

### SHAW MINES RUN - STATION 3

# **Description**

Shaw Mines Run was sampled near its confluence with the Casselman since July 1967, and has the most complete record of flows and chemical analyses of any of the AMD discharges, with a total of 162 observations (see data file). This is the largest source of AMD during low flows.

The complete statistical descriptions of acidity, iron and sulfate concentrations, loads and log-transformed loads were developed with program BMDP-2D, including histograms (see "Descriptive BMDP-2D"). Concentrations are named: "ACID," "TOTFE," and "SULF," with corresponding loads called: "ACIDL," "TOTFEL," and "SULFL." Log-transformed loads are: "LACID," "LTOTFE," and "LSULF."

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PAGE 8 BMDP2D STATION 3 DESCRIPTIVE STATISTICS

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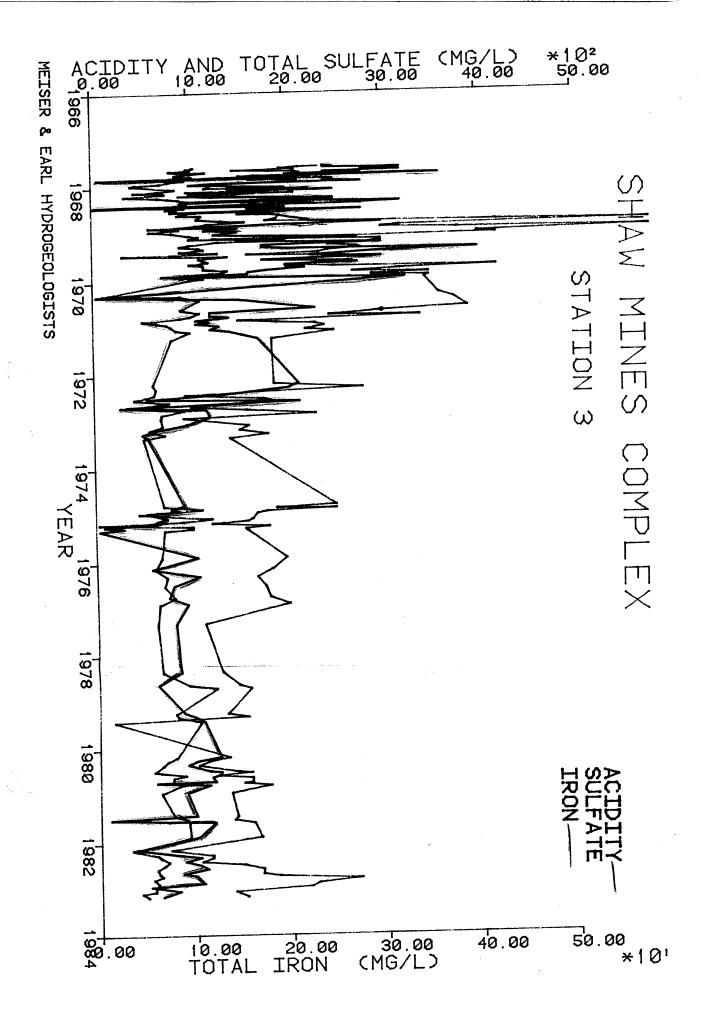
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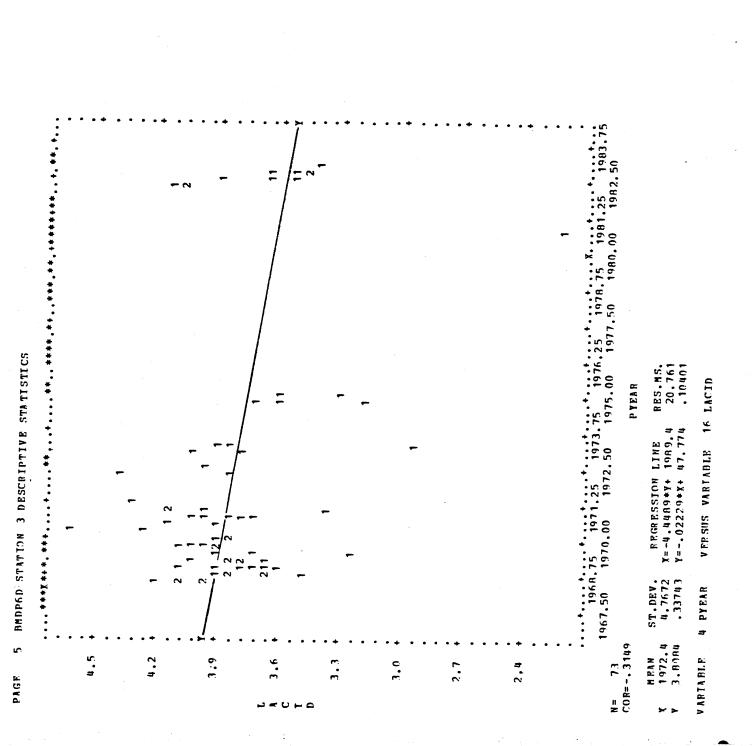
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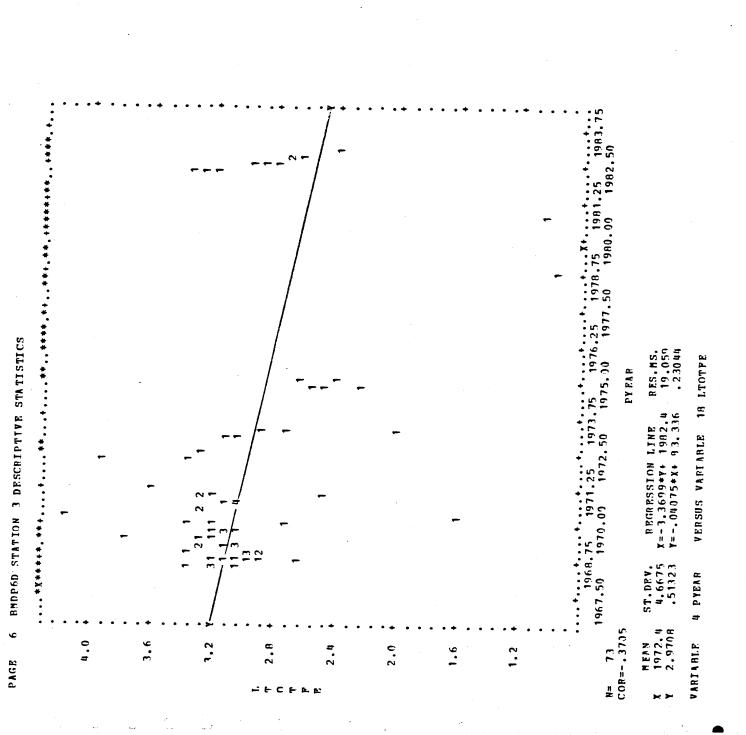
# **Graphical Trends of Observations**

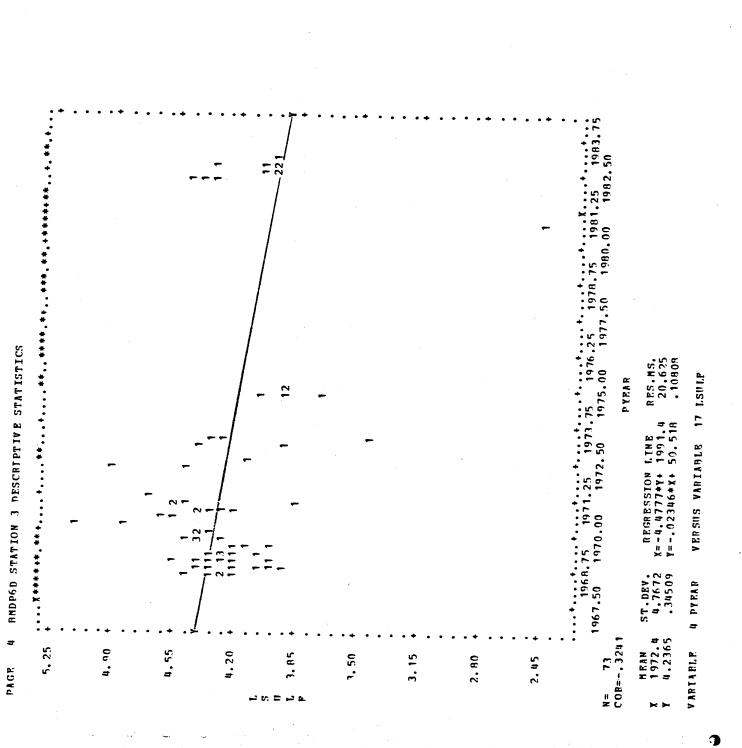
The CalComp plots (three-color) of acidity, iron and sulfate concentrations through time show an overall <u>decrease</u> in all concentrations, with the most striking changes seen in the sulfate and iron.

Bivariate scatter plots (BMDP-6D) of the individual log-transformed loads of acid, iron and sulfate through time all show a <u>decrease</u> as indicated by the slope of the regression lines. The scatter plot of combined log-transformed loads ("S, F and A diagram") clearly shows a pattern of decreasing loads for all three, acid, iron and sulfate.









4 BHDF6D STATION 3 LOG OF LOADS PLOT

# Statistical Comparisons

Station 3 data was grouped into five time groups: 1967-68, 1969-71, 1972-73, 1974-79 and 1980-83. The BMDP-7D multiple comparisons for concentrations, loads, log-transformed loads and flows are included and a summary interpretation follows.

#### A. Concentrations

- 1. Acidity Earliest two periods (1967-68 and 1969-71) are greater than most recent period (1980-83). Decrease of approximately 25-35%.
- 2. Iron Same as acidity. Decrease of roughly 50%.
- 3. Sulfate Same as acidity. Decrease of roughly 25-40%.
- 4. Comments Iron shows greatest decrease, acidity and sulfate show similar reductions. Very significant statistical differences for all three.

# B. Loads

- 1. Acid Load ]
- 2. Iron Load No differences between early and recent
- 3. Sulfate Load periods.
- 4. Comments High standard deviations make statistical distinction impossible, although the means for recent years are lower than for the earliest two periods. Furthermore, rigorous statistical testing requires log-transformation of the load data.

#### C. Log Loads

- Log Acid Load Early data (1969-71) is significantly greater than 1980-83.
   Decrease of roughly 40-50%.
- 2. Log Iron Load Decrease of roughly 50% from early data to recent, but not significant at 0.05 confidence.

- 3. Log Sulfate Load Same as log acid load. Decrease is roughly 40%.
- 4. Comments The improvements in acid and sulfate loads in recent years are statistically significant. The improvements in iron loads are significant at a level of 0.086. All load averages have been reduced on the order of 40%.

### D. Flows

- Flows ("AMGPD") No differences between groups except anomalous low flows in 1974-77.
- 2. Log Flows ("LMGPD") Same as flows.
- Comments Average flows in 1980-83 are no different than in earliest periods, 1967-68 and 1969-70. Therefore, decreases in <u>loads</u> are due to reduced concentrations, <u>not</u> changes in flow.

# E. Acid Concentrations vs. Flows - BMDP-1R Scatter Diagrams

1.	All Data	]	
2.	1967-68	]	
3.	1969-70	]	No correlation between acid concentrations
4.	1971-73	]	and flows.
5.	1974-79	]	
6.	1980-83	]	

7. Comments - Plots indicate "Type 1" discharge with observed acidities uniformly distributed about the mean over the range of flows.

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ICANCE LEVEL	.001	PO T-VALUE -0.33 3.25 3.25 5.28 5.28 1.30 0.66
SIGNIPICANCE LEVEL		1ANCE T P-VALUE 0.8099 0.0003 *** 0.0000 *** 0.0000 *** 0.0000 *** 0.0000 ***
SYMBOL	* * *	SEPARATE VARIANCE T. LUE DF P-VALUI 1.24 55.46 0.8099 1.34 21.28 0.0003 1.75 76.39 0.0 1.29 76.66 0.0700 1.30 45.89 0.0019 1.76 44.17 0.0000 1.75 44.77 0.0485 1.75 14.77 0.0485 1.75 46.78 0.9141
		SEPA 10-75 4.34 10.75 9.29 9.29 3.30 5.76 4.92 2.15
Y CELL (GROUP) MEANS. NIPICANCE OF THE BONFERRONI	THE SIMULTANEOUS PAIRS OF MEANS, HPARISON OF ALL LEVEL THE P	MEAN DTFF -6.05 89.13 129.27 108.92 95.18 135.32 114.97 40.14
ELL (GROUP) M	TEST IS THE SIMULTANEOUS IS OF ALL PAIRS OF MEANS. MULIIPLE COMPARISON OF ALL AT THE .05 LEVEL THE P	HEAN 206.80 111.62 71.48 91.82 71.48 91.82 91.82
NEMPTY CI	RRONT TI RISONS C THE MULI	GROUP HANE 1969-71 1972-3 1974-9 1972-3 1974-9 1980-3 1974-9
SVELS OF	E BONFERRONT COMPARISONS ENT FOR THE M SIGNIFICANT AV	GROUP NO. P 22. 23. 24. 35. 44. 56. 57. 57. 57. 57. 57. 57. 57. 57. 57. 57
SKS DENOTE THE LEVELS OF SIG	LUE GIVEN FOR THE BONFERRONT ICANT P VALUE OF COMPARISONS, A PTER ADJUSTMENT FOR THE OF MEANS, TO BE SIGNIFICANT MUST BE LESS THAN 0.005000	HEAN 200.75 200.75 200.75 200.75 206.80 206.80 111.62 71.48
SKS DPNC	LUE GIVI ICANT P S, APTER OF MEANS	GROUP NAME 1967-8 1967-8 1967-8 1969-71 1969-71 1972-3

(t)				计分类字 医骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨骨	TAIL PROBABILITY	0.0000	*************	0.0000
(VARIABLE				****	VALUE	15.94	2.37	22.43
***************************************	1980-3	1980-3 ** *********************************		TABLE	HEAN SQUARE F	8713036,0000 546535,5145	**************************************	
		2		OF VARIANCE	n P	4 157 161	* • * * = *	4, 57 4, 134
INTO GROUPS BASED ON VALUES	1974-9	OTHERWISE		ANALYSIS	SUN OF SOUARES	** ** **	ARIANCES NCE NCE N-GROUP BE EQUAL	
CASES DIVIDED INT	1972-3		235, 829 518, 400 148, 887 2890, 000 920, 000			GROUPS GROUPS		CH WN-FORSYTHE
, 12). CI		* COINCID	2 C C C C C C C C C C C C C C C C C C C	a 7 a H O S		* BETWEEN * WITHIN * TOTAL ********	LEVENE**********************************	BROWN
(VARIABLE	1969-71	*** *** *** *** *** *** *** ** ** ** **	115.87 14.86 10.00 50.00 4	* *	• <b>*</b> •	* * * * *	* * * * * *	*
######################################		MIDPOLNTS 6300,000) 6000,000) 5700,000) 8400,000) 4800,000) 4800,000) 4500,000) 8300,000) 8300,000) 8300,000) 8300,000) 8400,000) 8400,000) 84400,000)	W D D M D	(EXCEPT CASES WITH UNUSED VALUES FOR PYTAR )	THE CECC	S EV.	SAMPLY STRE 162	

PAGE 11 . ADP7D STATION 3 DESCRIPTIVE STATISTICS

PAIPWISE COMPARTSONS AMONG NONEMPTY CELL (GROUP) MEANS. ASTRRISKS DENOTE THE LEVELS OF SIGNIFICANCE OF THE BONFERRONI TESTS.	THE VALUE GIVEN FOR THE BONPERRONI TEST IS THE SIMULTANEOUS SIGNIFICANT P VALUE OF COMPARISONS OF ALL PAIRS OF HEANS. THAT IS, AFTER ADJUSTHENT FOR THE MULTIPLE COMPARISON OF ALL PAIRS OF MEANS, TO BE SIGNIFICANT AT THE .05 LEVEL THE P VALUE MUST PE LESS THAN 0.005000

	* ***
NI ST 00 00 00	ANCE T P-V ALUE 0.0000 **: 0.0235 0.0020 * 0.0020 0.0000 0.0000 **: 0.0000 **: 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000
BONFERRONI TEST 0.005000 0.001000	POOLED VARIANCE T UE DF P-VALUE 68 157 0.0005 29 157 0.0235 14 157 0.002 72 157 0.000 92 157 0.000 92 157 0.950 94 157 0.5606 58 157 0.5606
ICANCE LEVEL .05 .01	POC T-VALUE 1.75 1.75 2.29 3.14 4.72 5.92 6.92 0.06
SIGNIFICANCE LEVEL .05 .01	ANCE T P-VALUE 0.0001 *** 0.0530 0.0122 0.0007 *** 0.0000 *** 0.0000 *** 0.9312 0.4292
SYMBOL * * * * *	SEPARATE VARIANCE T LUE DF P-VALUI 12 93.82 0.0001 01 33.26 0.0530 57 77.22 0.0122 55 79.72 0.0007 92 27.53 0.0000 61 61.77 0.0000 15 62.87 0.0000 15 62.87 0.4292 81 18.13 0.4292
II	SEP T-VALUE -4.12 2.01 2.57 3.55 5.92 7.61 9.09
ISKS DENOTE THE LEVELS OF SIGNIFICANCE OF THE BONFERRONI ALUE GIVEN FOR THE BONFERRONI TEST IS THE SIMULTANEOUS FICANT P VALUE OF COMPARISONS OF ALL PAIRS OF HEANS, IS, AFTER ADJUSTMENT FOR THE MILTIPLE COMPARISON OF ALL OF MEANS, TO BE SIGNIFICANT AT THE .05 LEVEL THE P	HEAN DIFF -716.48 397.36 412.73 531.69 1113.85 1129.21 1248.17 145.33 118.96
ELL (GROUP) HEANS, ICANCR OF THE BONFE EST IS THE SINULTA OF ALL PAIRS OF H TIPLE COMPANISON OF THE .05 LEVEL THE	#BAN 2760.00 1646.15 1630.79 1511.83 1646.15 1630.79 1511.83
TELS OF SIGNIFIED CONPARISONS OF FIRE HILLS OF THE HILLS	P GROUP NAME 2 1969-71 3 1972-3 4 1974-9 4 1974-9 4 1974-9 6 1980-3 5 1980-3
EVELS OF EVE	G ROII
ISKS DENOTE THE LEVELS OF SIGNIFIATION OF MAINT FOR THE HULT OF MEANS, TO BE SIGNIFICANT AT THUST PE LESS THAN 0.005000	MEAN 2043.52 2043.52 2043.52 2043.52 2760.00 2760.00 2760.00
ISKS DEN ALUE GIV FICANT P IS, AFTE OF MEAN	GROUP RAME 1967-8 1967-8 1967-8 1969-71 1969-71 1972-3

GROUP NO.

VALUES  *******  ********  *******  *******  ****	****** MPUTATIONS WHICH *			• • • • • • • • • • • • • • • • • • • •	+	
*		***** FOLLOW EXCLUDE VALUES	**********	****	** ** ** **	
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A 44 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	****	*	*	* 2		
**			* .	***		
) MEANS ARE DENOTED BY M'S IP	IP THEY COINCIDE	* * * * * * N.S. N.S.	* ** *** **** **** **** **** **** **** ****	* *		
7550,992	9646.078		36.3	8 P		
	110.629	6988, 133	1529, 867	5877.264		
	165,090	5697, 387	1806.763	4454,258		
	41924, 590	2470,678	684, 177	1285,833		
M 2909,983 170 Size 14	1782, 360 34	904, 200	1417.920	13343,387 174,960		
ALL GROUPS COMBINED (RXCFPT CASES VITH HANSEN WATER		*****	ANALYSIS OF	21 are the Alvertage		
PYEAR )	* SOURCE	ac will	284 100			***
			SURES	DF MEAN SQUARE	P VALUE TATE	L PROBABILITY
6011,465 4886,094	* PETWEEN * WITHIN *	GROUPS ****	******	4 67593856.0000 8 34287371.8337	1.97	0. 1087
41924,500	* TOTAL	***	T *****	2		
174,960 STRE 73	LEVENE	S TEST FOR EQUAL VA	¥	**************************************	*****	* ~
	ON E-H A	ANALYSIS OF UR	*****	****	***	
	TEST	TISTICS FOR S NOT ASSUME	VILLANCE WITHIN-GROUP D TO BE EQUAL			
	# BYCE	WELCH BROWN-BODSVEHE	#	23	6.52	0.0012

5 . ADP7D STATION 3 DESCRIPTIVE STATISTICS

BONFERRONI TEST 0.005000 0.001000	POOLED VARIANCE T UE DF P-VALUE 15 68 0.2549 63 68 0.1744 73 68 0.470 22 68 0.8289 25 68 0.0274 84 68 0.0569 74 68 0.0569 74 68 0.0856 74 68 0.0856
LEVEL LEVEL .05 .01.	POCT-VALUE -1.15 -0.63 -0.73 0.22 2.25 1.94 1.74
SIGNIF	P-VALUE 0.1778 0.5546 0.0033 * 0.3175 0.8590 0.0001 ***
SYMBOL. * ** **	SEPARATE VARIANCE T LUB DP P-VALU 37 42.01 0.1778 61 9.40 0.5546 43 16.43 0.0033 02 21.77 0.3175 18 10.47 0.8590 62 30.61 0.0001 18 30.33 0.0373 27 8.03 0.0526 19 10.80 0.2602
TESTS. DENOTE THE LEVELS OF SIGNIFICANCE OF THE BONFERONI TESTS. THE VALUE GIVEN FOR THE BONFERONI TEST IS THE SIMULTANROUS SIGNIFICANT P VALUE OF COMPARISONS OF ALL PATRS OF MEANS. THAT IS, AFTER ADJUSTMENT FOR THE MOLTIPLE COMPARISON OF ALL VALUE NUST BE LESS THAN 0.005000	GROUP         GROUP         HEAN         DIFP         T-VALUE           7550.39         2 1969-71         9686.08         -2135.09         -1.37           7550.99         3 1972-3         9187.02         -1636.02         -0.61           7550.99         4 1974-9         3363.50         4187.49         3.43           7550.99         5 1980-3         5877.26         1673.73         1.02           9686.08         3 1972-3         9187.02         499.06         0.16           9686.08         3 1974-9         3363.50         6322.57         4.62           9187.02         4 1974-9         3363.50         5822.57         4.62           9187.02         4 1974-9         3363.50         5822.57         4.52           9187.02         5 1980-3         5877.26         3809.75         1.19           9187.02         4 1974-9         3363.50         5823.51         2.27           9187.02         4 1974-9         35823.51         2.27           9187.02         4 1974-9         35877.26         3809.75         1.19           9187.02         4 1974-9         3677.26         3809.75         1.73
TESTS. TESTS. THE VALUE GIVEN FOR THE SIGNIFICANT P VALUE OF THAT TS, AFTER ADJUSTMEN PAIDE OF PAIDE OF REANS, TO BE SI VALUE NUST BE LESS THAN	GROUP GROUP NO. NAME 1 1967-8 1 1967-8 1 1967-8 2 1969-71 2 1969-71 2 1969-71 3 1972-3 4 1974-9

HISTO GRAM	OP * TOTER. *	(VARTABLE	10). CASES	DIVIDED INTO GROUPS	TO GROUPS BASED ON	VALUES OF	********** * PYEAR *********	* (VARIABLE	(† 2	
	•	1969-71	•	1972-3	1974-9		1980-3			
VAR 10 EXCLUDED VALUES		•	•	•	• • • • • • • • • • • • • • • • • • •		•	•		
	**************************************	42 ***** COMPUTATIONS	WHICH POL	***** LOW EXCLUD	** EXCLUDE VALUES LISTED ABOVE	**************************************	***	****		
#10POINTS ********						2				
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8800.000)			•							
7200.000)										
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5600.000)		*								
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2400.000) 1 1600.000)	*****	***		* E			*	•		
	****	***		* *	4		**			
O.O ) GROUP MEANS	NS ARE DENOTED BY	**	* THE W COINCINE UP		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		* * * * *			
			3	C	ASTANBATO C'N					
MEAN STD.DEV.	1204.433	1973,708		2105, 194	257, 187		860.640			
R.E.S.D.	506.272	1458.612		2290, 984	148.820		661.769			
S. P. M.	128.262	428.201		993.374	60.756		199,531			
TO TACE	4113.161	14996, 488		8433.270	428.280		2101.200			
SAMPLE SIZE	741.319 ZE 14	346		97.650 8	8,330 6		10.260	·		
IIV	ALL GROUPS COMBINED	* •	* * * * * * * * * * * * * *	*****	***** ANALYSIS OF	F VARIANCE	TABLE *	****	****	***
FOR PYEAR	AR )	ALTES *	SOURCE			1				
:		*			OUR OF SQUARES		MEAN SQUARE	F VALUE	TAIL PROBABIL	BILIT
TEAN STO.DEV. R.E.S.D.	1531,776 2020,532 1201,336	* * *	BETWEEN GR WITHIN GR	GROUPS *	****	4 6368260 68 3948095	368260.0000 948095.8783	1.61	0.1810	<u> </u>
S. E. M.	236,485	***	TOTAL	* * * * * * * * * * * * * * * * * * * *		72				
MINIMUM Sample Size		**	_ =	TEST FOR EO	S	89 7	* 4	* -	****	***** 35
		* * *	ONE-PAY ANALYSIS OF TEST STATISTICS FOR VARIANCES NOT ASSIM	ANALYSIS OF V TISTICS FOR W S NOT ASSIMED				***	**	* * * *
	·	* *	WELCH BEOWN-F			.4, 25		14.76	0.0000	0 :
								_	0. 10	<del></del>

9 K. 27D STATION 3 DESCRIPTIVE STATISTICS

BONFERRONI TEST 0.005000 0.001000	POOLED VARIANCE T 11 DF P-V ALUE 22 68 0.2270 23 68 0.3100 98 68 0.3320 43 68 0.6690 17 68 0.6690 95 68 0.0552 61 68 0.1110 72 68 0.0896 85 68 0.1821
SIGNIFICANCE LEVEL .05 .01	T + + + + + + + + + + + + + + + + + + +
708 ## ## ##	SEPARATE VARIANCE T -1.72 38.40 0.0933 -0.90 7.23 0.3975 6.67 17.23 0.0000 1.45 17.65 0.1648 -0.12 9.77 0.9057 3.97 34.25 0.0004 2.36 42.30 0.0232 1.86 7.05 0.1054 1.23 7.57 0.2563
FICANCE OF THE BONFERRONI TEST IS THE SIMULTANEOUS OF ALL PAIRS OF MEANS. LITPLE COMPADISON OF ALL THE .05 LEVEL THE P.	HEAN DIFF -769.27 -900.76 947.25 343.79 -131.49 1716.52 1113.07 1848.01 1244.55 -603.45
ICANCE OF ICANCE OF ALL P TIPLE COMP	HEAN 1973.71 2105.19 257.19 860.64 2105.19 257.19 860.64 860.64
SKS DENOTE THE LEVELS OF SIGNIFICANCE OF LUR GIVEN FOR THE DONFRRONI TEST IS THE ICANT P VALUE OF COMPARISONS OF ALL PS. APTER ADJUSTMENT POR THE MULTIPLE COMPOST BE LESS THAN 0.005000	GROUP GROUP NO. NAME 2 1969-71 3 1972-3 4 1974-9 5 1980-3 4 1974-9 5 1980-3 5 1980-3
SKS DENOTE THE LEVENTE GIVEN FOR THE ICANT P VALUE OF S. APTER ADJUSTMEN OF MEANS, TO BE SIMUST BE LESS THAN	HBAN 1204,43 1204,43 1204,43 1973,71 1973,71 1973,71 2105,19 257,19
SKS DENC LUB GIVE ICANT P S, APTER OF MEANS	GROUP NAMS 1967-8 1967-8 1967-8 1969-71 1969-71 1972-3 1972-3

SROUP NO.

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	HISTOGRAM	######################################	(VAR IABLE	13). CAS	SES DIVIDED	DIVIDEN INTO GROUPS BASED ON		VALUES OF	*****	* (VARIABLE		(n	
		1967-8	1969-71		1972-3		1974-9		•				
	VAR 13	•	•		•	• • • • • • • • • • • • • • • • • • • •		•	C= 00 51		÷.		
	VALUES				j .							•	
	PENTOGOTH	**************************************	:42 ******) COMPUTATION	WHICH	***** FOLLOW EXCLUDE	UDE VALUES	**************************************	******	****	***			
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		***	4 C 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	•	# 1				*				
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	* (******** (000 · 000) *	* *	* * * *		*		*		****				
· .	_		•		* 4		***		+				
	GROUP MEANS	IS ARE DENOTED BY	M'S IP THEY	COINCIDE	E WITH # 1S,	N'S OTHERWISE	ISE		*				
-	MEAN TEN	19582.070	27234.153		24517, 151		8190, 598		404				
	r. s. D.	7625.789	15648, 461		23344,105		2267. 780		8728.762				
	S. E. M.	1973,789 34319,758	3671,391		8253, 387		2145.756 1014.182		9485.043				
		7946.477	6822, 717		77916.063		11369,988		30499, 188				
	SAMPLE SIZE	14	10		097 •1867 8		5064.000		268.560				
-	ALL GPO (EXCPPT CASES	ALL GROUPS COMBINED CASES WITH UNISED VALUES	* *	****	*****	******	ANALYSIS OF	VARIANCE TABLE	* *	***	***************************************		
	FOR PYEA		*	SOURCE		SUN OF SO	SOHARRS	<u>s</u>	1				
	MEAN	22080.003	* *	RETWEEN	2 011 042	•	1		NEAR SQUARE	F VALUE	TAIL	PROBABILITY	
	0.0 7.8	17946.047 1325°.688	* *			**	* *	4670612224 68301557623	4670612224.0000 8301557623.8460	2.22		0.0755	
	S. E. M.		* *	TOTAL		***							
	MINIMIM SAMPIF CT 25			LEVENE	S TEST FOR	FOUAL VARIA	**************************************	****	***	****	#	****	
			* * * *		***	. *	****	*	****	1.45		59	
•			* * * .	UNE-WAY A TEST STAT VARIANCES	ONE-WAY ANALYSIS OF V TEST STATISTICS FOR W VARIANCES NOT ASSUMED	VARIANCE WITHIN-G ED TO BE	ROUP EOIAL		•			* * * * * * * * * * * * * * * * * * *	
	•		* *	PELC	H N-FORSYTHE		# #	1, 25		11.43		0.0000	
			A service of the Complete Season of the service of				AND SECULIAR	. 0	Take the second of the second	3.18		0.0355	ł

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BONF BRRONI TEST 0.005000 0.001000	POOLRD VARIANCE TUB   39 68 0.1698 64 68 0.5235 26 68 0.2123 74 68 0.4642 40 68 0.05918 29 68 0.0531 55 68 0.1936 59 68 0.4936 59 68 0.4936
SIGNIFICANCE LEVEL . 05 . 01	T-VALUE -1,39 -1,39 -0.64 1,26 1,65 1,65
SIGNI	18TANCE T P-VALUE 0.0730 0.0773 0.0001 *** 0.1306 0.7698 0.000 *** 0.0067 0.0893 0.2804
SYMBOL.	SEPARATE VARITANCE T-VALUI -1.84 45.24 0.0730 -0.58 7.81 0.5773 5.13 16.93 0.0001 1.57 21.72 0.1306 0.30 9.96 0.7698 5.00 36.48 0.0000 5.00 36.48 0.0007 1.96 7.21 0.0893 1.15 8.32 0.2804
TEST IS THE BONFERRONI TEST IS THE SIMULTANEOUS OF ALL PAIRS OF MEANS. HULTIPLE COMPARISON OF ALL THE .05 LEVEL THE P	HEAN SERI DIFF T-VALUE -7652.07 -1.84 -4935.07 -0.58 11391.48 5.13 5028.60 1.57 2717.00 0.30 12680.67 2.85 16326.55 1.96 9963.67 1.15
TEST IS THE THE TEST IN THE TE	P HBAN 71 27234.15 3 24517.15 3 24517.15 3 24517.15 8190.60 14553.48 14553.48 14553.48
WELS OF SIGN BONFBRRONI COMPARISONS NT FOR THE HI IGNIFICANT A1	GROUP GROUP NO. 1948 3 1972-3 4 1974-9 5 1980-3 3 1972-3 4 1974-9 5 1980-3 5 1980-3
NOTE THE LE VEN FOR THE P VALUE OF ER ADJUSTME NS, TO BE S E LESS THAN	HEAN 19582.08 19582.08 19582.08 19582.08 27234.15 27234.15 27234.15 27534.15 24517.15
TESTS. THE VALUE GIVEN FOR THE BONFBRRONI SIGNIFICANT P VALUE OF COMPARISONS THAT IS, AFTER ADJUSTMENT FOR THE HUI PAIRS OF MEANS, TO BE SIGNIFICANT AT	GROUP GROUP NO. NAMB 1 1967-8 1 1967-8 1 1967-8 1 1967-8 2 1969-71 2 1969-71 3 1972-3 4 1974-9

HISTOGRAM O	**************************************	(VARIABLE 16)	. CASES	DIVIDED INTO GROUPS BASED	D ON VALUES OF	******** * PYEAR	** * (VARIABLE	(E
19		1969-71	1972-3	-3 1974	· 6 <b>-</b>	1980-3	¥ .	
VAR 16 RXCLUDED VALURS		•	•	•	•	•		
	C) + + + + + + + + + + + + + + + + + + +	***	***					
MIDPOINTS 4,800)		AND COMPUTATIONS	WHICH FOLLOW P	ICH FOLLOW EXCLUDE VALUES LISTE	LISTED ABOVE			
4,680)		*						
4.440)			*					
4, 200) *		* *						
080)		***						
960)	•	****	**			* *		
3, 720) **	•	***	* *E			*		
(009)	*	*		* *		* *		
3.360)		•		• æ		1 1 2 1		
3, 240)		* *		•		•		
3, 120)				*				
2.889)			*					
2. 760)								
2.520)								
2.407)								
٠ ۵.	ARE DENOTED BY	M'S IP THEY CO	COINCIDE WITH **	S, N'S OTHERWISE		•		
MEAN STD, DEV.	3.828	3,915	E		481	6		
R.E.S.D.	0.236	0.247	c c	0.405	.235	0.500		
S. E. H.	0.058	0.042	0		.276	0.416		
MINININ	3.464	4.622	**		669.	0.144		
SAMPLE SIZE	14	36	2.		3, 152 5	2.243		
ALL G (EXCPPT CASE	GROUPS COMPINED	* * * *	****	SISATURE *********	IS OF VARIANCE	TART	1	21
FOR PYEAR )	(		SOURCE	SHORTION AC MILE		2	* * * * * * * * * * * * * * * * * * *	***************************************
MEAN	3, 808	* 4		5	J.O	MEAN SOUARE	F VALUE	TAIL PROBABILIT
STD.DEV.	0.337		BETWEEN GROUPS WITHIN GROUPS	1.4508	æ œ	0.3627	3,66	0.0093
S. B. N.	0.030	:	11		7.2	2660.0		
	2.243	******* * IEV	**************************************	本种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种	****	** ***	****	*********
SAUPLE SLZE	73	*****	***	*********	######################################	1.06	1.06	0.3840
			ONE-KAI ANALYSIS TEST STATISTICS P VARIANCES NOT ASS	AT ANALISIS OF VARIANCE STATISTICS FOR WITHIN-GROUP HUCES NOT ASSUMED TO BE EQUAL				***
		\$	BROWN-FORSYTHE	22 21	4, 29		3,93	0.0194
		the state of the second of the	THE THE WASHING		O. S.	APPROXIMATION SERVICES CONTRACTOR	3.04	0.0329

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P A G F	
C.	

PAIRWISE COMPARISONS AMONG NONEMPTY CRLL(GROUP) HEANS.
ASTERISKS DRNOTE THE LEVELS OF SIGNIFICANCE OF THE BONFERRONI
THE VALUE GIVEN FOR THE BONFERRONI TEST IS THE SIMULTANEOUS
SIGNIFICANT P VALUE OF COMPARISONS OF ALL PAIRS OF NEANS.
THAT IS, AFTER ADJUSTMENT FOR THE MULTIPLE COMPARISON OF ALL
VALUE MUST BE LESS THAN 0.005000

GROUP NO.

TEST 0.005000 0.091000

.01

\* \*

BONFERRONI

STGNIFICANCE LEVBL

SYMBOL

	VARIANCE T DP P-VALUE 68 0.3892 68 0.0944 68 0.0706 68 0.0706 68 0.0041 68 0.0041 68 0.0041
	D VAR1) DF 08 68 68 68 68 68 68 68
	POOLED T-VALUE -0.87 -0.07 2.11 1.84 0.62 2.87 2.97 1.99 1.65
	SEPARATE VARIANCE T -1.21
	ATE V. 27.49.27.49.314.517.17.17.17.17.17.19.99.91.99.99
	SEPAR -1.21 -0.06 2.89 1.46 0.52 3.83 2.09 2.01
	MEAN DIFF -0.09 -0.01 0.35 0.08 0.43 0.36 0.24
	HEAN 3.91 3.91 3.60 3.60 3.60 3.60
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	######################################
	GROUP NAME 1967-8 1967-8 1967-8 1969-7 1969-7 1969-7 1972-3

HISTOGRAM O	**************************************	(V AR IABLE	18), CASES		DIVIDED INTO GPOUPS BASED ON	ON VALUES OF		* (VARIABLE	6
19	367-B	1969-71		1677.			* * * * * * * * * * * * * * * * * * * *	• •	
•	:			N	1974-9		1980-3		
VAR 18 EXCLIDED					•	•	•	•	
	C 17 * * * * * * * * * * * * * * * * * *	******							
	TABULATIONS AND	_	MHTCH POLICE		THE PERSON GRAND GRAND AND ADDRESS OF THE PERSON OF THE PE	***	经营业的存储 化二甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基	*****	
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880) *	**						4		
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1,800)				*	•				
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GROUP MEANS	ARE DENOTED BY M	M'S IP THEY	COLNCIDE	N TH + 18.	S OTHERNISE				
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STD. DEV.	0.185	3, 139		3,044	2.2	=	2.717		
R. E.S. D.	0,103			0.561	9.0	5	0.631		
	9.053	. 0.067		0.198	0.590	0 6	0.503		
ELEININ	2.645	4, 173		3.946	2.63	2 3	3, 322		
SAMPLE STRE	14	3.00		1.990 R	0.92	<u>-</u> 40	1.011		
ALL GRO	GROUPS COMBINED SES STELL INICED VALUES	***	* * *	****	******** ANALYSIS	OF VARIANCE	TARI.R ***		
FOR PYEAR		* *	SOURCE		SHIN OP SOMBRE	9			
× × 4 ×	2 071	* •			5	10	HEAN SQUARE	F VALUE	TAIL PROBABILITY
STD. DEV. R. F. S. D.	9.513 0.420	* * *	HETWEEN WITHIN	GROUPS GROUPS	5, 2544 13, 7113	# 9	1.3136	6.51	0.0002
S. B. M. MAXIMUM	0.060 4.173	**	TOTAL		18, 9656	72			
MINIBON SAMPLE SIZE	0.921	*		TEST	FOR EQUAL VAPIANCES	*****	长年的女子女子女子女子女女女女女女女女女女女女女女女女女女女女女女女女女女女女女	****	***
		* *	****	***	****	#	1.49 () 2.145 () 2.145 () 2.145 () 3.14	6 to . I	0.2145
		• <b>* *</b>	TEST STI	NAY ANALYSIS OP V. STATISTICS FOR W ANCES NOT ASSUMED	AY ANALYSIS OP VARTANCE STATISTICS FOR WITHIN-GROUP NCES NOT ASSUMED TO BE EQUAL				
		* *	WELCH	ELCH Pown-Fors ythe		18		3, 37	
		· The second sec		Const. Const. Co. Const. Const. Co. Co. Co. Co. Co. Co. Co. Co. Co. Co		3	The Control of the Co	4.73	0 0058
						and the second of the Second Second Second	64 ( Bank 1977 ) 17 ( 1978 ) 1984   1	See Describer of the season	and the second s

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TEST 005000 001000 000100 000100 000100 0000 68 0.518 68 0.9900 68 0.000 68 0.000 68 0.000 68 0.000	
BONFERRONI TEST 0.005000 0.001000 0.001000 0.001000 0.00100 0.	
SIGNIFICANCE  .05  .01  .01  .001  .001  ALUE  T-VALUE  165  119  1.82  119  1.57  101  1.57  1.57  1.57	
SIGNIF P-VALUE 0.2716 0.0243 0.1218 0.0577 0.0301 0.2521	
SYMBOL ***  ***  ***  ***  ***  ***  SEPARATE VARIANCE T  ALU E DF P-VALU  0.01 7.88 0.9716  3.12 5.36 0.0243  1.67 11.36 0.1218  2.09 12.55 0.0577  2.53 9.99 0.0301  1.19 16.20 0.2521  1.56 10.20 0.1495	600
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######################################	(VARIABLE)	17). CASES DIVIDED	D INTO GROUPS BASED ON	VALUES	***************************************	* (VARIABLE	<b>(</b>
9-196	1969-71	1972-3	1974-9		1000	•	
VAR 17 EXCLUDED	•	•				•	
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**************************************	****42 ****** AND COMPIETATIONS	****		****	***	****	
INTS 400)			EXCLUDE VALUES LISTED AI	ABOVE			
5, 250) 5, 100)	•						
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3, 900) **	* *		*		****		
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4. 600) 3. 11503			•				
3, 300)		*					
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3.000) 2.850)							
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2, 250)							
GROUP MEANS ARE DENOTED BY	M'S IF THEY	COINCIDE WITH * S	, N'S OTHERWISE				
MEAN 4.260	4, 359			ď	-		
	0.243				4.012		
	0.217			. 10	0.366		
MAXTMUM 4.536	5, 10.0	0.154	54 0.057	_	0.154		
.م. ا ا	3,834			·C •	4.484		
ZE	34			•	2, 429		
ALL GROUPS COMBINED W		****	SISATEN ********	OF VAPIANCE	TABLE .	***************************************	
Macono nitr	A LUES *	# C C C C C C C C C C C C C C C C C C C				•	*** ** ** ** ** ** ** ** ** ** ** ** **
•	*	SOURCE.	SUM OF SQUARES	O.P.	MEAN SQUARE	P VALUE	TAIL PROBABILITY
STO 0 4.236	*	BETWEEN GROUPS	1,6897	8	200		
	* *	WITHIN GROUPS	6.8848	<b>8</b> 9	0.1012	4.17	0.0044
S. E. M. 0.040	*	TOTA	8,5746	7.2			
	* * * *	******	***	****	** ** ** * * * * * * * * * * * * * * * *	****	
172 E	*	######################################	* ROUAL VARIANCES 4.	4, 69		1.34	2652
	*	~	VARI	* * *	*****	****	****
	* *	VARIANCES NOT ASS	WITHIN-G				•
	# 4	ELCH		10.	-	10.36	
	•	HFOWN-FORSYTHE	n-	4, 25		3.55	1000.0
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PAGE 17 AMDP7D STATION 3 DESCRIPTIVE STATISTICS

PAGE 18 BHDP7D STATION 3 DESCRIPTIVE STATISTICS

PAIPWISE COMPARISONS AMONG NONEMPTY CELL (GROUP) HEANS. ASTPRISKS DENOTE THE LEVELS OF SIGNIPICANCE OF THE BONFERRONI TESTS. THE VALUE GIVEN FOR THE BONFERRONI TEST IS THE SIMULTANEOUS SIGNIFICANT P VALUE OF COMPARISONS OF ALL PAIRS OF MEANS. THAT IS, APTER ADJUSTMENT FOR THE WULTIPLE COMPARISON OF ALL	(GROUP) HEANS. INCE OF THE BONPERRONI	IS THE SIMULTANEOUS ALL PAIRS OF HEANS.
ທ == ⊂	PAIPWISE COMPARISONS AMONG NONEMPTY CELL (GROUP) HEANS. ASTFFISKS DENOTE THE LEVELS OF SIGNIPICANCE OF THE BONPERRONI TESTS.	THE VALUE GIVEN FOR THE BONFERRONI TEST IS THE SIMULTANEOUS SIGNIFICANT P VALUE OF COMPARISONS OF ALL PAIRS OF HEANS.

BONFERRONI TEST	0.005000 0.001000 0.000100	POOLED VARIANCE T JE DP P-VALJE 97 68 0.3341 26 68 0.7980 18 68 0.0328 98 68 0.0514 09 68 0.0016 * 24 68 0.01489 57 68 0.1489
SIGNIFICANCE LEVEL	.01	POOT T-V ALUE T-0.97 0.26 2.18 1.98 1.08 3.01 3.24 1.79 1.79
SIGNIF		IANCE T P-VALUE 0.1300 0.8275 0.0006 ** 0.1475 0.0233 0.0001 ** 0.0800 0.3438
SYMBOL	* * *	SEPARATE VARIANCE T LUE DP P-VALU) -55 32.90 0.1300 -22 8.36 0.8275 -87 10.05 0.0006 -54 13.10 0.1475 -84 8.05 0.4233 -52 9.12 0.0001 -17 12.64 0.0496 -98 R.76 0.0496 -99 17.12 0.3430
IN	us S.	SEP -1.55 -1.55 0.22 4.87 1.54 0.84 0.84 0.97
HEANS. THE BONFERRONI	IS THE SIMULTANEOUS ALL PAIRS OF MEANS. E COMPARISON OF ALL .05 LEVEL THR P	MEAN DIFF -0.10 0.36 0.25 0.13 0.35
CELL (GROUP) H PICANCE OF TH	7 2 3	H BAN 4.35 4.22 4.01 4.01 4.01
 	ERRONI TES ARISONS OF R THE MULTI	05000  R GROUP  1974-9 11974-9 11972-3 11972-3 11974-9 11974-9 11980-3
ISES COPPARISONS ANONG NONEMPTY ISES DENOTE THE LEVELS OF SIGN	ALUS GIVEN FOR THE BONFERRONI TFICANT P VALUE OF COUPARISONS IS, A PTER ADJUSTMENT FOR THE MULL OF MEMONS, TO BE SIGNIFICANT ATTENTIONS.	GROUP
PENOTE TH	TVEN FOR TER ADJUSTER	P MENN MENN P P P P P P P P P P P P P P P P P P
I SKS I	ALUS C FICANT IS, AE	GROUP NAME 1967-8 1967-8 1967-8 1969-71 1969-71 1972-3

HISTOGRAM OF	**************************************	(VARIABLE 14). CASES	ES DIVIDED INTO GROUPS	PS BASED ON VALUES	***************************************	** * (VARIABLE	(#
191	67 -8	-7	1971-3	1974-7			
•		•		•	•	•	
*	**************************************	*****	****	****	C++++++++++++	11/4++++++	
MIDPOINTS 6.300) 6.000)		ARTCE	FOLLOW EXCLUDE VALUES	S LISTED ABOVE		7	
5. 700)		*					
5. 100) 4. 800)			•	·	<b>→</b>		
4.500) 3.200) 3.900)							
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1, 800) *		***	***				
200)			* 1		2		
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<b>.</b>	ŀ	***	*	***	* * * *		
MEANS	ARE DENOTED BY	M'S IF THEY COINCIDE	WITH AT SIN SIN BUTTER		*		
	0.884	7 60	1.875		•		
R.E.S.D.	0.424	0.908	1,233	0.145	1, 367		
S. E. M.	0.105	0.163	1.029	0.141	1.296		
MINIMUM SAMPLE SIZE	0.500	5,590 0,360 31	5,000 0,220 11	0.600	5.080		
ALL GROUPS (EXCEPT CASES WIT	RCUPS COMBINED S WITH UNISED VALUES	****	****	ANALYSIS OF VAR	12 V BRIANCE TABLE ****	化十分分子分子分子分子分子分子分子分子分子分子分子分子分子分子分子分子的一种种种种种种种种种种	
FOR PYEAR			SUNORS	SOUARES	SAM COURS		
MEAN STD. DEV.	1.177	* BRIVEEN *	GROUPS 9, 5588		3897	2.57	L PROBABILITY 0.045u
S. F. N.	0.786			89 0071	0,9291		
MAXIMUM	5.590	***********	72.7 	72			
GINIBON Sample Size	0.020 73	* LEVENE'S	TEST FOR ROUAL	=	**************************************	2.29	***************************************
		* ONE-HAY * TEST STI * VARIANCI	Y ANALYSIS OF VARIANCE TATISTICS FOR WITHIN-GROUP CES NOT ASSUMED TO BE POUR	•	**	***	*
		* BELCH	ORSYTHE	EQUAL 4. 2	28	7.44	0.0003
			4 H . 1 CM CM . 1		c	7,7	) E E E E

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SIGNIFICANCE BONFERRONI LEVEL TEST .05 0.005000 .01 0.001000	POOLED VARIANCE T  T-VALUE  -0.69  0.79  0.78  68  0.4938  -1.28  68  0.2047  -2.30  68  0.2047  -3.30  68  0.1971  -0.83  68  0.4093  2.66  68  0.0097  1.26  68  0.2126  -1.71  68
SIGNIF *** ***	SEPARATE VARIANCE T -1.10 42.99 0.2772 -2.57 11.61 0.0253 3.16 16.84 0.0057 -1.17 12.52 0.2627 -1.92 14.04 0.0757 3.45 33.87 0.0015 # -0.63 14.80 0.5388 3.67 10.60 0.0040 # 0.93 20.99 0.3647
FY CELL (GROUP) HEANS.  SHIPICANCE OF THE BONFERRONI  F TEST IS THE SIMULTANEOUS  NS OF ALL PAIRS OF HEANS.  NULTIPLE COMPARISON OF ALL  AT THE . 05 LEVEL THE P	HEAN DIPP T 1.10 -0.21 1.88 -0.39 0.49 0.39 1.37 -0.49 0.49 0.61 1.37 -0.27 1.37 -0.27
HONG NONEMPERES OF SIGNERSON: COMPARISONENT POR THE SIGNIFICANT	GROUP GROUP 0.88 2 1969-70 0.88 2 1971-3 0.88 4 1971-7 0.98 5 1980-3 1.10 4 1971-7 1.10 4 1971-7 1.10 5 1980-3 1.88 4 1971-7 1.88 5 1980-3 0.49 5 1980-3
PAIRHISE COMPARISONS A ASTERISKS DENOTE THE L. TESTS. THE VALUE GIVEN FOR TH SIGNIFICANT P VALUE OP THAT IS, AFTER ADJUSTED PAIRS OF MEANS, TO BE	GROUP GROUP NAME 1 1967-8 1 1967-8 1 1967-8 2 1969-70 2 1969-70 2 1969-70 3 1971-3 4 1974-7

HISTO GRAM OF	**************************************	CVARIABLE	24247			****	*		
	* * *			DIVIDED INTO GROUPS BASED ON	ON VALUES OF	P * PYEAR *	* (VAPIABLE	£ 4)	
1967	æ ;	1969	1971-3	1974-7		1980-3			
:		•	• • • • • • • • • • • • • • • • • • • •		•		•		
	<b>化工作业务业务业务业务业务业务</b>								
	TABULATIONS AND	AND COMPUTATIONS	WHICH	POLLOW EXCLING VALUES TESTER ASSESSED	*****	** * * * * * * * * * * * * * * * * * * *	*********		
0.840)					ABUVE				
0.720) 0.600)		*	*			•			
0.480)			•						
0.360)		*	•			;			
0.120) ***		4	***			•			
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-0.120) ## -0.240\###		***	**			* =			
360) **	ŀ	*		* *		***			
-0.480)		*		<b>E</b>					
-0. 600)			•	*					
-0.840)									
-0.960)									
-1.080)									
-1, 320)									
-1.440)									
-1.560)									
P HEANS	APE DENOTED BY	M'S IP THEY	COINCIDE WITH * S.	W'S OTHERSTICE		•	.*		
-	-0.089	-0.022	•						
STD:DEV.	0.176	0.201		•	329 166	n60.0-			
S. E. H.	0.194	0, 159	0.265		0.163	0.588			
KIMI	0.250	0.036			174	0.170			
MINIMUM Sample Size	-0.301 14	-0.444	•	-0.222	22	0.706			
116	201100	ָ			S	12		• .	
PT CAS	•	* *	***	******	OF VARIANCE TABLE	*	******	*****	*
FOR PIEAR	•	* *	SOURCE	SUN OF SQUARES	DP	MEAN SQUARE	P VALUE	TAIL PROBABILITY	<b>.</b>
STD. DEV.	-0.037 0.327	* *	BETWEEN GROUPS WITHIN GROUPS	1, 0323	<b>37</b> 00	0.2581	2.64		!
S. E. H.	0.038	# 1			3	1160.0			
MAXIMUM	0.747	*	TOTAL:	7,6771	72				
SAMPLE SIZE	- 1.699 7.3	* *	LEVENB'S TEST FOR	EQUAL.	68	4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.	2.18	*******	*
		* * *	ONE-WAY ANALYSIS (TEST STATISTICS FO	IS OF VARIANCE S FOR WITHIN-GROUP	# # # #	化苯基苯基苯基苯基苯基苯基苯基苯基苯基苯基苯基苯基苯基苯基苯基苯基苯基苯基苯基	* * * * * * * * * * * * * * * * * * * *	* * * * * * * * * *	*
		* •			4, 19		4	0000	
		•	BPOWN-FORSYTHE				70 · c	0.0088	

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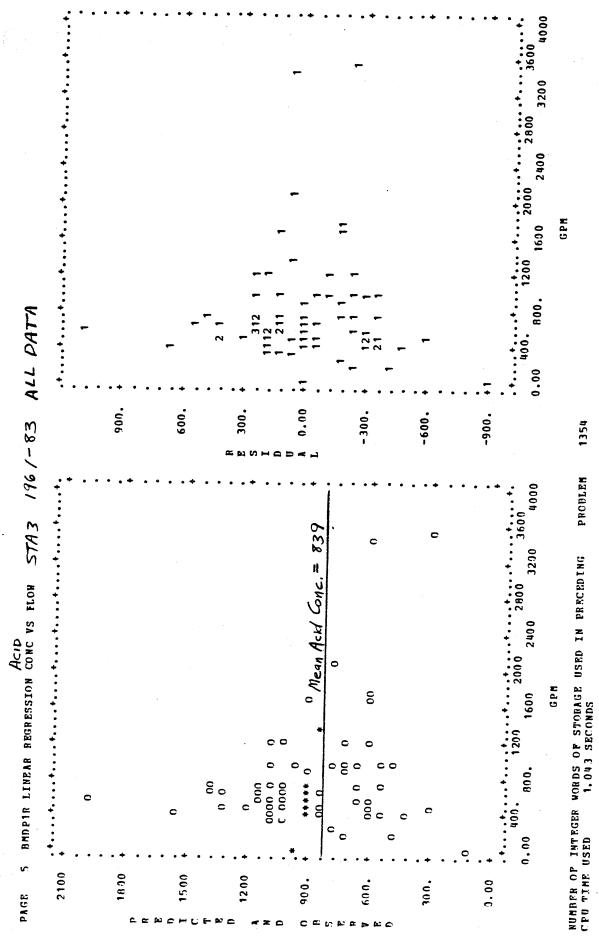
BONFERRONI	0.005000 0.001000 0.000100
SIGNIFICANCE LEVEL	. 00.
SYNBOL *	* * * * *
PAIRWISE COMPARISONS AMONG NONEMPTY CRLL (GROUP) MEANS. ASTERISKS DENOTE THE LEVELS OF SIGNIFICANCE OF THE BONFFRONI THE VALUE CITED TO THE THE CAME OF THE BONFFRONI	SIGNATED STATE THE BONFERRONI TEST IS THE SIMULTAREOUS SIGNATIONAL OF ALL PAIRS OF MEANS.  THAT IS, AFTER ADJUSTMENT FOR THE MULTIPLE COMPARISON OF ALL PAIRS OF MEANS, TO BE SIGNIFICANT AT THE .05 LEVEL THE PAIRS OF MEANS, TO BE SIGNIFICANT AT THE .05 LEVEL THE PAIRS OF MEANS.

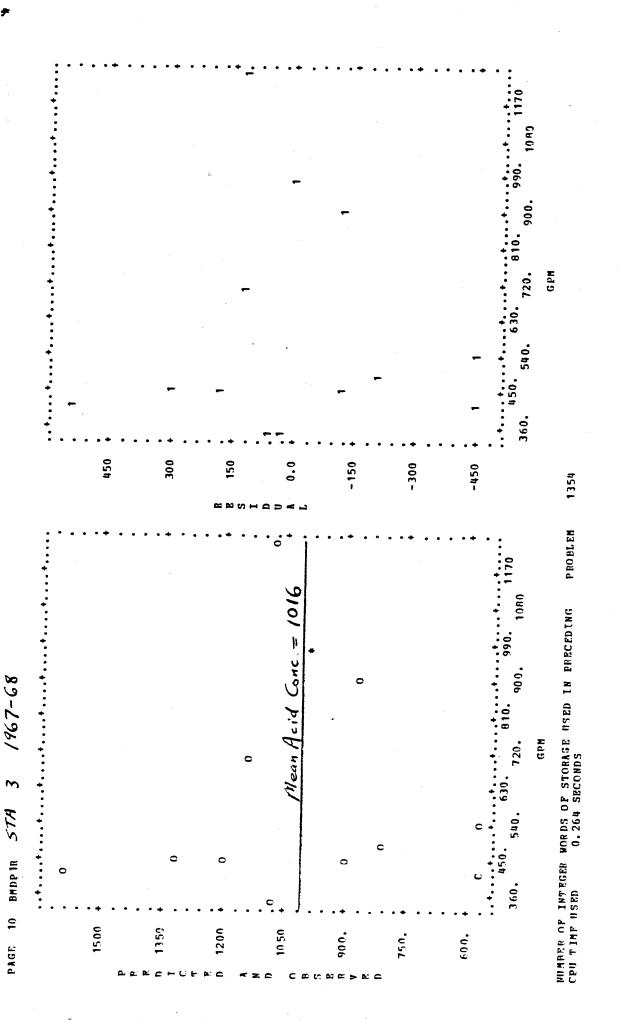
	<b>64</b>								*		
VARÍANCE T	P-VALU	0.5098	<b>0.035</b>	3. 1448	0.9652	0.0686	0.0455	0667	0035	0.0387	1.1627
VARÍA	96	68	<b>9</b>	89	89	89	89	89	89	68	) 89
POOLED	-VALUE	90.0	-2.14	1.48	0.04	-1.85	2.04	0.68	3.02	2.11	-1.41
	H										
ANCE T	F-VALUE 0 2707	1017.0	0.0288	0.0269	0.9761	0.0803	0.0094	0.6853	0.0012 *	0.1806	0.2251
ATE VARI	28.50	10.00	000	66.7	12.70	12.68	6.10	12.01	13.72	17.67	14.16
SEPARATE VARIANCE T	-1.12	EN C=	1	* * * * *	60.0	06.1-	3.74	0.42	60.	4.39	17.1-
MEAN	-0.07	-0.27	0 24			07.0-	0.3		0.0	0.20	67.0-
Z Z Z	-0.02	0.18	-0.33	000-					60.0-	60.0-	•
GROUP NAME	1969-70	1971-3	1974-7	1980-3	1971-1	1974-7	1980-3	1974-7	1980-3	1980-3	)
GROUP NO.	~	m	#	2	· m	3	M	. =	·	r.	
MEAN	-0.09	60.0-	-0.09	-0.09	-0.02	-0.02	-0.32	0.18	0.18	-0.33	. 1
GROUP	1967-8	0-106	H-/961	1967-8	1969-70	1969-70	1969-70	1971-3	1971-3	1974-7	
GROUP NO.		- •	- ,	-	2	2	7	m	m,	<b>#</b>	24 52 52 52 52 52 53 53 53 53 53 53 53 53 53 53 53 53 53

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PROBLEM

NUMBER OF INTEGER WORDS OF STORAGE USED IN PRECEDING CPU TIME USED 9.853 SECONDS





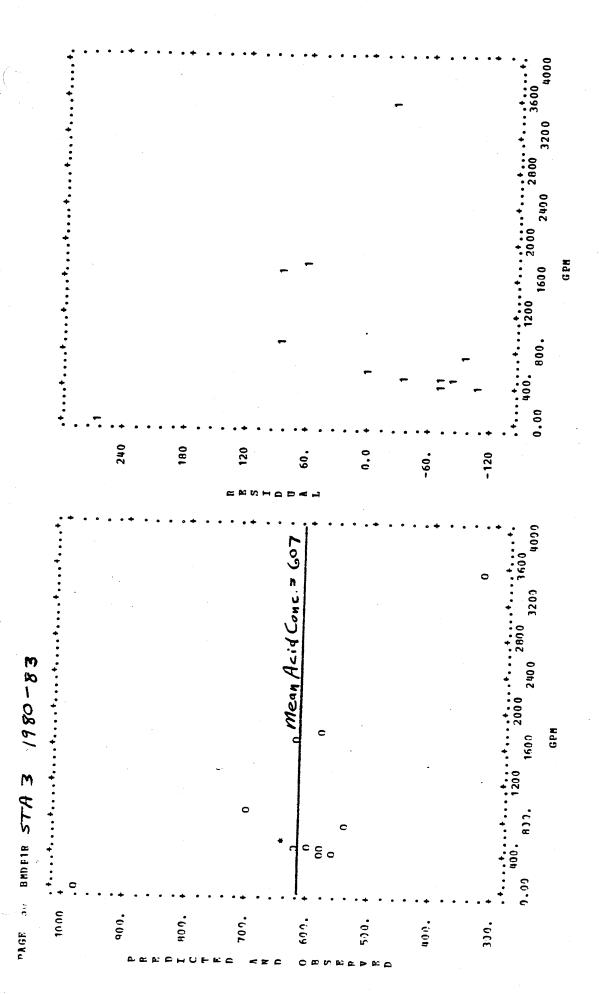
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1800	••••	•006	••••
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3 OF 1	GPM MIMPER OF INTEGER WORDS OF STORAGE USED IN PRECEDING		Wdb

PAGE 15 BHDP 18 STA3 1969-70

0 0 1750 1 150 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	975. +	••	300	<del>-</del>	
0 0 Mean Acid Conc, = 696 L	• • • •		225	• • • •	
o o Mean Aeld Conc, = 686 L	• • • • •	· · · · •		-	
o o Mean Aeld Conc, = 696 . L	750. +	0			
· · · · · · · · · · · · · · · · · · ·	675.	" " Mean Acid Conc, =		-	
••••	610. +	0	-75.	-	
	• • • • •	0	- 150	<b>-</b>	

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300 +	200 +	100 +	. 0.0	-100 +	-200 +	- 300 +	-400 + 175 225 275 325 375 400	3
C	0	••••	Mean Acid Conc 816 *: E	D « i	• • • •	•••	225 275 325 375 400	



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