-	3.
BB3327	104904.	.588	.235	17.91	1.054	-	-	-	-	3.
BB3328	104904.	.588	.125	16.38	.964	1.13	.069	-	-	3.
BB3329	104904.	.521	.125	16.94	.997	-	-	-	-	3.
BB3330	104904.	.454	.125	17.04	1.003	-	-	-	-	3.
BB3331	104904.	.320	.125	16.15	.951	-	-	-	-	3.
BB3332	104904.	.186	.125	14.72	.867	-	-	-	-	3.
BB3333	104904.	.051	.125	12.67	.746	-	-	-	-	3.
BB3334	104904.	.723	.125	14.82	.872	-	-	-	-	3.
BB3335	104904.	.857	.125	14.61	.860	-	-	-	-	3.
BB3336	104904.	.991	.125	14.08	.829	-	-	-	-	3.
BB3337	104904.	1.125	.125	12.55	.739	-	-	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT 3-B TYPE I BLOCK AT STA 2, WINDOW 3 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB3310	104904.	.590	1.265	19.92	1.173	-	-	-	-	3.
BB3311	104904.	.590	1.320	20.41	1.201	-	-	-	-	3.
BB3312	104904.	.590	1.430	21.03	1.238	-	-	-	-	3.
BB3313	104904.	.590	1.485	21.19	1.247	-	-	-	-	3.
BB3314	104904.	.590	1.375	20.71	1.219	.80	.038	-	-	3.
BB3315	104904.	.523	1.375	20.42	1.202	-	-	-	-	3.
BB3316	104904.	.455	1.375	19.74	1.162	-	-	-	-	3.
BB3317	104904.	.321	1.375	18.22	1.072	-	-	-	-	3.
BB3318	104904.	.187	1.375	17.69	1.041	-	-	-	-	3.
BB3319	104904.	.053	1.375	15.66	.922	-	-	-	-	3.
BB3320	104904.	.724	1.375	20.04	1.180	-	-	-	-	3.
BB3321	104904.	.858	1.375	19.05	1.121	-	-	-	-	3.
BB3322	104904.	.992	1.375	17.99	1.059	-	-	-	-	3.
BB3323	104904.	1.127	1.375	15.78	.929	-	-	-	-	3.

SECT 3-B TYPE I BLOCK AT STA 2, WINDOW 3 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB3296	104904.	.590	2.515	20.59	1.212	-	-	-	-	3.
BB3297	104904.	.590	2.570	21.26	1.251	-	-	-	-	3.
BB3298	104904.	.590	2.680	22.34	1.315	-	-	-	-	3.
BB3299	104904.	.590	2.735	22.33	1.315	-	-	-	-	3.
BB3300	104904.	.590	2.625	21.92	1.290	.83	.038	-	-	3.
BB3301	104904.	.523	2.625	21.61	1.272	-	-	-	-	3.
BB3302	104904.	.455	2.625	21.21	1.249	-	-	-	-	3.
BB3303	104904.	.321	2.625	20.53	1.208	-	-	-	-	3.
BB3304	104904.	.187	2.625	19.28	1.135	-	-	-	-	3.
BB3305	104904.	.053	2.625	17.07	1.005	-	-	-	-	3.
BB3306	104904.	.724	2.625	21.46	1.263	-	-	-	-	3.
BB3307	104904.	.858	2.625	20.26	1.192	-	-	-	-	3.
BB3308	104904.	.992	2.625	18.97	1.117	-	-	-	-	3.
BB3309	104904.	1.127	2.625	17.13	1.008	-	-	-	-	3.

SECT 3-B TYPE I BLOCK AT STA 2, WINDOW 3 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB3282	104904.	.595	3.765	19.82	1.166	-	-	-	-	3.
BB3283	104904.	.595	3.820	19.22	1.131	-	-	-	-	3.
BB3284	104904.	.595	3.930	17.01	1.001	-	-	-	-	3.
BB3285	104904.	.595	3.985	14.46	.851	-	-	-	-	3.
BB3286	104904.	.595	3.875	18.31	1.078	1.03	.056	-	-	3.
BB3287	104904.	.528	3.875	18.13	1.067	-	-	-	-	3.
BB3288	104904.	.461	3.875	18.23	1.073	-	-	-	-	3.
BB3289	104904.	.327	3.875	18.10	1.065	-	-	-	-	3.
BB3290	104904.	.192	3.875	17.07	1.005	-	-	-	-	3.
BB3291	104904.	.058	3.875	15.39	.906	-	-	-	-	3.
BB3292	104904.	.729	3.875	18.84	1.109	-	-	-	-	3.
BB3293	104904.	.863	3.875	18.58	1.093	-	-	-	-	3.
BB3294	104904.	.998	3.875	17.36	1.022	-	-	-	-	3.
BB3295	104904.	1.132	3.875	15.88	.935	-	-	-	-	3.

SECT 3-B TYPE I BLOCK AT STA 1, WINDOW 3, -5CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2534	104904.	.584	.125	12.26	.722	1.35	.110	-	-	3.
BB2535	104904.	.517	.125	13.06	.769	-	-	-	-	3.
BB2536	104904.	.450	.125	13.42	.790	-	-	-	-	3.
BB2537	104904.	.316	.125	12.74	.750	-	-	-	-	3.
BB2538	104904.	.182	.125	11.41	.671	-	-	-	-	3.
BB2539	104904.	.047	.125	8.94	.526	-	-	-	-	3.
BB2540	104904.	.719	.125	11.29	.664	1.16	.103	-	-	3.
BB2541	104904.	.853	.125	11.43	.673	1.12	.098	-	-	3.
BB2542	104904.	.987	.125	11.23	.661	.95	.084	-	-	3.
BB2543	104904.	1.121	.125	9.48	.558	.98	.104	-	-	3.
BB2544	104904.	1.054	.070	9.75	.574	-	-	-	-	3.
BB2545	104904.	.920	.070	9.99	.588	-	-	-	-	3.
BB2546	104904.	.786	.070	10.01	.589	-	-	-	-	3.
BB2547	104904.	.651	.070	10.38	.611	-	-	-	-	3.
BB2548	104904.	.584	.070	11.14	.656	1.24	.112	-	-	3.
BB2549	104904.	.584	.015	9.02	.531	1.05	.117	-	-	3.
BB2550	104904.	.719	.015	8.01	.471	-	-	-	-	3.
BB2551	104904.	.853	.015	7.98	.470	-	-	-	-	3.
BB2552	104904.	.987	.015	7.46	.439	-	-	-	-	3.
BB2553	104904.	1.121	.015	7.11	.419	-	-	-	-	3.
BB2554	104904.	1.054	.180	10.50	.618	-	-	-	-	3.
BB2555	104904.	.920	.180	12.05	.709	-	-	-	-	3.
BB2556	104904.	.786	.180	12.40	.730	-	-	-	-	3.
BB2557	104904.	.651	.180	12.65	.744	-	-	-	-	3.
BB2558	104904.	.584	.180	13.24	.779	1.27	.096	-	-	3.
BB2559	104904.	.584	.235	14.15	.833	1.06	.075	-	-	3.
BB2560	104904.	.719	.235	13.33	.784	-	-	-	-	3.
BB2561	104904.	.853	.235	12.72	.749	-	-	-	-	3.
BB2562	104904.	.987	.235	10.12	.595	-	-	-	-	3.
BB2563	104904.	1.121	.235	7.35	.433	-	-	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B TYPE I BLOCK AT STA 1+WINDOW 3+-.5CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
B82504	104904	.586	1.375	14.73	.867	.97	.066	-	-	3.
B82505	104904	.519	1.375	14.28	.841	-	-	-	-	3.
B82506	104904	.451	1.375	13.00	.765	-	-	-	-	3.
B82507	104904	.317	1.375	9.54	.562	-	-	-	-	3.
B82508	104904	.183	1.375	9.71	.572	-	-	-	-	3.
B82509	104904	.049	1.375	7.33	.431	-	-	-	-	3.
B82510	104904	.720	1.375	12.77	.751	1.16	.091	-	-	3.
B82511	104904	.854	1.375	9.63	.567	1.16	.120	-	-	3.
B82512	104904	.988	1.375	9.42	.555	1.42	.151	-	-	3.
B82513	104904	1.122	1.375	9.75	.574	1.37	.140	-	-	3.
B82514	104904	1.055	1.320	8.45	.497	-	-	-	-	3.
B82515	104904	.921	1.320	7.73	.455	-	-	-	-	3.
B82516	104904	.787	1.320	11.09	.653	-	-	-	-	3.
B82517	104904	.653	1.320	13.86	.816	-	-	-	-	3.
B82518	104904	.586	1.320	14.24	.838	.97	.068	-	-	3.
B82519	104904	.586	1.265	13.62	.802	.96	.070	-	-	3.
B82520	104904	.720	1.265	12.50	.736	-	-	-	-	3.
B82521	104904	.854	1.265	8.77	.516	-	-	-	-	3.
B82522	104904	.988	1.265	4.86	.286	-	-	-	-	3.
B82523	104904	1.122	1.265	5.32	.313	-	-	-	-	3.
B82524	104904	1.055	1.430	11.73	.690	-	-	-	-	3.
B82525	104904	.921	1.430	10.57	.622	-	-	-	-	3.
B82526	104904	.787	1.430	11.48	.676	-	-	-	-	3.
B82527	104904	.653	1.430	14.41	.848	-	-	-	-	3.
B82528	104904	.586	1.430	15.19	.894	.97	.064	-	-	3.
B82529	104904	.586	1.485	15.43	.908	1.07	.069	-	-	3.
B82530	104904	.720	1.485	13.10	.771	-	-	-	-	3.
B82531	104904	.854	1.485	11.60	.683	-	-	-	-	3.
B82532	104904	.988	1.485	12.38	.729	-	-	-	-	3.
B82533	104904	1.122	1.485	8.51	.501	-	-	-	-	3.

SECT B-B TYPE I BLOCK AT STA 1+WINDOW 3+-.5CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
B82474	104904	.586	2.625	21.24	1.250	.81	.038	-	-	3.
B82475	104904	.519	2.625	21.14	1.244	-	-	-	-	3.
B82476	104904	.451	2.625	20.83	1.226	-	-	-	-	3.
B82477	104904	.317	2.625	19.68	1.170	-	-	-	-	3.
B82478	104904	.183	2.625	18.89	1.112	-	-	-	-	3.
B82479	104904	.720	2.625	20.75	1.221	.80	.039	-	-	3.
B82480	104904	.854	2.625	19.73	1.161	.79	.040	-	-	3.
B82481	104904	.988	2.625	18.89	1.112	.88	.046	-	-	3.
B82482	104904	1.122	2.625	19.22	1.131	.84	.044	-	-	3.
B82483	104904	.049	2.625	19.11	1.125	-	-	-	-	3.
B82484	104904	1.055	2.570	17.82	1.049	-	-	-	-	3.
B82485	104904	.921	2.570	18.71	1.101	-	-	-	-	3.
B82486	104904	.787	2.570	20.01	1.178	-	-	-	-	3.
B82487	104904	.653	2.570	20.78	1.223	-	-	-	-	3.
B82488	104904	.586	2.570	20.89	1.230	.71	.034	-	-	3.
B82489	104904	.586	2.515	21.19	1.247	.83	.039	-	-	3.
B82490	104904	.720	2.515	20.50	1.206	-	-	-	-	3.
B82491	104904	.854	2.515	19.14	1.126	-	-	-	-	3.
B82492	104904	.988	2.515	17.24	1.015	-	-	-	-	3.
B82493	104904	1.122	2.515	15.69	.923	-	-	-	-	3.
B82494	104904	1.055	2.680	28.04	1.180	-	-	-	-	3.
B82495	104904	.921	2.680	19.85	1.168	-	-	-	-	3.
B82496	104904	.787	2.680	26.70	1.218	-	-	-	-	3.
B82497	104904	.653	2.680	21.68	1.276	-	-	-	-	3.
B82498	104904	.586	2.680	21.90	1.289	.90	.041	-	-	3.
B82499	104904	.586	2.735	22.67	1.334	.88	.039	-	-	3.
B82500	104904	.720	2.735	21.83	1.285	-	-	-	-	3.
B82501	104904	.854	2.735	20.93	1.232	-	-	-	-	3.
B82502	104904	.988	2.735	20.65	1.216	-	-	-	-	3.
B82503	104904	1.122	2.735	17.11	1.007	-	-	-	-	3.

SECT B-B TYPE I BLOCK AT STA 1+WINDOW 3+-.5CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
B82445	104904	.586	3.875	25.23	1.485	.72	.029	-	-	3.
B82446	104904	.519	3.875	25.17	1.482	-	-	-	-	3.
B82447	104904	.384	3.875	24.96	1.469	-	-	-	-	3.
B82448	104904	.250	3.875	24.47	1.440	-	-	-	-	3.
B82449	104904	.116	3.875	23.35	1.374	-	-	-	-	3.
B82450	104904	.720	3.875	25.17	1.482	.70	.028	-	-	3.
B82451	104904	.854	3.875	24.83	1.461	.64	.026	-	-	3.
B82452	104904	.988	3.875	23.98	1.411	.66	.027	-	-	3.
B82453	104904	1.122	3.875	22.93	1.350	.59	.026	-	-	3.
B82454	104904	1.055	3.820	22.77	1.341	-	-	-	-	3.
B82455	104904	.921	3.820	23.98	1.411	-	-	-	-	3.
B82456	104904	.787	3.820	24.75	1.457	-	-	-	-	3.
B82457	104904	.653	3.820	25.34	1.491	-	-	-	-	3.
B82458	104904	.586	3.820	25.39	1.494	.59	.023	-	-	3.
B82459	104904	.586	3.765	25.03	1.473	.64	.025	-	-	3.
B82460	104904	.720	3.765	24.53	1.444	-	-	-	-	3.
B82461	104904	.854	3.765	23.51	1.384	-	-	-	-	3.
B82462	104904	.988	3.765	22.34	1.315	-	-	-	-	3.
B82463	104904	1.122	3.765	20.21	1.190	-	-	-	-	3.
B82464	104904	1.055	3.930	22.76	1.340	-	-	-	-	3.
B82465	104904	.921	3.930	23.96	1.410	-	-	-	-	3.
B82466	104904	.787	3.930	24.33	1.432	-	-	-	-	3.
B82467	104904	.653	3.930	24.16	1.422	-	-	-	-	3.
B82468	104904	.586	3.930	24.05	1.416	.93	.039	-	-	3.
B82469	104904	.586	3.985	21.37	1.258	1.13	.053	-	-	3.
B82470	104904	.720	3.985	21.50	1.265	-	-	-	-	3.
B82471	104904	.854	3.985	21.51	1.266	-	-	-	-	3.
B82472	104904	.988	3.985	20.77	1.223	-	-	-	-	3.
B82473	104904	1.122	3.985	19.64	1.156	-	-	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B TYPE I BLOCK AT STA 3, WINDOW 4 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB3174	104904.	.578	2.625	33.26	1.958	4.34	.130	-	-	3.
BB3175	104904.	.510	2.625	33.52	1.973	-	-	-	-	3.
BB3176	104904.	.443	2.625	33.85	1.992	-	-	-	-	3.
BB3177	104904.	.309	2.625	33.08	1.947	-	-	-	-	3.
BB3178	104904.	.175	2.625	27.88	1.641	-	-	-	-	3.
BB3179	104904.	.041	2.625	18.49	1.088	-	-	-	-	3.
BB3180	104904.	.712	2.625	32.52	1.914	4.87	.150	-	-	3.
BB3181	104904.	.846	2.625	32.27	1.899	4.21	.130	-	-	3.
BB3182	104904.	.980	2.625	28.63	1.685	6.56	.229	-	-	3.
BB3183	104904.	1.114	2.625	17.12	1.008	+	+	-	-	3.
BB3184	104904.	1.034	2.570	24.88	1.229	-	-	-	-	3.
BB3185	104904.	.900	2.570	26.88	1.582	-	-	-	-	3.
BB3186	104904.	.765	2.570	25.89	1.524	-	-	-	-	3.
BB3187	104904.	.631	2.570	25.59	1.506	-	-	-	-	3.
BB3188	104904.	.564	2.570	25.46	1.499	+	+	-	-	3.
BB3189	104904.	.564	2.524	16.22	1.955	+	+	-	-	3.
BB3190	104904.	.698	2.524	18.52	1.090	-	-	-	-	3.
BB3191	104904.	.833	2.524	20.32	1.196	-	-	-	-	3.
BB3192	104904.	.967	2.524	19.52	1.149	-	-	-	-	3.
BB3193	104904.	1.101	2.524	11.91	.701	-	-	-	-	3.
BB3194	104904.	1.034	2.680	22.55	1.327	-	-	-	-	3.
BB3195	104904.	.900	2.680	33.11	1.949	-	-	-	-	3.
BB3196	104904.	.765	2.680	34.84	2.050	-	-	-	-	3.
BB3197	104904.	.631	2.680	35.43	2.086	-	-	-	-	3.
BB3198	104904.	.564	2.680	35.41	2.084	3.50	.099	-	-	3.
BB3199	104904.	.564	2.735	37.17	2.188	2.14	.057	-	-	3.
BB3190	104904.	.698	2.735	36.98	2.177	-	-	-	-	3.
BB3191	104904.	.833	2.735	35.43	2.086	-	-	-	-	3.
BB3192	104904.	.967	2.735	27.69	1.630	-	-	-	-	3.
BB3193	104904.	1.101	2.735	12.51	.737	-	-	-	-	3.

SECT B-B TYPE I BLOCK AT STA 3, WINDOW 4 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB3194	104904.	.579	2.625	33.08	1.947	5.39	.163	-	-	3.
BB3195	104904.	.512	2.625	33.40	1.966	-	-	-	-	3.
BB3196	104904.	.445	2.625	33.52	1.973	-	-	-	-	3.
BB3197	104904.	.310	2.625	32.69	1.924	-	-	-	-	3.
BB3198	104904.	.176	2.625	27.52	1.620	-	-	-	-	3.
BB3199	104904.	.042	2.625	20.01	1.178	-	-	-	-	3.
BB3200	104904.	.713	2.625	33.00	1.942	4.57	.138	-	-	3.
BB3201	104904.	.847	2.625	32.19	1.895	4.61	.143	-	-	3.
BB3202	104904.	.982	2.625	27.80	1.636	+	+	-	-	3.
BB3203	104904.	1.116	2.625	17.24	1.015	+	+	-	-	3.
BB3204	104904.	1.049	2.570	20.01	1.178	-	-	-	-	3.
BB3205	104904.	.914	2.570	27.36	1.610	-	-	-	-	3.
BB3206	104904.	.780	2.570	27.44	1.615	-	-	-	-	3.
BB3207	104904.	.646	2.570	26.45	1.557	-	-	-	-	3.
BB3208	104904.	.579	2.570	26.44	1.556	+	+	-	-	3.
BB3209	104904.	.579	2.515	15.96	1.940	-	-	-	-	3.
BB3210	104904.	.713	2.515	18.07	1.064	-	-	-	-	3.
BB3211	104904.	.847	2.515	20.97	1.234	-	-	-	-	3.
BB3212	104904.	.982	2.515	19.48	1.147	-	-	-	-	3.
BB3213	104904.	1.116	2.515	13.17	.775	-	-	-	-	3.
BB3214	104904.	1.049	2.680	18.35	1.080	-	-	-	-	3.
BB3215	104904.	.914	2.680	31.58	1.859	-	-	-	-	3.
BB3216	104904.	.780	2.680	35.29	2.077	-	-	-	-	3.
BB3217	104904.	.646	2.680	36.12	2.126	-	-	-	-	3.
BB3218	104904.	.579	2.680	36.11	2.126	2.89	.080	-	-	3.
BB3219	104904.	.579	2.735	37.13	2.185	2.19	.059	-	-	3.
BB3220	104904.	.713	2.735	36.74	2.163	-	-	-	-	3.
BB3221	104904.	.847	2.735	33.00	1.942	-	-	-	-	3.
BB3222	104904.	.982	2.735	17.94	1.056	-	-	-	-	3.
BB3223	104904.	1.116	2.735	11.09	.653	-	-	-	-	3.

SECT B-B TYPE I BLOCK AT STA 3, WINDOW 4 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB3144	104904.	.583	3.875	36.99	2.178	.60	.016	-	-	3.
BB3145	104904.	.516	3.875	36.99	2.178	-	-	-	-	3.
BB3146	104904.	.449	3.875	36.95	2.175	-	-	-	-	3.
BB3147	104904.	.315	3.875	36.68	2.159	-	-	-	-	3.
BB3148	104904.	.180	3.875	36.17	2.129	-	-	-	-	3.
BB3149	104904.	.046	3.875	35.13	2.068	-	-	-	-	3.
BB3150	104904.	.717	3.875	36.91	2.173	.57	.015	-	-	3.
BB3151	104904.	.851	3.875	36.66	2.158	.57	.016	-	-	3.
BB3152	104904.	.986	3.875	36.20	2.130	.53	.015	-	-	3.
BB3153	104904.	1.120	3.875	34.97	2.058	.90	.026	-	-	3.
BB3154	104904.	1.053	3.820	35.41	2.084	-	-	-	-	3.
BB3155	104904.	.918	3.820	36.57	2.152	-	-	-	-	3.
BB3156	104904.	.784	3.820	37.08	2.182	-	-	-	-	3.
BB3157	104904.	.650	3.820	37.20	2.189	-	-	-	-	3.
BB3158	104904.	.583	3.820	37.17	2.188	.56	.015	-	-	3.
BB3159	104904.	.583	3.765	37.44	2.204	.66	.018	-	-	3.
BB3160	104904.	.717	3.765	37.46	2.205	-	-	-	-	3.
BB3161	104904.	.851	3.765	37.22	2.191	-	-	-	-	3.
BB3162	104904.	.986	3.765	34.00	2.001	-	-	-	-	3.
BB3163	104904.	1.120	3.765	27.21	1.602	-	-	-	-	3.
BB3164	104904.	1.053	3.930	35.41	2.084	-	-	-	-	3.
BB3165	104904.	.918	3.930	36.06	2.123	-	-	-	-	3.
BB3166	104904.	.784	3.930	36.09	2.124	-	-	-	-	3.
BB3167	104904.	.650	3.930	35.91	2.114	-	-	-	-	3.
BB3168	104904.	.583	3.930	35.85	2.110	1.01	.028	-	-	3.
BB3169	104904.	.583	3.985	29.25	1.722	1.46	.050	-	-	3.
BB3170	104904.	.717	3.985	29.56	1.740	-	-	-	-	3.
BB3171	104904.	.851	3.985	30.40	1.789	-	-	-	-	3.
BB3172	104904.	.986	3.985	30.14	1.774	-	-	-	-	3.
BB3173	104904.	1.120	3.985	28.87	1.699	-	-	-	-	3.

HYDRAULIC DIAMETER: D = .759 INCHES, AVERAGE VELOCITY: UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT, + TURBULENCE INTENSITY TOO HIGH TO MEASURE, - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B TYPE I BLOCK AT STA 2+WINDOW 4 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2815	104904.	.579	.125	11.67	.687	+	+	-	-	3.
BB2816	104904.	.512	.125	12.86	.757	-	-	-	-	3.
BB2817	104904.	.445	.125	13.85	.815	-	-	-	-	3.
BB2818	104904.	.310	.125	15.57	.916	-	-	-	-	3.
BB2819	104904.	.176	.125	16.64	.980	-	-	-	-	3.
BB2820	104904.	.042	.125	15.85	.933	-	-	-	-	3.
BB2821	104904.	.713	.125	9.46	.557	+	+	-	-	3.
BB2822	104904.	.847	.125	7.13	.420	+	+	-	-	3.
BB2823	104904.	.982	.125	3.76	.221	+	+	-	-	3.
BB2824	104904.	.914	.070	3.75	.220	-	-	-	-	3.
BB2827	104904.	.780	.070	6.74	.397	-	-	-	-	3.
BB2828	104904.	.646	.070	9.25	.544	-	-	-	-	3.
BB2829	104904.	.579	.070	10.30	.606	+	+	-	-	3.
BB2830	104904.	.579	.015	8.55	.503	+	+	-	-	3.
BB2831	104904.	.713	.015	5.73	.337	-	-	-	-	3.
BB2832	104904.	.847	.015	2.58	.152	-	-	-	-	3.
BB2834	104904.	1.116	.015	-	-	-	-	-	-	3.
BB2835	104904.	.914	.180	5.96	.351	-	-	-	-	3.
BB2837	104904.	.780	.180	8.83	.520	-	-	-	-	3.
BB2838	104904.	.646	.180	11.55	.680	-	-	-	-	3.
BB2839	104904.	.579	.180	12.51	.737	+	+	-	-	3.
BB2840	104904.	.579	.235	12.81	.754	+	+	-	-	3.
BB2841	104904.	.713	.235	10.93	.643	-	-	-	-	3.
BB2842	104904.	.847	.235	8.42	.496	-	-	-	-	3.
BB2843	104904.	.982	.235	4.41	.260	-	-	-	-	3.
BB2844	106651.	1.116	.235	-	-	3.62	-	-	-	3.

SECT B-B TYPE I BLOCK AT STA 2+WINDOW 4 AT CL ZONE 2

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2805	104904.	.428	.750	4.80	.282	+	+	-	-	3.
BB2806	104904.	.455	.750	6.35	.374	+	+	-	-	3.
BB2807	104904.	.482	.750	7.54	.444	+	+	-	-	3.
BB2808	104904.	.508	.750	8.10	.477	+	+	-	-	3.
BB2809	104904.	.535	.750	8.29	.486	+	+	-	-	3.
BB2810	104904.	.562	.750	8.53	.502	+	+	-	-	3.
BB2811	104904.	.589	.750	8.32	.489	+	+	-	-	3.
BB2812	104904.	.482	.750	8.21	.483	+	+	-	-	3.
BB2813	104904.	.643	.750	7.93	.467	+	+	-	-	3.
BB2814	104904.	.669	.750	7.01	.413	+	+	-	-	3.

SECT B-B TYPE I BLOCK AT STA 2+WINDOW 4 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2775	104904.	.571	1.375	4.57	.269	+	+	-	-	3.
BB2776	104904.	.504	1.375	5.13	.302	-	-	-	-	3.
BB2777	104904.	.437	1.375	5.39	.317	-	-	-	-	3.
BB2778	104904.	.302	1.375	6.14	.362	-	-	-	-	3.
BB2779	104904.	.168	1.375	6.32	.372	-	-	-	-	3.
BB2780	104904.	.034	1.375	6.32	.372	-	-	-	-	3.
BB2782	104904.	.839	1.375	-	-	2.64	-	-	-	3.
BB2783	104904.	.974	1.375	-	-	.28	-	-	-	3.
BB2784	104904.	1.108	1.375	-	-	.21	-	-	-	3.
BB2785	104904.	1.041	1.320	-	-	.26	-	-	-	3.
BB2786	104904.	.906	1.320	-	-	.56	-	-	-	3.
BB2788	104904.	.638	1.320	3.28	.193	+	+	-	-	3.
BB2789	104904.	.571	1.320	4.46	.263	+	+	-	-	3.
BB2790	104904.	.571	1.265	4.41	.260	+	+	-	-	3.
BB2791	104904.	.705	1.265	1.05	.062	+	+	-	-	3.
BB2792	104904.	.839	1.265	-	-	-	-	-	-	3.
BB2793	104904.	.974	1.265	-	-	-	-	-	-	3.
BB2794	104904.	1.108	1.265	-	-	-	-	-	-	3.
BB2795	104904.	1.041	1.430	-	-	-	-	-	-	3.
BB2796	104904.	.906	1.430	-	-	-	-	-	-	3.
BB2798	104904.	.638	1.430	4.25	.250	-	-	-	-	3.
BB2799	104904.	.571	1.430	4.95	.291	+	+	-	-	3.
BB2800	104904.	.571	1.485	5.07	.298	+	+	-	-	3.
BB2801	104904.	.705	1.485	1.46	.086	-	-	-	-	3.
BB2802	104904.	.839	1.485	-	-	-	-	-	-	3.
BB2803	104904.	.974	1.485	-	-	-	-	-	-	3.
BB2804	104904.	1.108	1.485	-	-	-	-	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT 3-B TYPE 1 BLOCK AT STA 2+WINDOW 4 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
002730	104904	.574	2.025	26.46	1.557	3.80	.144	-	-	3.
002730	104904	.506	2.025	26.19	1.541	-	-	-	-	3.
002737	104904	.439	2.025	25.49	1.501	-	-	-	-	3.
002738	104904	.305	2.025	24.04	1.415	-	-	-	-	3.
002739	104904	.171	2.025	22.94	1.350	-	-	-	-	3.
002740	104904	.037	2.025	20.05	1.216	-	-	-	-	3.
002741	104904	.708	2.025	25.00	1.507	4.07	.159	-	-	3.
002742	104904	.842	2.025	24.42	1.437	4.18	.171	-	-	3.
002743	104904	.976	2.025	23.38	1.376	4.32	.185	-	-	3.
002744	104904	1.110	2.025	21.24	1.250	4.33	.204	-	-	3.
002745	104904	1.043	2.570	22.18	1.305	-	-	-	-	3.
002746	104904	.909	2.570	24.11	1.419	-	-	-	-	3.
002747	104904	.775	2.570	25.11	1.478	-	-	-	-	3.
002748	104904	.641	2.570	26.08	1.535	-	-	-	-	3.
002749	104904	.574	2.570	26.14	1.539	4.12	.158	-	-	3.
002750	104904	.574	2.515	25.74	1.515	4.26	.165	-	-	3.
002751	104904	.708	2.515	25.27	1.487	-	-	-	-	3.
002752	104904	.842	2.515	24.48	1.441	-	-	-	-	3.
002753	104904	.976	2.515	22.48	1.323	-	-	-	-	3.
002754	104904	1.110	2.515	18.01	1.060	-	-	-	-	3.
002755	104904	1.043	2.680	22.09	1.300	-	-	-	-	3.
002756	104904	.909	2.680	23.44	1.380	-	-	-	-	3.
002757	104904	.775	2.680	24.70	1.454	-	-	-	-	3.
002758	104904	.641	2.680	26.39	1.553	-	-	-	-	3.
002759	104904	.574	2.680	26.68	1.570	3.93	.147	-	-	3.
002760	104904	.574	2.735	26.90	1.583	3.99	.148	-	-	3.
002761	104904	.708	2.735	25.65	1.510	-	-	-	-	3.
002762	104904	.842	2.735	23.38	1.376	-	-	-	-	3.
002763	104904	.976	2.735	21.71	1.278	-	-	-	-	3.
002764	104904	1.110	2.735	18.30	1.077	-	-	-	-	3.

SECT 3-B TYPE 1 BLOCK AT STA 2+WINDOW 4 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
002700	104904	.579	3.075	31.92	1.873	1.70	.054	-	-	3.
002706	104904	.512	3.075	31.60	1.860	-	-	-	-	3.
002707	104904	.445	3.075	31.73	1.868	-	-	-	-	3.
002708	104904	.310	3.075	33.17	1.952	-	-	-	-	3.
002709	104904	.176	3.075	32.62	1.920	-	-	-	-	3.
002710	104904	.042	3.075	28.86	1.699	-	-	-	-	3.
002711	104904	.713	3.075	32.86	1.934	1.51	.046	-	-	3.
002712	104904	.847	3.075	33.58	1.977	1.10	.033	-	-	3.
002713	104904	.982	3.075	32.65	1.922	1.33	.041	-	-	3.
002714	104904	1.116	3.075	27.34	1.609	2.99	.109	-	-	3.
002715	104904	1.049	3.020	31.34	1.845	1.56	.050	-	-	3.
002716	104904	.914	3.020	33.57	1.976	-	-	-	-	3.
002717	104904	.780	3.020	34.53	2.032	-	-	-	-	3.
002718	104904	.646	3.020	34.31	2.020	-	-	-	-	3.
002719	104904	.579	3.020	33.93	1.997	1.16	.034	-	-	3.
002720	104904	.579	3.765	34.69	2.042	.79	.023	-	-	3.
002721	104904	.713	3.765	34.87	2.053	-	-	-	-	3.
002722	104904	.847	3.765	33.88	1.994	-	-	-	-	3.
002723	104904	.982	3.765	28.42	1.673	-	-	-	-	3.
002724	104904	1.116	3.765	23.94	1.409	-	-	-	-	3.
002725	104904	1.049	3.930	28.04	1.650	-	-	-	-	3.
002726	104904	.914	3.930	29.59	1.741	-	-	-	-	3.
002727	104904	.780	3.930	29.16	1.716	-	-	-	-	3.
002728	104904	.646	3.930	28.05	1.651	-	-	-	-	3.
002729	104904	.579	3.930	27.75	1.633	2.10	.076	-	-	3.
002730	104904	.579	3.985	22.01	1.296	1.83	.083	-	-	3.
002731	104904	.713	3.985	22.15	1.304	-	-	-	-	3.
002732	104904	.847	3.985	23.19	1.365	-	-	-	-	3.
002733	104904	.982	3.985	22.25	1.310	-	-	-	-	3.
002734	104904	1.116	3.985	21.34	1.250	-	-	-	-	3.

SECT 3-B TYPE 1 BLOCK AT STA 1+WINDOW 4 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
002500	104904	.572	.125	9.65	.509	-	-	-	-	3.
002501	104904	.300	.125	9.07	.544	-	-	-	-	3.
002502	104904	.430	.125	8.74	.513	-	-	-	-	3.
002503	104904	.304	.125	7.72	.454	-	-	-	-	3.
002504	104904	.170	.125	6.14	.362	-	-	-	-	3.
002505	104904	.030	.125	4.18	.240	-	-	-	-	3.
002506	104904	.706	.125	10.71	.631	2.53	.236	-	-	3.
002507	104904	.841	.125	11.13	.673	2.68	.235	-	-	3.
002508	104904	.975	.125	11.53	.693	-	-	-	-	3.
002509	104904	1.109	.125	10.50	.618	2.72	.259	-	-	3.
002510	104904	1.042	.070	11.15	.657	-	-	-	-	3.
002511	104904	.903	.070	11.50	.677	-	-	-	-	3.
002512	104904	.774	.070	11.09	.653	-	-	-	-	3.
002513	104904	.639	.070	10.16	.598	-	-	-	-	3.
002514	104904	.572	.070	9.68	.569	-	-	-	-	3.
002515	104904	.572	.015	7.10	.418	-	-	-	-	3.
002516	104904	.706	.015	6.20	.482	-	-	-	-	3.
002517	104904	.841	.015	9.13	.537	-	-	-	-	3.
002518	104904	.975	.015	9.47	.558	-	-	-	-	3.
002519	104904	1.109	.015	8.61	.507	-	-	-	-	3.
002520	104904	1.042	.180	11.31	.666	-	-	-	-	3.
002521	104904	.903	.180	11.81	.695	-	-	-	-	3.
002522	104904	.774	.180	11.54	.679	-	-	-	-	3.
002523	104904	.639	.180	10.77	.634	-	-	-	-	3.
002524	104904	.572	.180	10.32	.607	-	-	-	-	3.
002525	104904	.572	.235	10.74	.632	-	-	-	-	3.
002526	104904	.706	.235	11.54	.679	-	-	-	-	3.
002527	104904	.841	.235	11.81	.695	-	-	-	-	3.
002528	104904	.975	.235	11.06	.651	-	-	-	-	3.
002529	104904	1.109	.235	9.22	.543	-	-	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B TYPE I BLOCK AT STA 1 WINDOW 4 AT CL ZONE 2

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2694	104904	.707	.750	7.43	.437	+	+	-	-	3.
BB2695	104904	.680	.750	8.53	.502	+	+	-	-	3.
BB2696	104904	.653	.750	9.40	.553	+	+	-	-	3.
BB2697	104904	.627	.750	9.84	.579	+	+	-	-	3.
BB2698	104904	.600	.750	10.08	.593	+	+	-	-	3.
BB2699	104904	.573	.750	10.19	.600	+	+	-	-	3.
BB2700	104904	.546	.750	10.00	.588	+	+	-	-	3.
BB2701	104904	.519	.750	9.72	.572	+	+	-	-	3.
BB2702	104904	.492	.750	9.31	.548	+	+	-	-	3.
BB2703	104904	.465	.750	8.48	.499	+	+	-	-	3.
BB2704	104904	.439	.750	7.35	.433	+	+	-	-	3.

SECT B-B TYPE I BLOCK AT STA 1 WINDOW 4 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2594	104904	.571	1.375	11.45	.674	+	+	-	-	3.
BB2595	104904	.504	1.375	11.19	.659	+	+	-	-	3.
BB2596	104904	.437	1.375	10.67	.628	+	+	-	-	3.
BB2597	104904	.302	1.375	8.83	.520	+	+	-	-	3.
BB2598	104904	.168	1.375	6.98	.411	+	+	-	-	3.
BB2599	104904	.034	1.375	5.07	.298	+	+	-	-	3.
BB2600	104904	.705	1.375	10.16	.598	+	+	-	-	3.
BB2601	104904	.839	1.375	8.30	.489	+	+	-	-	3.
BB2602	104904	.974	1.375	6.08	.358	+	+	-	-	3.
BB2603	104904	1.108	1.375	3.58	.211	+	+	-	-	3.
BB2604	104904	1.041	1.320	4.69	.276	-	-	-	-	3.
BB2605	104904	.906	1.320	7.52	.442	-	-	-	-	3.
BB2606	104904	.772	1.320	9.35	.551	-	-	-	-	3.
BB2607	104904	.638	1.320	10.95	.645	-	-	-	-	3.
BB2608	104904	.571	1.320	11.09	.653	+	+	-	-	3.
BB2609	104904	.571	1.265	10.86	.639	+	+	-	-	3.
BB2610	104904	.705	1.265	9.90	.583	-	-	-	-	3.
BB2611	104904	.839	1.265	8.43	.496	-	-	-	-	3.
BB2612	104904	.974	1.265	5.94	.350	-	-	-	-	3.
BB2614	104904	1.041	1.430	4.29	.253	-	-	-	-	3.
BB2615	104904	.906	1.430	6.44	.379	-	-	-	-	3.
BB2616	104904	.772	1.430	9.04	.532	-	-	-	-	3.
BB2617	104904	.638	1.430	11.24	.661	-	-	-	-	3.
BB2618	104904	.571	1.430	11.57	.681	+	+	-	-	3.
BB2619	104904	.571	1.485	11.80	.694	+	+	-	-	3.
BB2620	104904	.705	1.485	10.24	.602	-	-	-	-	3.
BB2621	104904	.839	1.485	7.68	.452	-	-	-	-	3.

SECT B-B TYPE I BLOCK AT STA 1 WINDOW 4 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2624	104904	.579	2.625	24.12	1.420	2.96	.123	-	-	3.
BB2625	104904	.512	2.625	24.34	1.432	-	-	-	-	3.
BB2626	104904	.445	2.625	23.86	1.404	-	-	-	-	3.
BB2627	104904	.310	2.625	22.69	1.336	-	-	-	-	3.
BB2628	104904	.176	2.625	21.43	1.261	-	-	-	-	3.
BB2629	104904	.042	2.625	18.87	1.111	-	-	-	-	3.
BB2630	104904	.713	2.625	23.05	1.357	3.12	.135	-	-	3.
BB2631	104904	.847	2.625	22.01	1.296	3.34	.152	-	-	3.
BB2632	104904	.982	2.625	20.85	1.227	3.85	.185	-	-	3.
BB2633	104904	1.116	2.625	18.10	1.065	4.27	.236	-	-	3.
BB2634	104904	1.049	2.570	18.86	1.110	-	-	-	-	3.
BB2635	104904	.914	2.570	21.59	1.271	-	-	-	-	3.
BB2636	104904	.780	2.570	22.55	1.327	-	-	-	-	3.
BB2637	104904	.646	2.570	23.62	1.390	-	-	-	-	3.
BB2638	104904	.579	2.570	23.96	1.410	2.78	.116	-	-	3.
BB2639	104904	.579	2.515	23.67	1.393	2.81	.119	-	-	3.
BB2640	104904	.713	2.515	22.98	1.352	-	-	-	-	3.
BB2641	104904	.847	2.515	22.03	1.297	-	-	-	-	3.
BB2642	104904	.982	2.515	19.77	1.164	-	-	-	-	3.
BB2643	104904	1.116	2.515	15.03	.885	-	-	-	-	3.
BB2644	104904	1.049	2.680	19.41	1.142	-	-	-	-	3.
BB2645	104904	.914	2.680	21.03	1.238	-	-	-	-	3.
BB2646	104904	.780	2.680	22.12	1.302	-	-	-	-	3.
BB2647	104904	.646	2.680	23.87	1.405	-	-	-	-	3.
BB2648	104904	.579	2.680	24.35	1.433	3.20	.131	-	-	3.
BB2649	104904	.579	2.735	24.54	1.444	3.42	.139	-	-	3.
BB2650	104904	.713	2.735	22.89	1.348	-	-	-	-	3.
BB2651	104904	.847	2.735	20.76	1.222	-	-	-	-	3.
BB2652	104904	.982	2.735	18.92	1.114	-	-	-	-	3.
BB2653	104904	1.116	2.735	14.76	.869	-	-	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT U-B TYPE I BLOCK AT STA 1, WINDOW 4 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb2654	104904	.583	3.875	26.54	1.562	2.28	.086	-	-	3.
bb2655	104904	.516	3.875	26.79	1.577	-	-	-	-	3.
bb2656	104904	.449	3.875	27.69	1.630	-	-	-	-	3.
bb2657	104904	.315	3.875	28.29	1.665	-	-	-	-	3.
bb2658	104904	.180	3.875	27.58	1.623	-	-	-	-	3.
bb2659	104904	.046	3.875	23.05	1.357	-	-	-	-	3.
bb2660	104904	.717	3.875	28.60	1.683	2.15	.075	-	-	3.
bb2661	104904	.851	3.875	29.46	1.734	1.97	.067	-	-	3.
bb2662	104904	.986	3.875	27.63	1.626	2.05	.074	-	-	3.
bb2663	104904	1.120	3.875	23.54	1.385	2.43	.103	-	-	3.
bb2664	104904	1.053	3.820	27.06	1.593	-	-	-	-	3.
bb2665	104904	.918	3.820	29.61	1.755	-	-	-	-	3.
bb2666	104904	.784	3.820	31.59	1.859	-	-	-	-	3.
bb2667	104904	.650	3.820	29.92	1.761	-	-	-	-	3.
bb2668	104904	.583	3.820	29.05	1.710	2.14	.074	-	-	3.
bb2669	104904	.583	3.765	31.20	1.836	1.85	.059	-	-	3.
bb2670	104904	.717	3.765	32.46	1.911	-	-	-	-	3.
bb2671	104904	.851	3.765	30.16	1.775	-	-	-	-	3.
bb2672	104904	.986	3.765	26.11	1.537	-	-	-	-	3.
bb2673	104904	1.120	3.765	21.59	1.271	-	-	-	-	3.
bb2674	104904	1.053	3.931	24.27	1.428	-	-	-	-	3.
bb2675	104904	.918	3.931	25.23	1.485	-	-	-	-	3.
bb2676	104904	.784	3.931	26.15	1.539	-	-	-	-	3.
bb2677	104904	.650	3.931	24.33	1.432	-	-	-	-	3.
bb2678	104904	.583	3.931	23.62	1.390	2.11	.089	-	-	3.
bb2679	104904	.583	3.986	20.26	1.192	1.82	.090	-	-	3.
bb2680	104904	.717	3.986	20.45	1.204	-	-	-	-	3.
bb2681	104904	.851	3.986	21.18	1.246	-	-	-	-	3.
bb2682	104904	.986	3.986	19.58	1.152	-	-	-	-	3.
bb2683	104904	1.120	3.986	18.62	1.096	-	-	-	-	3.

SECT U-B TYPE I BLOCK AT STA 3, WINDOW 5 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb307d	104904	.571	.125	9.07	.534	1.43	.158	-	-	3.
bb307e	104904	.504	.125	9.21	.542	-	-	-	-	3.
bb308a	104904	.437	.125	9.21	.542	-	-	-	-	3.
bb308b	104904	.302	.125	9.21	.542	-	-	-	-	3.
bb308c	104904	.163	.125	9.19	.541	-	-	-	-	3.
bb308d	104904	.034	.125	8.53	.502	-	-	-	-	3.
bb308e	104904	.705	.125	8.66	.510	1.52	.176	-	-	3.
bb308f	104904	.839	.125	8.14	.479	1.41	.173	-	-	3.
bb308g	104904	.974	.125	7.11	.419	1.55	.219	-	-	3.
bb308h	104904	1.100	.125	5.37	.316	+	+	-	-	3.
bb308i	104904	1.041	.070	5.51	.324	-	-	-	-	3.
bb308j	104904	.980	.070	7.01	.413	-	-	-	-	3.
bb3090	104904	.772	.070	7.84	.461	-	-	-	-	3.
bb3091	104904	.638	.070	8.35	.492	-	-	-	-	3.
bb3092	104904	.571	.070	8.55	.503	1.40	.164	-	-	3.
bb3093	104904	.571	.015	7.13	.420	1.37	.192	-	-	3.
bb3094	104904	.705	.015	6.11	.360	-	-	-	-	3.
bb3095	104904	.839	.015	5.76	.349	-	-	-	-	3.
bb3096	104904	.974	.015	4.69	.288	-	-	-	-	3.
bb3097	104904	1.108	.015	3.82	.225	-	-	-	-	3.
bb3098	104904	1.041	.185	5.75	.359	-	-	-	-	3.
bb3099	104904	.906	.185	7.61	.448	-	-	-	-	3.
bb3100	104904	.772	.185	6.63	.508	-	-	-	-	3.
bb3101	104904	.638	.185	9.04	.532	-	-	-	-	3.
bb3102	104904	.571	.185	9.19	.541	1.60	.174	-	-	3.
bb3103	104904	.571	.240	9.41	.554	1.71	.182	-	-	3.
bb3104	104904	.705	.240	9.03	.532	-	-	-	-	3.
bb3105	104904	.839	.240	8.20	.482	-	-	-	-	3.
bb3106	104904	.974	.240	6.18	.364	-	-	-	-	3.
bb3107	104904	1.108	.240	4.10	.242	-	-	-	-	3.

SECT U-B TYPE I BLOCK AT STA 3, WINDOW 5 AT CL ZONE 2

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb3108	104904	.703	.750	8.24	.485	2.08	.252	-	-	3.
bb3109	104904	.676	.750	8.78	.517	2.21	.252	-	-	3.
bb3110	104904	.649	.750	9.14	.538	2.24	.245	-	-	3.
bb3111	104904	.622	.750	9.42	.555	+	+	-	-	3.
bb3112	104904	.595	.750	9.57	.563	2.48	.260	-	-	3.
bb3113	104904	.569	.750	9.56	.562	+	+	-	-	3.
bb3114	104904	.542	.750	9.34	.550	2.30	.246	-	-	3.
bb3115	104904	.515	.750	9.07	.534	2.26	.249	-	-	3.
bb3116	104904	.488	.750	8.11	.477	2.08	.256	-	-	3.
bb3118	104904	.730	.750	6.90	.406	+	+	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES, AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B TYPE I BLOCK AT STA 3, WINDOW 5 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB3048	104904.	.572	1.375	13.43	.791	2.49	.186	-	-	3.
BB3049	104904.	.505	1.375	13.12	.772	-	-	-	-	3.
BB3050	104904.	.438	1.375	12.62	.743	-	-	-	-	3.
BB3051	104904.	.304	1.375	11.27	.664	-	-	-	-	3.
BB3052	104904.	.170	1.375	9.97	.587	-	-	-	-	3.
BB3053	104904.	.035	1.375	8.37	.493	-	-	-	-	3.
BB3054	104904.	.706	1.375	12.88	.758	2.68	.208	-	-	3.
BB3055	104904.	.841	1.375	11.49	.676	2.83	.247	-	-	3.
BB3056	104904.	.975	1.375	10.40	.612	-	-	-	-	3.
BB3057	104904.	1.109	1.375	9.00	.529	+	+	-	-	3.
BB3058	104904.	1.042	1.320	9.97	.587	-	-	-	-	3.
BB3059	104904.	.908	1.320	11.45	.674	-	-	-	-	3.
BB3060	104904.	.774	1.320	12.61	.742	-	-	-	-	3.
BB3061	104904.	.639	1.320	13.28	.782	-	-	-	-	3.
BB3062	104904.	.572	1.320	13.43	.791	2.48	.184	-	-	3.
BB3063	104904.	.572	1.265	13.10	.771	2.37	.181	-	-	3.
BB3064	104904.	.706	1.265	12.71	.743	-	-	-	-	3.
BB3065	104904.	.841	1.265	11.85	.697	-	-	-	-	3.
BB3066	104904.	.975	1.265	10.50	.613	-	-	-	-	3.
BB3067	104904.	1.109	1.265	8.03	.473	-	-	-	-	3.
BB3068	104904.	1.042	1.430	9.72	.572	-	-	-	-	3.
BB3069	104904.	.908	1.430	10.67	.628	-	-	-	-	3.
BB3070	104904.	.774	1.430	12.17	.716	-	-	-	-	3.
BB3071	104904.	.639	1.430	13.56	.798	-	-	-	-	3.
BB3072	104904.	.572	1.430	13.65	.803	2.67	.195	-	-	3.
BB3073	104904.	.572	1.485	13.41	.813	3.37	.244	-	-	3.
BB3074	104904.	.706	1.485	13.04	.783	-	-	-	-	3.
BB3075	104904.	.841	1.485	11.07	.652	-	-	-	-	3.
BB3076	104904.	.975	1.485	9.62	.566	-	-	-	-	3.
BB3077	104904.	1.109	1.485	7.66	.463	-	-	-	-	3.

SECT B-B TYPE I BLOCK AT STA 3, WINDOW 5 AT CL ZONE 4

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB3119	104904.	.723	2.000	11.52	.684	+	+	-	-	3.
BB3120	104904.	.696	2.000	13.77	.810	+	+	-	-	3.
BB3121	104904.	.659	2.000	15.21	.895	3.74	.246	-	-	3.
BB3122	104904.	.643	2.000	16.57	.975	+	+	-	-	3.
BB3123	104904.	.616	2.000	17.84	1.050	+	+	-	-	3.
BB3124	104904.	.589	2.000	18.62	1.096	+	+	-	-	3.
BB3125	104904.	.562	2.000	19.03	1.120	+	+	-	-	3.
BB3126	104904.	.535	2.000	18.97	1.117	+	+	-	-	3.
BB3127	104904.	.508	2.000	18.60	1.095	+	+	-	-	3.
BB3128	104904.	.482	2.000	17.60	1.036	+	+	-	-	3.
BB3129	104904.	.455	2.000	16.33	.961	+	+	-	-	3.
BB3130	104904.	.428	2.000	14.75	.868	+	+	-	-	3.
BB3131	104904.	.401	2.000	12.91	.760	+	+	-	-	3.

SECT B-B TYPE I BLOCK AT STA 3, WINDOW 5 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB3010	104904.	.570	2.625	23.66	1.342	2.30	.097	-	-	3.
BB3019	104904.	.502	2.625	23.42	1.378	-	-	-	-	3.
BB3020	104904.	.435	2.625	23.13	1.362	-	-	-	-	3.
BB3021	104904.	.301	2.625	22.03	1.297	-	-	-	-	3.
BB3022	104904.	.167	2.625	20.79	1.224	-	-	-	-	3.
BB3023	104904.	.033	2.625	17.75	1.045	-	-	-	-	3.
BB3024	104904.	.704	2.625	22.88	1.347	2.77	.121	-	-	3.
BB3025	104904.	.838	2.625	21.94	1.291	2.55	.116	-	-	3.
BB3026	104904.	.972	2.625	20.36	1.199	2.97	.146	-	-	3.
BB3027	104904.	1.106	2.625	17.30	1.018	2.96	.171	-	-	3.
BB3028	104904.	1.039	2.370	18.32	1.079	-	-	-	-	3.
BB3029	104904.	.705	2.570	21.24	1.250	-	-	-	-	3.
BB3030	104904.	.771	2.570	22.39	1.318	-	-	-	-	3.
BB3031	104904.	.637	2.570	23.18	1.364	-	-	-	-	3.
BB3032	104904.	.570	2.570	23.34	1.374	2.50	.107	-	-	3.
BB3033	104904.	.570	2.515	23.82	1.355	2.56	.111	-	-	3.
BB3034	104904.	.704	2.515	22.67	1.334	-	-	-	-	3.
BB3035	104904.	.838	2.515	21.47	1.264	-	-	-	-	3.
BB3036	104904.	.972	2.515	18.85	1.109	-	-	-	-	3.
BB3037	104904.	1.106	2.515	14.11	.831	-	-	-	-	3.
BB3038	104904.	1.039	2.680	18.73	1.102	-	-	-	-	3.
BB3039	104904.	.905	2.680	20.81	1.225	-	-	-	-	3.
BB3040	104904.	.771	2.680	22.31	1.313	-	-	-	-	3.
BB3041	104904.	.637	2.680	23.65	1.392	-	-	-	-	3.
BB3042	104904.	.570	2.680	23.81	1.402	2.48	.104	-	-	3.
BB3043	104904.	.570	2.730	24.03	1.414	2.71	.113	-	-	3.
BB3044	104904.	.704	2.730	22.69	1.348	-	-	-	-	3.
BB3045	104904.	.838	2.730	20.77	1.223	-	-	-	-	3.
BB3046	104904.	.972	2.730	18.87	1.111	-	-	-	-	3.
BB3047	104904.	1.106	2.730	15.31	.901	-	-	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.

* QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT G-B TYPE 1 BLOCK AT STA 3+1400X 5 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UR	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb2986	104904	.494	3.475	28.08	1.636	-	-	-	-	3.
bb2989	104904	.427	3.475	28.85	1.698	-	-	-	-	3.
bb2990	104904	.360	3.475	29.43	1.762	-	-	-	-	3.
bb2992	104904	.226	3.475	31.64	1.862	-	-	-	-	3.
bb2992	104904	.292	3.475	31.21	1.837	-	-	-	-	3.
bb2993	104904	-.343	3.475	29.91	1.760	-	-	-	-	3.
bb2994	104904	.629	3.475	30.12	1.773	-	-	-	-	3.
bb2995	104904	.763	3.475	29.71	1.748	-	-	-	-	3.
bb2996	104904	.897	3.475	26.25	1.545	-	-	-	-	3.
bb2997	104904	1.731	3.475	24.59	1.447	-	-	-	-	3.
bb2998	104904	.964	3.420	25.32	1.490	-	-	-	-	3.
bb2999	104904	.830	3.420	28.50	1.679	-	-	-	-	3.
bb3000	104904	.696	3.420	32.57	1.917	-	-	-	-	3.
bb3001	104904	.561	3.420	25.45	1.675	-	-	-	-	3.
bb3002	104904	.494	3.420	28.75	1.692	-	-	-	-	3.
bb3003	104904	.494	3.765	30.08	1.770	-	-	-	-	3.
bb3004	104904	.629	3.765	29.97	1.764	-	-	-	-	3.
bb3005	104904	.763	3.765	29.61	1.743	-	-	-	-	3.
bb3006	104904	.897	3.765	25.79	1.518	-	-	-	-	3.
bb3007	104904	1.731	3.765	20.26	1.192	-	-	-	-	3.
bb3008	104904	.964	3.930	23.53	1.365	-	-	-	-	3.
bb3009	104904	.833	3.930	24.58	1.447	-	-	-	-	3.
bb3010	104904	.696	3.930	25.12	1.479	-	-	-	-	3.
bb3011	104904	.561	3.930	29.44	1.733	-	-	-	-	3.
bb3012	104904	.494	3.930	28.23	1.681	-	-	-	-	3.
bb3013	104904	.494	3.985	26.64	1.568	-	-	-	-	3.
bb3014	104904	.523	3.985	21.27	1.252	-	-	-	-	3.
bb3015	104904	.763	3.985	21.83	1.265	-	-	-	-	3.
bb3016	104904	.897	3.985	20.63	1.214	-	-	-	-	3.
bb3017	104904	1.731	3.985	20.34	1.180	-	-	-	-	3.

SECT G-B TYPE 1 BLOCK AT STA 2+1400X 5 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UR	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb2846	104904	.563	.125	9.63	.567	1.30	.135	-	-	3.
bb2846	104904	.496	.125	9.75	.574	-	-	-	-	3.
bb2847	104904	.429	.125	9.75	.574	-	-	-	-	3.
bb2848	104904	.294	.125	9.42	.555	-	-	-	-	3.
bb2849	104904	.160	.125	9.19	.541	-	-	-	-	3.
bb2850	104904	.026	.125	8.39	.494	-	-	-	-	3.
bb2851	104904	.697	.125	8.48	.558	1.14	.120	-	-	3.
bb2852	104904	.831	.125	8.96	.527	1.23	.138	-	-	3.
bb2853	104904	.785	.125	8.32	.489	1.05	.126	-	-	3.
bb2854	104904	1.100	.125	7.41	.436	.99	.134	-	-	3.
bb2855	104904	1.333	.070	7.40	.435	-	-	-	-	3.
bb2856	104904	.895	.070	8.16	.480	-	-	-	-	3.
bb2857	104904	.764	.070	8.83	.520	-	-	-	-	3.
bb2858	104904	.630	.070	9.31	.548	-	-	-	-	3.
bb2859	104904	.563	.070	9.35	.551	1.16	.124	-	-	3.
bb2860	104904	.563	.015	8.65	.474	1.16	.143	-	-	3.
bb2861	104904	.697	.015	7.75	.456	-	-	-	-	3.
bb2862	104904	.831	.015	7.13	.420	-	-	-	-	3.
bb2863	104904	.965	.015	6.20	.365	-	-	-	-	3.
bb2864	104904	1.100	.015	5.68	.334	-	-	-	-	3.
bb2865	104904	1.333	.140	7.86	.463	-	-	-	-	3.
bb2866	104904	.894	.140	8.74	.515	-	-	-	-	3.
bb2867	104904	.764	.140	9.42	.555	-	-	-	-	3.
bb2868	104904	.630	.140	9.52	.578	-	-	-	-	3.
bb2869	104904	.563	.180	9.94	.585	1.10	.111	-	-	3.
bb2870	104904	.563	.235	10.02	.590	1.21	.121	-	-	3.
bb2871	104904	.597	.235	9.69	.570	-	-	-	-	3.
bb2872	104904	.831	.235	9.04	.532	-	-	-	-	3.
bb2873	104904	.965	.235	7.96	.468	-	-	-	-	3.
bb2874	104904	1.100	.235	6.22	.366	-	-	-	-	3.

SECT G-B TYPE 1 BLOCK AT STA 2+1400X 5 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UR	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb2886	104904	.580	1.375	14.51	.854	2.10	.145	-	-	3.
bb2887	104904	.513	1.375	14.35	.845	-	-	-	-	3.
bb2888	104904	.446	1.375	14.10	.830	-	-	-	-	3.
bb2889	104904	.312	1.375	13.08	.770	-	-	-	-	3.
bb2890	104904	.178	1.375	12.00	.706	-	-	-	-	3.
bb2891	104904	.043	1.375	10.32	.607	-	-	-	-	3.
bb2892	104904	.714	1.375	14.04	.826	2.23	.159	-	-	3.
bb2893	104904	.849	1.375	13.10	.771	2.55	.194	-	-	3.
bb2894	104904	.983	1.375	12.03	.708	2.95	.245	-	-	3.
bb2895	104904	1.117	1.375	10.57	.622	2.60	.246	-	-	3.
bb2896	104904	1.050	1.320	11.20	.659	-	-	-	-	3.
bb2897	104904	.916	1.320	12.88	.758	-	-	-	-	3.
bb2898	104904	.782	1.320	13.85	.815	-	-	-	-	3.
bb2899	104904	.647	1.320	14.44	.850	-	-	-	-	3.
bb2900	104904	.580	1.320	14.47	.852	2.06	.142	-	-	3.
bb2901	104904	.580	1.265	14.32	.843	2.08	.146	-	-	3.
bb2902	104904	.714	1.265	14.08	.829	-	-	-	-	3.
bb2903	104904	.849	1.265	13.31	.784	-	-	-	-	3.
bb2904	104904	.983	1.265	11.69	.689	-	-	-	-	3.
bb2905	104904	1.117	1.265	8.85	.521	-	-	-	-	3.
bb2906	104904	1.050	1.430	11.27	.664	-	-	-	-	3.
bb2907	104904	.916	1.430	12.41	.730	-	-	-	-	3.
bb2908	104904	.782	1.430	13.65	.803	-	-	-	-	3.
bb2909	104904	.647	1.430	14.46	.851	-	-	-	-	3.
bb2910	104904	.580	1.430	14.64	.862	2.31	.158	-	-	3.
bb2911	104904	.580	1.485	14.72	.867	2.62	.178	-	-	3.
bb2912	104904	.714	1.485	14.08	.829	-	-	-	-	3.
bb2913	104904	.849	1.485	12.48	.735	-	-	-	-	3.
bb2914	104904	.983	1.485	11.25	.662	-	-	-	-	3.
bb2915	104904	1.117	1.485	9.25	.544	-	-	-	-	3.

HYDRAULIC DIAMETER = 1.759 INCHES. AVERAGE VELOCITY: UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)
 SECT B-D TYPE 1 BLOCK AT STA 2, WINDOW 5 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2920	104904	.560	2.625	22.91	1.348	2.12	.092	-	-	3.
BB2929	104904	.493	2.625	22.80	1.342	-	-	-	-	3.
BB2930	104904	.426	2.625	22.40	1.319	-	-	-	-	3.
BB2931	104904	.292	2.625	21.47	1.264	-	-	-	-	3.
BB2932	104904	.157	2.625	20.16	1.187	-	-	-	-	3.
BB2933	104904	.023	2.625	17.47	1.028	-	-	-	-	3.
BB2934	104904	.694	2.625	22.50	1.324	1.97	.087	-	-	3.
BB2935	104904	.829	2.625	21.64	1.274	2.17	.100	-	-	3.
BB2936	104904	.963	2.625	20.26	1.192	2.36	.116	-	-	3.
BB2937	104904	1.097	2.625	17.75	1.045	2.64	.149	-	-	3.
BB2938	104904	1.030	2.570	18.61	1.095	-	-	-	-	3.
BB2939	104904	.896	2.570	21.10	1.242	-	-	-	-	3.
BB2940	104904	.761	2.570	22.11	1.301	-	-	-	-	3.
BB2941	104904	.627	2.570	22.67	1.334	-	-	-	-	3.
BB2942	104904	.560	2.570	22.75	1.339	2.02	.089	-	-	3.
BB2943	104904	.560	2.515	22.49	1.324	2.07	.092	-	-	3.
BB2944	104904	.694	2.515	22.31	1.313	-	-	-	-	3.
BB2945	104904	.829	2.515	21.41	1.260	-	-	-	-	3.
BB2946	104904	.963	2.515	19.09	1.124	-	-	-	-	3.
BB2947	104904	1.097	2.515	14.76	.869	-	-	-	-	3.
BB2948	104904	1.030	2.680	19.17	1.128	-	-	-	-	3.
BB2949	104904	.896	2.680	20.61	1.225	-	-	-	-	3.
BB2950	104904	.761	2.680	21.95	1.292	-	-	-	-	3.
BB2951	104904	.627	2.680	22.99	1.353	-	-	-	-	3.
BB2952	104904	.560	2.680	23.16	1.363	2.05	.089	-	-	3.
BB2953	104904	.560	2.735	23.34	1.374	2.14	.091	-	-	3.
BB2954	104904	.694	2.735	22.50	1.324	-	-	-	-	3.
BB2955	104904	.829	2.735	20.76	1.222	-	-	-	-	3.
BB2956	104904	.963	2.735	19.11	1.125	-	-	-	-	3.
BB2957	104904	1.097	2.735	15.87	.934	-	-	-	-	3.

SECT B-B TYPE 1 BLOCK AT STA 2, WINDOW 5 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2958	104904	.614	3.675	29.31	1.725	2.57	.088	-	-	3.
BB2959	104904	.551	3.675	28.87	1.699	-	-	-	-	3.
BB2960	104904	.484	3.675	28.46	1.675	-	-	-	-	3.
BB2961	104904	.349	3.675	29.26	1.723	-	-	-	-	3.
BB2962	104904	.215	3.675	30.54	1.798	-	-	-	-	3.
BB2963	104904	.031	3.675	30.29	1.783	-	-	-	-	3.
BB2964	104904	.752	3.675	29.51	1.737	2.22	.075	-	-	3.
BB2965	104904	.886	3.675	29.13	1.715	1.87	.064	-	-	3.
BB2966	104904	1.020	3.675	24.00	1.413	1.60	.067	-	-	3.
BB2967	104904	1.155	3.675	18.78	1.105	2.18	.116	-	-	3.
BB2968	104904	1.088	3.820	22.00	1.295	1.84	.084	-	-	3.
BB2969	104904	.963	3.820	27.77	1.635	2.34	.084	-	-	3.
BB2970	104904	.819	3.820	28.95	1.704	-	-	-	-	3.
BB2971	104904	.685	3.820	29.73	1.750	-	-	-	-	3.
BB2972	104904	.618	3.820	29.67	1.738	2.22	.074	-	-	3.
BB2973	104904	.618	3.765	28.91	1.701	1.93	.067	-	-	3.
BB2974	104904	.752	3.765	28.49	1.677	-	-	-	-	3.
BB2975	104904	.886	3.765	25.20	1.483	-	-	-	-	3.
BB2976	104904	1.020	3.765	20.60	1.213	-	-	-	-	3.
BB2977	104904	1.155	3.765	15.43	.908	-	-	-	-	3.
BB2978	104904	1.083	3.930	21.08	1.241	-	-	-	-	3.
BB2979	104904	.953	3.930	27.05	1.592	-	-	-	-	3.
BB2980	104904	.819	3.930	28.31	1.666	-	-	-	-	3.
BB2981	104904	.685	3.930	28.17	1.658	-	-	-	-	3.
BB2982	104904	.618	3.930	27.52	1.620	2.33	.085	-	-	3.
BB2983	104904	.618	3.980	24.48	1.441	2.89	.118	-	-	3.
BB2984	104904	.752	3.980	26.28	1.547	-	-	-	-	3.
BB2985	104904	.886	3.980	25.32	1.490	-	-	-	-	3.
BB2986	104904	1.020	3.980	19.57	1.152	2.53	.104	-	-	3.
BB2987	104904	1.155	3.980	16.75	.986	-	-	-	-	3.

SECT B-B TYPE 1 BLOCK AT STA 1, WINDOW 5 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2416	104904	.576	.125	10.86	.639	1.05	.097	-	-	3.
BB2417	104904	.509	.125	10.76	.633	-	-	-	-	3.
BB2418	104904	.375	.125	10.38	.611	-	-	-	-	3.
BB2419	104904	.241	.125	9.59	.565	-	-	-	-	3.
BB2420	104904	.106	.125	8.95	.527	-	-	-	-	3.
BB2421	104904	.028	.125	4.34	.256	-	-	-	-	3.
BB2422	104904	.710	.125	10.71	.631	1.04	.097	-	-	3.
BB2423	104904	.845	.125	10.34	.609	1.12	.109	-	-	3.
BB2424	104904	.979	.125	9.77	.575	1.24	.107	-	-	3.
BB2425	104904	1.113	.125	9.04	.532	1.19	.132	-	-	3.
BB2426	104904	1.046	.070	8.76	.515	-	-	-	-	3.
BB2427	104904	.912	.070	9.50	.559	-	-	-	-	3.
BB2428	104904	.778	.070	10.14	.597	-	-	-	-	3.
BB2429	104904	.643	.070	10.41	.613	-	-	-	-	3.
BB2430	104904	.576	.070	10.41	.613	1.04	.099	-	-	3.
BB2431	104904	.576	.015	8.95	.527	.97	.109	-	-	3.
BB2432	104904	.710	.015	8.62	.519	-	-	-	-	3.
BB2433	104904	.845	.015	8.28	.487	-	-	-	-	3.
BB2435	104904	1.046	.100	9.56	.562	-	-	-	-	3.
BB2436	104904	.912	.180	10.20	.600	-	-	-	-	3.
BB2437	104904	.778	.180	10.64	.626	-	-	-	-	3.
BB2438	104904	.643	.180	10.88	.640	-	-	-	-	3.
BB2439	104904	.576	.180	10.98	.640	1.14	.105	-	-	3.
BB2440	104904	.576	.235	10.98	.646	1.11	.102	-	-	3.
BB2441	104904	.710	.235	10.80	.635	-	-	-	-	3.
BB2442	104904	.845	.235	10.40	.612	-	-	-	-	3.
BB2443	104904	.979	.235	9.82	.573	-	-	-	-	3.
BB2444	104904	1.113	.235	8.09	.476	-	-	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. * TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT D-B TYPE I BLOCK AT STA 1, WINDOW 5 AT CL ZONE 2

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2406	104904	.702	.750	10.14	.597	1.54	.151	-	-	3.
BB2407	104904	.675	.750	11.20	.659	1.45	.129	-	-	3.
BB2408	104904	.648	.750	11.87	.699	1.33	.112	-	-	3.
BB2409	104904	.621	.750	12.20	.718	1.39	.114	-	-	3.
BB2410	104904	.594	.750	12.35	.727	1.49	.121	-	-	3.
BB2411	104904	.567	.750	12.35	.727	1.50	.122	-	-	3.
BB2412	104904	.541	.750	12.17	.716	1.45	.119	-	-	3.
BB2413	104904	.514	.750	11.81	.695	1.36	.115	-	-	3.
BB2414	104904	.487	.750	11.09	.653	1.53	.138	-	-	3.
BB2415	104904	.460	.750	10.14	.597	1.44	.142	-	-	3.

SECT U-B TYPE I BLOCK AT STA 1, WINDOW 5 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2375	104904	.576	1.375	15.65	.921	1.76	.113	-	-	3.
BB2376	104904	.509	1.375	15.60	.918	1.57	.108	-	-	3.
BB2377	104904	.375	1.375	14.83	.873	-	-	-	-	3.
BB2378	104904	.241	1.375	14.02	.825	-	-	-	-	3.
BB2379	104904	.106	1.375	12.84	.756	-	-	-	-	3.
BB2380	104904	-.028	1.375	9.82	.578	-	-	-	-	3.
BB2381	104904	.710	1.375	15.31	.901	1.74	.114	-	-	3.
BB2382	104904	.845	1.375	14.55	.857	1.69	.116	-	-	3.
BB2383	104904	.979	1.375	13.65	.803	1.62	.119	-	-	3.
BB2384	104904	1.113	1.375	12.26	.722	1.66	.135	-	-	3.
BB2385	104904	1.046	1.430	12.90	.759	-	-	-	-	3.
BB2386	104904	.912	1.430	13.57	.822	-	-	-	-	3.
BB2387	104904	.778	1.430	14.89	.876	-	-	-	-	3.
BB2388	104904	.643	1.430	15.72	.926	-	-	-	-	3.
BB2389	104904	.576	1.430	15.77	.928	-	-	-	-	3.
BB2390	104904	.509	1.430	15.63	.920	1.71	.110	-	-	3.
BB2391	104904	.509	1.485	15.69	.923	1.95	.124	-	-	3.
BB2392	104904	.643	1.485	15.76	.928	1.81	.115	-	-	3.
BB2393	104904	.778	1.485	14.72	.867	1.72	.117	-	-	3.
BB2394	104904	.912	1.485	13.60	.801	-	-	-	-	3.
BB2395	104904	1.046	1.485	12.18	.717	-	-	-	-	3.
BB2396	104904	.979	1.320	13.46	.792	-	-	-	-	3.
BB2397	104904	.845	1.320	14.67	.864	-	-	-	-	3.
BB2398	104904	.710	1.320	15.27	.899	-	-	-	-	3.
BB2399	104904	.576	1.320	15.59	.918	-	-	-	-	3.
BB2400	104904	.509	1.320	15.45	.909	1.61	.104	-	-	3.
BB2401	104904	.509	1.265	15.37	.904	1.51	.098	-	-	3.
BB2402	104904	.643	1.265	15.31	.901	-	-	-	-	3.
BB2403	104904	.778	1.265	14.91	.878	-	-	-	-	3.
BB2404	104904	.912	1.265	14.04	.826	-	-	-	-	3.
BB2405	104904	1.046	1.265	11.57	.681	-	-	-	-	3.

SECT U-B TYPE I BLOCK AT STA 1, WINDOW 5 AT CL ZONE 4

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2363	104904	.702	2.000	14.26	.839	-	-	-	-	3.
BB2364	104904	.675	2.000	15.78	.929	2.65	.168	-	-	3.
BB2365	104904	.648	2.000	17.05	1.003	2.83	.166	-	-	3.
BB2366	104904	.621	2.000	17.89	1.053	3.02	.169	-	-	3.
BB2367	104904	.594	2.000	18.38	1.082	3.23	.176	-	-	3.
BB2368	104904	.567	2.000	18.59	1.094	3.30	.178	-	-	3.
BB2369	104904	.541	2.000	18.53	1.091	3.16	.170	-	-	3.
BB2370	104904	.514	2.000	18.09	1.065	3.10	.172	-	-	3.
BB2371	104904	.487	2.000	17.25	1.015	3.03	.176	-	-	3.
BB2372	104904	.460	2.000	16.06	.945	2.78	.173	-	-	3.
BB2373	104904	.433	2.000	14.41	.848	2.56	.178	-	-	3.
BB2374	104904	.541	2.000	11.14	.656	-	-	-	-	3.

HYDRAULIC DIAMETER: D = .759 INCHES. AVERAGE VELOCITY: UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. * TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B TYPE I BLOCK AT STA 1+WINDOW 5 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2332	104904.	.509	2.625	22.73	1.338	1.89	.083	-	-	3.
BB2333	104904.	.442	2.625	22.39	1.318	-	-	-	-	3.
BB2334	104904.	.308	2.625	21.49	1.265	-	-	-	-	3.
BB2335	104904.	.174	2.625	20.14	1.185	-	-	-	-	3.
BB2336	104904.	.039	2.625	17.86	1.051	-	-	-	-	3.
BB2337	104904.	.643	2.625	22.62	1.331	2.03	.090	-	-	3.
BB2338	104904.	.773	2.625	21.76	1.281	2.04	.094	-	-	3.
BB2339	104904.	.912	2.625	20.46	1.204	2.24	.110	-	-	3.
BB2340	104904.	1.046	2.625	18.50	1.089	2.33	.126	-	-	3.
BB2341	104904.	1.180	2.625	15.04	.885	2.06	.137	-	-	3.
BB2342	104904.	1.113	2.680	17.12	1.008	-	-	-	-	3.
BB2343	104904.	.979	2.680	19.47	1.146	-	-	-	-	3.
BB2344	104904.	.845	2.680	28.96	1.234	-	-	-	-	3.
BB2345	104904.	.710	2.680	22.24	1.309	-	-	-	-	3.
BB2346	104904.	.576	2.680	23.00	1.354	-	-	-	-	3.
BB2347	104904.	.509	2.680	22.85	1.345	1.93	.084	-	-	3.
BB2348	104904.	.509	2.735	22.99	1.353	1.97	.086	-	-	3.
BB2349	104904.	.643	2.735	22.81	1.343	-	-	-	-	3.
BB2350	104904.	.773	2.735	21.18	1.246	-	-	-	-	3.
BB2351	104904.	.912	2.735	19.47	1.146	-	-	-	-	3.
BB2352	104904.	1.046	2.735	16.99	1.000	-	-	-	-	3.
BB2353	104904.	.979	2.570	19.16	1.128	-	-	-	-	3.
BB2354	104904.	.845	2.570	21.21	1.249	-	-	-	-	3.
BB2355	104904.	.710	2.570	22.13	1.303	-	-	-	-	3.
BB2356	104904.	.576	2.570	22.62	1.331	-	-	-	-	3.
BB2357	104904.	.509	2.570	22.54	1.326	1.94	.086	-	-	3.
BB2358	104904.	.509	2.515	22.30	1.312	2.07	.093	-	-	3.
BB2359	104904.	.643	2.515	22.21	1.308	-	-	-	-	3.
BB2360	104904.	.773	2.515	21.59	1.271	-	-	-	-	3.
BB2361	104904.	.912	2.515	19.84	1.168	-	-	-	-	3.
BB2362	104904.	1.046	2.515	18.67	1.099	-	-	-	-	3.

SECT B-B TYPE I BLOCK AT STA 1+WINDOW 5 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2301	104904.	.537	3.875	24.36	1.434	2.07	.085	-	-	3.
BB2302	104904.	.672	3.875	25.05	1.475	2.16	.086	-	-	3.
BB2303	104904.	.806	3.875	25.55	1.504	1.88	.073	-	-	3.
BB2304	104904.	.940	3.875	24.47	1.440	1.89	.077	-	-	3.
BB2305	104904.	1.074	3.875	22.44	1.321	1.65	.073	-	-	3.
BB2306	104904.	.470	3.875	24.72	1.455	2.24	.091	-	-	3.
BB2307	104904.	.403	3.875	25.16	1.481	2.08	.083	-	-	3.
BB2308	104904.	.269	3.875	24.92	1.467	1.86	.074	-	-	3.
BB2309	104904.	.135	3.875	23.24	1.368	-	-	-	-	3.
BB2310	104904.	.000	3.875	27.44	1.615	-	-	-	-	3.
BB2311	104904.	-.134	3.875	21.83	1.285	-	-	-	-	3.
BB2312	104904.	.537	3.820	25.85	1.522	2.10	.081	-	-	3.
BB2313	104904.	.604	3.820	26.03	1.532	-	-	-	-	3.
BB2314	104904.	.739	3.820	26.70	1.572	-	-	-	-	3.
BB2315	104904.	.873	3.820	25.77	1.517	-	-	-	-	3.
BB2316	104904.	1.007	3.820	23.43	1.379	-	-	-	-	3.
BB2317	104904.	1.074	3.765	19.23	1.132	-	-	-	-	3.
BB2318	104904.	.940	3.765	23.34	1.374	-	-	-	-	3.
BB2319	104904.	.806	3.765	26.78	1.576	-	-	-	-	3.
BB2320	104904.	.672	3.765	27.49	1.618	-	-	-	-	3.
BB2321	104904.	.537	3.765	27.28	1.606	2.07	.076	-	-	3.
BB2322	104904.	.537	3.930	22.52	1.326	2.10	.093	-	-	3.
BB2323	104904.	.604	3.930	22.71	1.337	-	-	-	-	3.
BB2324	104904.	.739	3.930	23.75	1.398	-	-	-	-	3.
BB2325	104904.	.873	3.930	23.39	1.377	-	-	-	-	3.
BB2326	104904.	1.007	3.930	22.09	1.300	-	-	-	-	3.
BB2327	104904.	1.074	3.985	17.72	1.043	-	-	-	-	3.
BB2328	104904.	.940	3.985	19.05	1.121	-	-	-	-	3.
BB2329	104904.	.806	3.985	20.05	1.180	-	-	-	-	3.
BB2330	104904.	.672	3.985	19.90	1.171	-	-	-	-	3.
BB2331	104904.	.537	3.985	19.09	1.124	1.88	.099	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B TYPE II BLOCK AT STA 3, WINDOW 3 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB1442	104904.	.576	.125	16.58	.976	1.10	.067	-	-	3.
BB1443	104904.	.710	.125	16.68	.982	1.02	.061	-	-	3.
BB1444	104904.	.845	.125	16.67	.981	.88	.053	-	-	3.
BB1445	104904.	.979	.125	15.64	.921	.75	.048	-	-	3.
BB1446	104904.	1.113	.125	13.83	.814	.84	.060	-	-	3.
BB1447	104904.	.576	.070	15.28	.900	1.19	.078	-	-	3.
BB1448	104904.	.576	.015	12.98	.764	1.16	.090	-	-	3.
BB1449	104904.	.576	.180	17.68	1.041	.93	.053	-	-	3.
BB1450	104904.	.576	.235	18.46	1.086	.80	.043	-	-	3.

SECT B-B TYPE II BLOCK AT STA 3, WINDOW 3 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB1433	104904.	.578	1.375	21.31	1.254	.68	.032	-	-	3.
BB1434	104904.	.712	1.375	20.77	1.223	.79	.036	-	-	3.
BB1435	104904.	.848	1.375	19.59	1.153	.88	.045	-	-	3.
BB1436	104904.	.980	1.375	18.28	1.076	.90	.049	-	-	3.
BB1437	104904.	1.114	1.375	16.09	.947	.97	.060	-	-	3.
BB1438	104904.	.578	1.320	20.94	1.232	.74	.035	-	-	3.
BB1439	104904.	.578	1.265	20.45	1.204	.81	.040	-	-	3.
BB1440	104904.	.578	1.430	21.37	1.258	.65	.030	-	-	3.
BB1441	104904.	.578	1.485	21.10	1.242	.74	.035	-	-	3.

SECT B-B TYPE II BLOCK AT STA 3, WINDOW 3 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB1415	104904.	.576	2.025	21.61	1.272	.64	.029	-	-	3.
BB1416	104904.	.710	2.025	20.76	1.222	.85	.041	-	-	3.
BB1417	104904.	.845	2.625	19.46	1.145	.96	.050	-	-	3.
BB1418	104904.	.979	2.625	18.10	1.065	.95	.053	-	-	3.
BB1419	104904.	1.113	2.625	16.22	.955	.96	.059	-	-	3.
BB1420	104904.	.576	2.570	21.44	1.262	.73	.034	-	-	3.
BB1421	104904.	.576	2.515	20.96	1.234	.90	.038	-	-	3.
BB1422	104904.	.576	2.680	21.47	1.264	.70	.033	-	-	3.
BB1423	104904.	.576	2.735	20.88	1.229	.79	.038	-	-	3.

SECT B-B TYPE II BLOCK AT STA 3, WINDOW 3 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB1424	104904.	.576	3.875	16.86	.992	1.08	.064	-	-	3.
BB1425	104904.	.710	3.875	17.82	1.049	.88	.049	-	-	3.
BB1426	104904.	.845	3.875	17.29	1.017	.87	.050	-	-	3.
BB1427	104904.	.979	3.875	15.94	.938	.83	.052	-	-	3.
BB1428	104904.	1.113	3.875	14.39	.847	.78	.054	-	-	3.
BB1429	104904.	.576	3.820	17.63	1.038	.94	.053	-	-	3.
BB1430	104904.	.576	3.765	18.34	1.079	.76	.041	-	-	3.
BB1431	104904.	.576	3.930	15.69	.923	1.15	.073	-	-	3.
BB1432	104904.	.576	3.985	13.18	.776	1.12	.085	-	-	3.

SECT B-B TYPE II BLOCK AT STA 2, WINDOW 3 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB770	104904.	.582	.125	15.77	.928	1.16	.073	-	-	3.
BB771	104904.	.649	.125	16.08	.947	1.18	.073	-	-	3.
BB772	104904.	.716	.125	16.70	.983	1.08	.064	-	-	3.
BB773	104904.	.783	.125	16.92	.996	1.00	.059	-	-	3.
BB774	104904.	.850	.125	16.64	.980	.93	.056	-	-	3.
BB775	104904.	.917	.125	16.00	.942	.93	.058	-	-	3.
BB776	104904.	.984	.125	15.34	.903	.82	.053	-	-	3.
BB777	104904.	1.051	.125	14.76	.869	.76	.052	-	-	3.
BB778	104904.	1.118	.125	13.56	.798	.84	.062	-	-	3.
BB779	104904.	1.186	.125	10.43	.614	1.05	.101	-	-	3.
BB780	104904.	1.118	.070	12.77	.751	.84	.066	-	-	3.
BB781	104904.	.984	.070	13.74	.809	1.00	.073	-	-	3.
BB782	104904.	.850	.070	15.16	.893	1.04	.069	-	-	3.
BB783	104904.	.716	.070	15.28	.900	1.23	.080	-	-	3.
BB784	104904.	.582	.070	14.32	.843	1.12	.078	-	-	3.
BB785	104904.	.582	.015	11.01	.648	.98	.089	-	-	3.
BB786	104904.	.716	.015	11.66	.686	1.06	.091	-	-	3.
BB787	104904.	.850	.015	11.44	.673	.92	.080	-	-	3.
BB788	104904.	.984	.015	10.06	.592	.89	.088	-	-	3.
BB789	104904.	1.118	.015	9.00	.529	.63	.070	-	-	3.
BB790	104904.	.582	.180	16.86	.992	1.02	.061	-	-	3.
BB791	104904.	.716	.180	17.53	1.032	.95	.054	-	-	3.
BB792	104904.	.850	.180	17.13	1.008	.77	.045	-	-	3.
BB793	104904.	.984	.180	15.27	.899	.87	.057	-	-	3.
BB794	104904.	1.118	.180	13.29	.782	.77	.058	-	-	3.
BB795	104904.	1.118	.230	11.24	.661	.77	.069	-	-	3.
BB796	104904.	.984	.230	13.93	.820	1.02	.073	-	-	3.
BB797	104904.	.850	.230	16.73	.984	.97	.058	-	-	3.
BB798	104904.	.716	.230	18.12	1.067	.79	.044	-	-	3.
BB799	104904.	.582	.230	17.16	1.046	.99	.056	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B, TYPE II BLOCK AT STA 2+WINDOW 3 AT CL ZONE 3											
RUN	REYNOLDS	Z	Y	U	U/UB	UP	UP/UB	V	V/U	FT/SEC	CUTOFF
BB680	104904	1.592	1.375	21.22	1.249	1.76	0.36	-	-	1.07	0.58
BB681	104904	1.599	1.375	21.26	1.251	1.70	0.33	-	-	1.07	0.58
BB682	104904	1.727	1.375	20.79	1.224	1.81	0.39	-	-	1.07	0.58
BB683	104904	1.794	1.375	20.04	1.180	1.95	0.48	-	-	1.07	0.58
BB684	104904	1.861	1.375	19.09	1.124	2.06	0.56	-	-	1.07	0.58
BB685	104904	1.928	1.375	18.36	1.081	2.19	0.60	-	-	1.07	0.58
BB686	104904	1.995	1.375	17.82	1.049	2.30	0.56	-	-	1.07	0.58
BB687	104904	2.062	1.375	17.30	1.018	2.42	0.53	-	-	1.07	0.58
BB688	104904	2.129	1.375	16.83	0.987	2.53	0.50	-	-	1.07	0.58
BB689	104904	2.196	1.375	16.37	0.957	2.64	0.46	-	-	1.07	0.58
BB690	104904	2.263	1.375	15.90	0.927	2.75	0.43	-	-	1.07	0.58
BB691	104904	2.330	1.375	15.43	0.897	2.86	0.40	-	-	1.07	0.58
BB692	104904	2.397	1.375	14.96	0.867	2.97	0.37	-	-	1.07	0.58
BB693	104904	2.464	1.375	14.49	0.837	3.08	0.34	-	-	1.07	0.58
BB694	104904	2.531	1.375	14.02	0.807	3.19	0.31	-	-	1.07	0.58
BB695	104904	2.598	1.375	13.55	0.777	3.30	0.28	-	-	1.07	0.58
BB696	104904	2.665	1.375	13.08	0.747	3.41	0.25	-	-	1.07	0.58
BB697	104904	2.732	1.375	12.61	0.717	3.52	0.22	-	-	1.07	0.58
BB698	104904	2.799	1.375	12.14	0.687	3.63	0.19	-	-	1.07	0.58
BB699	104904	2.866	1.375	11.67	0.657	3.74	0.16	-	-	1.07	0.58
BB700	104904	2.933	1.375	11.20	0.627	3.85	0.13	-	-	1.07	0.58
BB701	104904	3.000	1.375	10.73	0.597	3.96	0.10	-	-	1.07	0.58
BB702	104904	3.067	1.375	10.26	0.567	4.07	0.07	-	-	1.07	0.58
BB703	104904	3.134	1.375	9.79	0.537	4.18	0.04	-	-	1.07	0.58
BB704	104904	3.201	1.375	9.32	0.507	4.29	0.01	-	-	1.07	0.58
BB705	104904	3.268	1.375	8.85	0.477	4.40	0.00	-	-	1.07	0.58
BB706	104904	3.335	1.375	8.38	0.447	4.51	0.00	-	-	1.07	0.58
BB707	104904	3.402	1.375	7.91	0.417	4.62	0.00	-	-	1.07	0.58
BB708	104904	3.469	1.375	7.44	0.387	4.73	0.00	-	-	1.07	0.58
BB709	104904	3.536	1.375	6.97	0.357	4.84	0.00	-	-	1.07	0.58
BB710	104904	3.603	1.375	6.50	0.327	4.95	0.00	-	-	1.07	0.58
BB711	104904	3.670	1.375	6.03	0.297	5.06	0.00	-	-	1.07	0.58
BB712	104904	3.737	1.375	5.56	0.267	5.17	0.00	-	-	1.07	0.58
BB713	104904	3.804	1.375	5.09	0.237	5.28	0.00	-	-	1.07	0.58
BB714	104904	3.871	1.375	4.62	0.207	5.39	0.00	-	-	1.07	0.58
BB715	104904	3.938	1.375	4.15	0.177	5.50	0.00	-	-	1.07	0.58
BB716	104904	4.005	1.375	3.68	0.147	5.61	0.00	-	-	1.07	0.58
BB717	104904	4.072	1.375	3.21	0.117	5.72	0.00	-	-	1.07	0.58
BB718	104904	4.139	1.375	2.74	0.087	5.83	0.00	-	-	1.07	0.58
BB719	104904	4.206	1.375	2.27	0.057	5.94	0.00	-	-	1.07	0.58
BB720	104904	4.273	1.375	1.80	0.027	6.05	0.00	-	-	1.07	0.58
BB721	104904	4.340	1.375	1.33	0.000	6.16	0.00	-	-	1.07	0.58
BB722	104904	4.407	1.375	0.86	0.000	6.27	0.00	-	-	1.07	0.58
BB723	104904	4.474	1.375	0.39	0.000	6.38	0.00	-	-	1.07	0.58
BB724	104904	4.541	1.375	0.00	0.000	6.49	0.00	-	-	1.07	0.58
BB725	104904	4.608	1.375	0.00	0.000	6.60	0.00	-	-	1.07	0.58
BB726	104904	4.675	1.375	0.00	0.000	6.71	0.00	-	-	1.07	0.58
BB727	104904	4.742	1.375	0.00	0.000	6.82	0.00	-	-	1.07	0.58
BB728	104904	4.809	1.375	0.00	0.000	6.93	0.00	-	-	1.07	0.58
BB729	104904	4.876	1.375	0.00	0.000	7.04	0.00	-	-	1.07	0.58
BB730	104904	4.943	1.375	0.00	0.000	7.15	0.00	-	-	1.07	0.58
BB731	104904	5.010	1.375	0.00	0.000	7.26	0.00	-	-	1.07	0.58
BB732	104904	5.077	1.375	0.00	0.000	7.37	0.00	-	-	1.07	0.58
BB733	104904	5.144	1.375	0.00	0.000	7.48	0.00	-	-	1.07	0.58
BB734	104904	5.211	1.375	0.00	0.000	7.59	0.00	-	-	1.07	0.58
BB735	104904	5.278	1.375	0.00	0.000	7.70	0.00	-	-	1.07	0.58
BB736	104904	5.345	1.375	0.00	0.000	7.81	0.00	-	-	1.07	0.58
BB737	104904	5.412	1.375	0.00	0.000	7.92	0.00	-	-	1.07	0.58
BB738	104904	5.479	1.375	0.00	0.000	8.03	0.00	-	-	1.07	0.58
BB739	104904	5.546	1.375	0.00	0.000	8.14	0.00	-	-	1.07	0.58
SECT B-B, TYPE II BLOCK AT STA 2+WINDOW 3 AT CL ZONE 5											
BB686	104904	1.029	1.369	18.07	1.064	1.05	0.58	-	-	1.07	0.58
BB687	104904	1.096	1.369	17.60	1.034	1.16	0.56	-	-	1.07	0.58
BB688	104904	1.163	1.369	17.13	1.004	1.27	0.53	-	-	1.07	0.58
BB689	104904	1.230	1.369	16.66	0.974	1.38	0.50	-	-	1.07	0.58
BB690	104904	1.297	1.369	16.19	0.944	1.49	0.47	-	-	1.07	0.58
BB691	104904	1.364	1.369	15.72	0.914	1.60	0.44	-	-	1.07	0.58
BB692	104904	1.431	1.369	15.25	0.884	1.71	0.41	-	-	1.07	0.58
BB693	104904	1.498	1.369	14.78	0.854	1.82	0.38	-	-	1.07	0.58
BB694	104904	1.565	1.369	14.31	0.824	1.93	0.35	-	-	1.07	0.58
BB695	104904	1.632	1.369	13.84	0.794	2.04	0.32	-	-	1.07	0.58
BB696	104904	1.699	1.369	13.37	0.764	2.15	0.29	-	-	1.07	0.58
BB697	104904	1.766	1.369	12.90	0.734	2.26	0.26	-	-	1.07	0.58
BB698	104904	1.833	1.369	12.43	0.704	2.37	0.23	-	-	1.07	0.58
BB699	104904	1.900	1.369	11.96	0.674	2.48	0.20	-	-	1.07	0.58
BB700	104904	1.967	1.369	11.49	0.644	2.59	0.17	-	-	1.07	0.58
BB701	104904	2.034	1.369	11.02	0.614	2.70	0.14	-	-	1.07	0.58
BB702	104904	2.101	1.369	10.55	0.584	2.81	0.11	-	-	1.07	0.58
BB703	104904	2.168	1.369	10.08	0.554	2.92	0.08	-	-	1.07	0.58
BB704	104904	2.235	1.369	9.61	0.524	3.03	0.05	-	-	1.07	0.58
BB705	104904	2.302	1.369	9.14	0.494	3.14	0.02	-	-	1.07	0.58
BB706	104904	2.369	1.369	8.67	0.464	3.25	0.00	-	-	1.07	0.58
BB707	104904	2.436	1.369	8.20	0.434	3.36	0.00	-	-	1.07	0.58
BB708	104904	2.503	1.369	7.73	0.404	3.47	0.00	-	-	1.07	0.58
BB709	104904	2.570	1.369	7.26	0.374	3.58	0.00	-	-	1.07	0.58
BB710	104904	2.637	1.369	6.79	0.344	3.69	0.00	-	-	1.07	0.58
BB711	104904	2.704	1.369	6.32	0.314	3.80	0.00	-	-	1.07	0.58
BB712	104904	2.771	1.369	5.85	0.284	3.91	0.00	-	-	1.07	0.58
BB713	104904	2.838	1.369	5.38	0.254	4.02	0.00	-	-	1.07	0.58
BB714	104904	2.905	1.369	4.91	0.224	4.13	0.00	-	-	1.07	0.58
BB715	104904	2.972	1.369	4.44	0.194	4.24	0.00	-	-	1.07	0.58
BB716	104904	3.039	1.369	3.97	0.164	4.35	0.00	-	-	1.07	0.58
BB717	104904	3.106	1.369	3.50	0.134	4.46	0.00	-	-	1.07	0.58
BB718	104904	3.173	1.369	3.03	0.104	4.57	0.00	-	-	1.07	0.58
BB719	104904	3.240	1.369	2.56	0.074	4.68	0.00	-	-	1.07	0.58
BB720	104904	3.307	1.369	2.09	0.044	4.79	0.00	-	-	1.07	0.58
BB721	104904	3.374	1.369	1.62	0.014	4.90	0.00	-	-	1.07	0.58
BB722	104904	3.441	1.369	1.15	0.000	5.01	0.00	-	-	1.07	0.58
BB723	104904	3.508	1.369	0.68	0.000	5.12	0.00	-	-	1.07	0.58
BB724	104904	3.575	1.369	0.21	0.000	5.23	0.00	-	-	1.07	0.58
BB725	104904	3.642	1.369	0.00	0.000	5.34	0.00	-	-	1.07	0.58
BB726	104904	3.709	1.369	0.00	0.000	5.45	0.00	-	-	1.07	0.58
BB727	104904	3.776	1.369	0.00	0.000	5.56	0.00	-	-	1.07	0.58
BB728	104904	3.843	1.369	0.00	0.000	5.67	0.00	-	-	1.07	0.58
BB729	104904	3.910	1.369	0.00	0.000	5.78	0.00	-	-	1.07	0.58
BB730	104904	3.977	1.369	0.00	0.000	5.89	0.00	-	-	1.07	0.58
BB731	104904	4.044	1.369	0.00	0.000	6.00	0.00	-	-	1.07	0.58
BB732	104904	4.111	1.369	0.00	0.000	6.11	0.00	-	-	1.07	0.58

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B, TYPE II BLOCK AT STA 1+WINDO# 3 CL=0.5, ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb526	104904.	.391	.070	10.27	.605	1.30	.126	-	-	3.
bb527	104904.	.458	.070	10.76	.633	1.34	.124	-	-	3.
bb528	104904.	.525	.070	10.78	.635	1.26	.117	-	-	3.
bb529	104904.	.592	.070	10.16	.598	1.30	.128	-	-	3.
bb530	104904.	.659	.070	9.50	.559	1.16	.122	-	-	3.
bb531	104904.	.727	.070	9.48	.558	1.19	.126	-	-	3.
bb532	104904.	.794	.070	9.84	.579	1.31	.133	-	-	3.
bb533	104904.	.861	.070	9.76	.574	1.41	.144	-	-	3.
bb534	104904.	.928	.070	9.16	.539	1.41	.153	-	-	3.
bb535	104904.	.995	.070	8.51	.501	1.48	.174	-	-	3.
bb536	104904.	.995	.001	4.88	.287	1.23	.252	-	-	3.
bb537	104904.	.928	.001	5.60	.329	+	+	-	-	3.
bb538	104904.	.861	.001	6.36	.374	+	+	-	-	3.
bb539	104904.	.794	.001	6.81	.401	1.58	.231	-	-	3.
bb540	104904.	.727	.001	6.14	.362	+	+	-	-	3.
bb541	104904.	.659	.001	6.28	.369	+	+	-	-	3.
bb542	104904.	.592	.001	7.34	.432	1.23	.167	-	-	3.
bb543	104904.	.525	.001	7.75	.456	1.23	.158	-	-	3.
bb544	104904.	.458	.001	7.44	.438	1.26	.170	-	-	3.
bb545	104904.	.391	.001	6.36	.374	+	+	-	-	3.

SECT B-B, TYPE II BLOCK AT STA 1+WINDO# 3 CL=0.5, ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb486	104904.	.592	.125	11.50	.677	1.23	.107	-	-	3.
bb487	104904.	.659	.125	10.88	.640	1.19	.110	-	-	3.
bb488	104904.	.727	.125	10.95	.645	1.23	.112	-	-	3.
bb489	104904.	.794	.125	11.41	.671	1.23	.108	-	-	3.
bb490	104904.	.861	.125	11.48	.676	1.19	.104	-	-	3.
bb491	104904.	.928	.125	10.94	.644	1.27	.116	-	-	3.
bb492	104904.	.995	.125	10.51	.619	1.19	.114	-	-	3.
bb493	104904.	1.062	.125	10.36	.610	.99	.095	-	-	3.
bb494	104904.	1.129	.125	9.34	.550	1.15	.123	-	-	3.
bb495	104904.	1.176	.125	7.53	.443	1.63	.216	-	-	3.
bb496	104904.	.525	.125	12.13	.714	1.34	.110	-	-	3.
bb497	104904.	.458	.125	12.44	.732	1.13	.091	-	-	3.
bb498	104904.	.391	.125	11.99	.706	1.19	.100	-	-	3.
bb499	104904.	.324	.125	11.35	.668	1.16	.102	-	-	3.
bb500	104904.	.257	.125	10.62	.637	1.00	.093	-	-	3.
bb501	104904.	.190	.125	9.94	.585	1.03	.104	-	-	3.
bb502	104904.	.123	.125	7.34	.432	1.66	.229	-	-	3.
bb503	104904.	.324	.130	12.25	.721	.99	.081	-	-	3.
bb504	104904.	.391	.180	13.06	.769	1.00	.077	-	-	3.
bb505	104904.	.458	.180	13.48	.793	1.06	.079	-	-	3.
bb506	104904.	.525	.180	13.30	.783	1.19	.090	-	-	3.
bb507	104904.	.592	.180	12.48	.735	1.33	.107	-	-	3.
bb508	104904.	.659	.180	11.98	.705	1.19	.100	-	-	3.
bb509	104904.	.727	.180	12.01	.707	1.19	.099	-	-	3.
bb510	104904.	.794	.180	12.48	.735	1.19	.096	-	-	3.
bb511	104904.	.861	.180	12.61	.742	1.06	.084	-	-	3.
bb512	104904.	.928	.180	12.32	.725	1.00	.081	-	-	3.
bb513	104904.	.995	.180	11.67	.687	.96	.082	-	-	3.
bb514	104904.	.995	.234	11.41	.671	1.08	.095	-	-	3.
bb515	104904.	.928	.234	12.65	.744	.92	.073	-	-	3.
bb516	104904.	.861	.234	13.28	.782	.92	.069	-	-	3.
bb517	104904.	.794	.234	13.25	.780	1.12	.085	-	-	3.
bb518	104904.	.727	.234	12.87	.758	1.23	.095	-	-	3.
bb519	104904.	.659	.234	12.87	.758	1.19	.093	-	-	3.
bb520	104904.	.592	.234	13.40	.789	1.19	.089	-	-	3.
bb521	104904.	.525	.234	13.99	.824	1.06	.076	-	-	3.
bb522	104904.	.458	.234	13.87	.817	.93	.067	-	-	3.
bb522	104904.	.391	.234	12.92	.760	1.09	.084	-	-	3.
bb524	104904.	.324	.234	11.49	.676	1.23	.107	-	-	3.
bb525	104904.	.324	.070	9.34	.550	1.34	.143	-	-	3.

SECT B-B, TYPE II BLOCK AT STA 1+WINDO# 3 CL=0.5, ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb546	104904.	.598	1.375	18.01	1.095	.75	.041	-	-	3.
bb547	104904.	.665	1.375	18.55	1.092	.81	.044	-	-	3.
bb548	104904.	.732	1.375	18.01	1.060	.97	.054	-	-	3.
bb549	104904.	.799	1.375	17.23	1.014	1.09	.063	-	-	3.
bb550	104904.	.866	1.375	16.68	.982	1.12	.067	-	-	3.
bb551	104904.	.933	1.375	16.51	.972	1.24	.075	-	-	3.
bb552	104904.	1.000	1.375	16.49	.970	1.22	.074	-	-	3.
bb553	104904.	1.067	1.375	16.30	.959	1.04	.064	-	-	3.
bb554	104904.	1.135	1.375	15.38	.905	1.02	.066	-	-	3.
bb555	104904.	1.202	1.375	12.50	.736	1.14	.091	-	-	3.
bb556	104904.	.866	1.320	15.75	.927	1.14	.072	-	-	3.
bb557	104904.	.799	1.320	16.70	.983	1.03	.061	-	-	3.
bb558	104904.	.732	1.320	17.48	1.029	1.02	.058	-	-	3.
bb559	104904.	.665	1.320	18.13	1.067	.83	.046	-	-	3.
bb560	104904.	.598	1.320	18.24	1.074	.75	.041	-	-	3.
bb561	104904.	.598	1.265	17.78	1.046	.79	.044	-	-	3.
bb562	104904.	.665	1.265	17.53	1.032	.85	.049	-	-	3.
bb563	104904.	.732	1.265	16.85	.992	.97	.058	-	-	3.
bb564	104904.	.799	1.265	15.87	.934	1.09	.069	-	-	3.
bb565	104904.	.866	1.265	14.84	.874	1.04	.070	-	-	3.
bb566	104904.	.866	1.430	17.93	1.055	1.14	.063	-	-	3.
bb567	104904.	.799	1.430	18.22	1.072	1.02	.056	-	-	3.
bb568	104904.	.732	1.430	18.75	1.104	.96	.051	-	-	3.
bb569	104904.	.665	1.430	19.23	1.132	.80	.041	-	-	3.
bb570	104904.	.598	1.430	19.18	1.129	.78	.041	-	-	3.
bb571	104904.	.598	1.485	19.76	1.163	.75	.038	-	-	3.
bb572	104904.	.665	1.485	19.78	1.164	.84	.043	-	-	3.
bb573	104904.	.732	1.485	19.43	1.144	.92	.047	-	-	3.
bb574	104904.	.799	1.485	19.09	1.124	1.01	.053	-	-	3.
bb575	104904.	.866	1.485	18.85	1.109	.97	.052	-	-	3.

SECT B-B, TYPE II BLOCK AT STA 1+WINDO# 3 CL=0.5, ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb630	104904.	.598	1.375	20.38	1.199	.74	.036	-	-	3.
bb631	104904.	.665	1.375	20.14	1.185	.83	.041	-	-	3.
bb632	104904.	.732	1.375	19.74	1.162	.81	.041	-	-	3.
bb633	104904.	.799	1.375	18.93	1.114	.76	.040	-	-	3.
bb634	104904.	.598	1.335	19.95	1.174	.73	.037	-	-	3.
bb635	104904.	.598	1.430	20.88	1.229	.68	.032	-	-	3.
bb636	104904.	.598	1.485	21.26	1.251	.69	.032	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES, AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT, + TURBULENCE INTENSITY TO HIGH TO MEASURE, - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT a-B TYPE II BLOCK AT STA 1+K1400W 3 CL+0.5 ZONES

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB576	104904.	.584	2.625	22.80	1.342	.83	.937	-	-	3.
BB577	104904.	.651	2.625	22.49	1.324	.91	.941	-	-	3.
BB578	104904.	.719	2.625	21.90	1.289	1.00	.946	-	-	3.
BB579	104904.	.786	2.625	21.34	1.256	1.06	.950	-	-	3.
BB580	104904.	.853	2.625	20.93	1.232	1.08	.952	-	-	3.
BB581	104904.	.920	2.625	20.64	1.215	1.04	.950	-	-	3.
BB582	104904.	.987	2.625	20.29	1.194	1.03	.951	-	-	3.
BB583	104904.	1.054	2.625	19.94	1.173	.87	.944	-	-	3.
BB584	104904.	1.121	2.625	19.06	1.122	.81	.943	-	-	3.
BB585	104904.	1.188	2.625	16.37	.963	1.25	.976	-	-	3.
BB586	104904.	.584	2.570	22.18	1.305	.87	.939	-	-	3.
BB587	104904.	.719	2.570	21.16	1.246	.98	.946	-	-	3.
BB588	104904.	.853	2.570	19.92	1.173	1.05	.953	-	-	3.
BB589	104904.	.853	2.515	19.02	1.119	.95	.950	-	-	3.
BB590	104904.	.719	2.515	20.62	1.213	.92	.945	-	-	3.
BB591	104904.	.584	2.515	21.52	1.267	.87	.941	-	-	3.
BB592	104904.	.584	2.680	23.35	1.374	.79	.934	-	-	3.
BB593	104904.	.719	2.680	22.64	1.333	.97	.943	-	-	3.
BB594	104904.	.853	2.680	21.77	1.262	.92	.942	-	-	3.
BB594	104904.	.853	2.735	21.77	1.262	.91	.942	-	-	3.
BB595	104904.	.719	2.735	23.12	1.361	.85	.937	-	-	3.
BB596	104904.	.584	2.735	23.48	1.406	.67	.928	-	-	3.

SECT a-B TYPE II BLOCK AT STA 1+K1400W 3 CL+0.5 ZONES

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB637	104904.	.590	2.625	23.39	1.377	.83	.936	-	-	3.
BB638	104904.	.665	2.625	23.11	1.363	.87	.937	-	-	3.
BB639	104904.	.732	2.625	22.70	1.335	.91	.940	-	-	3.
BB640	104904.	.799	2.625	22.17	1.305	.89	.940	-	-	3.
BB641	104904.	.868	2.570	22.73	1.333	.83	.936	-	-	3.
BB642	104904.	.598	2.515	22.17	1.305	.69	.931	-	-	3.
BB643	104904.	.598	2.680	23.98	1.411	.87	.936	-	-	3.
BB644	104904.	.599	2.735	24.54	1.444	.89	.933	-	-	3.

SECT a-B TYPE II BLOCK AT STA 1+K1400W 3 CL+0.5 ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB697	104904.	.584	3.675	20.90	1.233	.81	.939	-	-	3.
BB698	104904.	.651	3.675	21.30	1.253	.68	.932	-	-	3.
BB699	104904.	.719	3.675	21.40	1.260	.65	.930	-	-	3.
BB700	104904.	.786	3.675	21.06	1.239	.70	.933	-	-	3.
BB701	104904.	.853	3.675	20.64	1.215	.73	.935	-	-	3.
BB702	104904.	.920	3.675	20.02	1.178	.73	.936	-	-	3.
BB703	104904.	.987	3.675	19.35	1.139	.74	.938	-	-	3.
BB704	104904.	1.054	3.675	18.75	1.104	.67	.936	-	-	3.
BB705	104904.	1.121	3.675	17.92	1.055	.71	.940	-	-	3.
BB706	104904.	1.189	3.675	15.32	.902	1.11	.972	-	-	3.
BB707	104904.	.584	3.620	21.38	1.259	.66	.931	-	-	3.
BB708	104904.	.719	3.620	21.04	1.274	.57	.927	-	-	3.
BB709	104904.	.853	3.620	20.58	1.211	.75	.937	-	-	3.
BB710	104904.	.987	3.620	19.12	1.126	.79	.941	-	-	3.
BB711	104904.	1.121	3.620	17.93	1.055	.73	.941	-	-	3.
BB712	104904.	1.121	3.765	16.77	.987	.83	.949	-	-	3.
BB713	104904.	.987	3.765	17.95	1.057	.92	.951	-	-	3.
BB714	104904.	.853	3.765	20.05	1.180	.86	.943	-	-	3.
BB715	104904.	.719	3.765	21.45	1.253	.63	.929	-	-	3.
BB716	104904.	.584	3.765	21.52	1.267	.58	.927	-	-	3.
BB717	104904.	.584	3.930	20.02	1.178	.93	.946	-	-	3.
BB718	104904.	.719	3.930	20.25	1.192	.90	.944	-	-	3.
BB719	104904.	.853	3.930	19.61	1.154	.88	.945	-	-	3.
BB720	104904.	.987	3.930	18.41	1.084	.86	.947	-	-	3.
BB721	104904.	1.121	3.930	17.19	1.012	.75	.944	-	-	3.
BB722	104904.	1.121	3.975	15.07	.887	.88	.958	-	-	3.
BB723	104904.	.987	3.975	16.46	.969	.87	.953	-	-	3.
BB724	104904.	.853	3.975	17.32	1.020	1.03	.959	-	-	3.
BB725	104904.	.719	3.975	17.89	1.053	1.01	.956	-	-	3.
BB726	104904.	.584	3.975	17.93	1.055	1.01	.956	-	-	3.
BB727	104904.	.517	3.675	20.26	1.192	.89	.944	-	-	3.
BB728	104904.	.517	3.620	20.97	1.234	.70	.933	-	-	3.
BB729	104904.	.517	3.765	21.25	1.251	.63	.930	-	-	3.

SECT a-B TYPE II BLOCK AT STA 3+K1400W 4 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB1205	104904.	1.229	1.375	8.47	.499	+	+	-	-	3.
BB1206	104904.	1.161	1.375	11.97	.704	+	+	-	-	3.
BB1207	104904.	1.094	1.375	15.51	.913	+	+	-	-	3.
BB1208	104904.	1.027	1.375	19.15	1.127	3.89	.203	-	-	3.
BB1209	104904.	.960	1.375	21.58	1.270	2.07	.096	-	-	3.
BB1210	104904.	.893	1.375	22.73	1.338	1.65	.073	-	-	3.
BB1211	104904.	.826	1.375	23.45	1.361	1.19	.051	-	-	3.
BB1212	104904.	.759	1.375	23.98	1.411	1.09	.045	-	-	3.
BB1213	104904.	.692	1.375	24.15	1.421	1.16	.048	-	-	3.
BB1214	104904.	.625	1.375	23.06	1.392	1.43	.061	-	-	3.
BB1215	104904.	.625	1.320	23.05	1.392	1.52	.064	-	-	3.
BB1216	104904.	.759	1.320	23.99	1.412	1.18	.049	-	-	3.
BB1217	104904.	.893	1.320	23.08	1.359	1.41	.061	-	-	3.
BB1218	104904.	1.027	1.320	19.92	1.173	2.78	.140	-	-	3.
BB1219	104904.	1.161	1.320	11.93	.702	+	+	-	-	3.
BB1220	104904.	1.161	1.265	9.48	.556	+	+	-	-	3.
BB1221	104904.	1.027	1.265	17.66	1.039	3.79	.215	-	-	3.
BB1222	104904.	.893	1.265	21.77	1.282	2.41	.111	-	-	3.
BB1223	104904.	.759	1.265	23.82	1.402	1.31	.055	-	-	3.
BB1224	104904.	.625	1.265	23.72	1.396	1.58	.067	-	-	3.
BB1225	104904.	.625	1.430	23.73	1.397	1.22	.051	-	-	3.
BB1226	104904.	.759	1.430	23.70	1.395	1.06	.045	-	-	3.
BB1227	104904.	.893	1.430	21.62	1.272	2.01	.093	-	-	3.
BB1228	104904.	1.027	1.430	14.77	.869	+	+	-	-	3.
BB1229	104904.	1.161	1.430	9.37	.551	+	+	-	-	3.
BB1230	104904.	1.161	1.485	5.73	.337	+	+	-	-	3.
BB1231	104904.	1.027	1.485	9.60	.565	+	+	-	-	3.
BB1232	104904.	.893	1.485	19.91	1.172	3.06	.153	-	-	3.
BB1233	104904.	.759	1.485	23.56	1.387	1.24	.053	-	-	3.
BB1234	104904.	.625	1.485	23.72	1.396	1.30	.055	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECTION 10-6 TYPE II BLOCK AT STA 3+100.00 4 AT CL ZONE 6									
NO	NO	RETN	Z	Y	FT/SEC	UP	UP	UP	UP
NO	NO	RETN	Z	Y	FT/SEC	UP	UP	UP	UP
B81264	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81265	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81266	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81267	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81268	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81269	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81270	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81271	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81272	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81273	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81274	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81275	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81276	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81277	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81278	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81279	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81280	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81281	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81282	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81283	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81284	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81285	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81286	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81287	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81288	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81289	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81290	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81291	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81292	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81293	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81294	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81295	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81296	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81297	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81298	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81299	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-
B81300	10+90	1.117	2.735	15.28	1.900	1.03	0.97	-	-

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B, TYPE II BLOCK AT STA 2+WINDOW 4 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB905	104904.	.596	.125	7.31	.430	+	+	-	-	3.
BB906	104904.	.663	.125	7.38	.435	+	+	-	-	3.
BB907	104904.	.731	.125	7.50	.442	+	+	-	-	3.
BB908	104904.	.798	.125	7.54	.444	1.93	.256	-	-	3.
BB909	104904.	.865	.125	7.62	.449	+	+	-	-	3.
BB910	104904.	.932	.125	7.65	.450	+	+	-	-	3.
BB911	104904.	.999	.125	7.59	.447	+	+	-	-	3.
BB912	104904.	1.066	.125	7.47	.440	+	+	-	-	3.
BB913	104904.	1.133	.125	7.24	.426	+	+	-	-	3.
BB914	104904.	1.200	.125	6.35	.374	+	+	-	-	3.
BB915	104904.	1.133	.180	7.09	.417	+	+	-	-	3.
BB916	104904.	.999	.180	7.68	.452	+	+	-	-	3.
BB917	104904.	.865	.180	7.78	.458	+	+	-	-	3.
BB918	104904.	.731	.180	7.87	.463	+	+	-	-	3.
BB919	104904.	.596	.180	7.69	.453	1.94	.252	-	-	3.
BB920	104904.	.596	.235	8.09	.476	1.89	.234	-	-	3.
BB921	104904.	.731	.235	8.10	.477	1.99	.245	-	-	3.
BB922	104904.	.865	.235	7.87	.463	1.88	.239	-	-	3.
BB923	104904.	.999	.235	7.42	.437	+	+	-	-	3.
BB924	104904.	1.133	.235	6.60	.388	+	+	-	-	3.
BB925	104904.	1.133	.070	7.06	.416	+	+	-	-	3.
BB926	104904.	.999	.070	7.46	.439	+	+	-	-	3.
BB927	104904.	.865	.070	7.28	.428	+	+	-	-	3.
BB928	104904.	.731	.070	7.06	.416	+	+	-	-	3.
BB929	104904.	.596	.070	6.84	.402	+	+	-	-	3.
BB930	104904.	.596	.015	6.00	.353	+	+	-	-	3.
BB931	104904.	.731	.015	6.17	.363	+	+	-	-	3.
BB932	104904.	.865	.015	6.45	.380	+	+	-	-	3.
BB933	104904.	.999	.015	6.56	.386	+	+	-	-	3.
BB934	104904.	1.133	.015	6.30	.371	+	+	-	-	3.

SECT B-B TYPE II BLOCK AT STA 2 WINDOW 4 AT CL ZONE 2

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB1115	104904.	.735	.750	11.13	.655	-	-	.14	.01	-
BB1116	104904.	.702	.750	13.06	.769	-	-	.76	.06	-
BB1117	104904.	.668	.750	14.38	.846	-	-	1.29	.09	-
BB1118	104904.	.635	.750	15.41	.907	-	-	2.00	.13	-
BB1119	104904.	.601	.750	15.96	.940	-	-	2.30	.14	-
BB1120	104904.	.567	.750	16.08	.947	-	-	2.50	.16	-
BB1121	104904.	.534	.750	15.72	.925	-	-	2.32	.15	-
BB1122	104904.	.500	.750	14.68	.864	-	-	1.94	.13	-
BB1123	104904.	.467	.750	13.10	.771	-	-	1.26	.10	-
BB1124	104904.	.433	.750	10.17	.599	-	-	1.55	.15	-

SECT B-B, TYPE II BLOCK AT STA 2+WINDOW 4 AT CL ZONE 2

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB900	104904.	.737	.750	19.58	.623	2.30	.217	-	-	3.
BB901	104904.	.669	.750	13.74	.809	2.56	.186	-	-	3.
BB902	104904.	.602	.750	14.58	.858	2.94	.201	-	-	3.
BB903	104904.	.535	.750	13.33	.784	+	+	-	-	3.
BB904	104904.	.464	.750	9.54	.562	+	+	-	-	3.

SECT B-B, TYPE II BLOCK AT STA 2+WINDOW 4 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB670	104904.	.600	1.375	18.43	1.085	2.49	.135	-	-	3.
BB671	104904.	.668	1.375	18.62	1.096	2.20	.118	-	-	3.
BB672	104904.	.735	1.375	18.56	1.093	2.22	.120	-	-	3.
BB673	104904.	.802	1.375	18.29	1.076	2.13	.117	-	-	3.
BB674	104904.	.869	1.375	18.04	1.062	2.01	.112	-	-	3.
BB675	104904.	.936	1.375	17.78	1.046	2.00	.112	-	-	3.
BB676	104904.	1.003	1.375	17.48	1.029	1.95	.111	-	-	3.
BB677	104904.	1.070	1.375	17.06	1.004	1.92	.112	-	-	3.
BB678	104904.	1.137	1.375	16.48	.970	1.76	.107	-	-	3.
BB679	104904.	1.204	1.375	14.55	.857	1.80	.124	-	-	3.
BB680	104904.	1.137	1.320	15.85	.933	1.71	.108	-	-	3.
BB681	104904.	1.003	1.320	17.48	1.029	1.92	.110	-	-	3.
BB682	104904.	.869	1.320	18.25	1.074	2.06	.113	-	-	3.
BB683	104904.	.735	1.320	18.72	1.102	2.04	.109	-	-	3.
BB684	104904.	.600	1.320	18.64	1.109	2.12	.112	-	-	3.
BB685	104904.	.468	1.265	19.18	1.129	2.15	.112	-	-	3.
BB686	104904.	.735	1.265	18.86	1.110	2.06	.109	-	-	3.
BB687	104904.	.869	1.265	18.40	1.083	1.91	.104	-	-	3.
BB688	104904.	1.003	1.265	17.10	1.036	1.80	.106	-	-	3.
BB689	104904.	1.137	1.265	13.63	.814	1.71	.123	-	-	3.
BB690	104904.	1.137	1.430	16.26	.957	1.69	.104	-	-	3.
BB691	104904.	1.003	1.430	17.36	1.022	1.91	.110	-	-	3.
BB692	104904.	.869	1.430	17.91	1.054	1.92	.107	-	-	3.
BB693	104904.	.735	1.430	18.54	1.091	2.24	.121	-	-	3.
BB694	104904.	.600	1.430	18.21	1.072	2.72	.149	-	-	3.
BB695	104904.	.600	1.485	18.15	1.068	2.96	.163	-	-	3.
BB696	104904.	.735	1.485	18.80	1.107	2.48	.132	-	-	3.
BB697	104904.	.869	1.485	17.66	1.039	2.06	.117	-	-	3.
BB698	104904.	1.003	1.485	16.85	.992	1.54	.091	-	-	3.
BB699	104904.	1.137	1.485	14.24	.838	1.57	.111	-	-	3.

SECT B-B, TYPE II BLOCK AT STA 2+WINDOW 4 AT CL ZONE 4

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB660	104904.	.737	2.000	16.95	.998	1.97	.116	-	-	3.
BB661	104904.	.669	2.000	22.71	1.337	1.54	.068	-	-	3.
BB662	104904.	.602	2.000	25.17	1.482	.85	.034	-	-	3.
BB663	104904.	.535	2.000	24.40	1.436	1.41	.058	-	-	3.
BB664	104904.	.468	2.000	19.15	1.127	2.23	.116	-	-	3.
BB665	104904.	.468	1.950	17.99	1.059	2.75	.153	-	-	3.
BB666	104904.	.535	1.950	23.20	1.366	2.04	.088	-	-	3.
BB667	104904.	.602	1.950	24.75	1.457	1.24	.050	-	-	3.
BB668	104904.	.669	1.950	23.07	1.358	1.36	.059	-	-	3.
BB669	104904.	.737	1.950	18.06	1.063	1.79	.099	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT D-B TYPE II BLOCK AT STA 2 WINDOW 4 AT CL ZONE 4

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1125	104904	.719	2.000	18.07	1.004	-	-	1.76	.10	-
bb1126	104904	.686	2.000	20.86	1.228	-	-	2.44	.12	-
bb1127	104904	.652	2.000	23.51	1.384	-	-	2.71	.12	-
bb1128	104904	.618	2.000	25.13	1.479	-	-	2.66	.11	-
bb1129	104904	.585	2.000	25.72	1.514	-	-	2.57	.10	-
bb1130	104904	.551	2.000	25.50	1.501	-	-	2.42	.09	-
bb1131	104904	.518	2.000	24.37	1.434	-	-	2.13	.09	-
bb1132	104904	.484	2.000	22.23	1.308	-	-	1.61	.07	-
bb1133	104904	.451	2.000	19.57	1.152	-	-	.88	.04	-
bb1134	104904	.417	2.000	16.78	.988	-	-	.47	.03	-

SECT D-B TYPE II BLOCK AT STA 2 WINDOW 4 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb000	104904	.574	2.625	25.43	1.497	.65	.025	-	-	3.
bb001	104904	.641	2.625	25.23	1.485	.65	.026	-	-	3.
bb002	104904	.708	2.625	24.87	1.404	.67	.027	-	-	3.
bb003	104904	.775	2.625	24.22	1.425	.73	.030	-	-	3.
bb004	104904	.842	2.625	23.69	1.395	.72	.030	-	-	3.
bb005	104904	.909	2.625	23.08	1.359	.78	.034	-	-	3.
bb006	104904	.976	2.625	22.31	1.313	.91	.041	-	-	3.
bb007	104904	1.043	2.625	21.24	1.250	1.01	.048	-	-	3.
bb008	104904	1.110	2.625	19.67	1.158	1.16	.059	-	-	3.
bb009	104904	1.178	2.625	16.15	.951	1.52	.094	-	-	3.
bb010	104904	1.110	2.570	19.82	1.166	1.13	.057	-	-	3.
bb011	104904	.976	2.570	22.57	1.329	.71	.031	-	-	3.
bb012	104904	.842	2.570	23.86	1.404	.59	.025	-	-	3.
bb013	104904	.708	2.570	24.74	1.456	.62	.025	-	-	3.
bb014	104904	.574	2.570	25.22	1.484	.65	.026	-	-	3.
bb015	104904	.574	2.515	25.09	1.477	.60	.024	-	-	3.
bb016	104904	.708	2.515	24.66	1.451	.58	.024	-	-	3.
bb017	104904	.842	2.515	23.48	1.382	.78	.033	-	-	3.
bb018	104904	.976	2.515	20.78	1.223	1.24	.060	-	-	3.
bb019	104904	1.110	2.515	16.44	.908	1.29	.078	-	-	3.
bb020	104904	1.110	2.680	17.63	1.038	1.12	.064	-	-	3.
bb021	104904	.976	2.680	20.69	1.218	1.24	.060	-	-	3.
bb022	104904	.842	2.680	23.04	1.356	1.01	.044	-	-	3.
bb023	104904	.708	2.680	24.96	1.469	.75	.030	-	-	3.
bb024	104904	.574	2.680	25.71	1.513	.67	.026	-	-	3.
bb025	104904	.574	2.735	25.32	1.526	.62	.024	-	-	3.
bb026	104904	.708	2.735	24.79	1.459	.99	.040	-	-	3.
bb027	104904	.842	2.735	21.86	1.236	1.23	.056	-	-	3.
bb028	104904	.976	2.735	18.26	1.075	1.43	.078	-	-	3.
bb029	104904	1.110	2.735	13.90	.818	1.04	.075	-	-	3.

SECT D-B TYPE II BLOCK AT STA 2 WINDOW 4 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb030	104904	.560	3.875	22.27	1.311	1.14	.051	-	-	3.
bb031	104904	.627	3.875	22.40	1.319	1.18	.053	-	-	3.
bb032	104904	.694	3.875	22.64	1.333	1.14	.050	-	-	3.
bb033	104904	.761	3.875	22.64	1.333	1.05	.046	-	-	3.
bb034	104904	.829	3.875	22.50	1.324	.98	.044	-	-	3.
bb035	104904	.896	3.875	22.13	1.303	.98	.044	-	-	3.
bb036	104904	.963	3.875	21.41	1.260	.99	.046	-	-	3.
bb037	104904	1.030	3.875	20.38	1.229	.95	.046	-	-	3.
bb038	104904	1.097	3.875	19.46	1.145	1.10	.057	-	-	3.
bb039	104904	1.164	3.875	14.69	.864	1.70	.116	-	-	3.
bb040	104904	1.097	3.930	18.38	1.082	1.18	.064	-	-	3.
bb041	104904	.963	3.930	19.27	1.134	1.32	.069	-	-	3.
bb042	104904	.829	3.930	20.50	1.206	1.25	.061	-	-	3.
bb043	104904	.694	3.930	20.63	1.214	1.28	.062	-	-	3.
bb044	104904	.560	3.930	20.26	1.192	1.40	.069	-	-	3.
bb045	104904	.560	3.985	16.85	.992	1.38	.082	-	-	3.
bb046	104904	.694	3.985	16.98	.999	1.37	.080	-	-	3.
bb047	104904	.829	3.985	16.85	.992	1.28	.076	-	-	3.
bb048	104904	.963	3.985	15.76	.928	1.35	.086	-	-	3.
bb049	104904	1.097	3.985	15.03	.885	1.19	.079	-	-	3.
bb050	104904	1.097	3.825	19.57	1.152	1.10	.056	-	-	3.
bb051	104904	.963	3.825	21.78	1.282	.91	.042	-	-	3.
bb052	104904	.829	3.825	23.17	1.364	.70	.030	-	-	3.
bb053	104904	.694	3.825	23.65	1.392	.77	.032	-	-	3.
bb054	104904	.560	3.825	23.44	1.380	.88	.037	-	-	3.
bb055	104904	.560	3.770	24.05	1.416	.55	.023	-	-	3.
bb056	104904	.694	3.770	23.91	1.407	.54	.023	-	-	3.
bb057	104904	.829	3.770	22.55	1.327	.92	.041	-	-	3.
bb058	104904	.963	3.770	19.84	1.168	1.46	.074	-	-	3.
bb059	104904	1.097	3.770	16.92	.996	1.12	.066	-	-	3.

SECT D-B TYPE II BLOCK AT STA 1 WINDOW 4 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb209	104904	.458	.065	10.26	.604	1.22	.119	-	-	3.
bb210	104904	.525	.065	10.57	.622	1.19	.113	-	-	3.
bb211	104904	.592	.065	10.74	.632	1.22	.113	-	-	3.
bb212	104904	.659	.065	10.74	.632	1.17	.109	-	-	3.
bb213	104904	.659	.015	9.71	.572	1.22	.125	-	-	3.
bb214	104904	.525	.015	9.57	.563	1.27	.132	-	-	3.
bb215	104904	.391	.015	9.07	.534	1.15	.127	-	-	3.
bb216	104904	.250	.015	8.04	.473	1.19	.148	-	-	3.
bb217	104904	.122	.015	7.16	.421	1.07	.149	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECB-B, TYPE II BLOCK AT STA 1+*WINDOW 4 AT CL, ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB169	104904.	.659	.125	11.01	.648	1.11	.101	-	-	3.
BB170	104904.	.592	.125	10.95	.645	1.19	.109	-	-	3.
BB171	104904.	.525	.125	10.86	.639	1.12	.103	-	-	3.
BB172	104904.	.458	.125	10.44	.614	1.22	.117	-	-	3.
BB173	104904.	.391	.125	10.14	.597	1.12	.110	-	-	3.
BB174	104904.	.323	.125	9.78	.576	1.14	.116	-	-	3.
BB175	104904.	.256	.125	9.39	.553	1.14	.121	-	-	3.
BB176	104904.	.189	.125	9.03	.532	1.17	.129	-	-	3.
BB177	104904.	.122	.125	8.63	.508	1.14	.132	-	-	3.
BB178	104904.	.055	.125	7.83	.461	1.02	.131	-	-	3.
BB179	104904.	.015	.125	6.26	.369	1.41	.225	-	-	3.
BB180	104904.	.015	.185	6.17	.363	1.33	.216	-	-	3.
BB181	104904.	.055	.185	7.69	.453	1.06	.137	-	-	3.
BB182	104904.	.122	.185	8.66	.510	1.12	.129	-	-	3.
BB183	104904.	.189	.185	8.96	.527	1.14	.127	-	-	3.
BB184	104904.	.256	.185	9.26	.545	1.19	.129	-	-	3.
BB185	104904.	.323	.185	9.66	.569	1.14	.118	-	-	3.
BB186	104904.	.391	.185	10.07	.593	1.19	.118	-	-	3.
BB187	104904.	.458	.185	10.47	.617	1.22	.116	-	-	3.
BB188	104904.	.525	.185	10.93	.643	1.27	.116	-	-	3.
BB189	104904.	.592	.185	11.24	.661	1.19	.106	-	-	3.
BB190	104904.	.659	.185	11.39	.671	1.10	.097	-	-	3.
BB191	104904.	.659	.245	11.43	.673	1.27	.111	-	-	3.
BB192	104904.	.592	.245	11.32	.666	1.35	.119	-	-	3.
BB193	104904.	.525	.245	10.86	.639	1.41	.129	-	-	3.
BB194	104904.	.458	.245	10.39	.612	1.22	.117	-	-	3.
BB195	104904.	.391	.245	9.70	.571	1.30	.134	-	-	3.
BB196	104904.	.323	.245	9.27	.546	1.22	.131	-	-	3.
BB197	104904.	.256	.245	8.42	.519	1.14	.130	-	-	3.
BB198	104904.	.189	.245	8.24	.485	1.19	.145	-	-	3.
BB199	104904.	.122	.245	7.25	.427	1.09	.150	-	-	3.
BB200	104904.	.055	.245	5.93	.349	1.08	.182	-	-	3.
BB201	104904.	.015	.245	4.13	.243	+	+	-	-	3.
BB202	104904.	.015	.065	6.39	.376	1.16	.181	-	-	3.
BB203	104904.	.055	.065	7.66	.451	1.01	.132	-	-	3.
BB204	104904.	.122	.065	8.35	.492	1.05	.126	-	-	3.
BB205	104904.	.189	.065	8.70	.512	1.12	.128	-	-	3.
BB206	104904.	.256	.065	9.13	.537	1.12	.123	-	-	3.
BB207	104904.	.323	.065	9.60	.565	1.22	.127	-	-	3.
BB208	104904.	.391	.065	10.08	.593	1.06	.105	-	-	3.

SECB-B, TYPE II BLOCK AT STA 1+*WINDOW 4 AT CL, ZONE 2

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB278	104904.	.482	.750	11.55	.680	-	-	.78	.07	-
BB279	104904.	.508	.750	13.19	.777	-	-	.66	.05	-
BB280	104904.	.535	.750	13.45	.815	-	-	.88	.06	-
BB281	104904.	.562	.750	14.35	.845	-	-	.84	.06	-
BB282	104904.	.589	.750	14.45	.850	-	-	.81	.06	-
BB283	104904.	.616	.750	14.26	.839	-	-	.76	.05	-
BB284	104904.	.643	.750	14.03	.826	-	-	.57	.04	-
BB285	104904.	.669	.750	13.50	.794	-	-	.42	.03	-
BB286	104904.	.696	.750	12.55	.739	-	-	.22	.02	-
BB287	104904.	.723	.750	11.18	.658	-	-	.11	.01	-

SECB-B, TYPE II BLOCK AT STA 1+*WINDOW 4 AT CL, ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB114	104904.	.011	1.375	10.41	.636	1.53	.142	-	-	3.
BB115	104904.	.051	1.375	12.59	.741	1.48	.118	-	-	3.
BB116	104904.	.118	1.375	14.27	.840	1.29	.091	-	-	3.
BB117	104904.	.185	1.375	15.07	.887	1.43	.095	-	-	3.
BB118	104904.	.252	1.375	15.81	.930	1.41	.089	-	-	3.
BB119	104904.	.319	1.375	16.52	.973	1.33	.080	-	-	3.
BB120	104904.	.387	1.375	16.88	.994	1.30	.077	-	-	3.
BB121	104904.	.454	1.375	17.14	1.009	1.32	.077	-	-	3.
BB122	104904.	.521	1.375	17.24	1.015	1.38	.080	-	-	3.
BB123	104904.	.588	1.375	17.50	1.030	1.40	.080	-	-	3.
BB124	104904.	.655	1.375	17.82	1.049	1.56	.088	-	-	3.
BB125	104904.	.655	1.435	17.78	1.046	1.51	.085	-	-	3.
BB126	104904.	.588	1.435	17.39	1.024	1.46	.084	-	-	3.
BB127	104904.	.521	1.435	17.06	1.004	1.37	.080	-	-	3.
BB128	104904.	.454	1.435	16.61	.977	1.39	.084	-	-	3.
BB129	104904.	.387	1.435	16.53	.973	1.30	.078	-	-	3.
BB130	104904.	.319	1.435	16.24	.956	1.30	.080	-	-	3.
BB131	104904.	.252	1.435	15.74	.926	1.33	.084	-	-	3.
BB132	104904.	.185	1.435	15.13	.890	1.38	.091	-	-	3.
BB133	104904.	.118	1.435	14.20	.836	1.45	.102	-	-	3.
BB134	104904.	.051	1.435	12.45	.733	1.41	.113	-	-	3.
BB135	104904.	.011	1.435	10.41	.613	1.61	.155	-	-	3.
BB136	104904.	.011	1.495	9.00	.529	1.30	.144	-	-	3.
BB137	104904.	.051	1.495	10.58	.623	1.23	.116	-	-	3.
BB138	104904.	.118	1.495	12.61	.742	1.41	.112	-	-	3.
BB139	104904.	.185	1.495	14.20	.836	1.41	.100	-	-	3.
BB140	104904.	.252	1.495	15.25	.897	1.38	.091	-	-	3.
BB141	104904.	.319	1.495	15.84	.933	1.33	.084	-	-	3.
BB142	104904.	.387	1.495	16.11	.948	1.39	.086	-	-	3.
BB143	104904.	.454	1.495	16.26	.957	1.39	.086	-	-	3.
BB144	104904.	.521	1.495	16.63	.979	1.47	.088	-	-	3.
BB145	104904.	.588	1.495	16.96	.999	1.64	.097	-	-	3.
BB146	104904.	.655	1.495	17.50	1.030	1.67	.095	-	-	3.
BB147	104904.	.655	1.315	17.64	1.039	1.30	.079	-	-	3.
BB148	104904.	.588	1.315	17.45	1.027	1.30	.075	-	-	3.
BB149	104904.	.521	1.315	17.24	1.015	1.34	.078	-	-	3.
BB150	104904.	.454	1.315	17.05	1.003	1.28	.075	-	-	3.
BB151	104904.	.387	1.315	16.77	.987	1.31	.078	-	-	3.
BB152	104904.	.319	1.315	16.15	.951	1.42	.088	-	-	3.
BB153	104904.	.252	1.315	15.01	.883	1.57	.105	-	-	3.

HYDRAULIC DIAMETER, U = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECB-B, TYPE II BLOCK AT STA 1, WINDOW 4 AT CL, ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb154	104904.	.185	1.315	13.90	.818	1.44	.103	-	-	3.
bb155	104904.	.118	1.315	13.00	.765	1.43	.110	-	-	3.
bb156	104904.	.051	1.315	11.42	.672	1.22	.107	-	-	3.
bb157	104904.	.011	1.315	9.42	.555	1.49	.158	-	-	3.
bb158	104904.	.011	1.265	5.95	.350	+	+	-	-	3.
bb159	104904.	.051	1.265	8.27	.487	1.35	.163	-	-	3.
bb160	104904.	.118	1.265	10.68	.628	1.38	.129	-	-	3.
bb161	104904.	.185	1.265	12.40	.730	1.36	.110	-	-	3.
bb162	104904.	.252	1.265	14.51	.854	1.43	.099	-	-	3.
bb163	104904.	.319	1.265	16.03	.944	1.58	.099	-	-	3.
bb164	104904.	.387	1.265	16.95	.998	1.33	.078	-	-	3.
bb165	104904.	.454	1.265	17.31	1.019	1.17	.067	-	-	3.
bb166	104904.	.521	1.265	17.48	1.029	1.27	.073	-	-	3.
bb167	104904.	.588	1.265	17.63	1.038	1.30	.074	-	-	3.
bb168	104904.	.655	1.265	17.72	1.043	1.36	.077	-	-	3.

SECB-B, TYPE II BLOCK AT STA 1, WINDOW 4 AT CL, ZONE 4

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb298	104904.	.716	2.000	15.52	.913	-	-	.84	.05	-
bb299	104904.	.683	2.000	18.07	1.063	-	-	1.36	.08	-
bb300	104904.	.649	2.000	20.31	1.195	-	-	1.50	.07	-
bb301	104904.	.616	2.000	21.78	1.282	-	-	1.09	.05	-
bb302	104904.	.582	2.000	22.18	1.306	-	-	.82	.04	-
bb303	104904.	.549	2.000	21.43	1.285	-	-	.56	.03	-
bb304	104904.	.515	2.000	20.77	1.222	-	-	.25	.01	-
bb305	104904.	.482	2.000	18.94	1.115	-	-	-.09	-.00	-
bb306	104904.	.448	2.000	16.68	.982	-	-	-.49	-.03	-
bb307	104904.	.414	2.000	14.00	.824	-	-	-.82	-.06	-

SECB-B, TYPE II BLOCK AT STA 1, WINDOW 4 AT CL, ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb 59	104904.	.011	2.625	11.69	.688	1.67	.143	-	-	3.
bb 60	104904.	.051	2.625	14.17	.834	1.55	.109	-	-	3.
bb 61	104904.	.118	2.625	17.61	1.036	1.17	.066	-	-	3.
bb 62	104904.	.185	2.625	19.30	1.136	1.04	.054	-	-	3.
bb 63	104904.	.252	2.625	20.30	1.195	1.03	.051	-	-	3.
bb 64	104904.	.319	2.625	21.16	1.246	1.03	.048	-	-	3.
bb 65	104904.	.387	2.625	21.99	1.294	.98	.044	-	-	3.
bb 66	104904.	.454	2.625	22.74	1.338	.88	.039	-	-	3.
bb 67	104904.	.521	2.625	23.47	1.381	.75	.032	-	-	3.
bb 68	104904.	.588	2.625	24.03	1.414	.62	.026	-	-	3.
bb 69	104904.	.655	2.625	24.16	1.422	.61	.025	-	-	3.
bb 70	104904.	.655	2.685	24.17	1.423	.61	.025	-	-	3.
bb 71	104904.	.588	2.685	23.96	1.410	.70	.029	-	-	3.
bb 72	104904.	.521	2.685	23.11	1.360	.93	.040	-	-	3.
bb 73	104904.	.454	2.685	22.07	1.299	1.12	.051	-	-	3.
bb 74	104904.	.387	2.685	20.97	1.234	1.27	.061	-	-	3.
bb 75	104904.	.319	2.685	19.84	1.168	1.34	.068	-	-	3.
bb 76	104904.	.252	2.685	18.53	1.091	1.40	.075	-	-	3.
bb 77	104904.	.185	2.635	17.62	1.037	1.23	.070	-	-	3.
bb 78	104904.	.118	2.685	16.32	.973	1.19	.072	-	-	3.
bb 79	104904.	.051	2.685	13.43	.791	1.35	.100	-	-	3.
bb 80	104904.	.011	2.685	10.90	.642	1.63	.150	-	-	3.
bb 81	104904.	.011	2.735	9.19	.541	1.82	.199	-	-	3.
bb 82	104904.	.051	2.735	12.05	.709	1.10	.091	-	-	3.
bb 83	104904.	.118	2.735	14.32	.843	1.06	.074	-	-	3.
bb 84	104904.	.185	2.735	15.20	.895	1.31	.086	-	-	3.
bb 85	104904.	.252	2.735	16.61	.977	1.38	.083	-	-	3.
bb 86	104904.	.319	2.735	18.19	1.071	1.44	.079	-	-	3.
bb 87	104904.	.387	2.735	19.71	1.160	1.36	.069	-	-	3.
bb 88	104904.	.454	2.735	21.24	1.250	1.25	.059	-	-	3.
bb 89	104904.	.521	2.735	22.57	1.329	1.06	.047	-	-	3.
bb 90	104904.	.588	2.735	23.61	1.390	.87	.037	-	-	3.
bb 91	104904.	.655	2.735	24.05	1.416	.70	.029	-	-	3.
bb 92	104904.	.655	2.565	24.16	1.422	.57	.024	-	-	3.
bb 93	104904.	.588	2.565	24.04	1.415	.61	.025	-	-	3.
bb 94	104904.	.521	2.565	23.55	1.386	.72	.031	-	-	3.
bb 95	104904.	.454	2.565	22.82	1.343	.85	.037	-	-	3.
bb 96	104904.	.387	2.565	21.93	1.291	1.04	.048	-	-	3.
bb 97	104904.	.319	2.565	21.02	1.237	1.14	.054	-	-	3.
bb 98	104904.	.252	2.565	19.94	1.173	1.27	.064	-	-	3.

SECB-B, TYPE II BLOCK AT STA 1, WINDOW 4 AT CL, ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb 99	104904.	.185	2.565	18.77	1.105	1.22	.065	-	-	3.
bb100	104904.	.118	2.565	17.06	1.004	1.19	.070	-	-	3.
bb101	104904.	.051	2.565	13.93	.820	1.41	.101	-	-	3.
bb102	104904.	.011	2.565	11.06	.651	1.79	.162	-	-	3.
bb103	104904.	.011	2.515	8.21	.483	+	+	-	-	3.
bb104	104904.	.051	2.515	11.07	.652	1.31	.118	-	-	3.
bb105	104904.	.118	2.515	13.66	.804	1.08	.079	-	-	3.
bb106	104904.	.185	2.515	15.93	.937	1.37	.086	-	-	3.
bb107	104904.	.252	2.515	18.00	1.060	1.41	.078	-	-	3.
bb108	104904.	.319	2.515	19.55	1.151	1.37	.070	-	-	3.
bb109	104904.	.387	2.515	20.95	1.233	1.32	.063	-	-	3.
bb110	104904.	.454	2.515	22.29	1.312	1.09	.049	-	-	3.
bb111	104904.	.521	2.515	23.31	1.372	.78	.033	-	-	3.
bb112	104904.	.588	2.515	23.85	1.404	.62	.026	-	-	3.
bb113	104904.	.655	2.515	24.04	1.415	.56	.023	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.

* QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECB-B TYPE II BLOCK AT STA 1-WINDOW 4 AT CL-ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB 1	104904	.638	3.751	20.96	1.234	.94	.045	-	-	3.
BB 2	104904	.570	3.751	20.57	1.211	1.06	.051	-	-	3.
BB 3	104904	.503	3.751	20.03	1.179	1.03	.052	-	-	3.
BB 4	104904	.436	3.751	19.17	1.128	1.10	.057	-	-	3.
BB 5	104904	.369	3.751	17.72	1.043	1.42	.080	-	-	3.
BB 6	104904	.302	3.751	15.84	.933	1.69	.107	-	-	3.
BB 7	104904	.235	3.751	13.95	.821	1.50	.108	-	-	3.
BB 8	104904	.168	3.751	11.70	.689	1.70	.146	-	-	3.
BB 9	104904	.101	3.755	13.39	.788	1.17	.088	-	-	3.
BB 10	104904	.046	3.755	7.55	.444	1.50	.199	-	-	3.
BB 11	104904	.168	3.755	13.35	.786	1.09	.082	-	-	3.
BB 12	104904	.235	3.755	15.12	.890	1.17	.078	-	-	3.
BB 13	104904	.302	3.755	16.99	1.000	1.18	.069	-	-	3.
BB 14	104904	.369	3.755	18.60	1.095	1.17	.063	-	-	3.
BB 15	104904	.436	3.755	19.92	1.173	.94	.047	-	-	3.
BB 16	104904	.503	3.755	20.70	1.218	.79	.038	-	-	3.
BB 17	104904	.570	3.755	21.26	1.251	.72	.034	-	-	3.
BB 18	104904	.638	3.755	21.59	1.271	.66	.031	-	-	3.
BB 19	104904	.638	3.815	20.96	1.234	.86	.041	-	-	3.
BB 20	104904	.570	3.815	20.47	1.205	1.06	.052	-	-	3.
BB 21	104904	.503	3.815	20.04	1.180	1.01	.050	-	-	3.
BB 22	104904	.436	3.815	19.77	1.164	.95	.048	-	-	3.
BB 23	104904	.369	3.815	19.23	1.132	.92	.048	-	-	3.
BB 24	104904	.302	3.815	18.32	1.079	.95	.052	-	-	3.
BB 25	104904	.235	3.815	17.27	1.017	1.08	.062	-	-	3.
BB 26	104904	.168	3.815	16.28	.959	1.01	.062	-	-	3.
BB 27	104904	.101	3.815	14.77	.869	1.07	.072	-	-	3.
BB 28	104904	.034	3.815	11.87	.699	1.33	.112	-	-	3.
BB 29	104904	.034	3.875	11.21	.660	1.43	.128	-	-	3.
BB 30	104904	.101	3.875	14.79	.871	1.11	.075	-	-	3.
BB 31	104904	.168	3.875	16.61	.977	.90	.054	-	-	3.
BB 32	104904	.235	3.875	17.33	1.020	.97	.056	-	-	3.
BB 33	104904	.302	3.875	17.88	1.053	1.04	.058	-	-	3.
BB 34	104904	.369	3.875	18.25	1.074	1.08	.059	-	-	3.
BB 35	104904	.436	3.875	18.29	1.076	1.16	.063	-	-	3.
BB 36	104904	.503	3.875	18.41	1.084	1.17	.064	-	-	3.
BB 37	104904	.570	3.875	18.85	1.109	1.18	.063	-	-	3.
BB 38	104904	.638	3.875	19.37	1.140	1.17	.061	-	-	3.
BB 39	104904	.638	3.935	17.41	1.025	1.24	.071	-	-	3.
BB 40	104904	.570	3.935	16.92	.996	1.28	.076	-	-	3.

SECB-B TYPE II BLOCK AT STA 1-WINDOW 4 AT CL-ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB 41	104904	.503	3.935	16.44	.968	1.21	.074	-	-	3.
BB 42	104904	.436	3.935	16.24	.956	1.23	.076	-	-	3.
BB 43	104904	.369	3.935	16.32	.961	1.21	.074	-	-	3.
BB 44	104904	.302	3.935	16.00	.942	1.26	.079	-	-	3.
BB 45	104904	.235	3.935	15.45	.909	1.13	.073	-	-	3.
BB 46	104904	.168	3.935	15.03	.885	1.13	.075	-	-	3.
BB 47	104904	.101	3.935	14.11	.831	1.05	.075	-	-	3.
BB 48	104904	.034	3.935	11.06	.651	1.40	.133	-	-	3.
BB 49	104904	.034	3.965	11.24	.661	1.22	.109	-	-	3.
BB 50	104904	.101	3.965	13.50	.795	1.05	.077	-	-	3.
BB 51	104904	.168	3.965	13.98	.823	1.05	.075	-	-	3.
BB 52	104904	.235	3.965	14.21	.836	1.15	.081	-	-	3.
BB 53	104904	.302	3.965	14.66	.875	1.24	.083	-	-	3.
BB 54	104904	.369	3.965	15.13	.890	1.25	.082	-	-	3.
BB 55	104904	.436	3.965	15.12	.890	1.21	.080	-	-	3.
BB 56	104904	.503	3.965	15.26	.898	1.24	.081	-	-	3.
BB 57	104904	.570	3.965	15.76	.928	1.31	.083	-	-	3.
BB 58	104904	.638	3.965	16.13	.949	1.24	.077	-	-	3.

SECT B-B TYPE II BLOCK AT STA 3-WINDOW 5 AT CL-ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB1295	104904	.586	.125	12.85	.756	1.08	.084	-	-	3.
BB1296	104904	.653	.125	12.71	.748	1.10	.087	-	-	3.
BB1297	104904	.720	.125	12.47	.734	1.11	.089	-	-	3.
BB1298	104904	.787	.125	12.05	.709	1.12	.093	-	-	3.
BB1299	104904	.854	.125	11.57	.681	1.15	.099	-	-	3.
BB1300	104904	.921	.125	11.01	.648	1.12	.102	-	-	3.
BB1301	104904	.988	.125	10.41	.613	1.11	.107	-	-	3.
BB1302	104904	1.055	.125	9.84	.579	1.10	.112	-	-	3.
BB1303	104904	1.122	.125	9.26	.545	1.08	.116	-	-	3.
BB1304	104904	1.190	.125	7.99	.470	1.00	.125	-	-	3.
BB1305	104904	1.122	.070	8.74	.515	1.02	.117	-	-	3.
BB1306	104904	.988	.070	9.72	.572	1.16	.120	-	-	3.
BB1307	104904	.854	.070	11.19	.659	1.17	.105	-	-	3.
BB1308	104904	.720	.070	12.17	.716	1.09	.090	-	-	3.
BB1309	104904	.586	.070	12.48	.735	1.18	.095	-	-	3.
BB1310	104904	.586	.015	11.04	.650	1.15	.106	-	-	3.
BB1311	104904	.720	.015	10.64	.626	1.24	.117	-	-	3.
BB1312	104904	.854	.015	9.69	.570	1.17	.121	-	-	3.
BB1313	104904	.988	.015	8.12	.478	1.05	.129	-	-	3.
BB1314	104904	1.122	.015	7.16	.421	1.05	.147	-	-	3.
BB1315	104904	1.122	.180	9.26	.545	1.01	.110	-	-	3.
BB1316	104904	.988	.180	10.55	.621	1.09	.104	-	-	3.
BB1317	104904	.854	.180	11.55	.680	1.12	.097	-	-	3.
BB1318	104904	.720	.180	12.42	.731	1.20	.097	-	-	3.
BB1319	104904	.586	.180	12.88	.758	1.17	.090	-	-	3.
BB1320	104904	.586	.235	12.88	.758	1.23	.096	-	-	3.
BB1321	104904	.720	.235	12.31	.725	1.21	.098	-	-	3.
BB1322	104904	.854	.235	11.25	.662	1.13	.100	-	-	3.
BB1323	104904	.988	.235	10.08	.593	1.11	.110	-	-	3.
BB1324	104904	1.122	.235	7.77	.457	.94	.121	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT 0-B TYPE II BLOCK AT STA 3+WINDOW 5 AT CL ZONE 2

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
001165	104904.	.724	.750	11.89	.700	-	-	.62	.05	-
001166	104904.	.691	.750	13.91	.819	-	-	.26	.02	-
001167	104904.	.657	.750	15.61	.919	-	-	.59	.04	-
001168	104904.	.624	.750	16.47	.969	-	-	.66	.04	-
001169	104904.	.590	.750	16.69	.982	-	-	.58	.03	-
001170	104904.	.557	.750	16.43	.967	-	-	.32	.02	-
001171	104904.	.523	.750	16.16	.951	-	-	.42	.03	-
001172	104904.	.490	.750	14.90	.877	-	-	.09	.01	-
001173	104904.	.456	.750	13.11	.772	-	-	.08	.01	-
001174	104904.	.423	.750	11.20	.660	-	-	.13	.01	-

SECT 0-B TYPE II BLOCK AT STA 3+WINDOW 5 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
001320	104904.	.586	1.375	17.98	1.058	1.05	.058	-	-	3.
001320	104904.	.653	1.375	17.95	1.057	1.01	.056	-	-	3.
001327	104904.	.720	1.375	17.74	1.044	1.06	.060	-	-	3.
001320	104904.	.787	1.375	17.48	1.029	1.10	.063	-	-	3.
001329	104904.	.854	1.375	17.24	1.015	1.16	.067	-	-	3.
001330	104904.	.921	1.375	16.94	.997	1.23	.073	-	-	3.
001331	104904.	.988	1.375	16.58	.976	1.23	.074	-	-	3.
001332	104904.	1.055	1.375	15.91	.937	1.20	.076	-	-	3.
001333	104904.	1.122	1.375	14.63	.873	1.23	.081	-	-	3.
001334	104904.	1.190	1.375	12.20	.718	1.44	.118	-	-	3.
001335	104904.	1.122	1.320	14.13	.831	1.32	.093	-	-	3.
001336	104904.	.988	1.320	16.38	.964	1.24	.076	-	-	3.
001337	104904.	.854	1.320	17.39	1.024	1.12	.064	-	-	3.
001338	104904.	.720	1.320	17.84	1.050	1.06	.059	-	-	3.
001339	104904.	.586	1.320	18.01	1.060	1.05	.058	-	-	3.
001340	104904.	.586	1.265	18.12	1.067	1.00	.055	-	-	3.
001341	104904.	.720	1.265	17.91	1.054	1.04	.058	-	-	3.
001342	104904.	.854	1.265	17.38	1.023	1.18	.068	-	-	3.
001343	104904.	.988	1.265	15.65	.921	1.39	.089	-	-	3.
001344	104904.	1.122	1.265	11.87	.699	1.24	.104	-	-	3.
001345	104904.	.586	1.430	18.07	1.064	1.07	.059	-	-	3.
001346	104904.	.720	1.430	17.88	1.053	1.14	.064	-	-	3.
001347	104904.	.854	1.430	17.24	1.015	1.22	.071	-	-	3.
001348	104904.	.988	1.430	16.75	.986	1.28	.076	-	-	3.
001349	104904.	1.122	1.430	15.52	.914	1.22	.079	-	-	3.
001350	104904.	1.122	1.475	14.33	.843	1.29	.090	-	-	3.
001351	104904.	.988	1.475	16.21	.954	1.39	.086	-	-	3.
001352	104904.	.854	1.475	16.85	.992	1.31	.078	-	-	3.
001353	104904.	.720	1.475	17.81	1.048	1.14	.064	-	-	3.
001354	104904.	.586	1.475	17.98	1.058	1.10	.061	-	-	3.

SECT 0-B TYPE II BLOCK AT STA 3+WINDOW 5 AT CL ZONE 4

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
001190	102200.	.731	2.000	15.27	.899	-	-	.12	.01	-
001190	102200.	.698	2.000	18.40	1.083	-	-	.59	.03	-
001197	102200.	.664	2.000	20.49	1.206	-	-	.76	.04	-
001190	102200.	.631	2.000	21.55	1.268	-	-	.73	.03	-
001199	102200.	.597	2.000	21.87	1.287	-	-	.66	.03	-
001200	102200.	.565	2.000	21.59	1.271	-	-	.57	.03	-
001201	102200.	.530	2.000	20.76	1.222	-	-	.47	.02	-
001202	102200.	.496	2.000	19.43	1.143	-	-	.24	.01	-
001203	102200.	.463	2.000	17.17	1.011	-	-	.14	.01	-
001204	102200.	.429	2.000	13.49	.794	-	-	.11	.08	-

SECT 0-B TYPE II BLOCK AT STA 3+WINDOW 5 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
001355	104904.	.584	2.625	23.72	1.396	.71	.030	-	-	3.
001356	104904.	.651	2.625	23.42	1.378	.82	.035	-	-	3.
001357	104904.	.719	2.625	22.73	1.338	1.01	.045	-	-	3.
001358	104904.	.786	2.625	21.86	1.286	1.16	.053	-	-	3.
001359	104904.	.853	2.625	21.00	1.236	1.21	.058	-	-	3.
001360	104904.	.920	2.625	20.19	1.188	1.19	.059	-	-	3.
001361	104904.	.987	2.625	19.45	1.145	1.08	.056	-	-	3.
001362	104904.	1.054	2.625	18.58	1.093	.99	.053	-	-	3.
001363	104904.	1.121	2.625	16.85	.992	1.18	.070	-	-	3.
001364	104904.	1.188	2.625	13.76	.810	1.40	.101	-	-	3.
001365	104904.	1.121	2.570	16.44	.964	1.11	.068	-	-	3.
001366	104904.	.987	2.570	19.14	1.126	1.23	.064	-	-	3.
001367	104904.	.853	2.570	21.37	1.258	1.13	.053	-	-	3.
001368	104904.	.719	2.570	23.12	1.361	.88	.038	-	-	3.
001369	104904.	.584	2.570	23.94	1.409	.62	.026	-	-	3.
001370	104904.	.584	2.515	24.00	1.413	.59	.025	-	-	3.
001371	104904.	.719	2.515	23.11	1.360	.92	.040	-	-	3.
001372	104904.	.853	2.515	20.85	1.227	1.25	.060	-	-	3.
001373	104904.	.987	2.515	17.60	1.036	1.55	.088	-	-	3.
001374	104904.	1.121	2.515	14.04	.826	1.15	.082	-	-	3.
001375	104904.	1.121	2.680	16.42	.966	1.19	.073	-	-	3.
001376	104904.	.987	2.680	18.49	1.088	1.28	.069	-	-	3.
001377	104904.	.853	2.680	19.99	1.177	1.44	.072	-	-	3.
001378	104904.	.719	2.680	22.17	1.305	1.21	.055	-	-	3.
001379	104904.	.584	2.680	23.44	1.380	.82	.035	-	-	3.
001380	104904.	.584	2.735	22.93	1.350	.94	.041	-	-	3.
001381	104904.	.719	2.735	21.45	1.263	1.20	.056	-	-	3.
001382	104904.	.853	2.735	18.75	1.104	1.45	.077	-	-	3.
001383	104904.	.987	2.735	16.59	.977	1.41	.085	-	-	3.
001384	104904.	1.121	2.735	13.65	.803	1.13	.083	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT D-B TYPE II BLOCK AT STA 3 WINDOW 5 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB1385	104904.	.586	3.875	19.46	1.145	1.21	.062	-	-	3.
BB1386	104904.	.653	3.875	19.66	1.157	1.18	.060	-	-	3.
BB1387	104904.	.720	3.875	19.60	1.154	1.14	.058	-	-	3.
BB1388	104904.	.787	3.875	19.33	1.138	1.11	.057	-	-	3.
BB1389	104904.	.854	3.875	18.81	1.107	1.08	.057	-	-	3.
BB1390	104904.	.921	3.875	18.29	1.076	1.00	.055	-	-	3.
BB1391	104904.	.988	3.875	17.70	1.042	.96	.054	-	-	3.
BB1392	104904.	1.055	3.875	16.73	.984	.89	.053	-	-	3.
BB1393	104904.	1.122	3.875	14.76	.869	1.10	.075	-	-	3.
BB1394	104904.	1.190	3.875	12.04	.709	1.42	.118	-	-	3.
BB1395	104904.	1.122	3.820	14.90	.877	.99	.066	-	-	3.
BB1396	104904.	.988	3.820	17.51	1.031	1.06	.061	-	-	3.
BB1397	104904.	.854	3.820	19.58	1.152	.90	.046	-	-	3.
BB1398	104904.	.720	3.820	20.71	1.219	.96	.046	-	-	3.
BB1399	104904.	.586	3.820	20.95	1.233	1.03	.049	-	-	3.
BB1400	104904.	.586	3.765	21.51	1.266	.85	.040	-	-	3.
BB1401	104904.	.720	3.765	20.81	1.225	.94	.045	-	-	3.
BB1402	104904.	.854	3.765	18.93	1.114	1.11	.059	-	-	3.
BB1403	104904.	.988	3.765	15.75	.927	1.17	.074	-	-	3.
BB1404	104904.	1.122	3.765	11.48	.676	.90	.078	-	-	3.
BB1405	104904.	1.122	3.930	14.79	.871	1.02	.069	-	-	3.
BB1406	104904.	.988	3.930	16.44	.968	1.17	.071	-	-	3.
BB1407	104904.	.854	3.930	17.37	1.022	1.26	.074	-	-	3.
BB1408	104904.	.720	3.930	18.10	1.065	1.29	.071	-	-	3.
BB1409	104904.	.586	3.930	18.06	1.063	1.27	.070	-	-	3.
BB1410	104904.	.586	3.985	15.90	.936	1.30	.082	-	-	3.
BB1411	104904.	.720	3.985	15.90	.936	1.31	.083	-	-	3.
BB1412	104904.	.854	3.985	15.25	.897	1.27	.083	-	-	3.
BB1413	104904.	.988	3.985	14.27	.840	1.17	.082	-	-	3.
BB1414	104904.	1.122	3.985	13.39	.768	.98	.073	-	-	3.

SECT D-B TYPE II BLOCK AT STA 2 WINDOW 5 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB935	104904.	.612	.125	13.79	.812	1.13	.082	-	-	3.
BB936	104904.	.680	.125	13.76	.810	1.14	.083	-	-	3.
BB937	104904.	.747	.125	13.49	.794	1.19	.088	-	-	3.
BB938	104904.	.814	.125	13.24	.779	1.15	.087	-	-	3.
BB939	104904.	.881	.125	12.81	.754	1.21	.095	-	-	3.
BB940	104904.	.948	.125	12.28	.723	1.17	.095	-	-	3.
BB941	104904.	1.015	.125	11.72	.690	1.08	.092	-	-	3.
BB942	104904.	1.082	.125	11.08	.652	1.11	.101	-	-	3.
BB943	104904.	1.149	.125	10.53	.620	1.09	.104	-	-	3.
BB944	104904.	1.216	.125	9.02	.531	1.09	.121	-	-	3.
BB945	104904.	1.149	.070	9.85	.580	1.04	.105	-	-	3.
BB946	104904.	1.015	.070	10.86	.637	1.23	.114	-	-	3.
BB947	104904.	.881	.070	12.45	.733	1.19	.096	-	-	3.
BB948	104904.	.747	.070	13.25	.780	1.17	.089	-	-	3.
BB949	104904.	.612	.070	13.49	.794	1.15	.086	-	-	3.
BB950	104904.	.612	.015	11.74	.691	1.08	.092	-	-	3.
BB951	104904.	.747	.015	11.45	.674	1.14	.100	-	-	3.
BB952	104904.	.881	.015	10.55	.621	1.14	.109	-	-	3.
BB953	104904.	1.015	.015	8.98	.529	.95	.106	-	-	3.
BB954	104904.	1.149	.015	8.05	.474	.96	.120	-	-	3.
BB955	104904.	1.149	.180	10.64	.626	1.02	.096	-	-	3.
BB956	104904.	1.015	.180	11.93	.702	1.12	.094	-	-	3.
BB957	104904.	.881	.180	12.79	.753	1.17	.092	-	-	3.
BB958	104904.	.747	.180	13.43	.791	1.25	.093	-	-	3.
BB959	104904.	.612	.180	13.81	.813	1.21	.088	-	-	3.
BB960	104904.	.612	.235	13.66	.804	1.34	.098	-	-	3.
BB961	104904.	.747	.235	13.19	.777	1.42	.107	-	-	3.
BB962	104904.	.881	.235	12.59	.741	1.25	.100	-	-	3.
BB963	104904.	1.015	.235	11.52	.678	1.15	.100	-	-	3.
BB964	104904.	1.149	.235	9.19	.541	.96	.104	-	-	3.

SECT D-B TYPE II BLOCK AT STA 2 WINDOW 5 AT CL ZONE 2

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB1085	104904.	.716	.750	11.86	.698	-	-	-.32	-.03	-
BB1086	104904.	.683	.750	13.87	.816	-	-	-.09	-.01	-
BB1087	104904.	.649	.750	15.25	.897	-	-	.08	.01	-
BB1088	104904.	.616	.750	16.13	.949	-	-	.34	.02	-
BB1089	104904.	.582	.750	16.39	.964	-	-	.31	.02	-
BB1090	104904.	.549	.750	16.08	.947	-	-	.24	.01	-
BB1091	104904.	.515	.750	15.30	.900	-	-	.05	.00	-
BB1092	104904.	.482	.750	13.87	.816	-	-	-.27	-.02	-
BB1093	104904.	.448	.750	11.59	.682	-	-	-1.01	-.09	-
BB1094	104904.	.414	.750	8.03	.473	-	-	-2.26	-.28	-

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. † TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B TYPE II BLOCK AT STA 2 WINDOW 5 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UH	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB965	104904	.587	1.375	19.18	1.129	1.00	.052	-	-	3.
BB966	104904	.654	1.375	19.09	1.124	.99	.052	-	-	3.
BB967	104904	.721	1.375	18.64	1.109	1.07	.057	-	-	3.
BB968	104904	.788	1.375	18.53	1.091	1.13	.061	-	-	3.
BB969	104904	.855	1.375	18.25	1.074	1.11	.061	-	-	3.
BB970	104904	.923	1.375	17.99	1.059	1.22	.068	-	-	3.
BB971	104904	.990	1.375	17.69	1.041	1.18	.067	-	-	3.
BB972	104904	1.057	1.375	17.08	1.006	1.24	.073	-	-	3.
BB973	104904	1.124	1.375	16.07	.946	1.25	.078	-	-	3.
BB974	104904	1.191	1.375	13.72	.808	1.44	.105	-	-	3.
BB975	104904	1.124	1.320	15.20	.895	1.37	.090	-	-	3.
BB976	104904	.990	1.320	17.51	1.031	1.33	.076	-	-	3.
BB977	104904	.855	1.320	18.40	1.083	1.13	.062	-	-	3.
BB978	104904	.721	1.320	18.92	1.114	1.04	.055	-	-	3.
BB979	104904	.587	1.320	19.21	1.131	1.01	.053	-	-	3.
BB980	104904	.587	1.265	19.17	1.128	1.01	.053	-	-	3.
BB981	104904	.721	1.265	18.97	1.117	1.03	.055	-	-	3.
BB982	104904	.855	1.265	18.41	1.084	1.10	.060	-	-	3.
BB983	104904	.990	1.265	16.75	.986	1.37	.082	-	-	3.
BB984	104904	1.124	1.265	12.69	.747	1.30	.103	-	-	3.
BB985	104904	1.124	1.430	16.01	.942	1.27	.079	-	-	3.
BB986	104904	.990	1.430	17.49	1.029	1.30	.074	-	-	3.
BB987	104904	.855	1.430	17.85	1.050	1.31	.074	-	-	3.
BB988	104904	.721	1.430	18.79	1.106	1.09	.058	-	-	3.
BB989	104904	.587	1.430	19.17	1.128	1.06	.057	-	-	3.
BB990	104904	.587	1.485	19.06	1.122	1.11	.058	-	-	3.
BB991	104904	.721	1.485	18.67	1.099	1.18	.063	-	-	3.
BB992	104904	.855	1.485	17.36	1.022	1.32	.076	-	-	3.
BB993	104904	.990	1.485	16.65	.980	1.45	.087	-	-	3.
BB994	104904	1.124	1.485	13.64	.815	1.28	.092	-	-	3.

SECT B-B TYPE II BLOCK AT STA 2 WINDOW 5 AT CL ZONE 4

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UH	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB1065	104904	.734	2.000	14.84	.874	-	-	.74	.05	-
BB1066	104904	.700	2.000	17.74	1.044	-	-	.26	.01	-
BB1067	104904	.667	2.000	19.88	1.170	-	-	.31	.02	-
BB1068	104904	.633	2.000	21.18	1.247	-	-	.39	.02	-
BB1069	104904	.600	2.000	21.61	1.272	-	-	.44	.02	-
BB1070	104904	.566	2.000	21.42	1.261	-	-	.44	.02	-
BB1071	104904	.533	2.000	20.84	1.226	-	-	.29	.01	-
BB1072	104904	.499	2.000	19.69	1.159	-	-	.25	.01	-
BB1073	104904	.465	2.000	17.60	1.036	-	-	.32	.02	-
BB1074	104904	.432	2.000	14.93	.879	-	-	.35	.02	-

SECT B-B TYPE II BLOCK AT STA 2 WINDOW 5 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UH	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB995	104904	.584	2.625	24.64	1.450	.89	.036	-	-	3.
BB996	104904	.651	2.625	24.34	1.432	1.02	.042	-	-	3.
BB997	104904	.719	2.625	23.50	1.383	1.22	.052	-	-	3.
BB998	104904	.786	2.625	22.54	1.326	1.35	.060	-	-	3.
BB999	104904	.853	2.625	21.65	1.275	1.34	.062	-	-	3.
BB1000	104904	.920	2.625	20.91	1.231	1.29	.060	-	-	3.
BB1001	104904	.987	2.625	20.08	1.182	1.22	.061	-	-	3.
BB1002	104904	1.054	2.625	19.10	1.124	1.12	.059	-	-	3.
BB1003	104904	1.121	2.625	17.48	1.029	1.22	.070	-	-	3.
BB1004	104904	1.188	2.625	14.23	.838	1.24	.087	-	-	3.
BB1005	104904	1.121	2.570	16.98	.976	1.26	.076	-	-	3.
BB1006	104904	.987	2.570	19.52	1.149	1.41	.072	-	-	3.
BB1007	104904	.853	2.570	22.12	1.302	1.24	.056	-	-	3.
BB1008	104904	.719	2.570	24.05	1.416	1.07	.045	-	-	3.
BB1009	104904	.584	2.570	25.06	1.475	.81	.032	-	-	3.
BB1010	104904	.584	2.515	25.20	1.483	.75	.030	-	-	3.
BB1011	104904	.719	2.515	24.15	1.421	1.02	.042	-	-	3.
BB1012	104904	.853	2.515	21.61	1.294	1.31	.060	-	-	3.
BB1013	104904	.987	2.515	18.00	1.069	1.47	.082	-	-	3.
BB1014	104904	1.121	2.515	13.87	.817	1.16	.084	-	-	3.
BB1015	104904	1.121	2.690	17.00	1.001	-	-	-	-	3.
BB1016	104904	.987	2.690	19.29	1.135	1.21	.063	-	-	3.
BB1017	104904	.853	2.690	20.32	1.196	1.51	.074	-	-	3.
BB1018	104904	.719	2.690	22.56	1.328	1.33	.059	-	-	3.
BB1019	104904	.584	2.690	23.84	1.403	1.10	.046	-	-	3.
BB1020	104904	1.121	2.740	14.05	.827	1.13	.080	-	-	3.
BB1021	104904	.987	2.740	17.61	1.036	1.52	.086	-	-	3.
BB1022	104904	.853	2.740	19.22	1.131	1.52	.079	-	-	3.
BB1023	104904	.719	2.740	21.93	1.291	1.36	.062	-	-	3.
BB1024	104904	.584	2.740	23.36	1.375	1.08	.046	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.

* QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B TYPE II BLOCK AT STA 2 WINDOW 5 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/U _B	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1025	104904.	.594	3.659	20.07	1.161	1.24	.062	-	-	3.
bb1026	104904.	.661	3.659	20.07	1.161	1.29	.064	-	-	3.
bb1027	104904.	.728	3.659	20.04	1.160	1.26	.063	-	-	3.
bb1028	104904.	.795	3.659	19.67	1.156	1.17	.060	-	-	3.
bb1029	104904.	.862	3.659	19.31	1.137	1.11	.058	-	-	3.
bb1030	104904.	.929	3.659	18.75	1.104	1.03	.055	-	-	3.
bb1031	104904.	.996	3.659	18.06	1.063	.97	.054	-	-	3.
bb1032	104904.	1.063	3.659	17.16	1.010	.95	.055	-	-	3.
bb1033	104904.	1.131	3.659	15.20	.895	1.19	.078	-	-	3.
bb1034	104904.	1.198	3.659	12.00	.706	1.32	.110	-	-	3.
bb1035	104904.	1.131	3.604	14.88	.876	1.03	.069	-	-	3.
bb1036	104904.	.996	3.604	17.64	1.039	1.12	.063	-	-	3.
bb1037	104904.	.862	3.604	19.92	1.173	.98	.049	-	-	3.
bb1038	104904.	.728	3.604	21.14	1.244	1.07	.051	-	-	3.
bb1039	104904.	.594	3.604	21.43	1.261	1.14	.053	-	-	3.
bb1040	104904.	.594	3.755	21.63	1.273	1.07	.049	-	-	3.
bb1041	104904.	.728	3.755	21.08	1.241	1.05	.050	-	-	3.
bb1042	104904.	.862	3.755	18.92	1.114	1.33	.070	-	-	3.
bb1043	104904.	.996	3.755	15.39	.906	1.32	.086	-	-	3.
bb1044	104904.	1.131	3.755	10.81	.636	1.03	.095	-	-	3.
bb1045	104904.	1.131	3.914	15.03	.885	1.12	.074	-	-	3.
bb1046	104904.	.996	3.914	17.07	1.005	1.13	.066	-	-	3.
bb1047	104904.	.862	3.914	17.91	1.054	1.25	.070	-	-	3.
bb1048	104904.	.728	3.914	18.66	1.093	1.29	.069	-	-	3.
bb1049	104904.	.594	3.914	18.66	1.098	1.33	.071	-	-	3.
bb1050	104904.	.594	3.969	16.62	.975	1.43	.086	-	-	3.
bb1051	104904.	.728	3.969	16.65	.980	1.33	.080	-	-	3.
bb1052	104904.	.862	3.969	15.81	.930	1.35	.086	-	-	3.
bb1053	104904.	.996	3.969	15.07	.887	1.15	.077	-	-	3.
bb1054	104904.	1.131	3.969	13.56	.798	1.01	.075	-	-	3.
bb1055	104904.	.594	3.765	21.99	1.294	.99	.045	-	-	3.
bb1056	104904.	.594	3.620	21.12	1.243	1.15	.055	-	-	3.
bb1057	104904.	.594	3.875	19.82	1.166	1.21	.061	-	-	3.
bb1058	104904.	.594	3.930	18.29	1.076	1.36	.074	-	-	3.
bb1059	104904.	.594	3.985	15.76	.924	1.33	.085	-	-	3.
bb1060	104904.	.728	3.985	15.70	.924	1.32	.084	-	-	3.
bb1061	104904.	.728	3.930	18.24	1.074	1.43	.078	-	-	3.
bb1062	104904.	.728	3.675	19.70	1.163	1.23	.062	-	-	3.
bb1063	104904.	.728	3.620	20.96	1.234	1.04	.049	-	-	3.
bb1064	104904.	.728	3.765	21.35	1.257	1.00	.047	-	-	3.

SECT B-B TYPE II BLOCK AT STA 1 WINDOW 5 CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/U _B	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb644A	104904.	.576	.125	13.66	.804	.87	.064	-	-	3.
bb645	104904.	.643	.125	13.64	.803	.86	.063	-	-	3.
bb646	104904.	.710	.125	13.46	.792	.91	.068	-	-	3.
bb647	104904.	.776	.125	13.18	.776	.84	.064	-	-	3.
bb648	104904.	.845	.125	12.77	.751	.85	.067	-	-	3.
bb649	104904.	.912	.125	12.12	.713	.89	.074	-	-	3.
bb650	104904.	.979	.125	11.57	.681	.89	.077	-	-	3.
bb651	104904.	1.046	.125	11.06	.651	.86	.077	-	-	3.
bb652	104904.	1.113	.125	10.56	.621	.82	.077	-	-	3.
bb653	104904.	1.180	.125	9.26	.585	.82	.088	-	-	3.
bb654	104904.	1.180	.070	8.57	.504	.99	.115	-	-	3.
bb655	104904.	1.046	.070	10.24	.602	.92	.090	-	-	3.
bb656	104904.	.912	.070	11.33	.667	.89	.078	-	-	3.
bb657	104904.	.710	.070	12.97	.763	.93	.072	-	-	3.
bb658	104904.	.576	.070	13.23	.779	.89	.067	-	-	3.
bb659	104904.	.576	.020	11.46	.675	.92	.081	-	-	3.
bb660	104904.	.710	.020	11.30	.665	.92	.082	-	-	3.
bb661	104904.	.845	.020	10.59	.624	.91	.086	-	-	3.
bb662	104904.	.979	.020	9.13	.539	.91	.099	-	-	3.
bb663	104904.	1.113	.020	8.49	.500	.90	.106	-	-	3.
bb664	104904.	1.113	.180	10.52	.619	.79	.075	-	-	3.
bb665	104904.	.979	.180	12.04	.709	.81	.068	-	-	3.
bb666	104904.	.845	.180	12.96	.763	.92	.071	-	-	3.
bb667	104904.	.710	.180	13.62	.802	.90	.066	-	-	3.
bb668	104904.	.576	.180	13.67	.817	.88	.064	-	-	3.
bb669	104904.	.576	.235	13.87	.817	.94	.068	-	-	3.
bb670	104904.	.710	.235	13.53	.796	1.03	.076	-	-	3.
bb671	104904.	.845	.235	12.86	.757	.97	.076	-	-	3.
bb672	104904.	.979	.235	11.66	.686	.82	.071	-	-	3.
bb673	104904.	1.113	.235	8.80	.518	.74	.084	-	-	3.
bb674	104904.	.590	1.371	18.69	1.100	.87	.047	-	-	3.

SECT B-B TYPE II BLOCK AT STA 1 WINDOWS CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/U _B	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb395	104904.	.586	1.375	18.47	1.087	.90	.049	-	-	3.
bb396	104904.	.653	1.375	18.28	1.076	.93	.051	-	-	3.
bb397	104904.	.720	1.375	18.05	1.062	.96	.053	-	-	3.
bb398	104904.	.787	1.375	17.75	1.045	.95	.054	-	-	3.
bb399	104904.	.854	1.375	17.41	1.025	1.08	.062	-	-	3.
bb400	104904.	.921	1.375	17.08	1.006	1.15	.068	-	-	3.
bb401	104904.	.988	1.375	16.70	.983	1.05	.063	-	-	3.
bb402	104904.	1.055	1.375	15.94	.935	1.19	.075	-	-	3.
bb403	104904.	1.122	1.375	14.83	.873	1.09	.074	-	-	3.
bb404	104904.	1.190	1.375	12.44	.732	1.37	.110	-	-	3.
bb405	104904.	1.230	1.375	9.79	.577	1.92	.196	-	-	3.
bb406	104904.	.586	1.435	18.19	1.071	.98	.054	-	-	3.
bb407	104904.	.653	1.435	18.07	1.064	.98	.054	-	-	3.
bb408	104904.	.720	1.435	17.72	1.043	1.30	.074	-	-	3.
bb409	104904.	.787	1.435	17.26	1.016	1.13	.065	-	-	3.
bb410	104904.	.854	1.435	16.90	.997	1.11	.065	-	-	3.
bb411	104904.	.854	1.485	16.44	.968	1.28	.078	-	-	3.
bb412	104904.	.787	1.485	16.96	.999	1.13	.066	-	-	3.
bb413	104904.	.720	1.485	17.47	1.028	1.12	.064	-	-	3.
bb414	104904.	.653	1.485	17.99	1.059	1.04	.058	-	-	3.
bb415	104904.	.586	1.485	18.18	1.070	1.00	.055	-	-	3.
bb416	104904.	.586	1.315	18.07	1.064	.97	.054	-	-	3.
bb417	104904.	.653	1.315	17.95	1.057	.99	.055	-	-	3.
bb418	104904.	.720	1.315	17.74	1.044	.95	.054	-	-	3.
bb419	104904.	.787	1.315	17.48	1.029	1.07	.061	-	-	3.
bb420	104904.	.854	1.315	17.13	1.008	1.14	.067	-	-	3.
bb421	104904.	.854	1.265	16.88	.994	1.22	.072	-	-	3.
bb422	104904.	.787	1.265	17.33	1.020	1.22	.070	-	-	3.
bb423	104904.	.720	1.265	17.66	1.039	1.07	.061	-	-	3.
bb424	104904.	.653	1.265	17.87	1.052	1.07	.060	-	-	3.
bb425	104904.	.586	1.265	18.04	1.062	1.02	.056	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES, AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. * TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT D-B TYPE 11 BLOCK AT STA 1 WINDOW 5 CL+ZONE 4

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
00378	104904.	.727	2.000	14.98	.882	-	-	-.30	-.02	-
00379	104904.	.694	2.000	17.30	1.013	-	-	-.18	-.01	-
00380	104904.	.660	2.000	18.54	1.091	-	-	-.24	-.01	-
00381	104904.	.627	2.000	19.05	1.121	-	-	-.40	-.02	-
00382	104904.	.593	2.000	19.05	1.121	-	-	-.46	-.02	-
00383	104904.	.559	2.000	18.60	1.095	-	-	-.55	-.03	-
00384	104904.	.526	2.000	17.70	1.042	-	-	-.66	-.04	-
00385	104904.	.492	2.000	16.04	.944	-	-	-.87	-.05	-
00386	104904.	.459	2.000	15.16	.892	-	-	-.90	-.06	-

SECT D-B TYPE 11 BLOCK AT STA 1 WINDOW 5 CL+ZONE 4

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
00675	104904.	.730	2.000	14.57	.857	1.91	.131	-	-	3.
00676	104904.	.663	2.000	18.72	1.102	1.52	.081	-	-	3.
00677	104904.	.596	2.000	20.08	1.182	1.40	.070	-	-	3.
00678	104904.	.529	2.000	19.16	1.128	1.61	.084	-	-	3.
00679	104904.	.461	2.000	16.49	.970	1.65	.100	-	-	3.

SECT D-B TYPE 11 BLOCK AT STA 1 WINDOW 5 CL+ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
00426	104904.	.586	2.625	23.29	1.371	.96	.041	-	-	3.
00427	104904.	.653	2.625	23.02	1.355	1.00	.043	-	-	3.
00428	104904.	.720	2.625	22.21	1.308	1.19	.054	-	-	3.
00429	104904.	.787	2.625	21.33	1.256	1.23	.058	-	-	3.
00430	104904.	.854	2.625	20.42	1.202	1.23	.060	-	-	3.
00431	104904.	.921	2.625	19.72	1.161	1.19	.060	-	-	3.
00432	104904.	.988	2.625	18.89	1.112	1.23	.065	-	-	3.
00433	104904.	1.055	2.625	17.89	1.053	1.15	.064	-	-	3.
00434	104904.	1.122	2.625	16.12	.949	1.28	.080	-	-	3.
00435	104904.	1.190	2.625	13.18	.776	1.39	.106	-	-	3.
00436	104904.	.586	2.680	22.76	1.340	1.08	.048	-	-	3.
00437	104904.	.653	2.680	22.42	1.319	1.12	.050	-	-	3.
00438	104904.	.720	2.680	21.53	1.267	1.23	.057	-	-	3.
00439	104904.	.787	2.680	20.56	1.210	1.39	.067	-	-	3.
00440	104904.	.854	2.680	19.73	1.161	1.39	.070	-	-	3.
00441	104904.	.921	2.725	18.97	1.117	1.42	.075	-	-	3.
00442	104904.	.988	2.725	19.95	1.174	1.47	.074	-	-	3.
00443	104904.	1.055	2.725	21.12	1.243	1.27	.060	-	-	3.
00444	104904.	.653	2.725	22.07	1.299	1.16	.052	-	-	3.
00445	104904.	.720	2.725	22.42	1.319	1.12	.050	-	-	3.
00446	104904.	.787	2.575	23.56	1.387	.94	.040	-	-	3.
00447	104904.	.854	2.575	23.32	1.375	.98	.042	-	-	3.
00448	104904.	.921	2.575	22.67	1.334	1.02	.045	-	-	3.
00449	104904.	.988	2.575	21.74	1.279	1.23	.057	-	-	3.
00450	104904.	1.055	2.575	20.70	1.218	1.31	.063	-	-	3.
00451	104904.	1.122	2.520	20.36	1.199	1.32	.065	-	-	3.
00452	104904.	.787	2.520	21.46	1.263	1.19	.056	-	-	3.
00453	104904.	.720	2.520	22.51	1.325	1.15	.051	-	-	3.
00454	104904.	.653	2.520	23.07	1.358	1.02	.044	-	-	3.
00455	104904.	.586	2.520	23.44	1.380	.98	.042	-	-	3.

SECT D-B TYPE 11 BLOCK AT STA 1 WINDOW 5 CL+ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
00456	104904.	.586	3.875	18.67	1.099	1.27	.068	-	-	3.
00457	104904.	.653	3.875	18.75	1.104	1.27	.068	-	-	3.
00458	104904.	.720	3.875	18.65	1.098	1.19	.064	-	-	3.
00459	104904.	.787	3.875	18.29	1.076	1.23	.067	-	-	3.
00460	104904.	.854	3.875	17.78	1.046	1.24	.070	-	-	3.
00461	104904.	.921	3.875	17.48	1.029	1.04	.059	-	-	3.
00462	104904.	.988	3.875	16.96	.999	1.03	.061	-	-	3.
00463	104904.	1.055	3.875	16.12	.949	1.02	.063	-	-	3.
00464	104904.	1.122	3.875	14.32	.843	1.19	.083	-	-	3.
00465	104904.	1.190	3.875	11.36	.668	1.41	.124	-	-	3.
00466	104904.	.854	3.930	16.17	.951	1.23	.076	-	-	3.
00467	104904.	.787	3.930	16.63	.979	1.37	.082	-	-	3.
00468	104904.	.720	3.930	16.96	.999	1.30	.080	-	-	3.
00469	104904.	.653	3.930	17.10	1.006	1.31	.077	-	-	3.
00470	104904.	.586	3.930	17.06	1.004	1.46	.085	-	-	3.
00471	104904.	.520	3.975	15.09	.883	1.39	.092	-	-	3.
00472	104904.	.653	3.975	15.26	.898	1.30	.085	-	-	3.
00473	104904.	.720	3.975	14.96	.881	1.30	.087	-	-	3.
00474	104904.	.787	3.975	14.79	.871	1.23	.083	-	-	3.
00475	104904.	.854	3.975	14.21	.836	1.27	.089	-	-	3.
00476	104904.	.854	3.820	18.93	1.114	.97	.051	-	-	3.
00477	104904.	.787	3.820	19.45	1.145	1.08	.056	-	-	3.
00478	104904.	.720	3.820	19.86	1.169	1.08	.055	-	-	3.
00479	104904.	.653	3.820	20.02	1.178	1.16	.058	-	-	3.
00480	104904.	.586	3.820	20.01	1.178	1.10	.055	-	-	3.
00481	104904.	.520	3.760	20.94	1.232	.95	.045	-	-	3.
00482	104904.	.653	3.760	20.88	1.229	.91	.044	-	-	3.
00483	104904.	.720	3.760	20.32	1.196	.99	.049	-	-	3.
00484	104904.	.787	3.760	19.68	1.159	1.07	.054	-	-	3.
00485	104904.	.854	3.760	18.69	1.100	1.11	.059	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES.

AVERAGE VELOCITY, UB = 17.0 FT/SEC.

* QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B TYPE IV BLOCK AT STA 2 WINDOW 3 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2050	104904	.582	.125	16.74	.905	-	-	-	-	3.
BB2051	104904	.649	.125	16.64	.983	-	-	-	-	3.
BB2052	104904	.716	.125	16.62	.978	-	-	-	-	3.
BB2053	104904	.850	.125	16.61	.977	-	-	-	-	3.
BB2054	104904	.984	.125	15.64	.921	-	-	-	-	3.
BB2055	104904	1.118	.125	14.03	.826	-	-	-	-	3.
BB2056	104904	.514	.125	17.23	1.014	-	-	-	-	3.
BB2057	104904	.447	.125	17.74	1.044	-	-	-	-	3.
BB2058	104904	.313	.125	17.27	1.017	-	-	-	-	3.
BB2059	104904	.179	.125	15.89	.935	-	-	-	-	3.
BB2060	104904	.582	.070	15.51	.913	-	-	-	-	3.
BB2061	104904	.582	.015	13.24	.779	-	-	-	-	3.
BB2062	104904	.582	.180	17.84	1.050	-	-	-	-	3.
BB2063	104904	.582	.235	18.68	1.100	-	-	-	-	3.
BB2064	104904	.514	.180	18.25	1.074	-	-	-	-	3.
BB2065	104904	.447	.235	18.69	1.100	-	-	-	-	3.
BB2066	104904	.313	.235	16.64	.980	-	-	-	-	3.
BB2067	104904	.716	.235	18.32	1.079	-	-	-	-	3.
BB2068	104904	.649	.180	17.68	1.041	-	-	-	-	3.

SECT B-B TYPE IV BLOCK AT STA 2 WINDOW 3 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2069	104904	.582	1.375	21.69	1.277	-	-	-	-	3.
BB2070	104904	.716	1.375	21.41	1.260	-	-	-	-	3.
BB2071	104904	.850	1.375	20.32	1.190	-	-	-	-	3.
BB2072	104904	.984	1.375	18.77	1.105	-	-	-	-	3.
BB2073	104904	1.118	1.375	16.68	.962	-	-	-	-	3.
BB2074	104904	.447	1.375	20.87	1.223	-	-	-	-	3.
BB2075	104904	.313	1.375	20.04	1.180	-	-	-	-	3.
BB2076	104904	.179	1.375	18.94	1.115	-	-	-	-	3.
BB2077	104904	.745	1.375	16.61	.977	-	-	-	-	3.
BB2078	104904	.582	1.430	21.95	1.292	-	-	-	-	3.
BB2079	104904	.582	1.485	21.95	1.292	-	-	-	-	3.
BB2080	104904	.582	1.320	21.06	1.239	-	-	-	-	3.
BB2081	104904	.582	1.265	20.35	1.198	-	-	-	-	3.
BB2082	104904	.313	1.265	17.97	1.058	-	-	-	-	3.
BB2083	104904	.447	1.320	20.15	1.186	-	-	-	-	3.
BB2084	104904	.447	1.430	21.12	1.243	-	-	-	-	3.
BB2085	104904	.313	1.485	19.24	1.135	-	-	-	-	3.

SECT B-B TYPE IV BLOCK AT STA 2 WINDOW 3 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2086	104904	.579	2.625	21.67	1.287	-	-	-	-	3.
BB2087	104904	.713	2.625	21.31	1.254	-	-	-	-	3.
BB2088	104904	.847	2.625	20.28	1.194	-	-	-	-	3.
BB2089	104904	.982	2.625	19.02	1.119	-	-	-	-	3.
BB2090	104904	1.116	2.625	17.05	1.003	-	-	-	-	3.
BB2091	104904	.445	2.625	21.68	1.276	-	-	-	-	3.
BB2092	104904	.310	2.625	20.28	1.194	-	-	-	-	3.
BB2093	104904	.176	2.625	18.90	1.112	-	-	-	-	3.
BB2094	104904	.042	2.625	16.73	.984	-	-	-	-	3.
BB2095	104904	.579	2.680	22.15	1.364	-	-	-	-	3.
BB2096	104904	.579	2.735	21.99	1.294	-	-	-	-	3.
BB2097	104904	.579	2.570	21.35	1.257	-	-	-	-	3.
BB2098	104904	.579	2.515	20.73	1.220	-	-	-	-	3.
BB2099	104904	.445	2.680	21.84	1.286	-	-	-	-	3.
BB2100	104904	.312	2.735	20.14	1.165	-	-	-	-	3.

SECT B-B TYPE IV BLOCK AT STA 2 WINDOW 3 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB2101	104904	.588	3.875	17.48	1.029	-	-	-	-	3.
BB2102	104904	.834	3.875	16.95	.998	-	-	-	-	3.
BB2103	104904	.320	3.875	17.06	1.004	-	-	-	-	3.
BB2104	104904	.186	3.875	16.18	.952	-	-	-	-	3.
BB2105	104904	.051	3.875	14.70	.805	-	-	-	-	3.
BB2106	104904	.723	3.875	18.22	1.072	-	-	-	-	3.
BB2107	104904	.857	3.875	17.75	1.045	-	-	-	-	3.
BB2108	104904	.991	3.875	16.46	.969	-	-	-	-	3.
BB2109	104904	1.125	3.875	14.85	.874	-	-	-	-	3.
BB2110	104904	.588	3.930	16.37	.963	-	-	-	-	3.
BB2111	104904	.655	3.930	16.76	.987	-	-	-	-	3.
BB2112	104904	.723	3.930	16.99	1.000	-	-	-	-	3.
BB2113	104904	.588	3.985	13.70	.806	-	-	-	-	3.
BB2114	104904	.503	3.820	18.36	1.061	-	-	-	-	3.
BB2115	104904	.588	3.765	18.98	1.117	-	-	-	-	3.
BB2116	104904	.655	3.765	19.10	1.124	-	-	-	-	3.
BB2117	104904	.723	3.765	18.67	1.111	-	-	-	-	3.
BB2118	104904	.857	3.820	18.11	1.066	-	-	-	-	3.
BB2119	104904	.723	3.820	18.94	1.115	-	-	-	-	3.
BB2120	104904	.454	3.820	17.95	1.057	-	-	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT D-B TYPE IV BLOCK AT STA 1+1100.0 3 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1541	104904.	.580	.070	10.24	.602	1.22	.119	-	-	3.
bb1542	104904.	.714	.070	10.49	.617	1.30	.124	-	-	3.
bb1543	104904.	.849	.070	10.38	.611	1.33	.128	-	-	3.
bb1544	104904.	.983	.070	9.69	.570	1.15	.119	-	-	3.
bb1545	104904.	1.117	.070	8.92	.525	.96	.108	-	-	3.
bb1546	104904.	1.117	.015	4.12	.242	+	+	-	-	3.
bb1547	104904.	.983	.015	4.51	.265	+	+	-	-	3.
bb1548	104904.	.849	.015	4.53	.267	+	+	-	-	3.
bb1549	104904.	.714	.015	5.68	.334	+	+	-	-	3.
bb1550	104904.	.580	.015	7.77	.457	1.48	.190	-	-	3.
bb1551	104904.	.580	.125	11.03	.685	1.27	.109	-	-	3.
bb1552	104904.	.647	.125	11.12	.654	1.17	.106	-	-	3.
bb1553	104904.	.714	.125	11.30	.665	1.29	.114	-	-	3.
bb1554	104904.	.782	.125	11.77	.693	1.23	.104	-	-	3.
bb1555	104904.	.849	.125	11.83	.697	1.19	.101	-	-	3.
bb1556	104904.	.916	.125	11.48	.676	1.11	.096	-	-	3.
bb1557	104904.	.983	.125	11.18	.658	.97	.087	-	-	3.
bb1558	104904.	1.050	.125	10.74	.632	.81	.075	-	-	3.
bb1559	104904.	1.117	.125	9.17	.540	1.32	.111	-	-	3.
bb1560	104904.	1.184	.125	4.18	.246	+	+	-	-	3.
bb1561	104904.	1.117	.180	9.07	.534	1.06	.116	-	-	3.
bb1562	104904.	.983	.180	11.06	.686	.83	.071	-	-	3.
bb1563	104904.	.849	.180	12.80	.753	.99	.077	-	-	3.
bb1564	104904.	.714	.180	12.38	.729	1.23	.099	-	-	3.
bb1565	104904.	.580	.180	12.66	.745	1.27	.100	-	-	3.
bb1566	104904.	.580	.235	13.53	.790	1.16	.085	-	-	3.
bb1567	104904.	.714	.235	13.30	.783	1.14	.086	-	-	3.
bb1568	104904.	.849	.235	12.93	.761	.94	.073	-	-	3.
bb1569	104904.	.983	.235	10.49	.617	1.07	.102	-	-	3.
bb1570	104904.	1.117	.235	5.79	.341	+	+	-	-	3.

SECT D-B TYPE IV BLOCK AT STA 1+1100.0 3 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1451	104904.	.582	1.375	17.45	1.050	.84	.047	-	-	3.
bb1452	104904.	.649	1.375	17.42	1.025	1.04	.060	-	-	3.
bb1453	104904.	.716	1.375	16.62	.978	1.10	.066	-	-	3.
bb1454	104904.	.783	1.375	15.72	.926	1.14	.072	-	-	3.
bb1455	104904.	.850	1.375	15.01	.883	1.18	.078	-	-	3.
bb1456	104904.	.917	1.375	14.55	.857	1.26	.087	-	-	3.
bb1457	104904.	.984	1.375	14.38	.840	1.26	.088	-	-	3.
bb1458	104904.	1.051	1.375	14.40	.852	1.14	.078	-	-	3.
bb1459	104904.	1.118	1.375	13.90	.818	1.00	.072	-	-	3.
bb1460	104904.	1.186	1.375	11.13	.655	1.30	.117	-	-	3.
bb1461	104904.	1.118	1.320	12.32	.755	1.26	.083	-	-	3.
bb1462	104904.	.984	1.320	12.96	.763	1.17	.090	-	-	3.
bb1463	104904.	.850	1.320	14.16	.834	1.11	.079	-	-	3.
bb1464	104904.	.716	1.320	16.13	.949	1.08	.067	-	-	3.
bb1465	104904.	.582	1.320	17.42	1.025	.86	.050	-	-	3.
bb1466	104904.	.582	1.265	16.74	.965	.83	.050	-	-	3.
bb1467	104904.	.716	1.265	15.59	.916	1.02	.065	-	-	3.
bb1468	104904.	.850	1.265	13.34	.765	1.02	.077	-	-	3.
bb1469	104904.	.984	1.265	11.37	.669	1.03	.091	-	-	3.
bb1470	104904.	1.118	1.265	9.88	.581	1.06	.107	-	-	3.
bb1471	104904.	1.118	1.430	14.14	.832	.98	.069	-	-	3.
bb1472	104904.	.984	1.430	15.02	.931	1.13	.071	-	-	3.
bb1473	104904.	.850	1.430	16.11	.943	1.23	.076	-	-	3.
bb1474	104904.	.716	1.430	17.29	1.017	1.14	.066	-	-	3.
bb1475	104904.	.582	1.430	18.26	1.075	.90	.049	-	-	3.
bb1476	104904.	.582	1.485	18.72	1.102	.90	.048	-	-	3.
bb1477	104904.	.716	1.485	17.98	1.058	1.11	.062	-	-	3.
bb1478	104904.	.850	1.485	17.05	1.003	1.12	.066	-	-	3.
bb1479	104904.	.984	1.485	15.83	.932	1.05	.066	-	-	3.
bb1480	104904.	1.118	1.485	11.93	.702	1.22	.086	-	-	3.

SECT D-B TYPE IV BLOCK AT STA 1+1100.0 3 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1481	104904.	1.112	2.625	18.44	1.086	.86	.047	-	-	3.
bb1482	104904.	1.045	2.625	16.32	1.114	.93	.049	-	-	3.
bb1483	104904.	.978	2.625	18.97	1.117	1.00	.053	-	-	3.
bb1484	104904.	.910	2.625	19.18	1.129	1.03	.054	-	-	3.
bb1485	104904.	.843	2.625	19.57	1.132	1.07	.055	-	-	3.
bb1486	104904.	.776	2.625	20.07	1.161	1.04	.052	-	-	3.
bb1487	104904.	.709	2.625	20.65	1.210	1.00	.049	-	-	3.
bb1488	104904.	.642	2.625	21.21	1.249	.92	.044	-	-	3.
bb1489	104904.	.575	2.625	21.46	1.263	.86	.040	-	-	3.
bb1490	104904.	1.179	2.625	15.71	.925	1.20	.076	-	-	3.
bb1491	104904.	1.112	2.570	17.51	1.031	.95	.054	-	-	3.
bb1492	104904.	.978	2.570	17.78	1.046	1.02	.058	-	-	3.
bb1493	104904.	.843	2.570	18.71	1.101	1.01	.054	-	-	3.
bb1494	104904.	.709	2.570	20.04	1.130	.95	.048	-	-	3.
bb1495	104904.	.575	2.570	20.68	1.229	.86	.041	-	-	3.
bb1496	104904.	.575	2.521	20.23	1.184	.85	.042	-	-	3.
bb1497	104904.	.709	2.521	19.49	1.147	.89	.046	-	-	3.
bb1498	104904.	.843	2.521	18.06	1.063	.87	.048	-	-	3.
bb1499	104904.	.978	2.521	16.58	.976	.92	.055	-	-	3.
bb1500	104904.	1.112	2.521	15.33	.902	.93	.060	-	-	3.
bb1501	104904.	1.112	2.688	16.41	1.004	.78	.042	-	-	3.
bb1502	104904.	.978	2.688	19.86	1.169	.86	.044	-	-	3.
bb1503	104904.	.843	2.688	20.50	1.206	1.03	.050	-	-	3.
bb1504	104904.	.709	2.688	21.50	1.265	.95	.044	-	-	3.
bb1505	104904.	.575	2.688	22.21	1.308	.80	.036	-	-	3.
bb1506	104904.	.575	2.743	22.81	1.343	.70	.031	-	-	3.
bb1507	104904.	.709	2.743	22.13	1.303	.87	.039	-	-	3.
bb1508	104904.	.843	2.743	21.03	1.238	.89	.042	-	-	3.
bb1509	104904.	.978	2.743	19.29	1.135	1.00	.052	-	-	3.
bb1510	104904.	1.112	2.743	14.98	.882	.87	.058	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. * TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT D-U TYPE IV BLOCK AT STA 1+WINDOW 3 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1511	104904.	.571	3.875	20.76	1.222	.85	.041	-	-	3.
bb1512	104904.	.638	3.875	21.19	1.247	.74	.035	-	-	3.
bb1513	104904.	.705	3.875	21.32	1.255	.69	.032	-	-	3.
bb1514	104904.	.772	3.875	21.27	1.252	.63	.030	-	-	3.
bb1515	104904.	.839	3.875	20.91	1.231	.68	.032	-	-	3.
bb1516	104904.	.906	3.875	20.35	1.198	.68	.034	-	-	3.
bb1517	104904.	.974	3.875	19.71	1.160	.70	.036	-	-	3.
bb1518	104904.	1.041	3.875	19.18	1.129	.64	.033	-	-	3.
bb1519	104904.	1.108	3.875	18.49	1.088	.63	.034	-	-	3.
bb1520	104904.	1.175	3.875	15.75	.927	1.10	.070	-	-	3.
bb1521	104904.	1.108	3.820	18.34	1.079	.68	.037	-	-	3.
bb1522	104904.	.974	3.820	19.40	1.142	.77	.040	-	-	3.
bb1523	104904.	.839	3.820	20.81	1.225	.72	.034	-	-	3.
bb1524	104904.	.705	3.820	21.57	1.270	.58	.027	-	-	3.
bb1525	104904.	.571	3.820	21.39	1.259	.67	.031	-	-	3.
bb1526	104904.	.571	3.765	21.62	1.272	.55	.025	-	-	3.
bb1527	104904.	.705	3.765	21.30	1.253	.69	.032	-	-	3.
bb1528	104904.	.839	3.765	20.19	1.183	.82	.041	-	-	3.
bb1529	104904.	.974	3.765	18.37	1.081	.89	.048	-	-	3.
bb1530	104904.	1.108	3.765	16.94	.997	.80	.047	-	-	3.
bb1531	104904.	1.108	3.930	17.78	1.046	.74	.042	-	-	3.
bb1532	104904.	.974	3.930	18.83	1.103	.87	.046	-	-	3.
bb1533	104904.	.839	3.930	20.03	1.179	.85	.042	-	-	3.
bb1534	104904.	.705	3.930	20.40	1.201	.90	.044	-	-	3.
bb1535	104904.	.571	3.930	19.72	1.161	1.05	.053	-	-	3.
bb1536	104904.	.571	3.985	17.30	1.018	1.07	.062	-	-	3.
bb1537	104904.	.705	3.985	17.73	1.043	.97	.055	-	-	3.
bb1538	104904.	.839	3.985	17.36	1.022	.94	.054	-	-	3.
bb1539	104904.	.974	3.985	16.34	.962	.88	.054	-	-	3.
bb1540	104904.	1.108	3.985	14.77	.869	.80	.054	-	-	3.

SECT D-B TYPE IV BLOCK AT STA 1+WINDOW 4 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1630	104904.	.582	1.375	11.31	.666	+	+	-	-	3.
bb1631	104904.	.716	1.375	9.67	.541	+	+	-	-	3.
bb1632	104904.	.850	1.375	7.04	.414	+	+	-	-	3.
bb1633	104904.	.984	1.375	5.92	.343	+	+	-	-	3.
bb1634	104904.	1.118	1.375	3.88	.228	+	+	-	-	3.
bb1635	104904.	.447	1.375	10.14	.597	-	-	-	-	3.
bb1636	104904.	.313	1.375	6.81	.401	-	-	-	-	3.
bb1637	104904.	.179	1.375	5.79	.341	-	-	-	-	3.
bb1638	104904.	.045	1.375	5.40	.313	-	-	-	-	3.
bb1639	104904.	.582	1.320	10.78	.635	+	+	-	-	3.
bb1640	104904.	.649	1.320	10.53	.620	-	-	-	-	3.
bb1641	104904.	.783	1.320	9.07	.534	-	-	-	-	3.
bb1642	104904.	.917	1.320	6.86	.404	-	-	-	-	3.
bb1643	104904.	1.051	1.320	5.45	.321	-	-	-	-	3.
bb1644	104904.	1.118	1.265	4.70	.277	-	-	-	-	3.
bb1645	104904.	.984	1.265	5.91	.343	-	-	-	-	3.
bb1646	104904.	.850	1.265	8.02	.472	-	-	-	-	3.
bb1647	104904.	.716	1.265	9.45	.556	-	-	-	-	3.
bb1648	104904.	.582	1.265	10.68	.593	+	+	-	-	3.
bb1649	104904.	.582	1.430	11.93	.702	+	+	-	-	3.
bb1650	104904.	.649	1.430	11.29	.664	+	+	-	-	3.
bb1651	104904.	.783	1.430	8.16	.460	-	-	-	-	3.
bb1652	104904.	.917	1.430	6.32	.372	-	-	-	-	3.
bb1653	104904.	1.051	1.430	5.20	.306	-	-	-	-	3.
bb1654	104904.	1.118	1.485	4.21	.244	-	-	-	-	3.
bb1655	104904.	.984	1.485	5.63	.331	-	-	-	-	3.
bb1656	104904.	.850	1.485	6.44	.379	-	-	-	-	3.
bb1657	104904.	.716	1.485	8.65	.509	-	-	-	-	3.
bb1658	104904.	.582	1.485	12.14	.715	-	-	-	-	3.

SECT D-B TYPE IV BLOCK AT STA 1+WINDOW 4 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1600	104904.	.580	2.925	30.19	1.777	1.63	.054	-	-	3.
bb1601	104904.	.647	2.925	30.03	1.767	1.66	.055	-	-	3.
bb1602	104904.	.714	2.925	29.59	1.741	2.10	.071	-	-	3.
bb1603	104904.	.782	2.925	29.37	1.729	2.53	.086	-	-	3.
bb1604	104904.	.849	2.925	29.23	1.720	2.89	.099	-	-	3.
bb1605	104904.	.916	2.925	29.35	1.727	2.52	.086	-	-	3.
bb1606	104904.	.983	2.925	29.14	1.715	2.23	.076	-	-	3.
bb1607	104904.	1.050	2.925	28.23	1.661	2.57	.091	-	-	3.
bb1608	104904.	1.117	2.925	26.06	1.534	2.92	.112	-	-	3.
bb1609	104904.	1.184	2.925	20.91	1.231	3.90	.186	-	-	3.
bb1610	104904.	1.117	2.570	24.70	1.454	3.21	.130	-	-	3.
bb1611	104904.	.983	2.570	28.68	1.688	2.56	.089	-	-	3.
bb1612	104904.	.849	2.570	29.79	1.753	2.04	.068	-	-	3.
bb1613	104904.	.714	2.570	29.63	1.744	1.92	.065	-	-	3.
bb1614	104904.	.580	2.570	29.82	1.756	1.70	.057	-	-	3.
bb1615	104904.	.580	2.315	29.20	1.719	1.86	.064	-	-	3.
bb1616	104904.	.714	2.315	29.35	1.727	1.93	.066	-	-	3.
bb1617	104904.	.849	2.315	29.31	1.737	2.11	.072	-	-	3.
bb1618	104904.	.983	2.315	26.75	1.574	2.86	.107	-	-	3.
bb1619	104904.	1.117	2.315	20.97	1.234	3.25	.155	-	-	3.
bb1620	104904.	.580	2.680	30.43	1.791	1.35	.044	-	-	3.
bb1621	104904.	.714	2.680	29.30	1.725	2.42	.083	-	-	3.
bb1622	104904.	.849	2.680	28.31	1.666	3.77	.133	-	-	3.
bb1623	104904.	.983	2.680	28.08	1.653	3.08	.110	-	-	3.
bb1624	104904.	1.117	2.680	25.08	1.476	2.91	.116	-	-	3.
bb1625	104904.	1.117	2.735	20.65	1.216	2.37	.115	-	-	3.
bb1626	104904.	.983	2.735	25.10	1.477	4.80	.191	-	-	3.
bb1627	104904.	.849	2.735	26.63	1.567	4.55	.171	-	-	3.
bb1628	104904.	.714	2.735	28.85	1.698	2.31	.080	-	-	3.
bb1629	104904.	.580	2.735	30.40	1.789	1.51	.050	-	-	3.

HYDRAULIC DIAMETER, U = .759 INCHES, AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT, + TURBULENCE INTENSITY TOO HIGH TO MEASURE, - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT J-U TYPE IV BLOCK AT STA 1+1100.4 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
001571	104904	.575	3.875	28.60	1.603	1.53	.954	-	-	3.
001572	104904	.709	3.875	29.01	1.704	1.37	.947	-	-	3.
001573	104904	.780	3.875	28.92	1.702	1.38	.948	-	-	3.
001574	104904	.843	3.875	28.75	1.692	1.28	.944	-	-	3.
001575	104904	.914	3.875	28.10	1.654	1.40	.953	-	-	3.
001576	104904	.978	3.875	27.29	1.661	1.54	.957	-	-	3.
001577	104904	1.049	3.875	26.70	1.572	1.38	.952	-	-	3.
001578	104904	1.112	3.875	25.10	1.477	1.70	.968	-	-	3.
001579	104904	1.183	3.875	19.02	1.119	2.65	.140	-	-	3.
001580	104904	.575	3.985	20.71	1.219	1.79	.986	-	-	3.
001581	104904	.709	3.985	20.76	1.222	1.81	.987	-	-	3.
001582	104904	.843	3.985	20.77	1.223	1.81	.987	-	-	3.
001583	104904	.978	3.985	19.47	1.146	1.70	.988	-	-	3.
001584	104904	1.112	3.985	19.62	1.155	1.59	.981	-	-	3.
001585	104904	1.112	3.930	23.90	1.437	1.55	.965	-	-	3.
001586	104904	.978	3.930	23.91	1.437	1.85	.977	-	-	3.
001587	104904	.843	3.930	25.47	1.494	1.66	.965	-	-	3.
001588	104904	.709	3.930	25.52	1.502	1.80	.971	-	-	3.
001589	104904	.575	3.930	25.32	1.490	1.88	.974	-	-	3.
001590	104904	.575	3.820	30.11	1.772	1.09	.936	-	-	3.
001591	104904	.709	3.820	30.42	1.791	.84	.928	-	-	3.
001592	104904	.843	3.820	29.94	1.763	.86	.929	-	-	3.
001593	104904	.978	3.820	28.29	1.663	1.76	.945	-	-	3.
001594	104904	1.112	3.820	25.35	1.492	1.69	.967	-	-	3.
001595	104904	1.112	3.765	23.12	1.361	1.67	.972	-	-	3.
001596	104904	.978	3.765	26.20	1.542	1.92	.973	-	-	3.
001597	104904	.843	3.765	29.72	1.749	1.99	.937	-	-	3.
001598	104904	.709	3.765	30.39	1.818	.68	.922	-	-	3.
001599	104904	.575	3.765	30.90	1.848	.77	.925	-	-	3.

SECT J-B TYPE IV BLOCK AT STA 2+1100.4 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
002035	104904	.576	1.375	5.57	.329	+	+	-	-	3.
002036	104904	.509	1.375	5.66	.343	-	-	-	-	3.
002037	104904	.375	1.375	4.81	.283	-	-	-	-	3.
002038	104904	.710	1.375	4.78	.282	+	+	-	-	3.
002039	104904	.843	1.375	1.46	.086	+	+	-	-	3.
002040	104904	.576	1.320	5.09	.304	+	+	-	-	3.
002041	104904	.375	1.265	4.56	.266	+	+	-	-	3.
002042	104904	.576	1.430	6.45	.380	+	+	-	-	3.
002043	104904	.576	1.485	7.19	.423	+	+	-	-	3.
002044	104904	.442	1.485	6.67	.393	+	+	-	-	3.
002045	104904	.303	1.485	4.31	.253	+	+	-	-	3.
002046	104904	.710	1.485	6.02	.355	+	+	-	-	3.
002047	104904	.843	1.485	4.06	.239	+	+	-	-	3.
002048	104904	.710	1.430	5.85	.344	+	+	-	-	3.
002049	104904	.710	1.375	4.53	.267	+	+	-	-	3.

SECT J-U TYPE IV BLOCK AT STA 2+1100.4 AT CL ZONE 4

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
001849	104904	.397	2.000	15.68	.923	-	-	-7.01	-.40	-
001850	104904	.431	2.000	16.42	.966	-	-	-7.24	-.44	-
001851	104904	.464	2.000	16.01	.942	-	-	-7.32	-.41	-
001852	104904	.498	2.000	15.30	.901	-	-	-7.10	-.37	-
001853	104904	.531	2.000	14.77	.870	-	-	-7.07	-.34	-
001854	104904	.565	2.000	14.20	.836	-	-	-7.06	-.32	-
001855	104904	.598	2.000	13.45	.792	-	-	-7.72	-.30	-
001856	104904	.632	2.000	12.53	.738	-	-	-7.29	-.28	-
001857	104904	.665	2.000	11.49	.676	-	-	-7.74	-.27	-
001858	104904	.699	2.000	10.23	.602	-	-	-7.96	-.24	-
001859	104904	.719	2.000	8.61	.507	-	-	-7.24	-.24	-

SECT J-B TYPE IV BLOCK AT STA 2+1100.4 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
001992	104904	.583	2.625	30.42	1.791	2.50	.982	-	-	3.
001993	104904	.516	2.625	30.70	1.807	-	-	-	-	3.
001994	104904	.382	2.625	31.97	1.882	-	-	-	-	3.
001995	104904	.247	2.625	32.49	1.912	-	-	-	-	3.
001996	104904	.113	2.625	31.67	1.876	-	-	-	-	3.
001997	104904	-.021	2.625	23.63	1.391	-	-	-	-	3.
001998	104904	.717	2.625	31.30	1.843	1.93	.962	-	-	3.
001999	104904	.851	2.625	32.32	1.932	1.22	.938	-	-	3.
002000	104904	.986	2.625	32.20	1.895	1.18	.937	-	-	3.
002001	104904	1.120	2.625	30.66	1.779	1.52	.951	-	-	3.
002002	104904	1.053	2.640	29.78	1.753	-	-	-	-	3.
002003	104904	.918	2.640	32.07	1.888	-	-	-	-	3.
002004	104904	.784	2.680	32.35	1.904	-	-	-	-	3.
002005	104904	.650	2.680	32.01	1.884	-	-	-	-	3.
002006	104904	.516	2.680	31.95	1.881	1.57	.949	-	-	3.
002007	104904	.316	2.726	31.92	1.873	1.31	.941	-	-	3.
002008	104904	.650	2.726	31.95	1.881	-	-	-	-	3.
002009	104904	.784	2.726	31.71	1.866	-	-	-	-	3.
002010	104904	.913	2.726	29.66	1.746	-	-	-	-	3.
002011	104904	1.053	2.726	23.29	1.371	-	-	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.

* QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B TYPE IV BLOCK AT STA 2+WINDOW 4 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb2012	104904	1.120	2.625	30.54	1.798	1.39	.046	-	-	3.
bb2013	104904	.986	2.625	32.32	1.902	1.24	.038	-	-	3.
bb2014	104904	.851	2.625	32.37	1.905	1.18	.036	-	-	3.
bb2015	104904	.717	2.625	31.09	1.830	2.13	.068	-	-	3.
bb2016	104904	.583	2.625	30.23	1.779	2.51	.083	-	-	3.
bb2017	104904	.503	2.570	28.75	1.692	2.49	.087	-	-	3.
bb2018	104904	.650	2.570	28.94	1.704	-	-	-	-	3.
bb2019	104904	.650	2.570	28.93	1.703	-	-	-	-	3.
bb2020	104904	.784	2.570	31.07	1.829	-	-	-	-	3.
bb2021	104904	.918	2.570	32.16	1.893	-	-	-	-	3.
bb2022	104904	1.053	2.570	31.59	1.859	-	-	-	-	3.
bb2023	104904	1.120	2.515	25.03	1.473	-	-	-	-	3.
bb2024	104904	.986	2.515	30.55	1.798	-	-	-	-	3.
bb2025	104904	.851	2.515	31.40	1.848	-	-	-	-	3.
bb2026	104904	.717	2.515	28.52	1.679	-	-	-	-	3.
bb2027	104904	.583	2.515	27.43	1.614	2.52	.092	-	-	3.
bb2028	104904	.449	2.515	28.03	1.685	-	-	-	-	3.
bb2029	104904	.315	2.515	31.54	1.857	-	-	-	-	3.
bb2030	104904	.180	2.515	29.55	1.739	-	-	-	-	3.
bb2031	104904	.180	2.570	31.83	1.873	-	-	-	-	3.
bb2032	104904	.315	2.570	32.08	1.888	-	-	-	-	3.
bb2033	104904	.449	2.570	29.87	1.758	-	-	-	-	3.
bb2034	104904	.583	2.570	28.74	1.692	-	-	-	-	3.

SECT B-B TYPE IV BLOCK AT STA 2+WINDOW 4 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1962	104904	.578	3.875	31.57	1.858	.77	.024	-	-	3.
bb1963	104904	.510	3.875	31.55	1.857	-	-	-	-	3.
bb1964	104904	.376	3.875	31.28	1.841	-	-	-	-	3.
bb1965	104904	.242	3.875	30.93	1.821	-	-	-	-	3.
bb1966	104904	.108	3.875	30.27	1.781	-	-	-	-	3.
bb1967	104904	-.020	3.875	23.17	1.364	-	-	-	-	3.
bb1968	104904	.712	3.875	31.61	1.861	.68	.022	-	-	3.
bb1969	104904	.846	3.875	31.32	1.843	.62	.020	-	-	3.
bb1970	104904	.980	3.875	30.55	1.798	.71	.023	-	-	3.
bb1971	104904	1.114	3.875	29.01	1.708	.94	.032	-	-	3.
bb1972	104904	1.047	3.930	27.44	1.615	-	-	-	-	3.
bb1973	104904	.913	3.930	29.30	1.725	-	-	-	-	3.
bb1974	104904	.779	3.930	29.65	1.745	-	-	-	-	3.
bb1975	104904	.645	3.930	29.84	1.756	-	-	-	-	3.
bb1976	104904	.573	3.930	29.65	1.745	1.41	.047	-	-	3.
bb1977	104904	.578	3.985	24.02	1.414	1.51	.063	-	-	3.
bb1978	104904	.712	3.985	23.82	1.402	-	-	-	-	3.
bb1979	104904	.846	3.985	23.61	1.390	-	-	-	-	3.
bb1980	104904	.980	3.985	22.36	1.345	-	-	-	-	3.
bb1981	104904	1.114	3.985	20.87	1.228	-	-	-	-	3.
bb1982	104904	1.047	3.820	29.78	1.753	-	-	-	-	3.
bb1983	104904	.913	3.820	30.04	1.815	-	-	-	-	3.
bb1984	104904	.779	3.820	31.70	1.866	-	-	-	-	3.
bb1985	104904	.645	3.820	32.02	1.885	-	-	-	-	3.
bb1986	104904	.578	3.820	32.07	1.888	.60	.019	-	-	3.
bb1987	104904	.578	3.765	32.23	1.897	.66	.020	-	-	3.
bb1988	104904	.712	3.765	32.08	1.888	-	-	-	-	3.
bb1989	104904	.846	3.765	31.11	1.831	-	-	-	-	3.
bb1990	104904	.980	3.765	27.77	1.635	-	-	-	-	3.
bb1991	104904	1.114	3.765	25.01	1.472	-	-	-	-	3.

SECT B-B TYPE IV BLOCK AT STA 3+WINDOW 4 AT CL ZONE 4

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb2260	107639	.570	2.000	25.51	1.501	4.67	.183	-	-	3.
bb2261	107639	.597	2.000	25.53	1.503	4.67	.183	-	-	3.
bb2262	107639	.624	2.000	24.75	1.457	5.59	.226	-	-	3.
bb2263	107639	.651	2.000	23.26	1.369	+	+	-	-	3.
bb2264	107639	.678	2.000	29.35	1.918	+	+	-	-	3.
bb2265	107639	.704	2.000	17.01	1.001	+	+	-	-	3.
bb2266	107639	.543	2.000	25.60	1.507	4.50	.176	-	-	3.
bb2267	107639	.516	2.000	24.92	1.467	4.53	.182	-	-	3.
bb2268	107639	.490	2.000	23.48	1.362	5.49	.234	-	-	3.
bb2269	107639	.463	2.000	21.03	1.238	5.36	.255	-	-	3.
bb2270	107639	.436	2.000	19.08	1.123	+	+	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
* QUESTIONABLE DATA POINT. * TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT B-B TYPE IV BLOCK AT STA 3+1000 4 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
002230	107639	.579	2.625	32.34	1.904	1.01	.031	-	-	3.
002231	107639	.512	2.625	32.44	1.909	1.03	.032	-	-	3.
002232	107639	.445	2.625	32.58	1.918	.96	.030	-	-	3.
002233	107639	.311	2.625	32.04	1.921	-	-	-	-	3.
002234	107639	.176	2.625	32.31	1.902	-	-	-	-	3.
002235	107639	.042	2.625	30.89	1.818	-	-	-	-	3.
002236	107639	.713	2.625	32.21	1.896	1.08	.033	-	-	3.
002237	107639	.847	2.625	32.33	1.903	.97	.030	-	-	3.
002238	107639	.982	2.625	32.13	1.891	.89	.028	-	-	3.
002239	107639	1.116	2.625	30.64	1.803	.76	.025	-	-	3.
002240	107639	1.049	2.570	30.46	1.793	-	-	-	-	3.
002241	107639	.915	2.570	31.83	1.873	-	-	-	-	3.
002242	107639	.780	2.570	31.54	1.857	-	-	-	-	3.
002243	107639	.646	2.570	31.19	1.836	-	-	-	-	3.
002244	107639	.579	2.570	31.26	1.840	1.36	.043	-	-	3.
002245	107639	.579	2.515	29.12	1.714	2.19	.075	-	-	3.
002246	107639	.713	2.515	29.75	1.751	-	-	-	-	3.
002247	107639	.847	2.515	31.10	1.831	-	-	-	-	3.
002248	107639	.982	2.515	30.92	1.820	-	-	-	-	3.
002249	107639	1.116	2.515	28.76	1.693	-	-	-	-	3.
002250	107639	1.049	2.680	31.22	1.836	-	-	-	-	3.
002251	107639	.915	2.680	32.27	1.899	-	-	-	-	3.
002252	107639	.780	2.680	32.84	1.933	-	-	-	-	3.
002253	107639	.646	2.680	32.93	1.938	-	-	-	-	3.
002254	107639	.579	2.680	32.96	1.940	.92	.028	-	-	3.
002255	107639	.579	2.735	33.09	1.948	.78	.024	-	-	3.
002256	107639	.713	2.735	32.93	1.938	-	-	-	-	3.
002257	107639	.847	2.735	32.47	1.911	-	-	-	-	3.
002258	107639	.982	2.735	31.47	1.852	-	-	-	-	3.
002259	107639	1.116	2.735	23.66	1.392	-	-	-	-	3.

SECT B-B TYPE IV BLOCK AT STA 3+1000 4 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
002200	107639	.572	3.675	30.59	1.800	.57	.019	-	-	3.
002201	107639	.505	3.675	30.54	1.798	.64	.021	-	-	3.
002202	107639	.438	3.675	30.43	1.791	.56	.018	-	-	3.
002203	107639	.304	3.675	29.97	1.764	.58	.019	-	-	3.
002204	107639	.170	3.675	29.38	1.730	.58	.020	-	-	3.
002205	107639	.036	3.675	28.57	1.682	.52	.018	-	-	3.
002206	107639	.707	3.675	30.46	1.793	.55	.018	-	-	3.
002207	107639	.841	3.675	30.02	1.767	.58	.019	-	-	3.
002208	107639	.975	3.675	29.56	1.740	.55	.019	-	-	3.
002209	107639	1.109	3.675	29.06	1.711	.56	.019	-	-	3.
002210	107639	.572	3.620	30.49	1.795	.54	.018	-	-	3.
002211	107639	.639	3.620	30.45	1.792	-	-	-	-	3.
002212	107639	.707	3.620	30.30	1.784	-	-	-	-	3.
002213	107639	.841	3.620	29.61	1.735	-	-	-	-	3.
002214	107639	.975	3.620	29.11	1.713	-	-	-	-	3.
002215	107639	1.042	3.765	27.14	1.508	-	-	-	-	3.
002216	107639	.908	3.765	29.11	1.713	-	-	-	-	3.
002217	107639	.774	3.765	30.05	1.769	-	-	-	-	3.
002218	107639	.639	3.765	30.51	1.796	-	-	-	-	3.
002219	107639	.572	3.765	30.56	1.799	.60	.020	-	-	3.
002220	107639	.975	3.930	29.06	1.711	-	-	-	-	3.
002221	107639	.572	3.930	29.97	1.764	.83	.028	-	-	3.
002222	107639	.639	3.930	29.96	1.763	-	-	-	-	3.
002223	107639	.707	3.930	29.60	1.754	-	-	-	-	3.
002224	107639	.841	3.930	29.44	1.733	-	-	-	-	3.
002225	107639	1.109	3.985	22.64	1.333	-	-	-	-	3.
002226	107639	.975	3.985	24.50	1.442	-	-	-	-	3.
002227	107639	.841	3.905	25.08	1.476	-	-	-	-	3.
002228	107639	.707	3.985	25.47	1.499	-	-	-	-	3.
002229	107639	.572	3.985	25.59	1.506	1.26	.049	-	-	3.

SECT B-B TYPE IV BLOCK AT STA 3+1000 5 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
002271	107639	.531	1.375	15.21	.895	3.28	.216	-	-	3.
002272	107639	.665	1.375	15.00	.883	3.59	.239	-	-	3.
002273	107639	.799	1.375	13.48	.793	+	+	-	-	3.
002274	107639	.933	1.375	12.19	.718	+	+	-	-	3.
002275	107639	1.067	1.375	10.76	.633	+	+	-	-	3.
002276	107639	.464	1.375	14.53	.835	-	-	-	-	3.
002277	107639	.397	1.375	13.70	.806	-	-	-	-	3.
002278	107639	.262	1.375	12.00	.706	-	-	-	-	3.
002279	107639	.120	1.375	10.53	.620	-	-	-	-	3.
002280	107639	-.006	1.375	6.24	.367	-	-	-	-	3.
002281	107639	.531	1.320	14.89	.876	3.28	.220	-	-	3.
002282	107639	.598	1.320	15.09	.889	-	-	-	-	3.
002283	107639	.665	1.320	14.90	.877	-	-	-	-	3.
002284	107639	.799	1.320	13.56	.798	-	-	-	-	3.
002285	107639	.933	1.320	12.22	.719	-	-	-	-	3.
002286	107639	1.000	1.265	10.76	.633	-	-	-	-	3.
002287	107639	.866	1.265	12.65	.744	-	-	-	-	3.
002288	107639	.732	1.265	13.91	.819	-	-	-	-	3.
002289	107639	.598	1.265	14.55	.857	-	-	-	-	3.
002290	107639	.531	1.265	14.46	.831	3.05	.211	-	-	3.
002291	104904	.531	1.430	15.29	.900	3.71	.243	-	-	3.
002292	104904	.598	1.430	15.54	.915	-	-	-	-	3.
002293	104904	.732	1.430	14.40	.848	-	-	-	-	3.
002294	104904	.866	1.430	12.55	.739	-	-	-	-	3.
002295	104904	1.000	1.430	11.00	.647	-	-	-	-	3.
002296	104904	1.067	1.485	9.53	.561	-	-	-	-	3.
002297	104904	.933	1.485	11.07	.652	-	-	-	-	3.
002298	104904	.799	1.485	12.98	.764	-	-	-	-	3.
002299	104904	.665	1.485	15.66	.922	-	-	-	-	3.
002300	104904	.531	1.485	15.56	.916	4.03	.259	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES.

* QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT D-B TYPE IV BLOCK AT STA 3+114.00 W 5 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb2160	104904	.580	2.625	29.72	1.749	1.78	.060	-	-	3.
bb2161	104904	.513	2.625	29.34	1.727	-	-	-	-	3.
bb2162	104904	.446	2.625	28.57	1.682	-	-	-	-	3.
bb2163	104904	.312	2.625	26.94	1.586	-	-	-	-	3.
bb2164	104904	.178	2.625	25.65	1.510	-	-	-	-	3.
bb2165	104904	.043	2.625	22.67	1.334	-	-	-	-	3.
bb2166	104904	.714	2.625	28.42	1.673	2.54	.089	-	-	3.
bb2167	104904	.849	2.625	26.60	1.566	3.35	.126	-	-	3.
bb2168	104904	.983	2.625	25.39	1.494	3.04	.120	-	-	3.
bb2169	104904	1.117	2.625	22.52	1.326	3.14	.140	-	-	3.
bb2170	104904	1.050	2.680	24.05	1.416	-	-	-	-	3.
bb2171	104904	.916	2.680	25.11	1.478	-	-	-	-	3.
bb2172	104904	.782	2.680	26.95	1.586	-	-	-	-	3.
bb2173	104904	.647	2.680	29.30	1.725	-	-	-	-	3.
bb2174	104904	.580	2.680	29.73	1.750	1.73	.058	-	-	3.
bb2175	104904	.580	2.735	29.51	1.737	1.82	.062	-	-	3.
bb2176	104904	.714	2.735	27.81	1.637	-	-	-	-	3.
bb2177	104904	.849	2.735	24.38	1.435	-	-	-	-	3.
bb2178	104904	.983	2.735	22.77	1.341	-	-	-	-	3.
bb2179	104904	1.117	2.735	19.15	1.127	-	-	-	-	3.
bb2180	104904	1.050	2.570	23.93	1.409	-	-	-	-	3.
bb2181	104904	.916	2.570	26.34	1.550	-	-	-	-	3.
bb2182	104904	.782	2.570	27.83	1.638	-	-	-	-	3.
bb2183	104904	.647	2.570	29.25	1.722	-	-	-	-	3.
bb2184	104904	.580	2.570	29.53	1.738	1.96	.066	-	-	3.
bb2185	104904	.580	2.515	29.40	1.730	1.82	.062	-	-	3.
bb2186	104904	.714	2.515	28.37	1.670	-	-	-	-	3.
bb2187	104904	.849	2.515	27.05	1.592	-	-	-	-	3.
bb2188	104904	.983	2.515	24.28	1.429	-	-	-	-	3.
bb2189	104904	1.117	2.515	19.06	1.122	-	-	-	-	3.

SECT D-B TYPE IV BLOCK AT STA 3+114.00 W 5 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb2121	104904	.509	3.675	27.77	1.635	1.93	.070	-	-	3.
bb2122	104904	.442	3.675	27.91	1.637	-	-	-	-	3.
bb2123	104904	.308	3.675	27.59	1.624	-	-	-	-	3.
bb2124	104904	.174	3.675	25.95	1.527	-	-	-	-	3.
bb2125	104904	.039	3.675	23.17	1.364	-	-	-	-	3.
bb2126	104904	-.028	3.675	30.00	1.766	-	-	-	-	3.
bb2127	104904	-.095	3.675	28.14	1.657	-	-	-	-	3.
bb2128	104904	.643	3.675	27.60	1.636	2.11	.076	-	-	3.
bb2129	104904	.775	3.675	27.92	1.643	1.83	.066	-	-	3.
bb2130	104904	.912	3.675	27.12	1.591	1.68	.062	-	-	3.
bb2131	104904	1.046	3.675	25.11	1.478	1.58	.063	-	-	3.
bb2132	104904	.979	3.930	23.47	1.381	-	-	-	-	3.
bb2133	104904	.845	3.930	24.75	1.457	-	-	-	-	3.
bb2134	104904	.710	3.930	24.99	1.471	-	-	-	-	3.
bb2135	104904	.576	3.930	24.79	1.459	-	-	-	-	3.
bb2136	104904	.509	3.930	24.78	1.458	2.23	.090	-	-	3.
bb2137	104904	.509	3.985	20.64	1.215	2.02	.098	-	-	3.
bb2138	104904	.643	3.985	20.54	1.227	-	-	-	-	3.
bb2139	104904	.775	3.985	20.96	1.234	-	-	-	-	3.
bb2140	104904	.912	3.985	20.10	1.183	-	-	-	-	3.
bb2141	104904	1.046	3.985	19.03	1.120	-	-	-	-	3.
bb2142	104904	.979	3.620	27.01	1.590	-	-	-	-	3.
bb2143	104904	.845	3.620	29.37	1.729	-	-	-	-	3.
bb2144	104904	.710	3.620	30.08	1.770	-	-	-	-	3.
bb2145	104904	.576	3.620	29.93	1.762	-	-	-	-	3.
bb2146	104904	.509	3.620	29.94	1.763	1.69	.057	-	-	3.
bb2147	104904	.509	3.765	31.47	1.852	1.11	.035	-	-	3.
bb2148	104904	.643	3.765	31.46	1.852	-	-	-	-	3.
bb2149	104904	.778	3.765	30.54	1.793	-	-	-	-	3.
bb2150	104904	.912	3.765	26.91	1.584	-	-	-	-	3.
bb2151	104904	1.046	3.765	22.67	1.334	-	-	-	-	3.
bb2152	104904	-.028	3.765	15.91	.937	2.00	.126	-	-	3.
bb2153	104904	-.028	3.985	16.73	.984	2.00	.120	-	-	3.
bb2154	104904	.106	3.985	19.31	1.137	1.58	.082	-	-	3.
bb2155	104904	.106	3.930	23.16	1.363	1.60	.069	-	-	3.
bb2156	104904	.106	3.620	24.91	1.466	1.70	.068	-	-	3.
bb2157	104904	.106	3.765	21.38	1.258	1.92	.090	-	-	3.

SECT D-B TYPE IV BLOCK AT STA 2+114.00 W 5 AT CL ZONE 2

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1834	104904	.719	.750	7.46	.439	-	-	2.82	.38	-
bb1835	104904	.686	.750	9.04	.532	-	-	2.46	.27	-
bb1836	104904	.652	.750	10.25	.604	-	-	2.46	.24	-
bb1837	104904	.618	.750	10.79	.635	-	-	3.10	.29	-
bb1838	104904	.585	.750	11.20	.659	-	-	3.43	.31	-
bb1839	104904	.551	.750	11.04	.650	-	-	2.97	.27	-
bb1840	104904	.518	.750	10.12	.596	-	-	2.53	.25	-
bb1841	104904	.484	.750	13.18	.776	-	-	6.03	.46	-
bb1842	104904	.451	.750	9.43	.555	-	-	6.06	.64	-

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT. A-B TYPE IV BLOCK AT STA 2 WINDOW 5 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/U ₃	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1931	104904	.501	3.875	25.51	1.501	2.25	.088	-	-	3.
bb1932	104904	.494	3.875	25.41	1.496	-	-	-	-	3.
bb1933	104904	.560	3.875	25.47	1.492	-	-	-	-	3.
bb1934	104904	.226	3.875	24.54	1.444	-	-	-	-	3.
bb1935	104904	.092	3.875	22.67	1.334	-	-	-	-	3.
bb1936	104904	.043	3.875	14.02	.872	-	-	-	-	3.
bb1937	104904	.501	3.925	23.22	1.300	2.41	.104	-	-	3.
bb1938	104904	.629	3.925	23.38	1.376	-	-	-	-	3.
bb1939	104904	.763	3.925	23.12	1.301	-	-	-	-	3.
bb1940	104904	.897	3.925	22.06	1.290	-	-	-	-	3.
bb1941	104904	1.031	3.925	21.21	1.249	-	-	-	-	3.
bb1942	104904	1.098	3.975	17.60	1.036	-	-	-	-	3.
bb1943	104904	.964	3.975	18.72	1.102	-	-	-	-	3.
bb1944	104904	.830	3.975	19.43	1.167	-	-	-	-	3.
bb1945	104904	.696	3.975	20.48	1.206	-	-	-	-	3.
bb1946	104904	.561	3.975	20.47	1.205	1.97	.096	-	-	3.
bb1947	104904	.561	3.925	27.40	1.613	2.18	.079	-	-	3.
bb1948	104904	.629	3.925	27.38	1.612	-	-	-	-	3.
bb1949	104904	.763	3.925	27.05	1.592	-	-	-	-	3.
bb1950	104904	.897	3.925	25.27	1.487	-	-	-	-	3.
bb1951	104904	1.031	3.925	22.94	1.350	-	-	-	-	3.
bb1952	104904	1.098	3.775	21.51	1.204	-	-	-	-	3.
bb1953	104904	.964	3.775	24.22	1.425	-	-	-	-	3.
bb1954	104904	.830	3.775	26.31	1.548	-	-	-	-	3.
bb1955	104904	.696	3.775	27.40	1.613	-	-	-	-	3.
bb1956	104904	.561	3.775	27.40	1.613	2.18	.079	-	-	3.
bb1957	104904	.501	3.875	25.57	1.505	2.12	.083	-	-	3.
bb1958	104904	.690	3.875	25.57	1.505	2.20	.086	-	-	3.
bb1959	104904	.830	3.875	24.84	1.462	1.94	.078	-	-	3.
bb1960	104904	.964	3.875	23.51	1.384	1.71	.073	-	-	3.
bb1961	104904	1.098	3.675	21.28	1.253	1.65	.078	-	-	3.

SECT. A-B TYPE IV BLOCK AT STA 1 WINDOW 5 AT CL ZONE 1

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/U ₃	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1659	104904	.309	.125	7.60	.447	+	+	-	-	3.
bb1660	104904	.375	.125	6.90	.406	-	-	-	-	3.
bb1661	104904	.241	.125	5.37	.345	-	-	-	-	3.
bb1662	104904	.106	.125	4.41	.260	-	-	-	-	3.
bb1663	104904	.643	.125	7.81	.460	+	+	-	-	3.
bb1665	104904	.778	.125	7.11	.419	+	+	-	-	3.
bb1666	104904	.912	.125	6.23	.367	+	+	-	-	3.
bb1667	104904	1.046	.125	5.20	.306	+	+	-	-	3.
bb1668	104904	.977	.070	5.69	.335	-	-	-	-	3.
bb1669	104904	.845	.070	6.74	.397	-	-	-	-	3.
bb1670	104904	.710	.070	7.61	.440	-	-	-	-	3.
bb1671	104904	.576	.070	7.69	.453	-	-	-	-	3.
bb1672	104904	.509	.670	7.54	.444	+	+	-	-	3.
bb1673	104904	.509	.015	6.86	.404	+	+	-	-	3.
bb1674	104904	.643	.015	6.86	.404	-	-	-	-	3.
bb1675	104904	.778	.015	6.56	.386	-	-	-	-	3.
bb1676	104904	.912	.015	5.61	.330	-	-	-	-	3.
bb1677	104904	1.046	.015	4.29	.253	-	-	-	-	3.
bb1678	104904	.977	.180	4.29	.258	-	-	-	-	3.
bb1679	104904	.845	.180	6.44	.379	-	-	-	-	3.
bb1680	104904	.710	.180	7.52	.442	-	-	-	-	3.
bb1681	104904	.576	.180	7.99	.470	-	-	-	-	3.
bb1682	104904	.509	.180	7.64	.449	+	+	-	-	3.
bb1683	104904	.509	.235	7.58	.446	+	+	-	-	3.
bb1684	104904	.643	.235	7.87	.463	-	-	-	-	3.
bb1685	104904	.778	.235	6.66	.392	-	-	-	-	3.
bb1686	104904	.912	.235	5.46	.322	-	-	-	-	3.
bb1687	104904	1.046	.235	4.24	.249	-	-	-	-	3.

SECT. A-B TYPE IV BLOCK AT STA 1 WINDOW 5 AT CL ZONE 2

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/U ₃	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1805	104904	.718	.750	9.95	.586	+	+	-	-	3.
bb1806	104904	.684	.750	11.69	.685	+	+	-	-	3.
bb1807	104904	.651	.750	12.74	.750	3.22	.253	-	-	3.
bb1808	104904	.617	.750	13.35	.786	3.16	.237	-	-	3.
bb1809	104904	.584	.750	13.58	.797	3.07	.226	-	-	3.
bb1810	104904	.550	.750	13.23	.782	3.20	.241	-	-	3.
bb1811	104904	.516	.750	12.62	.743	3.03	.240	-	-	3.
bb1812	104904	.483	.750	11.48	.676	+	+	-	-	3.
bb1813	104904	.449	.750	10.24	.602	+	+	-	-	3.
bb1814	104904	.429	.750	8.45	.521	+	+	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, UB = 17.0 FT/SEC.

* QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT D-B TYPE IV BLOCK AT STA 2 WINDOW 5 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1869	104904.	.583	1.375	17.04	1.003	3.24	.190	-	-	3.
bb1870	104904.	.516	1.375	16.85	.992	-	-	-	-	3.
bb1871	104904.	.382	1.375	15.10	.889	-	-	-	-	3.
bb1872	104904.	.247	1.375	13.65	.803	-	-	-	-	3.
bb1873	104904.	.113	1.375	11.69	.688	-	-	-	-	3.
bb1874	104904.	-.021	1.375	8.05	.474	-	-	-	-	3.
bb1875	104904.	.717	1.375	15.94	.938	3.30	.207	-	-	3.
bb1876	104904.	.551	1.375	14.27	.840	3.33	.234	-	-	3.
bb1877	104904.	.986	1.375	12.81	.754	+	+	-	-	3.
bb1878	104904.	1.120	1.375	10.63	.626	+	+	-	-	3.
bb1879	104904.	1.053	1.425	11.69	.688	-	-	-	-	3.
bb1880	104904.	.918	1.425	13.21	.777	-	-	-	-	3.
bb1881	104904.	.784	1.425	14.89	.876	-	-	-	-	3.
bb1882	104904.	.650	1.425	16.80	.989	-	-	-	-	3.
bb1883	104904.	.583	1.425	17.29	1.017	3.22	.186	-	-	3.
bb1884	104904.	.570	1.475	17.36	1.022	4.14	.239	-	-	3.
bb1885	104904.	.717	1.475	15.78	.929	-	-	-	-	3.
bb1886	104904.	.851	1.475	13.15	.774	-	-	-	-	3.
bb1887	104904.	.986	1.475	11.69	.688	-	-	-	-	3.
bb1888	104904.	1.120	1.475	9.33	.549	-	-	-	-	3.
bb1889	104904.	1.120	1.275	8.78	.517	-	-	-	-	3.
bb1890	104904.	.986	1.275	12.74	.750	-	-	-	-	3.
bb1891	104904.	.851	1.275	14.65	.862	-	-	-	-	3.
bb1892	104904.	.717	1.275	16.05	.944	-	-	-	-	3.
bb1893	104904.	.583	1.275	16.79	.988	2.66	.158	-	-	3.
bb1894	104904.	.583	1.325	16.88	.994	2.79	.165	-	-	3.
bb1895	104904.	.650	1.325	16.52	.973	-	-	-	-	3.
bb1896	104904.	.784	1.325	15.29	.900	-	-	-	-	3.
bb1897	104904.	.918	1.325	13.77	.810	-	-	-	-	3.
bb1898	104904.	1.053	1.325	11.69	.688	-	-	-	-	3.

SECT D-B TYPE IV BLOCK AT STA 2 WINDOW 5 AT CL ZONE 4

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1824	104904.	.714	2.000	14.98	.882	-	-	-.00	-.00	-
bb1825	104904.	.680	2.000	18.14	1.068	-	-	.93	.05	-
bb1826	104904.	.647	2.000	21.03	1.238	-	-	1.88	.09	-
bb1827	104904.	.613	2.000	24.12	1.420	-	-	3.54	.15	-
bb1828	104904.	.580	2.000	25.29	1.489	-	-	3.90	.15	-
bb1829	104904.	.546	2.000	24.81	1.463	-	-	3.32	.13	-
bb1830	104904.	.512	2.000	21.51	1.268	-	-	1.42	.02	-
bb1831	104904.	.479	2.000	19.29	1.135	-	-	-.64	-.03	-
bb1832	104904.	.445	2.000	16.55	.974	-	-	-1.96	-.12	-
bb1833	104904.	.412	2.000	11.66	.687	-	-	-4.50	-.39	-

SECT D-B TYPE IV BLOCK AT STA 2 WINDOW 5 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
bb1899	104904.	.567	2.625	27.49	1.618	2.05	.074	-	-	3.
bb1900	104904.	.433	2.625	26.10	1.536	-	-	-	-	3.
bb1901	104904.	.299	2.625	24.22	1.425	-	-	-	-	3.
bb1902	104904.	.164	2.625	23.01	1.355	-	-	-	-	3.
bb1903	104904.	.030	2.625	20.04	1.180	-	-	-	-	3.
bb1904	104904.	.701	2.625	26.47	1.556	2.17	.082	-	-	3.
bb1905	104904.	.835	2.625	24.33	1.432	3.00	.123	-	-	3.
bb1906	104904.	.969	2.625	23.38	1.376	2.84	.121	-	-	3.
bb1907	104904.	1.104	2.625	20.42	1.202	2.83	.139	-	-	3.
bb1908	104904.	1.238	2.625	9.08	.534	+	+	-	-	3.
bb1909	104904.	1.236	2.575	11.82	.696	+	+	-	-	3.
bb1910	104904.	1.171	2.575	17.04	1.003	-	-	-	-	3.
bb1911	104904.	1.037	2.575	21.84	1.286	-	-	-	-	3.
bb1912	104904.	.902	2.575	24.22	1.425	-	-	-	-	3.
bb1913	104904.	.768	2.575	25.67	1.511	-	-	-	-	3.
bb1914	104904.	.634	2.575	27.38	1.612	-	-	-	-	3.
bb1915	104904.	.567	2.575	27.63	1.626	1.93	.070	-	-	3.
bb1916	104904.	.567	2.525	27.58	1.623	2.07	.075	-	-	3.
bb1917	104904.	.701	2.525	26.59	1.565	-	-	-	-	3.
bb1918	104904.	.835	2.525	25.09	1.477	-	-	-	-	3.
bb1919	104904.	.969	2.525	22.74	1.338	-	-	-	-	3.
bb1920	104904.	1.104	2.525	17.92	1.055	-	-	-	-	3.
bb1921	104904.	1.104	2.725	18.44	1.086	-	-	-	-	3.
bb1922	104904.	.969	2.725	21.50	1.265	-	-	-	-	3.
bb1923	104904.	.835	2.725	22.91	1.348	-	-	-	-	3.
bb1924	104904.	.701	2.725	25.84	1.521	-	-	-	-	3.
bb1925	104904.	.567	2.725	27.20	1.601	1.95	.072	-	-	3.
bb1926	104904.	.567	2.675	27.46	1.616	1.88	.068	-	-	3.
bb1927	104904.	.634	2.675	27.08	1.594	-	-	-	-	3.
bb1928	104904.	.768	2.675	24.89	1.465	-	-	-	-	3.
bb1929	104904.	.902	2.675	23.07	1.358	-	-	-	-	3.
bb1930	104904.	1.037	2.675	21.93	1.291	-	-	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES, AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT H-B TYPE IV BLOCK AT STA 1+WINDOW 5 AT CL ZONE 3

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/U _B	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
081688	104904	.598	1.375	16.79	.988	2.98	.178	-	-	3.
081689	104904	.531	1.375	16.65	.980	-	-	-	-	3.
081690	104904	.463	1.375	16.05	.944	-	-	-	-	3.
081691	104904	.329	1.375	14.79	.871	-	-	-	-	3.
081692	104904	.195	1.375	13.48	.793	-	-	-	-	3.
081693	104904	.061	1.375	11.19	.650	-	-	-	-	3.
081694	104904	.732	1.375	16.22	.955	3.49	.210	-	-	3.
081695	104904	.966	1.375	14.86	.875	+	+	-	-	3.
081696	104904	1.000	1.375	13.73	.808	+	+	-	-	3.
081697	104904	1.135	1.375	11.37	.689	+	+	-	-	3.
081698	104904	1.067	1.320	12.50	.736	-	-	-	-	3.
081699	104904	.933	1.320	14.69	.864	-	-	-	-	3.
081700	104904	.799	1.320	15.81	.930	-	-	-	-	3.
081701	104904	.665	1.320	16.60	.980	-	-	-	-	3.
081702	104904	.598	1.320	16.50	.989	2.83	.168	-	-	3.
081703	104904	.596	1.265	16.74	.985	2.79	.161	-	-	3.
081704	104904	.732	1.265	16.30	.959	-	-	-	-	3.
081705	104904	.865	1.265	15.31	.901	-	-	-	-	3.
081706	104904	1.000	1.265	13.37	.767	-	-	-	-	3.
081707	104904	1.135	1.265	9.54	.562	-	-	-	-	3.
081708	104904	1.067	1.430	12.42	.731	+	+	-	-	3.
081709	104904	.933	1.430	13.62	.802	-	-	-	-	3.
081710	104904	.799	1.430	15.21	.895	-	-	-	-	3.
081711	104904	.665	1.430	16.03	.942	-	-	-	-	3.
081712	104904	.598	1.430	16.92	.996	3.37	.199	-	-	3.
081713	104904	.593	1.485	16.92	.993	3.88	.231	-	-	3.
081714	104904	.732	1.485	15.68	.923	-	-	-	-	3.
081715	104904	.866	1.485	13.65	.803	-	-	-	-	3.
081716	104904	1.000	1.485	12.29	.723	-	-	-	-	3.
081717	104904	1.135	1.485	9.69	.570	-	-	-	-	3.

SECT H-B TYPE IV BLOCK AT STA 1+WINDOW 5 AT CL ZONE 4

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/U _B	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
081776	104904	.445	2.000	14.34	.844	-	-	-1.07	-.60	-
081777	104904	.479	2.000	18.16	1.069	-	-	-.65	-.04	-
081778	104904	.512	2.000	20.00	1.224	-	-	1.19	.06	-
081779	104904	.546	2.000	22.64	1.333	-	-	1.76	.08	-
081780	104904	.580	2.000	23.29	1.371	-	-	1.83	.08	-
081781	104904	.513	2.000	22.90	1.348	-	-	1.48	.06	-
081782	104904	.647	2.000	21.58	1.270	-	-	.78	.04	-
081783	104904	.680	2.000	19.71	1.160	-	-	.13	.01	-
081784	104904	.714	2.000	17.01	1.001	-	-	-1.70	-.04	-
081785	104904	.747	2.000	12.75	.748	-	-	-2.08	-.16	-

SECT H-B TYPE IV BLOCK AT STA 1+WINDOW 5 AT CL ZONE 5

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/U _B	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
081718	104904	1.133	2.625	16.60	1.095	2.16	.116	-	-	3.
081719	104904	1.004	2.625	21.22	1.249	2.29	.103	-	-	3.
081720	104904	.870	2.625	22.33	1.315	2.17	.097	-	-	3.
081721	104904	.736	2.625	23.59	1.398	2.00	.085	-	-	3.
081722	104904	.602	2.625	24.43	1.438	1.70	.070	-	-	3.
081723	104904	.468	2.625	23.38	1.376	-	-	-	-	3.
081724	104904	.333	2.625	22.17	1.305	-	-	-	-	3.
081725	104904	.199	2.625	21.12	1.243	-	-	-	-	3.
081726	104904	.065	2.625	18.29	1.076	-	-	-	-	3.
081727	104904	1.071	2.570	19.65	1.157	-	-	-	-	3.
081728	104904	.937	2.570	22.09	1.300	-	-	-	-	3.
081729	104904	.803	2.570	23.30	1.371	-	-	-	-	3.
081730	104904	.669	2.570	24.31	1.431	-	-	-	-	3.
081731	104904	.602	2.570	24.49	1.442	1.79	.073	-	-	3.
081732	104904	.602	2.515	24.49	1.442	1.84	.075	-	-	3.
081733	104904	.736	2.515	23.98	1.411	-	-	-	-	3.
081734	104904	.870	2.515	22.89	1.348	-	-	-	-	3.
081735	104904	1.004	2.515	20.33	1.197	-	-	-	-	3.
081736	104904	1.139	2.515	15.41	.907	-	-	-	-	3.
081737	104904	1.071	2.680	19.94	1.173	-	-	-	-	3.
081738	104904	.937	2.680	21.13	1.246	-	-	-	-	3.
081739	104904	.803	2.680	22.39	1.318	-	-	-	-	3.
081740	104904	.669	2.680	24.06	1.416	-	-	-	-	3.
081741	104904	.602	2.680	24.28	1.429	1.66	.069	-	-	3.
081742	104904	.602	2.735	24.02	1.414	1.84	.076	-	-	3.
081743	104904	.736	2.735	22.92	1.349	-	-	-	-	3.
081744	104904	.870	2.735	20.78	1.223	-	-	-	-	3.
081745	104904	1.004	2.735	19.60	1.154	-	-	-	-	3.
081746	104904	1.139	2.735	16.11	.948	-	-	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES. AVERAGE VELOCITY, U_B = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-1. Tabulation of Velocity and Turbulence Data (contd)

SECT 3-B TYPE IV BLOCK AT STA 1+ WINDOW 5 AT CL ZONE 6

RUN NO	REYNOLDS NO	Z IN	Y IN	U FT/SEC	U/UB	UP FT/SEC	UP/U	V FT/SEC	V/U	CUTOFF KHZ
BB1747	104904.	.580	3.675	22.55	1.327	2.16	.096	-	-	3.
BB1748	104904.	.446	3.675	22.40	1.319	-	-	-	-	3.
BB1749	104904.	.312	3.675	22.25	1.310	-	-	-	-	3.
BB1750	104904.	.178	3.675	21.09	1.241	-	-	-	-	3.
BB1751	104904.	.043	3.675	17.06	1.039	-	-	-	-	3.
BB1752	104904.	.714	3.675	22.92	1.349	2.02	.088	-	-	3.
BB1753	104904.	.849	3.675	22.38	1.317	1.75	.078	-	-	3.
BB1754	104904.	.983	3.675	21.14	1.244	1.41	.067	-	-	3.
BB1755	104904.	1.117	3.675	17.70	1.042	1.66	.094	-	-	3.
BB1756	104904.	1.050	3.820	19.20	1.166	-	-	-	-	3.
BB1757	104904.	.916	3.820	22.50	1.324	-	-	-	-	3.
BB1758	104904.	.782	3.820	24.19	1.424	-	-	-	-	3.
BB1759	104904.	.647	3.820	24.44	1.459	-	-	-	-	3.
BB1760	104904.	.580	3.820	24.28	1.429	-	-	-	-	3.
BB1761	104904.	.580	3.765	25.82	1.520	-	-	-	-	3.
BB1762	104904.	.714	3.765	25.59	1.506	-	-	-	-	3.
BB1763	104904.	.849	3.765	23.57	1.383	-	-	-	-	3.
BB1764	104904.	.983	3.765	19.61	1.154	-	-	-	-	3.
BB1765	104904.	1.117	3.765	15.31	.901	-	-	-	-	3.
BB1766	104904.	1.050	3.930	17.13	1.008	-	-	-	-	3.
BB1767	104904.	.916	3.930	20.10	1.183	-	-	-	-	3.
BB1768	104904.	.782	3.930	20.88	1.229	-	-	-	-	3.
BB1769	104904.	.647	3.930	20.93	1.232	-	-	-	-	3.
BB1770	104904.	.580	3.930	20.66	1.216	-	-	-	-	3.
BB1771	104904.	.580	3.985	19.11	1.125	-	-	-	-	3.
BB1772	104904.	.714	3.985	18.26	1.075	-	-	-	-	3.
BB1773	104904.	.849	3.985	17.66	1.039	-	-	-	-	3.
BB1774	104904.	.983	3.985	16.67	.981	-	-	-	-	3.
BB1775	104904.	1.117	3.985	14.57	.857	-	-	-	-	3.

HYDRAULIC DIAMETER, D = .759 INCHES, AVERAGE VELOCITY, UB = 17.0 FT/SEC.
 * QUESTIONABLE DATA POINT. + TURBULENCE INTENSITY TOO HIGH TO MEASURE. - NO DATA POINT.

TABLE A-2. Tabulation of Pressure Drop Data

Blockage Type	Station	Flow (gpm)	Temp (°F)	P3A-P4R (a)	P4R-P5R (a)	P3R-P3L (a)	P4R-P4L (a)	P5R-P5L (a)
I	1	140	72	14.1	-0.70	0.89	-0.41	-0.019
I	2	140	72	16.0	-2.90	0.091	-0.94	-0.070
I	3	140	72	7.5	5.0	0.0065	8.8	-0.215
II	1	140	72	3.57	0.82	0.38	0.078	0.016
II	1	140	72	3.60	0.80	0.39	0.079	0.017
II	2	140	72	4.05	0.34	0.041	0.53	0.038
II	3	140	72	4.7*	-0.19*	0	-	0.025
IV	1	140	72	11.2	-1.0	0.36	-0.39	0
IV	2	140	72	12.9	-1.85	0.036	-1.12	-0.210
IV	3	140	72	-0.66	12.0	0	5.35	-0.235

(a) inches of Hg

* Difference of Left pressure taps rather than Right

Special Distribution
in Category UC-80

<u>No. of Copies</u>	<u>Offsite</u>
1	<u>AEC Advisory Committee for Reactor Safeguards</u> Washington, D.C. M. C. Gaske
1	<u>AEC Chicago Patent Office</u> A. A. Churm
7	<u>AEC Directorate of Licensing, Washington, D.C.</u> E. G. Case (3) V. Stello T. Novak D. Ross G. M. Lauben
2	<u>AEC Directorate of Reactor Standards, Washington, D.C.</u>
1	<u>AEC Office of Assistant General Counsel for Patents</u> Washington, D.C. R. A. Anderson
2	<u>AEC Technical Information Center</u>
20	<u>AEC Division of Reactor Research and Development</u> Washington, D.C. Assistant Director, Reactor Technology Chief, Special Technology Branch Chief, Reactor Physics Branch Assistant Director, Reactor Engineering Chief, Core Design Branch Chief, Fuel Engineering Branch Assistant Director, Plant Engineering Assistant Director, Program Analysis Chief, Water Projects Branch Chief, LMFBR Projects Branch F. Goldner R. Impara T. Speis R. M. Scroggins (2)

<u>No. of Copies</u>	<u>Offsite</u>
2	<u>AEC Division of Reactor Safety Research</u> Washington, D.C. H. J. C. Kouts E. Davidson
2	<u>Argonne National Laboratory</u> H. Fauske R. P. Stein
1	<u>Atomic Energy Commission</u> Brussels Office U.S. Mission to the European Communities APO, New York, N. Y. 09667
1	<u>Atomic Energy of Canada, Limited</u> Chalk River, Ontario, Canada G. A. Wikhammer
5	<u>Atomics International</u> P.O. Box 591, Canoga Park, California 91305 Louis Bernath Donald T. Egan David C. Fulton H. Morowitz W. B. Wolfe
2	<u>Babcock and Wilcox Company</u> P.O. Box 1260 Lynchburg, Virginia 24502 R. E. Willard C. Morgan

<u>No. of Copies</u>	<u>Offsite</u>
2	<u>Babcock and Wilcox</u> <u>Alliance Research Center</u> 1562 Beeson Street Alliance, Ohio 44601 J. S. Gellerstadt G. D. Lindstrom
1	<u>Brookhaven National Laboratory</u> O. E. Dwyer
2	<u>Chicago Operations Office</u> Richard J. Bariboldi
1	<u>Columbia University</u> <u>Department of Chemical Engineering</u> J. E. Casterline
2	<u>Combustion Engineering, Inc.</u> F. Bevilacqua P. Zamola
1	<u>duPont Company, Wilmington, Delaware 19898</u> J. S. Neill
1	<u>Gulf-General Atomic</u> <u>P.O. Box 608</u> San Diego 12, California 92112 R. Katz
1	<u>General Electric Company, San Jose (Trumbull)</u> <u>BRDO, Sunnyvale, California</u> P. Magee
4	<u>General Electric Company, San Jose</u> Earl Janssen R. T. Lahey S. Levy W. Sutherland

<u>No. of Copies</u>	<u>Offsite</u>
1	<u>Georgia Institute of Technology</u> Novak Zuber
3	<u>Idaho Nuclear, Inc.</u> <u>Idaho Falls, Idaho</u> H. D. Curet C. Solbrig L. Ybarrando
2	<u>Exxon Nuclear Corp.</u> <u>Bellevue, Washington</u> L. Bupp G. A. Sofer
1	<u>Knolls Atomic Power Laboratory</u> <u>General Electric Company</u> <u>Schenectady, New York</u> G. H. Halsey
1	<u>Massachusetts Institute of Technology</u> <u>Chambridge, Massachusetts</u> N. E. Todreas
1	<u>Nuclear Fuel Services</u> <u>Rockville, Md.</u> R. T. Berringer
1	<u>Union Carbide Corporation (ORNL)</u> Floyd L. Culler
1	<u>Union Carbide Corp. (ORNL-Y-12)</u> M. Fontana H. W. Hoffman
1	<u>Gulf United Nuclear Fuels Corporation</u> <u>Grasslands Road</u> <u>Elmsford, New York</u> H. S. Chung

<u>No. of Copies</u>	<u>Offsite</u>
1	University of Minnesota Department of Chemical Engineering Minneapolis, Minnesota 55455 H. S. Isbin
1	<u>Westinghouse Bettis Atomic Power Laboratory</u> S. Green
2	<u>Westinghouse Electric Corporation</u> H. Chelemer L. S. Tong
2	<u>Westinghouse Electric Corporation</u> Waltz Mill Site P.O. Box 158 Madison, Pa. E. Novendstern R. Markley
	<u>Onsite-Hanford</u>
1	<u>AEC/RL Patent Attorney</u> R. M. Poteat
2	<u>AEC/RL-RDT Sr. Site Representative, PNP.</u> F. Standerfer
54	<u>Battelle-Northwest</u> D. T. Aase R. T. Allemann N. E. Carter P. D. Cohn D. L. Condotta J. M. Creer J. C. Fox D. E. Fitzsimmons S. Goldsmith B. M. Johnson T. I. McSweeney C. A. Oster L. T. Pedersen

No. of
Copies Onsite-Hanford

Battelle-Northwest (Continued)

D. S. Rowe (30)
A. M. Sutey
D. S. Trent
C. L. Wheeler
W. C. Wolkenhauer
F. R. Zaloudek
Technical Information Files (5)
Technical Publications (1)

2 United Nuclear Industries

R. H. Shoemaker
R. E. Baars

7 Westinghouse-Hanford

W. M. Gajewski
J. W. Hagan
K. M. Horst
J. Muroaka
R. E. Peterson
J. F. Wett
J. M. Yatabe