

[illegible]

[illegible]

[illegible]

RESIDUAL ERROR2=	.01508	ERROR CHECK RATIO=	1.0000	SORTB1=	1.625	BETA2=	9.120
.02700000	.02370002	.00030	.020	-.00439221	.03575625	.02069180	.03071224
.01600000	.03278366	-.01678	-1.113	.00302953	.06233739	.03061019	.03495713
.01000000	.03264532	-.02265	-1.502	.00283340	.06250725	.02978343	.03550721
.01200000	.03368390	-.02168	-1.438	.00395620	.06341159	.03190197	.03546582
.01200000	.03563599	-.02364	-1.568	.00589106	.06357793	.03363049	.03764145
.06000000	.02702064	.03298	2.187	-.00299288	.05703756	.02249794	.03154335
.01300000	.03579094	-.02279	-1.512	.00605662	.06532525	.03390173	.03768014
.03700000	.03459998	.00240	.159	.00485050	.06439345	.03248558	.03671437
.03600000	.03667822	-.00068	-.045	.00692213	.06642731	.03456924	.03678724
.03200000	.03974399	-.00774	-.514	.00989541	.06958456	.03651430	.0365875
.04300000	.03027386	.01273	.844	.00040719	.06014053	.02688097	.03365875
.04500000	.03762393	-.01262	-.837	.00748565	.06739322	.03524699	.04000086
.02000000	.03554344	-.01554	-1.031	.00581065	.06527622	.03367547	.03740840
.04100000	.03575648	.00524	.348	.00601305	.06550391	.03370180	.03781516
.02400000	.03256535	-.00857	-.568	.00274388	.06226672	.02650069	.03562400
.03500000	.03916592	-.00417	-.276	.00929969	.06909215	.03578490	.04254493
.02100000	.03423271	-.01323	-.878	.00450377	.06382166	.03433004	.03603539
.03500000	.03556333	-.00056	-.037	.00582501	.06530164	.03361220	.03791445
.07300000	.03614306	.03686	2.444	.00638031	.06590580	.03384946	.03843665
.02300000	.03636299	-.01338	-.888	.00660033	.06616564	.03384407	.03592190
.05200000	.02871431	.02329	1.544	-.00115572	.05858433	.02529597	.03212864
.02300000	.02857903	-.00588	-.370	-.00141118	.05856925	.02423709	.03292097
.02500000	.03115144	-.00615	-.408	.00137730	.06092558	.02871446	.03358842
.04200000	.03563651	.01236	.820	.00588863	.06536620	.03352116	.03775585
.06000000	.03650616	.02309	1.532	.00715630	.0665802	.03475044	.03925388
.02200000	.02974531	-.00775	-.514	.00067939	.05957001	.02675332	.03273750
.03200000	.03650495	.02150	1.426	-.00070871	.06659719	.03383156	.03917435
.03400000	.03396595	.00003	.002	.00421191	.06371999	.03178626	.03614355
.04400000	.03312406	-.00912	-.605	.00337361	.06287451	.03099598	.03525213
.04000000	.03596644	-.00409	.271	.00612930	.06566358	.03343310	.03837978
.03300000	.03603220	-.00303	-.201	.00622916	.06583524	.03326437	.03680004
.04600000	.03519244	.01261	.849	.00545453	.06493035	.03324747	.03713740
.03400000	.03467120	-.00087	-.058	.00510040	.06464199	.03347542	.03726697
.02400000	.03539675	-.01140	-.756	.00560912	.06514437	.03280019	.03799330
.02900000	.03524346	-.00624	-.414	.00545374	.06505318	.03362300	.03786391
.03200000	.02763461	.00437	.290	-.00234521	.05761443	.02336504	.03190418
.03300000	.03613791	.00486	.322	.00832334	.06796247	.03524867	.04102715
.03100000	.03757593	.01342	.890	.00760686	.06735100	.03512762	.04002425
.02700000	.03262371	-.00562	-.373	.00287444	.06237298	.03051214	.03473528

DUP
 40000000
 1803

LCI 1 AVERAGE: .1000000+01 INCE OF INVERSE: .1000000+01 MODEL: 3 DIA6 INCREMENT: .00000 ITERATION NUMBER: 0
 COVARIANCE MATRIX OF REGRESSION COEFFICIENTS
 .50759105-01

RESPONSE 1 LEAD

	REGRESSION COEFFICIENT	BETA COEFF.	STD. DEV. OF REG. COEFF.	CALCULATED T VALUE
CONSTANT	.03443285			
LOG D ALA -H	.01221051	.20427	.00340	3.590*

RESIDUAL ERROR: .015096 ERROR SS: .67456059-01 ADJ TOTAL SS: .70393397-01 ADJ REGRESSION SS: .29373384-02
 R SQ: .0417 ADJ R SQ: .0385 F CALC: 12.8892 PROBABILITY: .001 MODEL DF: 1 ERROR DF: 296

OBSERVED
RESPONSE

CALCULATED
RESPONSE

RESIDUAL
RESIDUAL

STD.
RESIDUAL

95 PERCENT
LOWER

CONFIDENCE LIMITS-POINT
UPPER

95 PERCENT
LOWER

CONFIDENCE LIMITS-LIMITS
UPPER

0.04000000	0.03370364	0.01030	0.682	0.00394147	0.06346581	0.03193679	0.03547048
0.03600000	0.03486951	0.00341	0.226	0.00482990	0.06434912	0.03286634	0.03631268
0.02600000	0.02896376	0.00096	0.064	0.00944636	0.05887388	0.02550686	0.03420666
0.05000000	0.03919600	0.01080	0.716	0.00942409	0.06907191	0.03606967	0.04292614
0.01500000	0.03262620	0.01793	1.187	0.00315525	0.06269714	0.03101724	0.03483515
0.03000000	0.03952652	0.00953	0.631	0.00963917	0.06941987	0.03624511	0.04281093
0.02000000	0.03552227	0.00752	0.498	0.00575679	0.06528775	0.03370057	0.03731397
0.02500000	0.03772920	0.00573	0.380	0.00791490	0.06754350	0.03523378	0.04022462
0.05000000	0.03536635	0.01163	0.771	0.00892864	0.06820385	0.03560748	0.04112521
0.07000000	0.03201492	0.04499	2.980	0.00225953	0.06140391	0.02984265	0.03418720
0.01000000	0.03498257	0.02498	1.655	0.00522155	0.06474358	0.03323556	0.03672978
0.03000000	0.03263949	0.00064	0.042	0.00296377	0.06241521	0.03065747	0.03462151
0.05000000	0.03761515	0.00262	0.173	0.00740458	0.06742573	0.03516463	0.04006568
0.02000000	0.03345899	0.01146	0.759	0.00369269	0.06322128	0.03165473	0.03525924
0.01700000	0.03201492	0.01501	0.995	0.00225953	0.06180391	0.02984265	0.03418720
0.02000000	0.03319225	0.01020	0.676	0.00333106	0.06296543	0.03134893	0.03584757
0.01000000	0.02633919	0.01834	1.215	0.00160718	0.05828557	0.02456150	0.03209689
0.03000000	0.03048534	0.00049	0.032	0.00065144	0.06032724	0.02772617	0.03328251
0.05000000	0.03601216	0.00199	0.332	0.00624008	0.06578424	0.03408565	0.03793867
0.04000000	0.03646837	0.00753	0.499	0.00862390	0.06830685	0.03566387	0.04126687
0.02100000	0.03478964	0.01379	0.913	0.00502951	0.06454977	0.03052753	0.03652175
0.01400000	0.03436157	0.02038	1.350	0.00422206	0.06414107	0.03266030	0.03614263
0.01400000	0.03534839	0.02135	1.414	0.00538467	0.06511211	0.03355568	0.03714411
0.01200000	0.03478964	0.02279	1.510	0.00502951	0.06454977	0.03305753	0.03662175
0.02500000	0.03167266	0.00667	0.442	0.00161473	0.06147059	0.02938108	0.03396425
0.02400000	0.03498257	0.01098	0.728	0.00221455	0.06474358	0.03323556	0.03672978
0.03600000	0.03761515	0.00162	0.107	0.00764558	0.06742573	0.03516463	0.04006568
0.01700000	0.02633919	0.01134	0.751	0.00161718	0.05828557	0.02456150	0.03209689
0.03500000	0.03616889	0.00117	0.077	0.00639124	0.06594054	0.03420017	0.03813171
0.02500000	0.03660193	0.01160	0.769	0.00681869	0.06838516	0.03451010	0.03869375
0.05000000	0.03534839	0.01465	0.971	0.00538467	0.06511211	0.03355568	0.03714411
0.02500000	0.03498257	0.00998	0.076	0.00624155	0.06474358	0.03323556	0.03672978
0.03700000	0.03616889	0.00115	0.061	0.00681869	0.06838516	0.03451010	0.03813171
0.03500000	0.03616889	0.00117	0.077	0.00639124	0.06594054	0.03420017	0.03813171
0.03400000	0.03700487	0.00300	1.199	0.00741200	0.06679774	0.03478005	0.03922989
0.03400000	0.03393942	0.02006	1.329	0.00417871	0.06370014	0.03219727	0.03568158
0.02500000	0.03902413	0.01102	0.730	0.00915840	0.06887885	0.03597513	0.04207312
0.03400000	0.03393942	0.02006	1.329	0.00417871	0.06370014	0.03219727	0.03568158
0.03600000	0.02633919	0.00966	0.640	0.00180718	0.05828557	0.02456150	0.03209689
0.03600000	0.03292820	0.00293	0.194	0.00315525	0.06269714	0.03101724	0.03483515
0.03600000	0.03737337	0.01738	1.151	0.00757608	0.06718266	0.03501910	0.03971963
0.02600000	0.04020745	0.01221	0.809	0.01028008	0.07013482	0.03660435	0.04381055
0.04000000	0.03582227	0.01152	0.763	0.00575679	0.06528775	0.03370057	0.03731397
0.01000000	0.03601216	0.02601	1.723	0.00624008	0.06578424	0.03408565	0.03793867
0.02600000	0.02763110	0.00037	0.024	0.00236105	0.05762326	0.02352451	0.03173770
0.03600000	0.03601216	0.02199	1.457	0.00624008	0.06578424	0.03408565	0.03793867
0.02000000	0.02952251	0.00752	0.498	0.00369269	0.06322128	0.03165473	0.03525924
0.02400000	0.02952251	0.00552	0.366	0.00358467	0.05940349	0.02632761	0.03271742
0.02000000	0.03233943	0.00434	0.287	0.00254776	0.05621161	0.02306697	0.03026697
0.01000000	0.02833519	0.01834	1.215	0.00160718	0.05828557	0.02456150	0.03209689
0.02600000	0.03991684	0.01192	0.789	0.01000590	0.06982778	0.03645286	0.04338081
0.04000000	0.03416807	0.00983	0.651	0.00440522	0.06392492	0.03243379	0.03589235
0.04000000	0.03772920	0.00227	0.150	0.00791490	0.06754350	0.03523378	0.04022462
0.03000000	0.03534839	0.00365	0.242	0.00584667	0.06511211	0.03355568	0.03714411
0.03478964	0.03478964	0.00079	0.052	0.00392951	0.06454977	0.03305753	0.03662175
0.03960925	0.03960925	0.01739	1.152	0.00971479	0.06950372	0.03629055	0.04292614
0.03100000	0.02763110	0.00337	0.223	0.00236105	0.05762326	0.02352451	0.03173770
0.03000000	0.03436157	0.01938	1.284	0.00482206	0.06414107	0.03266030	0.03610233
0.03000000	0.03000000	0.00031	0.620	0.00392951	0.06454977	0.03305753	0.03662175

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SUMMATION MATRIX

(CORRECTED) SUMS OF SQUARES AND CROSS-PRODUCTS OF DEVIATIONS FROM THE RESPECTIVE AVERAGES. BOTH DEPENDENT AND INDEPENDENT VARIABLES INCLUDED. ELEMENTS ASSOCIATED WITH THE INDEPENDENT VARIABLES ARE THE (UNCORRECTED) SAME AS ABOVE EXCEPT NO CORRECTION IS MADE FOR AVERAGES

CORRELATION MATRIX
NORMALIZED MATRIX

SUMMATION MATRIX(CORRECTED) NORMALIZED BY DIVIDING (i,j) BY $\text{SQRT}(i,i)$ AND $\text{SQRT}(j,j)$
SAME AS ABOVE EXCEPT SUMMATION MATRIX(UNCORRECTED) IS NORMALIZED

LATENT ROOTS

USED TO DETERMINE LINEAR RELATIONS AMONG THE INDEPENDENT VARIABLES. A ZERO OR NEAR ZERO ROOT INDICATES THE VARIABLES IN THE ASSOCIATED EIGENVECTOR ARE PERFECTLY CORRELATED.

SUM OF ROOTS

A CHECK. SHOULD EQUAL THE NUMBER OF INDEPENDENT VARIABLES

PRODUCT OF ROOTS

SAME AS THE DETERMINANT OF THE CORRELATION(OR NORMALIZED) MATRIX

DET OF INVERSE

THE DETERMINANT OF THE INVERSE OF THE CORRELATION (NORMALIZED) MATRIX

TRACE OF INVERSE

THE SUM OF THE DIAGONAL VALUES OF THE INVERSE OF THE CORRELATION (NORMALIZED) MATRIX

DIAG INCREMENT

USED IN SENSITIVITY ANALYSIS - AMOUNT ADDED TO THE DIAGONAL OF THE CORRELATION MATRIX

COVARIANCE MATRIX OF
REGRESSION COEFFICIENTS

INVERSE OF SUMMATION MATRIX. ALSO CALLED XPRIME X INVERSE OR C MATRIX. DOES NOT HAVE THE RESIDUAL ERROR SQUARED TERM, XPRIMEY OR RIGHT HAND SIDES OF NORMAL EQUATIONS CONTAINED IN SUMMATION MATRIX

BETA COEFFICIENT

ASSOCIATED REGRESSION COEFFICIENT NORMALIZED BY MULTI BY STD DEV OF $X(i)$ AND DIVIDING BY STD DEV OF Y

STD DEV OF REG COEFF

$\text{SQRT OF } C(1,1)$ TIMES THE RESIDUAL ERROR

CALCULATED T VALUE

T VALUE FOR EACH REGRESSION COEFFICIENT TO TEST FOR ZERO REGRESSION. THIS PROCEDURE ASSUMES ORTHOGONALITY OF THE INDEPENDENT VARIABLES FOR VALIDITY. IF SIGNIFICANCE IS GREATER THAN 95 PERCENT AN * WILL BE PRESENT

ADJ TOTAL SS

ADJUSTED TOTAL SUM OF SQUARES-ADJ BY REMOVING THE SS DUE TO THE MEAN, ATSS

ADJ REGRESSION SS

ADJUSTED REGRESSION SUM OF SQUARES-ADJ BY OMITTING SS DUE TO THE MEAN, ARSS

ERROR SS

ATSS - ARSS = ESS

MODEL DF
ERROR LF

DEGREES OF FREEDOM (NUMBER OF REGRESSION COEFFICIENTS) FOR REGRESSION SS, P
DEGREES OF FREEDOM FOR ERROR SS $(N-1-\text{MODEL DF})$, Q

RESIDUAL ERROR1

$\text{SQRT}(\text{ERROR SS}/Q)$, S

R SQ

ARSS/ATSS

ADJ R SQ

$1.0 - ((\text{ARSS}/P) / \text{VARIANCE OF } Y)$

FCALC

$(\text{ARSS}/P) / (\text{ESS}/Q)$ THIS IS THE OVERALL TEST OF SIGNIFICANCE FOR REGRESSION

PROBABILITY

PROBABILITY UNDER NULL HYPOTHESIS OF OBTAINING A F GREATER THAN FCALC

RESIDUAL ERROR2

FORMED BY SUMMING THE SQUARES OF THE RESIDUALS ETC

ERROR CHECK RATIO

$(\text{RESIDUAL ERROR1}) / (\text{RESIDUAL ERROR2})$. SINCE EACH IS INDEPENDENTLY FORMED, THIS RATIO FORMS A CHECK ON THE ERRORS OF COMPUTATION

SQRTB1
BETA2

APPROX MEASURE OF THE STANDARDIZED THIRD MOMENT OF THE ERROR. NEED LARGE N TO TEST FOR SYMMETRY
APPROX MEASURE OF THE STANDARDIZED FOURTH MOMENT OF THE ERRORS. NEED LARGE N

STD RESIDUAL

RESIDUALS DIVIDED BY THE RESIDUAL ERROR

CONFIDENCE LIMITS

$(\text{LINE}) \text{ YCALC} + (-) \text{ T}(Q) * \text{STDEV}(\text{YCALC})$, WHERE $\text{STDEV}(\text{YCALC}) = S * \text{SQRT}(1.0/N + (X-\text{XBAR})^2 / \text{PRIME} * C * (X-\text{XBAR}))$
(POINT) SAME AS ABOVE EXCEPT $\text{STDEV}(\text{YCALC}) = S * \text{SQRT}(1.0 + 1.0/N + ((X-\text{XBAR})^2 / \text{PRIME} * C * (X-\text{XBAR})))$
 $\text{T}(Q)$ IS THE 95 PERCENT STUDENT T BASED ON Q DEGREES OF FREEDOM

MEANS AND STANDARD DEVIATIONS FROM CONDITIONED LIST ANALYSIS OF DELTA ALA, LEAD FEMALES

K		MEAN(K)	SIGMA(K)
1	69.	.03218840	1.00000000
2	69.	578.04347000	1.00000000
3	69.	1.29103522	1.00000000
4	69.	2.72599840	1.00000000

ROW	OSMOL -MEAN	LOG D ALA -M	OSM-M* LOG DA LA-M	LEAD	LOG MO S/L
X 1	X 2	X 3	X 4	X 5	X
1	-263.04347	-.59207	155.73890	.01400	2.49831
2	-168.04347	-.44594	74.93650	.03800	2.61278
3	-43.04347	-.1495	4.94764	.05000	2.72535
4	-38.04347	.10690	-4.06703	.02400	2.73239
5	-223.04347	-.14491	32.32016	.01700	2.55023
6	-263.04347	-.17710	46.58374	.04500	2.49831
7	-163.04346	-.06059	9.87803	.01000	2.61605
8	-203.04348	-.14491	29.42206	.02400	2.57403
9	56.95653	-.01229	-.69972	.13400	2.80277
10	311.95653	.37172	115.96197	.04000	2.94939
11	241.95653	.24044	58.17718	.03300	2.91301
12	-83.04347	-.29104	24.16857	.02000	2.69461
13	-278.04347	-.17710	49.24017	.02500	2.47712
14	226.95653	.12393	25.12781	.04200	2.90580
15	131.95653	.32174	42.45632	.06200	2.85126
16	-273.04348	-.03577	9.76546	.01800	2.48430
17	-133.04348	-.17710	23.56137	.02000	2.64836
18	151.95653	.07069	10.74253	.03200	2.66332
19	-33.04347	-.03577	1.18181	.01000	2.73640
20	-8.04347	.14032	-1.12670	.10600	2.75587
21	246.95653	.53503	132.13033	.01000	2.91645
22	1.95653	.14032	.27455	.02000	2.76343
23	-248.04347	-.24965	61.92287	.03100	2.51851
24	156.95653	-.44594	-69.99245	.04100	2.86029
25	241.95653	.40793	96.70248	.02700	2.91381
26	-208.04347	-.11495	23.91361	.05600	2.56820
27	-98.04347	-.03577	3.50655	.03900	2.68124
28	-178.04347	-.14491	25.79943	.02600	2.60206
29	151.95653	.20032	30.44066	.03000	2.86332
30	-53.04347	.00599	-.33026	.02300	2.73640
31	86.95653	.07069	6.14737	.01800	2.82282
32	-123.04347	.14032	-17.26605	.02300	2.65801
33	-363.04347	-.44594	161.89387	.01400	2.33244
34	296.95653	.35241	104.65187	.03000	2.94201
35	-203.04348	-.14491	29.42206	.01000	2.57403
36	356.95653	-.01229	-4.38529	.02800	2.97081
37	91.95653	.07069	6.50085	.03400	2.82607
38	-138.04346	-.06059	8.36340	.03400	2.64345
39	-163.04348	-.06059	9.87803	.03300	2.61805
40	196.95653	.41653	82.03924	.03700	2.88930
41	-318.04347	-.51289	163.11980	.01000	2.41497
42	131.95653	.08917	11.76719	.02000	2.85126
43	511.95653	.30002	153.59964	.02400	3.03743
44	1.95653	.08917	.17447	.01000	2.76343
45	156.95653	.00999	1.56875	.03700	2.86677
46	391.95653	.14032	55.00121	.04100	2.98629
47	301.95653	.05138	15.51597	.07900	2.94448
48	16.95653	-.14491	-2.45709	.06800	2.77452
49	166.95653	.08917	14.88831	.01700	2.87216
50	-183.04347	.00999	-1.82948	.03600	2.59060

ROW	OSMOL -MEAN	LOG D ALA -M	OSM-M* LOG DA LA-M	LEAD	LOG MO S/L	X
51	61.95653	.17136	10.61717	.04700	2.80618	
52	-33.04347	.10690	-3.53250	.02700	2.73640	
53	-193.04347	-.29104	56.18245	.01700	2.58546	
54	171.95653	.07069	12.15643	.03400	2.87506	
55	171.95653	.07069	12.15643	.03400	2.87506	
56	-298.04347	-.44594	132.90808	.03400	2.44716	
57	-178.04347	-.08692	15.47469	.03000	2.60206	
58	176.95653	.52167	92.34915	.02800	2.87795	
59	-213.04347	-.59207	126.13563	.01600	2.56229	
60	351.95653	.42496	149.56912	.03200	2.96848	
61	196.95653	.07069	13.92380	.02400	2.88930	
62	131.95653	.43324	57.16948	.03900	2.65126	
63	-273.04347	-.44594	121.75970	.03000	2.48430	
64	356.95653	.07069	25.23496	.03300	2.97081	
65	-393.04347	-.11455	45.17847	.02800	2.26717	
66	-208.04347	-.06059	12.60436	.01000	2.56620	
67	356.95653	.41653	148.68481	.04000	2.97081	
68	-363.04347	-.17710	67.83517	.03200	2.29003	
69	-8.04347	.14032	-1.12870	.01600	2.75567	

DUP04000181

EDUCATION, AND STAT. GROUP-MULT. RESP. AND MULT. REG. (MINOR)
ANALYSIS OF DELTA ALA, LEAD FEMALES

ANALYSIS OF DATA FOR P. SMITH

STATISTICS FOR VARIABLES IN THE COMPLETE MODEL

VARIABLE	MEAN	VARIANCE	STANDARD DEVIATION
OSMUL-MEAN	1	.00000619	49989.12100000
LOG D ALA -M	2	.00000028	223.58248000
OSMUL-LOG. DALA-M	3	.06924410	.26314273
LEAD	4	42.19645000	2762.23720000
LOG MOS/L	5	.03218840	52.55698900
		.03419831	.02065065
		2.72599840	.18492786

CONSTANT

.690000+02

OSMOL-MEAN

.4272461+03

.3399260+07

LOG D ALA -M

.1925230+04

.2911555+04

.4708599+01

OSM-M*LOG DALA-M

.2911555+04

.1214236+05

-.1764497+02

.1878321+06

LEAD

.2221000+01

.6531544+02

.4998912-01

-.1474983+02

.2899856-01

LOG MOS/L

.1680939+03

.2748392+04

.2401121+01

-.7257825+02

.5866009-01

.2325485+01

OSRDL-MEAN	1.0000				
LOG D ALA -M	.7278	1.0000			
OSR-M*LOG DALA-M	.0152	-.0188	1.0000		
LEAD	.2080	.1353	-.1999	1.0000	
LOG MUS/L	.9775	.7256	-.1098	.2259	1.0000

CALCULATIONS OF THE CORRELATION MATRIX
SUM OF THE SQUARES = 3.00000

ANALYSIS OF DATA FOR P. SMITH
PRODUCT OF THE SQUARES = .46937042

LATENT ROOTS .1728+01 .1001+01 .2715-00

LATENT ROOTS 1.72777 1.00076 .27145

OSMOL-KEAN .70706 .02574 .70668

LOG D ALA -M .70714 -.02084 -.70676

OSN-M*LOG DALA-M -.00347 .99945 -.03294

DEL OF 101-ADSE= .215010701 1NACE OF INVERSE= .5261911+01 MODEL= 1 DIAG INCREMENT= .00000 ITERATION NUMBER= 0

COVARIANCE MATRIX OF REGRESSION COEFFICIENTS

.62653730-06 .45236843-00 .53352218-05
-.26770668-03 .67558727-04
-.76923538-07

RESPONSE 1 LEAD

REGRESSION

BETA COEFF.

COEFFICIENT

STD. DEV. OF
REG. COEFF.

CALCULATED
T VALUE

CONSTANT

OSMO-MEAN

LOG D ALA -M
OSM-M*LOG DALA-M

.03567849
.00002668
-.00370621
-.00008034

.24551
-.04723
-.20447

.00002
.01358
.00005

1.418
-.273
-1.722

RESIDUAL ERROR1=
R S.= .0856

.020198
ADJ R SQ =

ERROR SS= .26517720-01
F-CALC= 2.0270

ADJ TOTAL SS= .28998557-01
PROBABILITY= .117

MODEL DF= 3.

ADJ REGRESSION SS= .24808374-02
ERROR DF= 65.

DUP040001819

1. 1.651.01.35 1 LEAD

RECEIVED RESPONSE	CALCULATED RESPONSE	RESIDUAL	STD. RESIDUAL	95 PERCENT CONFIDENCE LIMITS-LOWER	95 PERCENT CONFIDENCE LIMITS-UPPER	95 PERCENT CONFIDENCE LIMITS-LOWER	95 PERCENT CONFIDENCE LIMITS-UPPER
01400000	01929585	-0.0530	-2.282	-0.02414910	0.06274081	0.00316903	0.03542867
03600000	02740021	0.1060	5.285	-0.01429953	0.06900995	0.01688272	0.03796779
05000000	03463095	0.01537	7.61	-0.00621822	0.07548111	0.02818583	0.04107600
02400000	03464635	0.01065	5.27	-0.00637622	0.07566893	0.02718612	0.04210650
01700000	02846117	-0.01146	-5.67	-0.01248738	0.06940972	0.02141936	0.03580298
04500000	02652749	0.01847	9.15	-0.01453240	0.06758737	0.01886475	0.03419023
01000000	02513124	-0.02151	-1.035	-0.00963037	0.07225495	0.02430301	0.03831498
02400000	02914753	0.00515	2.85	-0.01174644	0.07004150	0.02243037	0.03586469
13400000	03697179	0.09703	4.804	-0.00319456	0.07785922	0.03029452	0.04364906
04000000	03155828	0.00804	3.98	-0.00920935	0.07382590	0.02074061	0.04316995
03300000	03549996	0.00250	1.24	-0.00550866	0.07650861	0.02811674	0.04288321
02000000	02633231	-0.01283	-6.35	-0.00831697	0.07398159	0.02470115	0.04096047
02500000	02597393	-0.0097	-0.48	-0.01515026	0.06709811	0.01797380	0.03377405
04200000	03380563	0.00399	1.98	-0.00297713	0.07900880	0.03065120	0.04555746
00600000	03356752	0.02803	1.388	-0.00755654	0.07509118	0.02596684	0.04196580
01600000	02373493	-0.01073	-5.31	-0.01276697	0.07023684	0.01896637	0.03880110
02000000	03133250	-0.01133	-5.61	-0.00948310	0.07213311	0.02515206	0.03749795
03200000	03789919	-0.00590	-2.92	-0.00301219	0.07681057	0.03107883	0.04472156
01000000	03466680	-0.02487	-1.231	-0.00549100	0.07568260	0.02864319	0.04109047
10600000	03496670	0.07103	3.517	-0.00604104	0.07597445	0.02758844	0.04234947
01000000	02858810	-0.01858	-9.20	-0.01422401	0.07138420	0.01426245	0.04289774
02000000	03506070	-0.01508	-7.47	-0.00565384	0.07605529	0.02768915	0.04287230
02100000	02590416	0.00510	2.82	-0.01544178	0.06695009	0.01831651	0.03349180
04100000	04641362	-0.00541	-2.68	-0.0159975	0.09152749	0.02621300	0.06661423
02700000	03162339	-0.00462	-2.29	-0.01066334	0.07331013	0.02110733	0.04213945
03000000	02930366	0.02663	1.319	-0.01188393	0.07031526	0.02231777	0.03641356
03500000	03320609	0.00579	2.87	-0.00785277	0.07406494	0.02670012	0.03970606
02600000	03000547	-0.00401	-1.98	-0.01053722	0.07084817	0.02360786	0.03640309
03000000	03583020	-0.00584	-2.89	-0.00498757	0.07665996	0.02956656	0.04211183
02300000	03481669	-0.01182	-5.85	-0.00641803	0.07565541	0.02845934	0.04117803
01600000	03679443	-0.01879	-9.31	-0.00421212	0.07761007	0.03057188	0.04301697
02300000	03365544	-0.01066	-5.28	-0.00733209	0.07524298	0.02353377	0.04377112
01400000	03159216	-0.00199	-0.99	-0.02742858	0.05901290	0.01033031	0.03094502
03000000	03259837	-0.00260	-1.29	-0.00904436	0.07424109	0.02228313	0.04293860
01000000	02914753	-0.01915	-9.48	-0.01174644	0.07004150	0.02243037	0.03588649
02600000	04407071	-0.01607	-7.96	-0.01533505	0.08660836	0.03057051	0.05757090
03400000	03567941	-0.00288	-1.43	-0.00353976	0.07709858	0.03063374	0.04112508
03400000	03200063	0.00200	0.99	-0.00888406	0.07286573	0.02533912	0.03566254
03300000	03131224	0.00169	0.84	-0.00963037	0.07225486	0.024330501	0.03631948
03700000	03190563	0.00509	2.52	-0.00968335	0.07350301	0.02177098	0.04204868
01000000	01710222	-0.00716	-3.55	-0.02601940	0.06034385	0.00175660	0.03257140
02000000	03729486	-0.01729	-8.66	-0.00354610	0.07813582	0.03090631	0.04368184
02400000	03373539	-0.00974	-4.82	-0.00975321	0.07722398	0.01748342	0.04598535
01000000	03527634	-0.02528	-1.252	-0.0059883	0.07615551	0.02864422	0.04189246
03700000	03697457	-0.00197	-0.98	-0.0213292	0.08008206	0.03106071	0.04688843
04100000	03952761	0.00147	0.73	-0.00234199	0.08139721	0.02830657	0.05077465
07900000	04098667	0.03801	1.882	-0.0065261	0.08262995	0.03063427	0.05132307
06600000	03669745	0.03130	1.550	-0.00499453	0.07778943	0.02886154	0.04453036
01700000	03763777	-0.02084	-1.032	-0.00368877	0.07874431	0.03104448	0.04463106
03600000	03153773	0.00446	2.21	-0.00971796	0.07279342	0.02288697	0.04018648
04700000	03549532	0.01150	5.70	-0.00538096	0.07637159	0.02888674	0.04210389
04700000	03549532	0.01150	5.70	-0.00538096	0.07637159	0.02888674	0.04210389
01700000	02776592	-0.00772	-3.82	-0.00628885	0.07572243	0.02735022	0.04208336
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10	-0.00272337	0.07920161	0.03111669	0.04536155
03400000	03623912	-0.00424	-2.10</				

DLI OF INVERSE = .2125990+01 TRACE OF INVERSE = .4251967+01 MODEL = 2 DIAG INCREMENT = .00000 ITERATION NUMBER = 0
 COVARIANCE MATRIX OF REGRESSION COEFFICIENTS
 .62542621-06
 -.38673262-03 .45151296+00

RESPONSE 1 LEAD

	REGRESSION COEFFICIENT	BETA COEFF.	STD. DEV. OF REG. COEFF.	CALCULATED T VALUE
CONSTANT	.03218840			
OSMOL-MEAN	.00002152	.23297	.00002	1.327
LOG D ALA -M	-.00268888	-.03426	.01377	-.195

RESIDUAL ERROR = .020497 ERROR SS = .27727535-01 ADJ TOTAL SS = .28998557-01 ADJ REGRESSION SS = .12710231-02
 R SQ = .0438 ADJ R SQ = .0149 F CALC = 1.5127 PROBABILITY = .226 MODEL DF = 2. ERROR DF = 56.

DUP040001822

RESPONSE 1 LEAD

ANALYSIS OF DATA FOR P. SMITH

RESPONSE	RESPONSE	RESIDUAL	STD. RESIDUAL	95 PERCENT CONFIDENCE LIMITS-POINT LOWER	95 PERCENT CONFIDENCE LIMITS-POINT UPPER	95 PERCENT CONFIDENCE LIMITS-LIMIT LOWER	95 PERCENT CONFIDENCE LIMITS-LIMIT UPPER
01400000	02812030	-01412	-689	-01471385	07029545	01546836	0407722
03600000	02977156	00823	401	-01244029	07198340	01942035	0401227
05000000	03157128	01843	899	-009714414	07286670	02611286	0370295
02400000	03108234	-00708	-346	-01032285	07247812	02478182	0373828
01700000	02777665	-01078	-526	-01375546	06931276	02068008	03487722
04500000	02870450	01800	878	-00686554	07025101	01925101	03447578
01000000	02864299	-01884	-919	-01289114	07027711	02235497	03533100
02400000	02820900	-00421	-205	-01356280	06968081	02148457	03433343
03400000	03344701	10055	4906	-00782504	07471905	02809077	03880324
04000000	03790146	00210	102	-00393268	07979621	02893358	04687235
03300000	03674682	-00375	-183	-00482869	07832513	02940300	04409304
02000000	03118405	-01118	-546	-01051640	07288450	02316939	03919871
02500000	02668173	-00168	-882	-01503001	06633347	01860853	03475493
04200000	03673817	00528	237	-004833162	07830909	02943110	040404637
06200000	03416267	02784	1358	-00755643	07588176	02605155	04227379
01600000	02640930	-00841	-410	-01550698	06842558	01688695	03533165
02000000	02960180	-00980	-478	-01155880	07116239	02360131	03580228
03200000	03526806	-00327	-159	-00662050	07665662	02907773	04145840
01200000	03157355	-02157	-1053	-00965197	07279907	02656548	03658862
01600000	03163001	07436	3628	-00977917	07305519	02525914	03801687
01000000	03606369	-02606	-1272	-00645862	07858600	02551145	04761594
02600000	03165318	-01185	-578	-00950128	07324764	02662354	03888283
03100000	02752234	00348	170	-01407479	06911947	02006352	03498077
04100000	03676481	00424	207	-00757248	08110209	01970308	05382653
02700000	03629786	-00930	-454	-00565377	07822949	02716828	04543944
02600000	02802086	02798	1365	-01349194	06953365	02104310	03499361
03900000	03017490	00883	431	-01112228	07147208	02462635	03572144
02600000	02974965	-00275	-134	-01265108	07050610	02242780	03508610
03000000	03491950	-00492	-240	-00648174	07632073	02864495	04149406
02300000	03145051	-00845	-412	-00918795	07266897	02635955	03651446
01000000	03386941	-01587	-774	-00739437	07513320	02857725	03916157
02300000	02916347	-00616	-301	-01269433	07102127	02036657	03796020
01400000	02557561	-01158	-565	-01658686	06773807	01542766	03572355
03000000	03763062	-00763	-372	-004919855	07945979	02897112	04689012
01000000	02820900	-01821	-888	-01356280	06958081	02148457	03493343
02600000	03990231	-01190	-581	-00297211	08271470	02711470	05268993
03400000	03397700	00002	001	-00793259	07524659	02863277	03931424
03000000	02936893	00462	225	-01188168	07074353	02336658	03699527
03000000	02884299	00416	203	-01259114	07027711	02235497	03533100
03700000	03530644	00169	883	-00669975	07731262	02582874	04478414
01000000	02672392	-01672	-816	-01561428	06906212	01586895	03757839
04000000	03478602	-01479	-721	-00659960	07611564	02901918	04055686
02400000	04239772	-01840	-998	-00056762	08532320	02944024	05535534
01000000	03199072	-02199	-1073	-00929795	07327939	02650785	03747359
03700000	03553887	00146	71	-00596788	07704562	02660219	04247555
04100000	04024568	00075	337	-00222260	08271297	02889183	05159534
07900000	03854764	04045	1974	-00339927	08069455	02846454	04863074
06500000	03294290	03506	1710	-00869978	07439558	02633744	03954835
01700000	03554114	-01854	-905	-00561006	07695234	02920122	04188106
03600000	02822285	00778	379	-01344851	06965421	02036097	03686473
04700000	03306078	01394	660	-00838873	07443209	02699913	03912244
04700000	03118993	-00419	-204	-01022440	07258225	02497447	03740538
01700000	02661711	-01182	-577	-01276737	07040158	02142957	03680464
03400000	03369642	-00170	-883	-00574995	07714678	02912011	04227673
03400000	02697426	00703	343	-01509963	06904814	01720087	03674764
03000000	02859102	00141	669	-01285573	07003777	02202288	03515915
02600000	03459284	-00659	-322	-00804609	07723177	02261645	04656723
01000000	02715616	-01320	-644	-01379425	07218662	01602483	04236754

DUP040001824

COVARIANCE MATRIX OF REGRESSION COEFFICIENTS
 .21237741-00
 .1000000+01 TRACE OF INVERSE= .1000000+01 MODEL= 3 DIAG INCREMENT= .00000 ITERATION NUMBER= 0

RESPONSE 1 LEAD

	REGRESSION COEFFICIENT	BETA COEFF.	STD. DEV. OF REG. COEFF.	CALCULATED T VALUE
CONSTANT	.03218840		.00950	1.118
LOG D ALA -M	.01061656	.13528		
RESIDUAL ERROR=	.020613	ERROR SS= .28467845-01	ADJ. TOTAL SS= .28998557-01	ADJ. REGRESSION SS= .53071240-03
R SQ= .0183	ADJ R SQ= .0036	FCALC= 1.2490	PROBABILITY= .267	MODEL D.F. 1. ERROR D.F. 67.

OBSERVED RESPONSE	CALCULATED RESPONSE	RESIDUAL	STD. RESIDUAL	95 PERCENT CONFIDENCE LIMITS-POINT		95 PERCENT CONFIDENCE LIMITS-LINE	
				LOWER	UPPER	LOWER	UPPER
.01400000	.02590270	-.01190	-.577	-.01703165	.068893705	.01363252	.03817285
.03800000	.02745410	.01055	.512	-.01484042	.06974861	.01765484	.03725336
.05000000	.03096807	.01903	.923	-.01052993	.072445607	.02555666	.03637946
.02400000	.03382336	-.00932	-.452	-.00816692	.07484363	.02797153	.03867516
.01700000	.03065000	-.01365	-.662	-.01068171	.07218171	.02496588	.03631412
.04500000	.03030025	.01469	.713	-.01216829	.07184480	.02432422	.03629227
.01000000	.03154519	-.02155	-1.045	-.00991146	.07300184	.02446061	.03662977
.02400000	.03065000	-.00665	-.323	-.01088171	.07218171	.02496588	.03631412
.13400000	.03245797	.10194	4.946	-.00938341	.07349935	.02709938	.03701656
.04000000	.03613483	.00387	.188	-.00590100	.07817667	.02152029	.04474938
.02300000	.03474109	-.00174	-.084	-.00649466	.07643184	.02880023	.04147295
.02000000	.02909260	-.00910	-.441	-.01270792	.07090513	.02168344	.03651377
.02500000	.03030825	-.00531	-.258	-.01126829	.07166480	.02432422	.03629229
.04200000	.03350416	.00850	.412	-.00800315	.07501146	.02602188	.03688643
.06600000	.03560422	.02640	1.281	-.00628314	.07749197	.02774611	.04346233
.01600000	.03180869	-.01361	-.670	-.00963759	.07328497	.02680937	.03680801
.02000000	.03030625	-.01031	-.500	-.01126829	.07184880	.02432422	.03629229
.02200000	.03253893	-.00094	-.046	-.00852347	.07440133	.02780765	.03807021
.01000000	.03160869	-.02181	-1.058	-.00963759	.07328497	.02680937	.03680801
.10600000	.03367816	.07232	3.509	-.00784789	.07520422	.02605567	.03930066
.01000000	.03786862	-.02787	-1.352	-.00479575	.08053300	.02657933	.04915792
.02000000	.03267816	-.01368	-.664	-.00784789	.07520422	.02680937	.03930066
.03100000	.02953802	.00146	.071	-.01217217	.07124821	.02686880	.03638924
.04100000	.02745410	.01355	.657	-.01484042	.06974861	.01765484	.03725336
.02700000	.03661926	-.00952	-.462	-.00563713	.07867564	.02733449	.04570403
.02600000	.03096607	.02503	1.214	-.01052993	.07246607	.02556666	.03637948
.03900000	.03180869	.00719	.349	-.00963759	.07328497	.02680937	.03680801
.02600000	.03065000	-.00465	-.226	-.01088171	.07218171	.02496588	.03631412
.03000000	.03451516	-.00432	-.209	-.00729928	.07592939	.02807332	.04055699
.02300000	.03239451	-.00929	-.451	-.00914666	.07373567	.02753777	.03725124
.01600000	.03253893	-.01494	-.725	-.00852347	.07440133	.02780765	.03607021
.02300000	.0367816	.01068	.518	-.00784789	.07520422	.02686880	.03930066
.01400000	.02745410	-.01345	-.653	-.01484042	.06974861	.01765484	.03725336
.03000000	.03592983	-.00593	-.288	-.00604617	.07790582	.02761218	.04424748
.01000000	.03065000	-.02065	-1.002	-.01088171	.07218171	.02496588	.03631412
.02600000	.03205797	.00406	.197	-.00938341	.07440133	.02780765	.03807021
.03400000	.03238693	.00106	.051	-.00852347	.07440133	.02780765	.03807021
.03400000	.03154519	.00245	.119	-.00991146	.07300184	.02646061	.03662977
.03300000	.03154519	.00145	.071	-.00991146	.07300184	.02646061	.03662977
.03700000	.03661056	.00039	.019	-.00557605	.07879117	.02828806	.04593307
.01000000	.02674332	-.01674	-.812	-.01582315	.06930979	.01582586	.03765678
.02000000	.03313513	-.01314	-.637	-.00834008	.07461033	.02790137	.03856888
.04000000	.03557363	-.01137	-.552	-.00645573	.07720299	.02783077	.04291649
.01000000	.03313513	-.02314	-1.122	-.00834008	.07461033	.02790137	.03856888
.03700000	.03274551	.00471	.228	-.00914666	.07373567	.02735137	.03785824
.04100000	.03367816	.06732	3.55	-.00784789	.07520422	.02605567	.03930066
.01900000	.03273393	.04627	2.245	-.00871826	.07418171	.02768590	.03781195
.06600000	.03065000	.03735	1.812	-.01088171	.07218171	.02496588	.03651412
.01700000	.03313513	-.01614	-.783	-.00834008	.07461033	.02790137	.03856888
.03500000	.03229451	.00371	.180	-.00914666	.07373567	.02735137	.03785824
.04700000	.03400770	.01299	.630	-.00756021	.07561561	.02806396	.03993144
.02700000	.03332336	-.00632	-.307	-.00816692	.07461563	.02797153	.03867516
.01700000	.02909660	-.01210	-.587	-.01270792	.07090513	.02168344	.03651377
.03400000	.03253893	.00106	.051	-.00852347	.07440133	.02780765	.03807021
.03400000	.02745310	.00655	.318	-.01464042	.06974861	.01765484	.03725336
.03000000	.03126566	-.00127	-.061	-.01020783	.07273914	.02604558	.03648573
.06600000	.03772591	-.00973	-.472	-.00407682	.08033564	.02606330	.04679452
.01600000	.02745410	-.00930	-.480	-.01703165	.068893705	.01363252	.03817285

DUP040001826

RESIDUAL ERROR2=	.02061	ERROR CHECK RATIO= 1.0000	SORTB1= 2.595	BETA2= 12.018
.0000000	.00221	.107	-.00845911	.079035503
.0300000	.00235	.124	-.01484042	.06974861
.0330000	.00006	.003	-.00852347	.07440133
.0280000	-.00297	-.144	-.01052293	.07246607
.0100000	-.02155	-1.045	-.00991146	.07300184
.0400000	.00339	.164	-.00557805	.07379717
.0320000	.00169	.082	-.01126829	.07188480
.0160000	.03367616	-.01768	-.00784789	.07320422
				.02719356
				.01765484
				.02780765
				.02555666
				.02646061
				.02728808
				.02432422
				.02805567
				.04638036
				.03725336
				.03807021
				.03637946
				.03662977
				.04593307
				.03629225
				.03930066

DUP040001827

GLOSSARY OF TERMS USED IN MKNR

DUP040001828

SUMMATION MATRIX	(CORRECTED) SUMS OF SQUARES AND CROSS-PRODUCTS OF DEVIATIONS FROM THE RESPECTIVE AVERAGES, BOTH DEPENDENT AND INDEPENDENT VARIABLES INCLUDED. ELEMENTS ASSOCIATED WITH THE INDEPENDENT VARIABLES ARE THE (UNCORRECTED) SAME AS ABOVE EXCEPT NO CORRECTION IS MADE FOR AVERAGES
CORRELATION MATRIX NORMALIZED MATRIX	SUMMATION MATRIX (CORRECTED) NORMALIZED BY DIVIDING (I,U) BY $\sqrt{SS(I,I)}$ AND $\sqrt{SS(U,U)}$ SAME AS ABOVE EXCEPT SUMMATION MATRIX (UNCORRECTED) IS NORMALIZED
LATENT ROOTS	USED TO DETERMINE LINEAR RELATIONS AMONG THE INDEPENDENT VARIABLES. A ZERO OR NEAR ZERO ROOT INDICATES THE VARIABLES IN THE ASSOCIATED EIGENVECTOR ARE PERFECTLY CORRELATED.
SUM OF ROOTS	A CHECK. SHOULD EQUAL THE NUMBER OF INDEPENDENT VARIABLES
PRODUCT OF ROOTS	SAME AS THE DETERMINANT OF THE CORRELATION (OR NORMALIZED) MATRIX
DET OF INVERSE TRACE OF INVERSE	THE DETERMINANT OF THE INVERSE OF THE CORRELATION (NORMALIZED) MATRIX THE SUM OF THE DIAGONAL VALUES OF THE INVERSE OF THE CORRELATION (NORMALIZED) MATRIX
DIAG INCREMENT	USED IN SENSITIVITY ANALYSIS - AMOUNT ADDED TO THE DIAGONAL OF THE CORRELATION MATRIX
COVARIANCE MATRIX OF REGRESSION COEFFICIENTS	INVERSE OF SUMMATION MATRIX, ALSO CALLED XPRIME INVERSE OR C MATRIX, DOES NOT HAVE THE RESIDUAL ERROR SQUARED TERM. XPRIME OR RIGHT HAND SIDES OF NORMAL EQUATIONS CONTAINED IN SUMMATION MATRIX
BETA COEFFICIENT	ASSOCIATED REGRESSION COEFFICIENT NORMALIZED BY MULT BY STD DEV OF X(I) AND DIVIDING BY STD DEV OF Y.
STD DEV OF REG COEFF	$SS(I,I)$ TIMES THE RESIDUAL ERROR
CALCULATED T VALUE	T VALUE FOR EACH REGRESSION COEFFICIENT TO TEST FOR ZERO REGRESSION. THIS PROCEDURE ASSUMES ORTHOGONALITY OF THE INDEPENDENT VARIABLES FOR VALIDITY. IF SIGNIFICANCE IS GREATER THAN 95 PERCENT AN * WILL BE PRESENT
ADJ TOTAL SS ADJ REGRESSION SS ERROR SS	ADJUSTED TOTAL SUM OF SQUARES-ADJ BY REMOVING THE SS DUE TO THE MEAN, ATSS ADJUSTED REGRESSION SUM OF SQUARES-ADJ BY OMITTING SS DUE TO THE MEAN, ARSS ATSS = ARSS = ESS
MODEL DF ERROR DF	DEGREES OF FREEDOM (NUMBER OF REGRESSION COEFFICIENTS) FOR REGRESSION SS, P DEGREES OF FREEDOM FOR ERROR SS (N-1-MODEL DF) OR (N-MODEL DF), Q
RESIDUAL ERROR1	$\sqrt{SS(RESIDUAL ERROR SS/Q)}$, S
R SQ ADJ R SQ	ARSS/ATSS $1.0 - (ARSS/P) / \text{VARIANCE OF Y}$
F CALC	(ARSS/P) / (ESS/Q) THIS IS THE OVERALL TEST OF SIGNIFICANCE FOR REGRESSION
PROBABILITY	PROBABILITY UNDER NULL HYPOTHESIS OF OBTAINING A F GREATER THAN F CALC
RESIDUAL ERROR2	FORMED BY SUMMING THE SQUARES OF THE RESIDUALS ETC
ERROR CHECK RATIO	(RESIDUAL ERROR1) / (RESIDUAL ERROR2). SINCE EACH IS INDEPENDENTLY FORMED, THIS RATIO FORMS A CHECK ON THE ERRORS OF COMPUTATION
SORTB1 BETA2	APPROX MEASURE OF THE STANDARDIZED THIRD MOMENT OF THE ERROR. NEED LARGE N TO TEST FOR SYMMETRY APPROX MEASURE OF THE STANDARDIZED FOURTH MOMENT OF THE ERRORS. NEED LARGE N
STD RESIDUAL	RESIDUALS DIVIDED BY THE RESIDUAL ERROR
CONFIDENCE LIMITS	(LINE) $Y_{CALC} + (-) T(q) * \text{STDEV}(Y_{CALC})$, WHERE $\text{STDEV}(Y_{CALC}) = S * \sqrt{1.0/N + (X - \bar{X})^2 / \text{PRIME} * C * (X - \bar{X})^2}$ (POINT) SAME AS ABOVE EXCEPT $\text{STDEV}(Y_{CALC}) = S * \sqrt{1.0/N + 1.0/N * (X - \bar{X})^2 / \text{PRIME} * C * (X - \bar{X})^2}$ T(q) IS THE 95 PERCENT STUDENT T BASED ON Q DEGREES OF FREEDOM

1.3257000	1.95083424	-1.25191	-1.581	1.63409888	1.26766959	1.90648336	1.99523512
1.32044999	1.33208491	-1.10161	-1.638	1.01712531	1.64700451	1.30368473	1.36044510
1.36021000	1.20680530	1.17340	1.088	1.89112501	1.52248560	1.17113277	1.24247783
1.36172999	1.33345328	0.9828	1.077	1.01815100	1.64875557	1.30129729	1.36560927
1.53145000	1.42410360	1.0738	1.674	1.10866694	1.73953827	1.39067455	1.45753266
1.77815000	1.06210864	-1.28396	-1.782	1.74398348	1.38023379	1.11523201	1.1523201
1.51551000	1.45073579	0.6777	1.425	1.13532822	1.76614337	1.41756324	1.48390834
1.47712000	1.36902201	1.0810	1.678	1.05479911	1.68324491	1.35019358	1.38785049
1.54406999	1.54527394	-0.0120	-0.008	1.23082346	1.85972443	1.52236720	1.56758069
1.75236999	1.69774622	0.9464	1.594	1.38228144	2.01321100	1.66403411	1.73145832
1.00000000	1.24391401	-2.3391	-1.530	1.92908388	1.55874413	1.21677570	1.27105232
1.63347000	1.57607120	0.5740	1.360	1.25110569	1.89103612	1.54740494	1.50473746
1.50514999	1.43659363	0.6566	1.418	1.12384553	1.75334172	1.41244113	1.46476312
1.54406999	1.44965062	0.0942	1.592	1.13536195	1.76393928	1.42975485	1.48554638
1.30021000	1.20842107	1.1719	1.078	1.89365184	1.52319029	1.18199876	1.23484337
1.82607000	1.61360879	2.1246	1.333	1.23882085	1.92839673	1.58696428	1.64025331
1.41497000	1.36162542	0.5334	1.335	1.04703982	1.67621101	1.33748681	1.38576201
1.44715999	1.49274166	-0.0558	-1.286	1.17844875	1.80703457	1.47272889	1.51270443
1.46239999	1.57230093	-1.1096	-1.690	1.25486568	1.88985619	1.52314998	1.62157188
1.46239999	1.56165700	-0.9226	-1.623	1.24604098	1.87607301	1.53244105	1.59087294
1.00000000	1.08215208	-0.08215	-1.515	1.76530705	1.39899711	1.03732738	1.12697679
1.84509999	1.15588878	-3.1079	-1.950	1.84082495	1.47095262	1.12616169	1.18581587
1.14613000	1.22210319	-0.7597	-1.477	1.90742119	1.53678520	1.19674090	1.24746549
1.54406999	1.44182514	1.0324	1.642	1.12723128	1.75641899	1.41758108	1.46606819
1.59106000	1.55421051	0.3585	1.231	1.23851857	1.86990246	1.51843500	1.58998603
1.04138999	1.14220665	-1.0082	-1.633	1.82703014	1.45738317	1.11130320	1.17310511
1.46239999	1.60022986	-1.3783	-1.865	1.28462362	1.91583610	1.56521476	1.63524096
1.30103000	1.42294267	-1.2191	-1.765	1.10875131	1.73713402	1.40464818	1.44123715
1.36172999	1.28180467	0.7993	1.501	1.96728003	1.59632930	1.25847512	1.30513321
1.59106000	1.43165180	1.1594	1.000	1.11739725	1.74590635	1.41230229	1.45100132
1.41497000	1.56466112	-1.1469	-1.939	1.25008726	1.87923497	1.54067807	1.58884416
1.41497000	1.48499197	-0.7002	-1.439	1.17036044	1.79960349	1.46051967	1.50946426
1.51551000	1.36882579	1.5168	1.952	1.05826552	1.68102606	1.34837584	1.38527274
1.56819999	1.38108839	1.8711	1.174	1.06665935	1.69551744	1.35908610	1.40309069
1.36172999	1.51424928	-1.5232	-1.957	1.19976485	1.82873371	1.49146916	1.53702940
1.00000000	1.95096003	0.4904	1.308	1.63407743	1.26784262	1.90587062	1.99609343
1.60205999	1.66694896	-0.6489	-1.407	1.35184014	1.98205778	1.63674884	1.69714908
1.66275999	1.56920521	0.9355	1.587	1.25424384	1.88416658	1.54058456	1.59782586
1.24044999	1.32285108	-0.9240	-1.580	1.00850420	1.63719796	1.30205554	1.34361632

RESIDUAL ERROR2= .15937 ERROR CHECK RATIO= 1.0000 SORTBI= .459 BETA2= 5.749

1.1 OF INVERSE= .1000000+01 TRACE OF INVERSE= .1000000+01 MODEL= 3 DIAG INCREMENT= .00000 ITERATION NUMBER= 040240
 . COVARIANCE MATRIX OF REGRESSION COEFFICIENTS
 .62667260-07

RESPONSE 1 LOG D-ALA*100

REGRESSION COEFFICIENT	BETA COEFF.	STD.DEV.OF REG.COEFF.	CALCULATED T VALUE
1.40213966			
.00067338	.78602	.00004	21.875*

CONSTANT
OSKOL*MEAN

RESIDUAL ERROR= .159488 ERROR SS= .75291338+01 ADJ TOTAL SS= .19701278+02 ADJ REGRESSION SS= .12172145+02
 R SQ= .6178 ADJ R SQ= .6165 FCALC=478.5351 PROBABILITY= .000 MODEL DF= 1. ERROR DF= 296.

RESPONSE 1

LOG D-ALAN-100

ANALYSIS OF DATA FOR F. SMITH

OBSERVED RESPONSE	CALCULATED RESPONSE	RESIDUAL	STD. RESIDUAL	95 PERCENT CONFIDENCE LIMITS-POINT LOWER	95 PERCENT UPPER	95 PERCENT LOWER
1.34242000	1.47154126	-.12912	-.810	1.15707569	1.78600682	1.452
1.41437000	1.40603764	.00893	.056	1.09163387	1.72044142	1.387
.95423999	1.19205922	-.23782	-1.491	.87708808	1.50703035	1.165
1.79238999	1.76849093	.02390	.150	1.45236452	2.08461730	1.730
1.27874999	1.25319593	.02555	.160	.93850693	1.56788492	1.230
1.81953999	1.50647651	.31306	1.963	1.19193284	1.82102017	1.486
1.49135999	1.53704485	-.04568	-.286	1.22240710	1.85168260	1.515
1.67209999	1.45844053	.21366	1.340	1.14399615	1.77288491	1.439
1.72428000	1.59818155	.12610	.791	1.28328367	1.91307943	1.572
1.20412000	1.24882902	-.04471	-.280	.93412305	1.56353499	1.228
1.44715999	1.44533981	.00182	.011	1.13091221	1.75976741	1.426
1.25526999	1.28813116	-.03286	-.206	.97356033	1.60270199	1.267
1.60275999	1.76412402	-.10136	-.636	1.44803834	2.08020970	1.726
1.34222000	1.37110241	-.04888	-.306	1.05668643	1.68551838	1.352
1.20412000	1.14639016	.05573	.349	.83315888	1.46362144	1.119
1.50103000	1.25136139	.06967	.437	.91658263	1.54614015	1.207
.90308999	1.09162037	-.18853	-1.182	.77597812	1.40726262	1.058
1.07917999	1.28376427	-.20458	-1.283	.96918038	1.59834817	1.262
1.53148000	1.32306643	.20841	1.307	1.00858238	1.63755047	1.303
1.73238999	1.98770964	-.25532	-1.601	1.66892302	2.30649630	1.931
1.43135999	1.48027506	-.04892	-.307	1.16579291	1.79475722	1.460
1.39793999	1.29686499	.10108	.634	.98231879	1.61141118	1.276
1.47712000	1.49774270	-.02062	-.129	1.18322149	1.81226391	1.477
1.43135999	1.49774270	-.06638	-.416	1.18322149	1.81226391	1.477
1.17608999	1.20952685	-.03344	-.210	.89464611	1.52440760	1.184
1.44715999	1.43660599	.01055	.066	1.12218712	1.75102486	1.418
1.60275999	1.73355566	-.07080	-.444	1.41774146	2.04936990	1.698
.90308999	1.01738295	-.11429	-.717	.70107962	1.33368628	.978
1.54406999	1.52394414	.02013	.126	1.20934965	1.83653863	1.502
1.57978000	1.61128227	-.03150	-.198	1.29631619	1.92624836	1.585
1.47712000	1.49900887	-.01189	-.075	1.17450818	1.80350956	1.465
1.44715999	1.42787218	.01929	.121	1.11346008	1.74228428	1.409
1.51651000	1.48027506	.03823	.240	1.16579291	1.79475722	1.460
1.54406999	1.57634702	-.03228	-.202	1.26155306	1.89114098	1.552
1.61277999	1.62001608	-.00724	-.045	1.30500208	1.93503009	1.593
1.36172999	1.19642614	.16530	1.036	.88147832	1.51137395	1.170
1.77614999	1.62438299	.15377	.964	1.30934429	1.93942168	1.597
1.36172999	1.23136139	.13037	.817	.91658263	1.54614015	1.207
.90308999	1.07415274	-.17106	-1.073	.75836752	1.38993795	1.039
1.27874999	1.33180025	-.05305	-.333	1.01733300	1.64626750	1.312
1.64344999	1.37546931	.26798	1.680	1.06105658	1.68988204	1.357
1.87565999	1.64621753	.22884	1.435	1.33104807	1.96138698	1.611
1.49135999	1.41477147	.07659	.480	1.10036583	1.72917710	1.398
1.53148000	1.58944774	-.05797	-.363	1.27459289	1.90430258	1.564
.84509999	1.00864914	-.16355	-1.025	.69225885	1.32503943	.968
1.53148000	1.39730385	.13418	.841	1.08269997	1.71170773	1.379
1.00000000	1.07651964	-.07852	-.492	.76277089	1.39426839	1.044
1.00000000	1.40167075	-.40167	-2.519	1.08726718	1.71607433	1.383
1.23044999	1.17622470	.06023	.378	.85512958	1.48531981	1.142
.90308999	.99554841	-.09246	-.580	.67902409	1.31207274	.954
1.85125999	1.74228948	.10897	.683	1.42640014	2.05817890	1.708
1.38021000	1.34926787	.03094	.194	1.03482832	1.66370742	1.330
1.67209999	1.66368516	.00841	.053	1.34840231	1.97896801	1.633
1.47712000	1.55451249	-.07739	-.485	1.23981020	1.86921477	1.531
1.43135999	1.58071393	-.14935	-.936	1.26590016	1.89552769	1.558
1.82607000	1.61564918	.21042	1.319	1.30005937	1.93063698	1.588
.84509999	1.01301605	-.16792	-1.053	.69666947	1.32936262	.973
1.53775999	1.55014058	-.15221	-.954	1.23546016	1.86483100	1.527
1.53044999	1.43233909	.07291	.457	1.11702365	1.74065432	1.413

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1.0012599	1.00725047	-0.04586	-2.288	1.77157620	1.00253074	1.05259153	1.12091540
1.25626999	1.37546931	-1.2020	-754	1.06105658	1.68908204	1.35712932	1.39380930
1.60123999	1.62001608	0.6122	384	1.30500208	1.93503002	1.59328011	1.64675206
1.54406999	1.49774270	0.4633	290	1.18322149	1.81236391	1.47782863	1.51785676
1.81277999	1.40603764	0.2074	1.296	1.09163387	1.72044142	1.38785192	1.42422336
1.11339999	1.28319593	-1.1326	-873	0.93806693	1.56738492	1.23060336	1.27578250
1.49135999	1.53704485	-0.04568	-286	1.22240710	1.85168260	1.51518390	1.55890581
1.54406999	1.45844053	0.8563	537	1.14399615	1.7268491	1.43956581	1.47731525
1.44715999	1.38420314	0.6296	395	1.06979541	1.6981086	1.36594230	1.40245697
1.62324999	1.34490097	0.2783	1.745	1.03045522	1.65934671	1.32600343	1.36379850
1.20412000	1.41913837	-2.1502	-1.348	1.10473107	1.73384568	1.40089178	1.43738496
1.25268999	1.67678587	-4.2152	-2.643	1.36141287	1.99215887	1.64610821	1.70746353
1.64344999	1.73032546	-1.4688	-921	1.47398822	2.10668270	1.75095238	1.82969855
1.60205999	1.47590816	1.2615	791	1.16143455	1.79036177	1.45655246	1.49526386
1.17606999	1.31607938	-1.3999	-878	1.00158048	1.63057828	1.28631720	1.33584155
1.04138999	1.50647651	-4.6509	-2.916	1.19193284	1.82102017	1.48601414	1.52693887
1.25268999	1.29249808	-0.3723	-233	0.97793981	1.60705635	1.27181241	1.31318375
1.11392999	1.13642614	-0.8249	-517	0.88147832	1.51137395	1.17048173	1.22237055
1.30103000	1.20952685	0.9150	574	0.89464611	1.52440760	1.18440959	1.23464411
1.60205999	1.63311681	-0.3106	-195	1.31802727	1.94820635	1.60550511	1.66072851
1.47712000	0.85637574	-4.0926	-2.566	0.5685658	1.20428490	0.85653948	0.93621200
1.36021000	1.47154126	-0.9133	-573	1.15707569	1.78600682	1.45231670	1.49076531
1.36165100	1.54141176	-0.2290	-144	1.22675861	1.85606490	1.51933028	1.56349324
1.43334700	1.63748372	-0.0401	-0.25	1.32236803	1.95239941	1.60957515	1.66539228
1.41457000	1.41040455	0.0457	0.29	1.09600009	1.72408901	1.39220700	1.42860210
0.90308999	1.01301605	-1.1093	-689	0.69666947	1.32936262	0.97356811	1.05246398
1.20412000	1.45844053	-2.2542	-1.595	1.14399615	1.7228491	1.43956581	1.47731525
1.62324999	1.73355566	-1.1031	-692	1.41774146	2.04938990	1.69863297	1.76847835
1.56275999	1.47154126	0.1922	1.199	1.15707569	1.78600682	1.45231670	1.49076531
1.50205999	1.48464197	1.1742	736	1.17015079	1.79913315	1.46500297	1.50428097
1.31359999	1.58887939	-1.2752	-800	1.24415976	1.87359902	1.53586979	1.58188999
1.11393999	1.23249608	-1.7856	-1.120	0.97793981	1.60705635	1.27181241	1.31318375
0.90308999	1.12655562	-2.2347	-1.401	0.8117600	1.44193524	1.09580997	1.15730128
1.20404999	1.21826066	0.0219	0.76	0.90342218	1.53305914	1.19367892	1.24284241
0.60260000	1.04795130	-4.4589	-2.796	0.73193710	1.36396550	1.01126394	1.08463866
1.50334700	1.44097291	1.9250	1.207	1.12654991	1.75539590	1.42245792	1.45948790
1.51651000	1.57634702	-0.5784	-363	1.26155306	1.89114098	1.55234221	1.60035184
1.49135999	1.62436299	-1.3302	-834	1.30934429	1.93942168	1.59735765	1.65140833
1.47712000	1.50508083	-1.1096	-677	1.27024676	1.89991491	1.56055579	1.60960588
1.27674999	1.38857004	-1.0982	-689	1.07416409	1.70297599	1.37034671	1.40679337
1.43135999	1.30559881	1.2576	789	0.99107529	1.62012233	1.28944855	1.32574907
1.39630000	1.56761320	-0.1131	-0.71	1.25265737	1.88236903	1.54411386	1.59111254
1.04138999	1.17895851	-1.3757	-863	0.86391445	1.49400237	1.15187068	1.20604633
1.20404999	1.31869952	-0.0825	-553	1.00420634	1.63319270	1.29902847	1.33837058
1.50514999	1.49337579	0.1177	0.74	1.17886509	1.80788650	1.47342658	1.51332501
1.49135999	1.46717435	0.0219	0.152	1.15271634	1.78163236	1.44807380	1.48627490
1.17606999	1.09598728	0.8010	502	0.78037955	1.41159500	1.06898386	1.12899069
1.30103000	1.42767218	-1.2684	-795	1.11346008	1.74228428	1.409594304	1.44620132
1.41457000	1.57634702	-1.6138	-1.012	1.26155306	1.89114098	1.55234221	1.60035184
1.59106000	1.65931825	-0.6826	-428	1.34406447	1.97457203	1.68874956	1.74874937
1.34242000	1.38857004	-0.4615	-289	1.07416409	1.70297599	1.37034671	1.40679337
1.14613000	1.27339737	-1.3327	-836	0.96479993	1.59399481	1.25812446	1.30067028
1.36021000	1.47590816	-0.9570	-600	1.16143455	1.79036177	1.45555246	1.49526386
1.47213599	1.37546931	1.1589	727	1.06105658	1.68908204	1.35712932	1.39380930
1.17606999	1.54141176	-3.6532	-2.291	1.262675861	1.85606490	1.51933028	1.56349324
1.40239999	1.41477147	0.4763	299	1.10036583	1.72917710	1.39655364	1.43298930
1.36819999	1.56761320	-0.0059	0.004	1.25265737	1.88236903	1.54411386	1.59111254
0.77815000	0.94751243	-1.6936	-1.062	0.6045961	1.26456524	0.90275224	0.99227262
1.11359999	1.11345489	0.0049	0.003	0.79798043	1.42892936	1.08175115	1.14515863
1.62324999	1.65495135	-0.3170	-199	1.33972616	1.97017653	1.62593256	1.68407014
1.60275999	1.51521032	1.4755	925	1.20064221	1.82977842	1.49937578	1.53604485
1.62324999	1.77722473	-1.5397	-965	1.466101545	2.09339400	1.73889321	1.81555626
1.31359999	1.11782181	0.37354	2.342	0.80237944	1.43364418	1.08643912	1.14920451
1.14712000	0.97071567	1.7242	1.081	0.65695652	1.29047123	0.93109690	1.01633034

1.43135539	1.43225909	0.5912	0.371	1.1172385	1.74665432	1.41385319	1.45062199
1.27274959	1.33160025	-0.05305	-0.333	1.01733300	1.64626750	1.31254816	1.35105234
1.15797800	1.52831104	0.05147	0.323	1.21370263	1.84291945	1.50687636	1.54974572
1.68275599	1.57634702	0.08641	0.542	1.26155306	1.89114098	1.55234221	1.60035184
1.34242500	1.35800169	0.01558	-0.098	1.04357304	1.67243035	1.37661260	1.37661260
1.65321100	1.66368516	-0.01048	-0.066	1.34880231	1.97826801	1.63334658	1.63334658
1.79238999	1.68551970	0.0687	0.670	1.37008417	2.00095530	1.65420572	1.71683367
1.56619999	1.56324629	0.00495	0.031	1.24808881	1.87798378	1.53999387	1.58649872
1.53145000	1.37546931	0.15601	0.978	1.06105658	1.68988204	1.35712932	1.39380930
1.44149700	1.36673550	0.04823	0.302	1.05231579	1.68115522	1.34827627	1.38519473
1.04136999	1.12655562	-0.08517	-0.534	0.81117600	1.44193524	1.09580997	1.15730128
1.60201999	1.64185462	-0.03979	-0.249	1.32670829	1.95699295	1.61368283	1.63005841
1.38021000	1.50647651	-0.12627	-0.792	1.19193284	1.82102017	1.48601414	1.52693887
1.34242000	1.17459160	0.16763	1.052	0.85952225	1.48966095	1.14721130	1.20197190
1.04136999	1.17895851	-0.13757	-0.863	0.86391445	1.49400257	1.15187068	1.20604633
1.34242000	1.17459160	0.16763	1.052	0.85952225	1.48966095	1.14721130	1.20197190
1.44149700	1.37110241	0.04387	0.275	1.05668643	1.68551838	1.35279086	1.38949795
1.76334300	1.53704485	0.22639	1.419	1.22210710	1.85168260	1.51515390	1.55890581
1.25526999	1.22262758	0.03264	0.205	0.90780950	1.53744566	1.19830950	1.24694666
1.34242000	1.47154126	-0.12912	-0.810	1.15707569	1.78600682	1.45231670	1.49076581
1.30103000	1.34577566	-0.24475	-1.535	1.23110963	1.86044769	1.52347191	1.58508542
1.53145000	1.49774270	0.03374	0.212	1.18322149	1.81226391	1.47762863	1.51785676
1.64344999	1.57634702	0.06710	0.421	1.26155306	1.89114098	1.55234221	1.60035184
1.41457000	1.34490097	0.07007	0.439	1.03035622	1.65934671	1.32600343	1.36379850
1.69019999	1.46280743	0.22739	1.426	1.14835648	1.77725836	1.44382353	1.48179133
1.73236999	0.87414840	0.85824	5.381	0.56317676	1.19212003	0.82328034	0.92501046
1.39793999	1.17022470	0.22772	1.428	0.85512958	1.48531981	1.14254343	1.19789997
1.39793999	1.42787218	-0.02993	-0.188	1.11346008	1.74228426	1.40954304	1.44630132
1.07917999	1.09598728	-0.01681	-0.105	0.78037955	1.411159500	1.06298386	1.12899069
1.70756999	1.48900887	0.21856	1.370	1.17450818	1.80350956	1.46921308	1.50679967
1.54406999	1.52394414	0.02013	0.126	1.20934965	1.83853663	1.50271490	1.54517338
1.55630000	1.49333759	0.06292	0.395	1.17868509	1.80788650	1.47342858	1.51332501
1.50619999	1.36673550	0.20146	1.263	1.05231579	1.68115522	1.34827627	1.38519473
1.60201999	1.44533981	0.15672	0.983	1.13091221	1.75976741	1.42674670	1.463935293
1.34242000	1.34053406	0.05741	0.360	1.02608164	1.65498649	1.32152574	1.35954238
1.30172599	1.27503045	0.06670	0.544	0.96044897	1.58964193	1.25355095	1.29650295
1.77084999	1.54577866	0.22507	1.411	1.23110963	1.86044769	1.52347191	1.56808542
1.04136999	0.99554641	0.04584	0.287	0.67902409	1.34207274	0.95469845	1.03639737
1.30103000	1.16149087	0.13954	0.875	0.84638276	1.47663699	1.13321451	1.18976323
1.69896999	1.44970672	0.24926	1.563	1.13527402	1.75413941	1.43102755	1.46838589
1.69896999	1.78412402	-0.06515	-0.409	1.44803834	2.08020970	1.72682588	1.80142216
1.59106000	1.58887939	0.03218	0.202	1.24415976	1.87359902	1.53586979	1.58188899
1.30103000	1.38857004	-0.08754	-0.549	1.07416409	1.70297599	1.37034671	1.40679337
1.60201999	1.65931825	-0.05726	-0.359	1.34406447	1.97457203	1.62989156	1.66874495
1.32222000	1.22262758	0.09959	0.624	0.90780950	1.53744566	1.19830950	1.24694666
1.69896999	1.66368516	0.03528	0.221	1.34840231	1.97896801	1.63394858	1.69342174
1.55630000	1.60691537	-0.05062	-0.317	1.29191250	1.92185824	1.58103107	1.63279967
1.47712000	1.32306643	0.15405	0.966	1.00858238	1.63735047	1.30354194	1.34259091
1.56619999	1.83050101	-0.26230	-1.645	1.51374437	2.14725760	1.76788927	1.87311274
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1.23044999	1.02174965	0.20870	1.309	0.70548928	1.38801044	0.98299752	1.06030219
1.25526999	1.50647651	-0.25121	-1.575	1.19193284	1.82102017	1.48601414	1.52693887
1.84509999	1.73355566	0.11154	0.699	1.41774146	2.09336990	1.69863297	1.76847835
1.27674999	1.44097291	-0.16222	-1.017	1.12693591	1.75339590	1.42245752	1.45948730
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1.23044999	1.43660599	-0.20616	-1.293	1.12218712	1.75102486	1.41816111	1.45505087
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1.17608999	1.20515995	-0.02907	-0.182	0.89025733	1.52006257	1.17977005	1.23054964
1.11353599	1.10472108	0.0922	0.058	0.78918096	1.42026120	1.07237053	1.13707164
1.44715999	1.72482165	-0.27766	-1.741	1.40908086	2.04856290	1.69056755	1.75907615
1.04136999	1.00165202	-0.01966	-0.123	0.74513450	1.37694955	1.02536358	1.09672047

1.23591000	1.95167936	-1.25291	-1.586	1.63407698	1.26888172	1.90747787	1.99628083
1.23044999	1.34490097	-1.11445	-7.18	1.03045522	1.65934671	1.32600343	1.36379850
1.36021000	1.22262758	1.15758	.988	1.90780350	1.53744566	1.19830850	1.24894666
1.36172999	1.34926787	0.01246	.078	1.03482932	1.66370742	1.33047359	1.36806215
1.53148000	1.44097291	0.09051	.567	1.12654991	1.73539590	1.42245792	1.45948790
1.71815000	1.03921749	-1.26107	-1.637	1.72312309	1.35531189	1.00184564	1.07658933
1.51851000	1.46717435	0.05134	.322	1.15271534	1.78163236	1.44807380	1.48627490
1.47712000	1.36673550	1.1038	.692	1.05231579	1.68115522	1.34827627	1.38519473
1.54406999	1.56577866	-1.00171	-.011	1.23110863	1.86044769	1.52347191	1.56808542
1.79238999	1.70298731	0.08940	.561	1.38742088	2.01485380	1.67038111	1.73589351
1.00000000	1.23372629	-2.3573	-1.478	1.92096847	1.55048811	1.21217583	1.25928116
1.63347000	1.58508083	0.04839	.303	1.27024676	1.89991491	1.56055579	1.60960388
1.50514999	1.44970672	0.05544	.348	1.13527402	1.76413941	1.43102755	1.46838589
1.50406999	1.44533981	0.09873	.619	1.13091221	1.75976741	1.42674670	1.46393293
1.30021000	1.21389376	1.6632	1.043	1.89903338	1.52375313	1.18904592	1.23874159
1.62607000	1.61564518	0.21042	1.319	1.30065937	1.93063898	1.58919990	1.64209846
1.41497000	1.37110241	0.04387	.275	1.05668843	1.68551838	1.35270886	1.38949795
1.44715999	1.49337579	0.04622	-.290	1.17886509	1.80788650	1.47342658	1.51332501
1.40239999	1.54577866	-0.08338	-.523	1.23110963	1.86044769	1.52347191	1.56808542
1.46239999	1.57193010	-1.0958	-.687	1.25720546	1.88675475	1.54822993	1.59573027
1.00000000	1.06541693	-0.06542	-.410	1.74955931	1.38127654	1.03008790	1.10074995
1.84509999	1.16149087	-3.1639	-1.984	1.47633899	1.47663899	1.13321851	1.18976323
1.14613000	1.22699448	-0.08086	-.507	1.91219631	1.54179266	1.20293452	1.25108445
1.54406999	1.43223909	1.1183	.701	1.11762383	1.74665432	1.41385619	1.45062198
1.59106000	1.53704485	0.05402	.339	1.22240710	1.85168260	1.51518390	1.55890581
1.04138999	1.14839016	-1.0700	-.671	1.83315888	1.46362144	1.11920943	1.17757489
1.46239999	1.58508083	-1.2268	-.769	1.27024676	1.89991491	1.56055579	1.60960588
1.30103000	1.42350528	-1.2248	-.768	1.10909583	1.73791473	1.40522161	1.44178094
1.36172999	1.28813116	0.07360	.461	1.97356033	1.60270199	1.26725531	1.30900702
1.59106000	1.42787218	1.6319	1.023	1.11346008	1.74228428	1.40954304	1.44620132
1.41497000	1.56781320	-1.15264	-.957	1.25285737	1.88236903	1.54411386	1.59111254
1.41497000	1.47390816	-0.06094	-.382	1.16143455	1.79038177	1.45655246	1.49526386
1.51851000	1.36673550	1.15177	.952	1.05231579	1.68115522	1.34827627	1.38519473
1.59815999	1.38857004	1.17963	1.126	1.07416409	1.70237599	1.37034671	1.40679337
1.36172999	1.51957723	-1.15785	-.990	1.20499618	1.83415829	1.49854808	1.54060639
1.00000000	1.94751243	0.05249	.329	1.63045961	1.26456524	1.90275224	1.99227262
1.60205999	1.66368516	-0.06163	-.386	1.34840231	1.97898801	1.69394858	1.69342174
1.66275999	1.55887939	1.0388	.651	1.24415976	1.87359902	1.53586979	1.58188899
1.23044999	1.32743333	-0.09698	-.608	1.01295793	1.54190874	1.30804850	1.34681816
RESIDUAL ERROR2= .15948				ERROR CHECK RATIO= 1.0000		SQRTB1= .472	BETA2= 5.862

SUMMATION MATRIX	(CORRECTED) SUMS OF SQUARES AND CROSS-PRODUCTS OF DEVIATIONS FROM THE RESPECTIVE AVERAGES. BOTH DEPENDENT AND INDEPENDENT VARIABLES INCLUDED. ELEMENTS ASSOCIATED WITH THE INDEPENDENT VARIABLES ARE THE (UNCORRECTED) SAME AS ABOVE EXCEPT NO CORRECTION IS MADE FOR AVERAGES
CORRELATION MATRIX NORMALIZED MATRIX	SUMMATION MATRIX (CORRECTED) NORMALIZED BY DIVIDING (I,J) BY $\sqrt{SRT(I,I)}$ AND $\sqrt{SRT(J,J)}$ SAME AS ABOVE EXCEPT SUMMATION MATRIX (UNCORRECTED) IS NORMALIZED
LATENT ROOTS	USED TO DETERMINE LINEAR RELATIONS AMONG THE INDEPENDENT VARIABLES. A ZERO OR NEAR ZERO ROOT INDICATES THE VARIABLES IN THE ASSOCIATED EIGENVECTOR ARE PERFECTLY CORRELATED.
SUM OF ROOTS	A CHECK. SHOULD EQUAL THE NUMBER OF INDEPENDENT VARIABLES
PRODUCT OF ROOTS	SAME AS THE DETERMINANT OF THE CORRELATION (OR NORMALIZED) MATRIX
DET OF INVERSE TRACE OF INVERSE	THE DETERMINANT OF THE INVERSE OF THE CORRELATION (NORMALIZED) MATRIX THE SUM OF THE DIAGONAL VALUES OF THE INVERSE OF THE CORRELATION (NORMALIZED) MATRIX
DIAG INCREMENT	USED IN SENSITIVITY ANALYSIS - AMOUNT ADDED TO THE DIAGONAL OF THE CORRELATION MATRIX
COVARIANCE MATRIX OF REGRESSION COEFFICIENTS	INVERSE OF SUMMATION MATRIX, ALSO CALLED XPRIME X INVERSE OR C MATRIX. DOES NOT HAVE THE RESIDUAL ERROR SQUARED TERM. XPRIME Y OR RIGHT HAND SIDES OF NORMAL EQUATIONS CONTAINED IN SUMMATION MATRIX
BETA COEFFICIENT	ASSOCIATED REGRESSION COEFFICIENT NORMALIZED BY MULT BY STD DEV OF X(I) AND DIVIDING BY STD DEV OF Y
STD DEV OF REG COEFF	$\sqrt{RT OF C(I,I)}$ TIMES THE RESIDUAL ERROR
CALCULATED T VALUE	T VALUE FOR EACH REGRESSION COEFFICIENT TO TEST FOR ZERO REGRESSION. THIS PROCEDURE ASSUMES ORTHOGONALITY OF THE INDEPENDENT VARIABLES FOR VALIDITY. IF SIGNIFICANCE IS GREATER THAN 95 PERCENT AN * WILL BE PRESENT
ADJ TOTAL SS ADJ REGRESSION SS ERROR SS	ADJUSTED TOTAL SUM OF SQUARES - ADJ BY REMOVING THE SS DUE TO THE MEAN, ATSS ADJUSTED REGRESSION SUM OF SQUARES - ADJ BY OMITTING SS DUE TO THE MEAN, ARSS ATSS - ARSS = ESS
MODEL OF ERROR OF	DEGREES OF FREEDOM (NUMBER OF REGRESSION COEFFICIENTS) FOR REGRESSION SS, P DEGREES OF FREEDOM FOR ERROR SS (N-1-MODEL DF) OR (N-MODEL DF), Q
RESIDUAL ERROR1	$\sqrt{RT(ESS/Q)}$, S
R SQ	ARSS/ATSS
ADJ R SQ	$1.0 - ((ARSS/P) / \text{VARIANCE OF Y})$
FCALC	$(ARSS/P) / (ESS/Q)$ THIS IS THE OVERALL TEST OF SIGNIFICANCE FOR REGRESSION
PROBABILITY	PROBABILITY UNDER NULL HYPOTHESIS OF OBTAINING A F GREATER THAN FCALC
RESIDUAL ERROR2	FORMED BY SUMMING THE SQUARES OF THE RESIDUALS ETC
ERROR CHECK RATIO	$(\text{RESIDUAL ERROR1}) / (\text{RESIDUAL ERROR2})$. SINCE EACH IS INDEPENDENTLY FORMED, THIS RATIO FORMS A CHECK ON THE ERRORS OF COMPUTATION
SQRTB1 BETA2	APPROX MEASURE OF THE STANDARDIZED THIRD MOMENT OF THE ERROR. NEED LARGE N TO TEST FOR SYMMETRY APPROX MEASURE OF THE STANDARDIZED FOURTH MOMENT OF THE ERRORS. NEED LARGE N
STD RESIDUAL	RESIDUALS DIVIDED BY THE RESIDUAL ERROR
CONFIDENCE LIMITS	(LINE) $YCALC + (-) T(Q) * \text{STDEV}(YCALC)$, WHERE $\text{STDEV}(YCALC) = S * \sqrt{SRT(1.0/N + (X-XBAR)^2 / \text{PRIME } C^* (X-XBAR))}$ (POINT) SAME AS ABOVE EXCEPT $\text{STDEV}(YCALC) = S * \sqrt{SRT(1.0 + 1.0/N + (X-XBAR)^2 / \text{PRIME } C^* (X-XBAR))}$ T(Q) IS THE 95 PERCENT STUDENT T BASED ON Q DEGREES OF FREEDOM

MEANS AND STANDARD DEVIATIONS FROM COMBINED LIST ANALYSIS OF DELTA ALA, LEAD FEMALES

K		MEAN(K)	SIGMA(K)
1	69.	.03218840	1.00000000
2	69.	578.04347000	1.00000000
3	69.	1.29103522	1.00000000
4	69.	2.72599840	1.00000000

4.1.1.1.1.1

4.1.1.1.1.1

DUP040001838

ROW	LEAD-M EAN	OSMOL- MEAN	LEAD-M *OSMOL -M	LOG D- ALA*10 0	LOG MO S/L	X
	X 1	X 2	X 3	X 4	X 5	X
1	-.01819	-263.04347	4.78434	.69897	2.49831	
2	.00581	-168.04347	-.97660	.84510	2.61278	
3	.01781	-43.04347	-.76667	1.17609	2.72835	
4	-.00819	-38.04347	.31152	1.39794	2.73239	
5	-.01519	-223.04347	5.38767	1.14613	2.55023	
6	.01281	-263.04347	-3.37001	1.11394	2.49831	
7	-.02219	-163.04348	3.61767	1.23045	2.61805	
8	-.00819	-203.04348	1.66260	1.14613	2.57403	
9	.01081	56.95653	5.79884	1.27875	2.80277	
10	.00781	311.95653	2.43688	1.66276	2.94939	
11	.00081	241.95653	.19637	1.53148	2.91381	
12	-.01219	-83.04347	1.01217	1.00000	2.69461	
13	-.00719	-278.04347	1.99869	1.11394	2.47712	
14	.00981	226.95653	2.22681	1.41497	2.90580	
15	.02981	131.95653	3.93384	1.61273	2.85126	
16	-.01419	-273.04348	3.87405	1.25527	2.48430	
17	.001219	-133.04348	1.62159	1.11394	2.64836	
18	-.00019	151.95653	-.02863	1.36173	2.86332	
19	-.02219	-33.04347	.73318	1.25527	2.73640	
20	.07381	-8.04347	-.59370	1.43136	2.75587	
21	-.02219	246.95653	-5.47957	1.82607	2.91645	
22	.001219	1.95653	-.02385	1.43136	2.76343	
23	-.00119	-248.04347	.29477	1.04139	2.51651	
24	.00881	156.95653	1.38304	.84510	2.86629	
25	.00519	241.95653	-1.25537	1.69897	2.91381	
26	.02381	-208.04347	-4.95385	1.17609	2.56620	
27	.00681	-98.04347	-.66783	1.25527	2.68124	
28	-.00619	-178.04347	1.10180	1.14613	2.60206	
29	-.00219	151.95653	-.33254	1.49136	2.86332	
30	-.00919	-33.04347	.30362	1.30103	2.73840	
31	.01419	86.95653	-1.23377	1.36173	2.82282	
32	-.00919	-123.04347	1.13057	1.43136	2.65801	
33	-.01819	-363.04347	6.60318	.84510	2.33244	
34	-.00219	296.95653	-.64986	1.64345	2.94201	
35	-.02219	-203.04348	4.50521	1.14613	2.57403	
36	-.00419	356.95653	-1.49508	1.27875	2.97081	
37	.00181	91.95653	.16659	1.36173	2.82607	
38	.00181	-138.04346	-.25008	1.23045	2.64345	
39	.00061	-163.04348	-.13233	1.23045	2.61805	
40	.00481	196.95653	.94768	1.70757	2.88930	
41	-.02219	-318.04347	7.05688	.77815	2.41497	
42	-.001219	131.95653	-1.50834	1.38021	2.85126	
43	-.00819	511.95653	-4.19210	1.59106	3.03743	
44	-.02219	1.95653	-.04341	1.38021	2.76343	
45	.00481	156.95653	.75521	1.30103	2.86629	
46	.00881	391.95653	3.45376	1.43136	2.98677	
47	.04681	301.95653	14.13507	1.34242	2.94448	
48	.03581	16.95653	.60724	1.14613	2.77452	
49	-.01519	166.95653	-2.53580	1.38021	2.87216	
50	.00381	-143.04347	-.69769	1.30103	2.59560	

Run	LEAD-M EAN	OSMOL- MEAN	LEAD-M *OSMOL	LOG D- ALA*10	LOG MO S/L	X	X	X	X	X
51	.01481	61.95653	.91768	1.46240	2.80618					
52	-.00519	-33.04347	.17144	1.39794	2.73640					
53	-.01519	-193.04347	2.93202	1.00000	2.58546					
54	.00181	171.95653	.31152	1.36173	2.87506					
55	.00161	171.95653	.31152	1.36173	2.87506					
56	.00181	-298.04347	-.53994	.84510	2.44716					
57	-.00219	-178.04347	.38963	1.20412	2.60206					
58	-.00119	176.95653	-.74116	1.81291	2.87795					
59	-.01619	-213.04347	3.44883	.69897	2.56229					
60	-.00019	351.95653	-.06631	1.71600	2.96848					
61	-.00819	196.95653	-1.61276	1.36173	2.88930					
62	.00581	131.95653	.89884	1.72428	2.85126					
63	-.00219	-275.04348	.59753	.84510	2.48430					
64	.00081	356.95653	.28971	1.36173	2.97081					
65	-.00419	-393.04347	1.64622	1.17609	2.26717					
66	-.02219	-208.04347	4.61615	1.23045	2.56820					
67	.00781	356.95653	2.78840	1.70757	2.97081					
68	-.00019	-363.04348	.07217	1.11394	2.29003					
69	-.01619	-8.04347	.13021	1.43136	2.75587					

ESURVIVAL, AND STAT. GROUP-MULT. RESP. AND MULT. REG. (MCMR)
ANALYSIS OF DELTA ALA, LEAD FEMALE

ANALYSIS OF DATA FOR P.SMITH

STATISTICS FOR VARIABLES IN THE COMPLETE MODEL

VARIABLE	MEAN	VARIANCE	STANDARD DEVIATION
LEAD-MEAN	1	.00000001	.00042645
USMOL-MEAN	2	.00000619	49989.12100000
LEAD-M*OSMOL-M	3	.94660044	8.28096350
LOG D-ALA*100	4	1.29103522	.06924455
LOG MOS/L	5	2.72599840	.03419831

DUP040001841

LEAD-MEAN	1.0000
OSMOL-MEAN	.2080 1.0000
LEAD-M*OSMOL-M	.1467 -.1737 1.0000
LOG U-ALAB*100	.1353 .7278 -.2864 1.0000
LOG MUS/L	.2259 .9775 -.1984 .7256 1.0000

1. EIGENVECTORS OF THE CORRELATION MATRIX
SUM OF THE ROOTS = 3.00000

ANALYSIS OF DATA FOR P.S.M.I.H
PRODUCT OF THE ROOTS = .89445647

LATENT ROOTS	.1212+01	.1141+01	.6465-00
LATENT ROOTS	1.21208	1.14137	.64655
LEAD-MEAN	.60878	.53919	-.58195
OSMOL-MEAN	.76605	-.20880	.60792
LEAD-M*OSMOL-M	-.20627	.81589	.54016

DUP040001844

DET OF INVERSE= .111797+04 TRACE OF INVERSE= .3247842+01 MODEL= 1 DIAG INCREMENT= .00000 ITERATION NO. CLK= 0 4 77 000

COVARIANCE MATRIX OF REGRESSION COEFFICIENTS

.57390880+02
-.83148642-03
-.50572291-01 .32181972-06
 .52173267-05 .18994882-02

RESPONSE 1 LOG D-ALA*100

REGRESSION COEFFICIENT	BETA COEFF.	STD. DEV. OF REG. COEFF.	CALCULATED T VALUE
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CONSTANT	1.30556993		
LEAD-MEAN	.19415113	1.09632	.177
OSMOL-MEAN	.00061848	.00010	8.047*
LEAD-M*OSMOL-M	-.01535465	.00781	-1.965

RESIDUAL ERROR1=	.179290	ERROR SS=	.20894076+01	ADJ TOTAL SS=	.47086295+01	ADJ REGRESSION SS=	.26192220+01
R SQ=	.5563	ADJ R SQ =	.5358	FCALC=	27.1607	PROBABILITY=	.000
						MODEL DF=	3.
						ERROR DF=	65.

OBSERVED RESPONSE	CALCULATED RESPONSE	RESIDUAL	STD. RESIDUAL	95 PERCENT CONFIDENCE LIMITS-POINT		95 PERCENT CONFIDENCE LIMITS-LINE	
				LOWER	UPPER	LOWER	UPPER
1.69897000	1.01328202	-0.31431	-1.753	1.38291954	1.9215123	1.10504480	1.10504480
1.64509999	1.18415408	-0.33905	-1.891	1.54395949	1.15435795	1.25395021	1.25395021
1.17608999	1.28557003	-0.10948	-0.611	1.65032399	1.21608493	1.35505512	1.35505512
1.39793999	1.26505930	0.12988	0.724	1.90688418	1.22077315	1.31534545	1.31534545
1.14613000	1.06804885	0.07808	0.436	1.70238578	1.43371192	1.99390040	1.14219730
1.11393999	1.14450784	-0.03057	-0.170	1.76873665	1.52027903	1.03052317	1.25849251
1.12304999	1.11226674	0.11818	0.659	1.74528067	1.47925286	1.03184721	1.19288632
1.14613000	1.11226530	0.03366	0.189	1.74929973	1.47523087	1.05283031	1.17170030
1.12767499	1.29291522	-0.00417	-0.023	1.86059254	1.70523790	1.05898453	1.50684591
1.66275999	1.52499805	0.13776	0.768	1.15775174	1.89224437	1.44339927	1.60689684
1.53148000	1.50074787	0.03073	0.171	1.13695043	1.86454532	1.43642771	1.56506804
1.00000000	1.21969301	-0.21969	-1.225	1.58795462	1.58143139	1.16828120	1.27110481
1.11393999	1.04591526	0.06803	0.379	1.68114308	1.41068345	0.97630145	1.11582508
1.14149700	1.45904148	-0.04407	-0.246	1.99461504	1.82346791	1.39125404	1.52682891
1.16127799	1.35895347	0.25362	1.416	1.99050821	1.72740872	1.27210170	1.44581524
1.25526999	1.01965104	0.23542	1.313	1.5264377	1.38705832	0.93842312	1.10127397
1.11393999	1.16341176	-0.05547	-0.309	1.80710816	1.53171536	1.1141613	1.22466040
1.36172999	1.43034570	-0.06862	-0.383	1.06832412	1.79236776	1.37697776	1.48371364
1.25526999	1.26295902	-0.00769	-0.043	1.89295908	1.62665894	1.19919258	1.32425545
1.44135999	1.32433322	0.10893	0.608	1.92445619	1.72041024	1.14872593	1.49614051
1.62607000	1.58752689	0.23654	1.330	1.21034363	1.96462014	1.46925570	1.70579708
1.44135999	1.30517107	0.12619	0.704	1.94342466	1.66691749	1.25370283	1.35663931
1.04136999	1.09779544	-0.05641	-0.315	1.7329321	1.46229768	1.02960165	1.16598924
1.04509999	1.41450979	-0.56941	-3.176	1.05222315	1.77679643	1.35937254	1.46968704
1.69898999	1.52187391	0.17710	0.988	1.15690573	1.88684209	1.45123199	1.59251581
1.17606999	1.21597899	-0.03889	-0.222	1.83182687	1.60013112	1.07683384	1.35512415
1.25526999	1.23690052	0.01837	0.102	1.87363004	1.59997101	1.17682813	1.29697292
1.14613000	1.14172634	0.00440	0.025	1.79362644	1.50409025	1.08608364	1.19736905
1.49135999	1.43462387	0.05674	0.316	1.07236311	1.79606463	1.37978986	1.48945887
1.30103000	1.27207880	0.02895	0.161	1.91082104	1.63333656	1.22416551	1.31999208
1.39172999	1.32935122	-0.03120	-0.174	1.05945812	1.75644033	1.33047159	1.45539086
1.43135999	1.16571833	0.24564	1.370	1.82397550	1.54746115	1.13427538	1.23716128
1.64509999	1.90350677	-0.05841	-0.326	1.52659152	1.26042202	0.78580337	1.02120817
1.64349999	1.55817519	0.08527	0.476	1.19237359	1.92397679	1.48334355	1.63300383
1.14613000	1.08569992	0.08023	0.447	1.68669586	1.43510398	0.97589910	1.15590075
1.27674999	1.61987346	-0.34112	-1.903	1.23125016	1.98849680	1.53226548	1.70746148
1.39172999	1.37862794	-0.01690	-0.094	1.01742263	1.73963325	1.33111173	1.42614415
1.20044999	1.19677627	0.03367	0.188	1.83411552	1.55943702	1.13923214	1.25432040
1.20044999	1.17431216	0.05614	0.313	1.81136858	1.53725573	1.11501168	1.23361264
1.70756999	1.45315705	0.25441	1.419	1.09041835	1.81589575	1.39512368	1.51119043
1.77615000	1.93259525	-0.15445	-0.861	1.53597984	1.31121066	0.80955913	1.05563237
1.38021000	1.43590227	-0.05569	-0.311	1.07178959	1.80001494	1.36982340	1.50198214
1.53106000	1.78737257	-0.19631	-1.095	1.49728708	2.16745810	1.65988337	1.91488178
1.36021000	1.30352998	0.07668	0.428	1.93967499	1.66738497	1.23888303	1.36817493
1.30103000	1.42337324	-0.12234	-0.682	1.06141089	1.78533559	1.37040858	1.47633789
1.43135999	1.57505636	-0.14370	-0.801	1.20276155	1.94735117	1.47311549	1.67697223
1.34242000	1.34476356	-0.00234	-0.013	1.91931747	1.77020966	1.11499854	1.57453059
1.14613000	1.31707734	-0.17095	-0.953	1.94791877	1.68623590	1.22726330	1.40689138
1.36021000	1.47620735	-0.09800	-0.547	1.11166133	1.84475337	1.39968355	1.55059415
1.50103000	1.16720603	0.13382	0.746	1.80277106	1.53164101	1.09937268	1.23503938
1.46239999	1.34506495	0.11734	0.654	1.98300499	1.70712482	1.29143722	1.39869268
1.39793999	1.27488488	0.12306	0.686	1.91366463	1.63590513	1.2887962	1.32097314
1.00000000	1.09359950	-0.09960	-0.566	1.73500691	1.46419008	1.03093506	1.16826393
1.36172999	1.44188070	-0.08015	-0.447	1.07965697	1.80410443	1.38715030	1.49660310
1.36172999	1.44188070	-0.08015	-0.447	1.07965697	1.80410443	1.38715030	1.49660310
1.64509999	1.07027073	-0.22517	-1.256	1.70280440	1.43773706	0.95768732	1.15285414
1.20412000	1.19343414	0.05068	0.283	1.79079524	1.51608104	1.09600660	1.21086907
1.61296999	1.46097174	0.35194	1.963	1.09792040	1.82402308	1.40101325	1.52092823
1.64509999	1.07510038	-0.37613	-2.098	1.70931317	1.44086759	1.00030419	1.14945856

1.40109400	1.32319	1.203	1.03571050	1.76277624	1.35006769	1.45212103
1.07249071	-.22739	-1.268	.70754059	1.43744083	1.00194219	1.14303923
1.59343952	-.23171	-1.292	1.22522530	1.96095374	1.51064329	1.67623575
.95773295	.21831	1.218	.58904702	1.32651886	.86972224	1.04584365
1.06010407	.17035	.950	.69058368	1.42962447	.96881422	1.15139392
1.55543198	.15114	.843	1.18691319	1.92595077	1.46514864	1.64771532
.99091342	.12303	.686	.62112902	1.36069782	.89856078	1.08326606
1.29384424	.13752	.767	.93149003	1.55619844	1.23826475	1.34942372

RESIDUAL ERROR2= .17929 ERROR CHECK RATIO= 1.0000 SQRTR1= -.592 BETA2= 3.403

ALL OF INVERSE= .109223001 TRACE OF INVERSE= .2090472+01 MODEL= 2 DIAG INCREMENT= .00000 ITERATION NUMBER= 0

COVARIANCE MATRIX OF REGRESSION COEFFICIENTS

.36044435+02
-.89257945-03

.30748929-06

RESPONSE 1 LOG D=ALAM*100

REGRESSION COEFFICIENT	BETA COEFF.	STD.DEV.OF REG.COEFF.	CALCULATED T VALUE
---------------------------	-------------	--------------------------	-----------------------

CONSTANT			
LEAD-MEAN			
OSMOL-MEAN			

1.29103522			
-.21465370	-.01685	1.09949	-.195
.00066065	.73126	.00010	8.475*

RESIDUAL ERROR1=	.183135	ERROR SS=	.22135279+01	ADJ TOTAL SS=	.47086295+01	ADJ REGRESSION SS=	.24951017+01
R SQ=	.5299	ADJ R SQ =	.5157	FCALC=	37.1978	PROBABILITY=	.000
						MODEL DF=	2.
						ERROR DF=	66.

CALCULATED RESPONSE	RESIDUAL	STD.	95 PERCENT CONFIDENCE LIMITS-POINT		95 PERCENT CONFIDENCE LIMITS-LINE	
			UPPER	LOWER	UPPER	LOWER
1.0687000	1.06855088	-1.6958	-2.018	.69547817	1.44162360	1.14284664
1.0689999	1.14516102	-3.0006	-1.638	.77484342	1.51547861	1.20383002
1.1760899	1.25016651	-0.7408	-.404	.87952167	1.62081134	1.18946619
1.3279399	1.28005076	.13799	.753	.89132923	1.62877229	1.21248307
1.14613000	1.10233296	.04380	.239	.73063406	1.47403187	1.16916861
1.1139399	1.05189664	.05204	.284	.68787777	1.43591550	.98317540
1.23044999	1.15547457	.07498	.409	.78341815	1.52753100	1.08657843
1.14613000	1.11804339	.02809	.153	.74744838	1.46863840	1.10576814
1.27674999	1.31820065	-.03945	-.215	.88850209	1.74789920	1.54391679
1.60275999	1.55784401	.10492	.573	1.18438178	1.93130624	1.48181131
1.53148000	1.49910104	.03238	.177	1.12761199	1.87059009	1.43344253
1.00000000	1.28218008	-.22218	-1.213	.85279673	1.59156144	1.16974424
1.11393299	1.05327995	.06066	.331	.68087211	1.42568779	.98260795
1.14197000	1.48425941	-.06929	-.378	1.11304562	1.85547321	1.42017658
1.61277999	1.35820452	.21458	1.172	1.02417155	1.72237499	1.31941621
1.25126999	1.05906577	.19618	1.071	.68632831	1.43184324	.98658402
1.11393999	1.17914754	-.06521	-.356	.80931801	1.54897708	1.12368424
1.36172599	1.42185712	-.06013	-.328	1.05228254	1.79143170	1.36807707
1.25526999	1.26735215	-.01209	-.066	.95999381	1.63872449	1.20240416
1.43135999	1.26826867	.16309	.891	.86577979	1.67075756	1.10003006
1.82607000	1.50834133	.31773	1.735	1.13214324	1.84853941	1.41984315
1.43135999	1.29533537	.13602	.743	.92607787	1.66459286	1.24377926
1.04138999	1.07781154	-.03642	-.199	.70617713	1.44944595	1.01133552
1.65099999	1.42422852	-.57913	-3.162	1.05441582	1.79404122	1.36883576
1.62626999	1.50038495	.19858	1.084	1.12836811	1.87240979	1.43178551
1.17608999	1.10687123	.06922	.378	.73129222	1.48245035	1.02104278
1.25526999	1.20519193	.05008	.273	.83590469	1.57447916	1.15348322
1.14613000	1.11913035	.00700	.038	.76911104	1.50914967	1.08237451
1.49135999	1.42228644	.06907	.377	1.05260475	1.79196812	1.36777514
1.30103000	1.26456866	.03646	.199	.89575143	1.63338588	1.21626669
1.39172999	1.39992000	-.00719	-.039	.99859573	1.73924427	1.31020889
1.43135999	1.16711010	.24425	1.334	.81771803	1.55650216	1.13459381
1.65099999	.98240382	-.13739	-.750	.60642701	1.35854462	.89458160
1.64344999	1.54708079	.09637	.526	1.17371875	1.92044282	1.47154179
1.14613000	1.12104654	.02508	.137	.74840447	1.49369261	1.04914214
1.27674999	1.59914912	-.32040	-1.750	1.22340319	1.97495505	1.51233305
1.35172599	1.39978680	-.00806	-.044	1.00105688	1.73852071	1.32214259
1.25044999	1.17183916	.05861	.320	.80241238	1.54126595	1.11908425
1.25044999	1.15053755	.07991	.436	.78073877	1.52033633	1.09523773
1.70756999	1.45951316	.24806	1.355	1.08916005	1.82986628	1.40062048
1.77815000	1.02207372	-.24392	-1.332	.64676780	1.39737964	.93744828
1.30021000	1.40721996	-.02701	-.147	1.03659861	1.77784131	1.34666325
1.59106000	1.73340860	-.14235	-.777	1.434934510	2.11747210	1.61588542
1.30021000	1.29748191	.08273	.452	.92598318	1.66898064	1.36319520
1.30103000	1.42508714	-.12406	-.677	1.05547234	1.79470193	1.37103136
1.43135999	1.62648141	-.19512	-1.065	1.25007629	2.00288650	1.53710721
1.34242000	1.54086602	-.19845	-1.084	1.15704180	1.92469023	1.4242716
1.14613000	1.29794177	-.15181	-.829	.92149776	1.67438579	1.38747965
1.25021000	1.45798670	-.05778	-.315	1.056602192	1.80995148	1.36986789
1.30103000	1.13268058	.16835	.919	.76226565	1.50309551	1.07340032
1.40239999	1.34117877	.12122	.662	.97148202	1.71087553	1.28656538
1.37793999	1.20371004	.13423	.733	.89523546	1.63218461	1.21809822
1.00000000	1.12815247	-.12815	-.700	.75703080	1.49927415	1.06460539
1.36172999	1.43864085	-.07691	-.420	1.06877016	1.80851154	1.39286214
1.59172599	1.43864085	-.07691	-.420	1.06877016	1.80851154	1.39286214
1.30103000	1.03413506	-.18904	-1.032	.66077441	1.40749571	.95860292
1.20412000	1.13827175	.06585	.360	.76829241	1.50625109	1.10966720
1.01290999	1.44423200	.36868	2.013	1.07390821	1.81455379	1.38523387
1.00000000	1.11115412	-.41210	-2.251	.73950823	1.46280002	1.04613087
1.00000000	1.00000000	1.00000	1.000	1.00000000	1.00000000	1.17769438

1.72114	1.40214156	.32114	1.754	1.03361298	1.77247013	1.35107484	1.43320428
.64504999	1.05050993	-21141	-1.154	.68420914	1.42881072	.98640426	1.12661500
1.30172999	1.59807587	-23635	-1.291	1.22281833	1.97333340	1.51366526	1.68248617
1.17608999	.95366116	.22243	1.215	.57714953	1.33017278	.86383948	1.04348284
1.23044999	1.11674529	.11370	.621	.74401543	1.48947516	1.04439555	1.18909504
1.70756999	1.59657329	.11100	.606	1.22154479	1.97160180	1.51318680	1.67995979
1.11333999	.96140905	.15253	.833	.58504607	1.33777203	.87221253	1.05060557
1.43135999	1.28758749	.14377	.785	.91762526	1.65754972	1.23120500	1.34396999

RESIDUAL ERROR2= .18313

ERROR CHECK RATIO= 1.0000

SQRTB1= -.604

BETA2= 3.436

CALCULATED RESPONSE	RESIDUAL	STD. RESIDUAL	95 PERCENT CONFIDENCE LIMITS-POINT		95 PERCENT CONFIDENCE LIMITS-LINE	
			LOWER	UPPER	LOWER	UPPER
1.68897000	1.06573161	-3.6676	-2.017	1.43490613	.99792609	1.13347714
1.84509999	1.14710160	-3.0200	-1.661	1.51412085	1.09230405	1.20189914
1.17606999	1.25416736	-0.7808	-.429	1.8854346	1.20966476	1.29866996
1.39793999	1.25845000	.13949	.767	1.62405244	1.21412423	1.30277577
1.14613000	1.09999266	.04614	.254	1.73183984	1.03805608	1.16192925
1.11393999	1.06573161	.04821	.265	1.69655710	1.43490613	1.13347714
1.23044999	1.15136423	.07907	.435	1.78445236	1.09717508	1.20559339
1.14613000	1.11712319	.02901	.160	1.74941903	1.05791190	1.17633447
1.27674999	1.33981997	-.06107	-.336	1.97412235	1.29471581	1.38492413
1.16027999	1.55623414	.10453	.575	1.18758675	1.48287417	1.61359411
1.53148000	1.49827731	.03320	.183	1.12966201	1.86689261	1.56290607
1.00000000	1.21990632	-.21991	-1.210	1.85401528	1.58579735	1.26655267
1.11353999	1.05266371	.06106	.336	1.68328355	1.42248388	1.12291166
1.41497000	1.48542942	-.07046	-.388	1.11718395	1.42294452	1.54791433
1.61277999	1.40405942	.20872	1.148	1.03761204	1.35323299	1.45488586
1.25326999	1.05716635	.19810	1.090	1.68771064	1.42662206	1.12642736
1.11353999	1.17706001	-.06314	-.347	1.81061739	1.54354262	1.22801611
1.36172999	1.42118955	-.05946	-.327	1.05444251	1.78793739	1.4713637
1.25526999	1.26273263	-.00746	-.041	1.8714903	1.62831622	1.30690275
1.45135999	1.28414579	.14721	.810	1.91861662	1.64967495	1.32786313
1.82607000	1.50255994	.32351	1.779	1.13381620	1.87130369	1.43720256
1.43135999	1.29711103	.13865	.763	1.93718510	1.65823697	1.56791733
1.04136999	1.07857950	-.03719	-.205	1.70980749	1.44735152	1.33840137
1.84509999	1.42347259	-.58037	-3.192	1.058664356	1.79230161	1.44096117
1.65986999	1.49827731	.20069	1.104	1.12296201	1.86689261	1.56230607
1.17608999	1.11284055	.06325	.348	1.4065297	1.05296057	1.17212052
1.25526999	1.20705843	.04821	.265	1.84102361	1.57309325	1.25461954
1.14613000	1.13553633	.00759	.042	1.7133445	1.50573621	1.19454399
1.49135999	1.42118955	.07017	.386	1.05444251	1.78793739	1.4713637
1.30103000	1.25273263	.03830	.211	1.8714903	1.62831622	1.30690275
1.36172999	1.36591575	-.00379	-.021	1.93958950	1.73144200	1.41243757
1.45135999	1.18564527	.24571	1.351	1.81931804	1.55197249	1.33569292
1.84509999	1.98007900	-.13498	-.742	1.60763367	1.35252433	1.06383553
1.64344999	1.54538625	.09806	.539	1.17521654	1.91555597	1.61636058
1.14613000	1.11712319	.02901	.160	1.74941903	1.48482734	1.17633447
1.27674999	1.59677781	-.31803	-1.749	1.22456051	1.96899511	1.67951448
1.36172999	1.36597939	-.00807	-.044	1.00362479	1.73577200	1.41708811
1.25044999	1.17279738	.05765	.317	1.80626312	1.53933104	1.22424638
1.23044999	1.15138423	.07907	.435	1.78445236	1.51831611	1.20559339
1.70756999	1.45973364	.24784	1.363	1.09215778	1.82730949	1.40132436
1.78150000	1.01362267	-.24047	-1.323	1.64777490	1.38947043	1.09186203
1.36021000	1.40405942	-.02385	-.131	1.03761204	1.77050681	1.45488586
1.59106000	1.72953938	-.13848	-.762	1.35037741	2.10870140	1.83937305
1.36021000	1.29271103	.08750	.481	1.92718510	1.65623697	1.24902070
1.30103000	1.42547259	-.12444	-.684	1.05864356	1.79230161	1.33640137
1.45135999	1.62675624	-.19540	-1.075	1.25317723	2.00033820	1.37196404
1.34242000	1.54966688	-.20725	-1.140	1.17934248	1.91999528	1.53809448
1.14613000	1.30555692	-.15943	-.877	1.94001795	1.67109989	1.47590390
1.36021000	1.434903785	-.05363	-.296	1.06703782	1.80103786	1.26174296
1.30103000	1.13425371	.16678	.917	1.76695650	1.50155082	1.37936920
1.46239999	1.34410261	.11830	.651	1.97837350	1.50155082	1.07762504
1.39793999	1.25273263	.13521	.744	1.89714903	1.70983171	1.19088238
1.00000000	1.12666645	-.12569	-.691	1.75819303	1.62831622	1.38946140
1.36172999	1.43832047	-.07659	-.421	1.07123101	1.49318387	1.30690275
1.36172999	1.43832047	-.07659	-.421	1.07123101	1.49318387	1.19358938
1.84509999	1.03575319	-.19065	-1.049	1.07123101	1.80540994	1.43358633
1.26412000	1.13853633	.06558	.361	.77133445	1.80540994	1.43358633
1.61250999	1.44260311	.37031	2.037	1.07542159	1.50573621	1.49358633
1.65986999	1.10655792	-.40959	-2.253	.740603464	1.80978494	1.10889900
					1.47648121	1.19454399
					1.04800065	1.49847715
						1.16911520

1.7616000	1.40405982	.32022	1.761	1.03761204	1.77050681	1.35323299	1.45483136
.84569999	1.05716635	-.21207	-1.166	.68771064	1.42662206	.98790485	1.12642736
1.30172999	1.59677781	-.23505	-1.293	1.22456051	1.96899511	1.51404114	1.67951448
1.17608999	.95438321	.22171	1.219	.58075996	1.32800646	.86533520	1.04323122
1.2304999	1.11284955	.11761	.647	.74502812	1.48065297	1.05296057	1.17272052
1.70758999	1.59677781	.11079	.609	1.22456051	1.96899511	1.51404114	1.67951448
1.11393999	.96294847	.15099	.830	.58972783	1.33616911	.87580903	1.05008791
1.43135999	1.28414579	.14721	.810	.91861662	1.64967495	1.24042845	1.32786313

RESIDUAL ERROR2= .18181 ERROR CHECK RATIO= 1.0000 SQRTR1= -.602 BETA2= 3.489

GLOSSARY OF TERMS USED IN RRRR

SUMMATION MATRIX	(CORRECTED) SUMS OF SQUARES AND CROSS-PRODUCTS OF DEVIATIONS FROM THE RESPECTIVE AVERAGES. BOTH DEPENDENT AND INDEPENDENT VARIABLES INCLUDED. ELEMENTS ASSOCIATED WITH THE INDEPENDENT VARIABLES ARE THE (UNCORRECTED) SAME AS ABOVE EXCEPT NO CORRECTION IS MADE FOR AVERAGES
CORRELATION MATRIX NORMALIZED MATRIX	SUMMATION MATRIX (CORRECTED) NORMALIZED BY DIVIDING (I,J) BY SORT (I,I) AND SORT (J,J) SAME AS ABOVE EXCEPT SUMMATION MATRIX (UNCORRECTED) IS NORMALIZED
LATENT ROOTS	USED TO DETERMINE LINEAR RELATIONS AMONG THE INDEPENDENT VARIABLES. A ZERO OR NEAR ZERO ROOT INDICATES THE VARIABLES IN THE ASSOCIATED EIGENVECTOR ARE PERFECTLY CORRELATED.
SUM OF ROOTS	A CHECK. SHOULD EQUAL THE NUMBER OF INDEPENDENT VARIABLES
PRODUCT OF ROOTS	SAME AS THE DETERMINANT OF THE CORRELATION (OR NORMALIZED) MATRIX
DET OF INVERSE TRACE OF INVERSE	THE DETERMINANT OF THE INVERSE OF THE CORRELATION (NORMALIZED) MATRIX THE SUM OF THE DIAGONAL VALUES OF THE INVERSE OF THE CORRELATION (NORMALIZED) MATRIX
DIAG INCREMENT	USED IN SENSITIVITY ANALYSIS - AMOUNT ADDED TO THE DIAGONAL OF THE CORRELATION MATRIX
COVARIANCE MATRIX OF REGRESSION COEFFICIENTS	INVERSE OF SUMMATION MATRIX. ALSO CALLED XPRIME INVERSE OR C MATRIX. DOES NOT HAVE THE RESIDUAL ERROR SQUARED TERM. XPRIMEY OR RIGHT HAND SIDES OF NORMAL EQUATIONS CONTAINED IN SUMMATION MATRIX
BETA COEFFICIENT	ASSOCIATED REGRESSION COEFFICIENT NORMALIZED BY MULT BY STD DEV OF X(I) AND DIVIDING BY STD DEV OF Y
STD DEV OF REG COEFF	SQ RT OF C(I,I) TIMES THE RESIDUAL ERROR
CALCULATED T VALUE	T VALUE FOR EACH REGRESSION COEFFICIENT TO TEST FOR ZERO REGRESSION. THIS PROCEDURE ASSUMES ORTHOGONALITY OF THE INDEPENDENT VARIABLES FOR VALIDITY. IF SIGNIFICANCE IS GREATER THAN 95 PERCENT AN * WILL BE PRESENT
ADJ TOTAL SS ADJ REGRESSION SS ERROR SS	ADJUSTED TOTAL SUM OF SQUARES - ADJ BY REMOVING THE SS DUE TO THE MEAN, ATSS ADJUSTED REGRESSION SUM OF SQUARES - ADJ BY OMITTING SS DUE TO THE MEAN, ARSS ATSS - ARSS = ESS
MODEL CF ERROR CF	DEGREES OF FREEDOM (NUMBER OF REGRESSION COEFFICIENTS) FOR REGRESSION SS, P DEGREES OF FREEDOM FOR ERROR SS (N-1-MODEL DF) OR (N-MODEL DF), Q
RESIDUAL ERROR1	SQRT(ERROR SS/Q), S
R SQ ADJ R SQ	ARSS/ATSS 1.0 - ((ARSS/P) / VARIANCE OF Y)
FCALC	(ARSS/P) / (ESS/Q). THIS IS THE OVERALL TEST OF SIGNIFICANCE FOR REGRESSION
PROBABILITY	PROBABILITY UNDER NULL HYPOTHESIS OF OBTAINING A F GREATER THAN FCALC
RESIDUAL ERROR2	FORMED BY SUMMING THE SQUARES OF THE RESIDUALS ETC
ERROR CHECK RATIO	(RESIDUAL ERROR1) / (RESIDUAL ERROR2). SINCE EACH IS INDEPENDENTLY FORMED, THIS RATIO FORMS A CHECK ON THE ERRORS OF COMPUTATION
SQRT B1 BETA2	APPROX MEASURE OF THE STANDARDIZED THIRD MOMENT OF THE ERROR. NEED LARGE N TO TEST FOR SYMMETRY APPROX MEASURE OF THE STANDARDIZED FOURTH MOMENT OF THE ERRORS. NEED LARGE N
STD RESIDUAL	RESIDUALS DIVIDED BY THE RESIDUAL ERROR
CONFIDENCE LIMITS	(LINE) YCALC + (-) T(Q) * STDEV(YCALC), WHERE STDEV(YCALC) = S * SQRT(1.0/N + (X-XBAR)PRIME * C* (X-XBAR)) (POINT) SAME AS ABOVE EXCEPT STDEV(YCALC) = S * SQRT(1.0 + 1.0/N + (X-XBAR)PRIME * C* (X-XBAR)) T(Q) IS THE 95 PERCENT STUDENT T BASED ON Q DEGREES OF FREEDOM

LOG NO 07733

DATE 190270 PAGE 59

DATE 19 FEB 70 PRIORITY D MAN/SEC 02884 /55710 CARDS IN 417 MAX PAGES 100 END TIME 14:12:54

IDENT STIVER

CHARGE J5904 /

CARDS OUT 8

PAGES 59

START TIME 14:12:18

DUP040001857

K	MEAN(K)	SIGMA(K)
1	298.	1.03443286
2	298.	1.00000000
3	298.	1.00000000
4	298.	1.00000000

Appendix I

REGRESSION OF LEAD ON LOG Δ -ALA & OSMOLARITY

ROW	OSMOL -MEAN	LOG D ALA -M	OSM-M* LOG DA LA-M	LEAD	LOG MO S/L	X
	X 1	X 2	X 3	X 4	X 5	X
1	79.46310	-.05972	-4.74551	.04400	2.88649	
2	4.46310	.01283	.05726	.03800	2.84198	
3	-240.53690	-.44790	107.73640	.02800	2.65321	
4	419.46311	.39025	163.69561	.05000	3.04532	
5	-170.53690	-.12339	21.04249	.01500	2.71600	
6	119.46310	.41740	49.86394	.03000	2.90849	
7	154.46310	.08922	13.78125	.02800	2.92886	
8	64.46310	.28996	17.40248	.03200	2.87795	
9	224.46311	.32214	72.30862	.05000	2.96142	
10	-175.53689	-.19802	34.75976	.07700	2.71181	
11	49.46310	.04502	2.22685	.01000	2.86923	
12	-130.53681	-.14667	19.17191	.03200	2.74819	
13	414.46310	.26082	108.01751	.03500	3.04336	
14	-35.53690	-.07992	2.84010	.02200	2.81624	
15	-290.53690	-.19802	57.53202	.01700	2.60206	
16	-195.53690	-.10111	19.77067	.02300	2.69461	
17	-355.53690	-.49905	177.43057	.01000	2.52504	
18	-135.53689	-.32296	43.77295	.03000	2.74429	
19	-90.53690	.12934	-11.71007	.03800	2.77815	
20	670.46310	.33025	221.42066	.04600	3.13386	
21	69.46310	.02922	2.61414	.02100	2.89209	
22	-120.53690	-.00420	.50622	.01400	2.75587	
23	109.46310	.07498	8.20758	.01400	2.90309	
24	109.46310	.02922	3.19855	.01200	2.90309	
25	-220.53690	-.22605	49.85229	.02500	2.67210	
26	39.46310	.04502	1.77664	.02400	2.86332	
27	379.46311	.26062	94.89580	.03600	3.02938	
28	-440.53689	-.49905	219.84980	.01700	2.39794	
29	139.46310	.14193	19.79404	.03500	2.91908	
30	239.46311	.17764	42.53831	.02500	2.96848	
31	99.46310	.07498	7.45778	.05000	2.89763	
32	29.46310	.04502	1.32644	.02500	2.85733	
33	69.46310	.11637	10.41085	.03700	2.89209	
34	199.46311	.14193	26.30986	.03500	2.94939	
35	249.46310	.21064	52.54699	.03400	2.97313	
36	-235.53690	-.04041	9.51797	.05400	2.65801	
37	254.46311	.37601	95.68075	.02800	2.97543	
38	-195.53690	-.04041	7.90158	.05400	2.69461	
39	-375.53690	-.49905	187.41157	.03800	2.49831	
40	-80.53690	-.12339	9.93742	.03000	2.78533	
41	-30.53690	.24131	-7.36887	.02000	2.81954	
42	279.46310	.47292	132.16379	.02800	2.98677	
43	14.46310	.08922	1.29040	.02400	2.84819	
44	214.46311	.12934	27.73873	.01000	2.95665	
45	-450.53690	-.55704	280.96693	.02800	2.38021	
46	-5.53690	.12934	-7.1614	.05600	2.83569	
47	-370.53689	-.40214	148.00758	.02200	2.50515	
48	-5.53690	-.40214	.21591	.02400	2.83685	
49	-265.53690	-.17109	45.58994	.02800	2.62839	
50	-465.53690	-.49905	232.32604	.01000	2.35218	

Row	USNOL -MEAN	LOG D ALA -M	OSM-M* LOG DA LA-M	LEAD	LOG MO S/L	
	X 1	X 2	X 3	X 4	X 5	X
51	389.46310	.44912	174.91580	.02800	3.03342	
52	-60.53690	-.92193	1.32755	.04400	2.73334	
53	299.46311	.26996	80.84316	.04000	2.99564	
54	174.46311	.07498	13.08130	.03900	2.93702	
55	204.46310	.02922	5.97448	.03400	2.95182	
56	244.46311	.42393	103.63532	.05700	2.97081	
57	-445.53690	-.55704	248.18173	.03100	2.38917	
58	169.46311	-.00420	-.71169	.01500	2.93450	
59	34.46310	.10301	3.55006	.03600	2.86034	
60	-30.53690	-.04041	1.23399	.04300	2.81954	
61	-400.53689	-.40214	161.07177	.02200	2.46240	
62	199.46311	.44296	86.35424	.02900	2.94939	
63	119.46310	.43671	52.17077	.05300	2.90849	
64	219.46310	.43037	94.45041	.03100	2.95904	
65	-260.53689	.26996	-70.33463	.01300	2.63347	
66	-480.53690	-.70317	337.69897	.01600	2.32222	
67	369.46311	.36319	141.57469	.03700	3.02531	
68	119.46310	.17764	21.22147	.03600	2.90649	
69	249.46310	.44296	110.50226	.03100	2.97313	
70	-255.53690	-.07392	20.42242	.02700	2.63849	
71	339.46311	.30543	103.68232	.02700	3.01284	
72	-165.53690	-.04041	6.68929	.02900	2.72016	
73	59.46310	-.00420	-.24973	.02200	2.87506	
74	189.46310	.11637	22.04789	.03000	2.94448	
75	204.46310	.16606	33.95321	.04800	2.95182	
76	209.46310	.04502	9.43010	.03100	2.95424	
77	44.46310	.06026	2.67936	.04600	2.86629	
78	149.46310	-.00420	-.62770	.05000	2.92428	
79	-110.53690	.40404	-44.66136	.07200	2.76343	
80	-210.53690	-.49905	105.06837	.03300	2.68124	
81	-230.53689	-.36075	83.16611	.02900	2.66276	
82	349.46311	.27210	97.53527	.02600	3.01703	
83	39.46310	-.12339	-4.86934	.02400	2.86332	
84	129.46311	.07498	9.70719	.04000	2.91381	
85	94.46310	.07498	7.08267	.03900	2.89487	
86	84.46310	.44296	37.41380	.05400	2.88930	
87	129.46311	.31386	40.63333	.02800	2.91381	
88	-75.53690	-.14687	11.09408	.02000	2.78388	
89	-305.53690	-.44790	136.84987	.01400	2.58546	
90	-150.53689	-.14687	22.10930	.02900	2.73239	
91	224.46311	.16606	37.27442	.02300	2.96142	
92	-395.53690	-.36075	142.68981	.02000	2.46982	
93	-360.53690	-.22605	81.49925	.01400	2.51851	
94	-175.53689	.18692	-33.16249	.02800	2.71181	
95	214.46311	.29683	63.65915	.05500	2.95665	
96	-105.53689	-.17169	18.11960	.04500	2.76716	
97	-335.53690	-.28820	96.70162	.02800	2.55023	
98	134.46310	.26936	36.29970	.03500	2.91645	
99	14.46310	.16806	2.40175	.01000	2.84619	
100	-120.53690	-.02193	2.64333	.03000	2.75587	

ROW	OSMOL -MEAN	LOG D ALA -M	OSM-M* LOG DA LA-M	LEAD	LOG NO S/L	
	X 1	X 2	X 3	X 4	X 5	X
101	129.46311	.07498	9.70719	.04500	2.91381	
102	-470.53690	-.36075	169.74603	.03300	2.34242	
103	-410.53690	-.40214	165.09317	.02300	2.44716	
104	184.46311	.32214	59.42301	.03900	2.94201	
105	194.46310	.25107	48.82392	.03200	2.94694	
106	69.46310	.17764	12.33945	.03300	2.88081	
107	-180.53690	-.25601	46.21919	.03200	2.70757	
108	-85.53690	-.14687	12.56278	.03300	2.78176	
109	159.46311	.04502	7.17908	.05100	2.92942	
110	279.46310	.30543	85.35651	.04800	2.98677	
111	154.46310	.19992	30.88031	.03800	2.92686	
112	-365.53690	-.40214	145.99689	.02400	2.51188	
113	39.46310	-.07992	-3.15388	.02800	2.86332	
114	-175.53689	-.19802	34.75976	.02300	2.71161	
115	129.46311	.10301	13.33604	.04200	2.91381	
116	184.46311	.16892	34.84883	.03500	2.94201	
117	214.46311	-.00420	-.90067	.03500	2.95665	
118	-145.53690	-.12339	17.97775	.02200	2.73640	
119	39.46310	.04502	1.77664	.03000	2.86332	
120	174.46311	.22111	38.57559	.03000	2.93702	
121	174.46311	.16606	26.97140	.03000	2.93702	
122	-355.53690	-.55704	198.04816	.02000	2.52504	
123	-20.53690	-.00420	.08625	.03000	2.82607	
124	89.46310	.11637	10.41085	.02200	2.89209	
125	44.46310	-.12339	-5.48629	.03000	2.86629	
126	19.46310	.06026	1.17285	.02500	2.85126	
127	-55.53690	-.14687	8.15669	.02500	2.80277	
128	-360.53690	-.36075	130.06357	.02300	2.51851	
129	-30.53690	-.14687	4.48494	.03800	2.81954	
130	249.46310	.27910	69.62523	.06200	2.97313	
131	109.46310	.14193	15.53613	.09500	2.90309	
132	4.46310	.21084	9.4011	.04100	2.84198	
133	-170.53690	-.28820	49.14868	.04100	2.71600	
134	154.46310	.08922	13.78125	.09100	2.92686	
135	64.46310	.14193	9.14927	.06800	2.87795	
136	-20.53690	.04502	-.92458	.02900	2.82607	
137	-65.53690	.22111	-14.49088	.03800	2.79588	
138	19.46310	-.19802	-3.85408	.02300	2.85126	
139	314.46311	-.14687	-46.18509	.04300	3.00217	
140	44.46310	.24131	107.25354	.03400	3.05500	
141	84.46310	.19992	16.88589	.01800	2.68930	
142	-98.53690	-.22605	22.27423	.03800	2.77232	
143	119.46310	-.36075	-43.09628	.02300	2.90849	
144	-125.53689	-.14687	18.43756	.04900	2.75205	
145	-235.53690	-.28820	67.88166	.03600	2.65801	
146	-220.53690	-.10111	22.29841	.05200	2.67210	
147	264.46310	.19992	52.87155	.07300	2.98000	
148	-590.53689	-.92502	546.25824	.04400	2.00000	
149	79.46310	-.02193	-1.74260	.03500	2.88649	
150	159.46311	.11637	18.55678	.06600	2.92942	

251	39.46310	-17189	-26.77541	103600	2.86338
252	199.46311	-107392	-15.374102	102800	2.94939
253	425.53690	21064	25.37910	103800	2.82322
254	229.53690	-122605	-39.58284	105000	2.66745
255	340.53690	-125820	-58.14262	104000	2.54407
256	369.46311	04502	16.63335	104600	3.02531
257	390.53690	-36075	-140.88606	103400	2.47712
258	184.46311	17184	32.76809	107200	2.94201
259	-275.53689	-36075	99.39985	102000	2.61805
260	-515.53690	-70317	362.50991	102600	2.24304
261	-65.53690	-17189	11.25201	101600	2.79588
262	-205.53689	-02193	4.50736	101000	2.68574
263	-60.53690	-04041	2.44628	101200	2.79934
264	44.46310	12934	5.75087	101200	2.86629
265	-415.53690	-62399	259.29073	106000	2.43933
266	74.46310	11637	8.66530	101300	2.88366
267	-40.53690	07498	-3.03947	101300	2.81291
268	164.46310	14193	23.34230	101300	2.93197
269	344.46310	39025	134.42684	101300	2.01494
270	-190.53689	-40214	76.62244	101300	2.9897
271	209.46310	23133	48.45517	102500	2.75824
272	54.46310	13301	5.61026	102100	1.7216
273	49.46310	14193	7.02031	104100	2.66923
274	-215.53690	-02193	4.72665	102400	2.67659
275	244.46311	42393	103.63532	103500	2.97081
276	-35.53690	01283	-45595	102100	2.51824
277	104.46310	04502	4.70296	103500	2.96037
278	164.46310	06022	9.91060	107300	2.7297
279	194.46310	06026	11.71641	102300	2.4694
280	-385.53689	-40214	155.03968	105200	2.48430
281	-275.53689	-55704	153.46499	102300	2.51805
282	-200.53690	-25601	51.33938	102500	2.69020
283	34.46310	14193	4.89136	104800	2.6034
284	154.46310	18892	29.12122	106000	2.686
285	-290.53690	-36075	104.81109	102200	2.7206
286	209.46310	06026	12.62231	105600	2.5284
287	24.46310	10111	-2.47346	103400	2.5431
288	-130.53691	-04041	5.27495	102400	2.4819
289	29.46310	18892	5.56618	104000	2.55733
290	169.46310	01283	2.43087	103300	2.94448
291	84.46310	01283	1.08369	104600	2.68930
292	-40.53690	11637	-4.71729	103400	2.61291
293	-15.53690	16505	-2.56006	102400	2.2930
294	134.46310	04041	-5.43361	103300	2.51643
295	520.53689	-40214	209.32853	103300	2.33046
296	99.46311	19992	59.88976	104700	2.95664
297	10.46310	2606	46.77173	105700	2.3952
298	35.53690	171	4.68580	102700	2.76

ESJ-DATA, AND STAT. GROUP-HULT. RESP. AND MULT. RES.(RRR)
ANALYSIS OF DELTA ALA, LEAD

ANALYSIS OF DATA FOR P.SMITH

STATISTICS FOR VARIABLES IN THE COMPLETE MODEL

VARIABLE	MEAN	VARIANCE	STANDARD DEVIATION
USMOL-MEAN	.00001690	53728.26200000	231.79357000
LOG D ALA -M	.00000103	.06633299	.25755192
USM-M*LOG DALA-M	46.76777900	5861.09620000	74.57275800
LEAD	.03443286	.00023701	.01539529
LOG MOS/L	2.80631030	.03477833	.18648948

THE UNIVERSITY OF CHICAGO

DUP040001865

COVARIANCE MATRIX OF REGRESSION COEFFICIENTS

.16488123-06
 -.11957133-03
 -.23155346-07
 .15107287-00
 .11851593-03
 .76968995-06

RESPONSE 1		LEAD	
REGRESSION		BETA COEFF.	SID. DEV. OF REG. COEFF.
COEFFICIENT			
CONSTANT			
OSMOL-MEAN		.11552	.00001
LOG D ALA -M		.13748	.00586
OSM-M*LOG DALA-M		.05238	.00001
RESIDUAL ERROR=			
R SQ= .0494			
ERROR SS= .015086			
ADJ R SQ= .0397			
FCALC= 5.0957			
ADJ TOTAL SS= .70393397-01			
PROBABILITY= .002			
MODEL DF= 3			
ADJ REGRESSION SS= .34793431-02			
ERROR DF= 294			

OBSERVED RESPONSE	CALCULATED RESPONSE	RESIDUAL	STD. 95 PERCENT CONFIDENCE LIMITS-POINT		95 PERCENT CONFIDENCE LIMITS-LINE	
			RESIDUAL	LOWER	UPPER	UPPER
.0400000	.03399466	.01001	.663	.00416951	.06381981	.03117313
.0360000	.03406739	.00393	.261	.00430309	.06383168	.03198536
.0260000	.02956588	-.00157	-.104	-.00033991	.05947167	.03314049
.0500000	.04212269	.00788	.522	.01191238	.07233301	.04769805
.0150000	.03183221	-.01683	-1.116	.00204490	.06161952	.02944365
.0500000	.03881308	-.00881	-.584	.00882039	.06880576	.03457249
.0500000	.03599443	-.00799	-.530	.00622050	.06576836	.03377397
.0520000	.03582839	-.00483	-.320	.00699245	.06666433	.03389501
.0500000	.03307856	.01092	.724	.00920623	.06895089	.03579566
.0770000	.03132689	.04567	3.027	.00153941	.06111837	.02891340
.0100000	.03470064	-.02470	-1.637	.00493977	.06461152	.03673314
.0520000	.03192592	.00007	.005	.00214240	.06170944	.03266814
.0500000	.04041692	-.00542	-.359	.01040702	.07042682	.03605623
.0220000	.03302837	-.01103	-.731	.00324664	.06281010	.03071045
.0170000	.03069263	-.01369	-.908	.00086590	.06051976	.03353313
.0230000	.03180974	-.00881	-.584	.00200822	.06161126	.02925005
.0100000	.02901690	-.01902	-1.261	.00095820	.0599200	.02490253
.0300000	.03070651	-.00071	-.047	.00083916	.06057385	.02746923
.0300000	.03416873	.00383	.254	.00431999	.06401747	.03110788
.0460000	.04417965	.00182	.121	.01342683	.07493047	.03617749
.0210000	.03468188	-.01388	-.920	.00510814	.06495563	.03266888
.0140000	.03297324	-.01897	-1.258	.00317715	.06276933	.03047757
.0130000	.03547187	-.02147	-1.423	.00570827	.06523547	.03339983
.0120000	.03504165	-.02304	-1.527	.00526024	.06482306	.03272778
.0250000	.03091650	-.00592	-.392	.00112083	.06071216	.02842586
.0240000	.03461905	-.01062	-.704	.00485866	.06437944	.03259358
.0360000	.04004974	-.00405	-.268	.01009121	.07000826	.03605790
.0170000	.02882349	-.01182	-.784	.00125845	.05890542	.02399189
.0350000	.03637754	-.00138	-.091	.00561653	.06613835	.03434305
.0250000	.03768420	-.01268	-.841	.00788499	.06748341	.03515153
.0500000	.03536704	.01461	.969	.00562563	.06514846	.03334663
.0250000	.03453746	-.00954	-.632	.00477706	.06429786	.03251189
.0370000	.03568239	.00132	.087	.00592583	.06543896	.03371399
.0350000	.03692997	.00193	.128	.00714976	.06671019	.03463152
.0340000	.03414036	-.00414	-.274	.00833061	.06795010	.03548861
.0540000	.03189080	.02211	1.466	.00202946	.06175214	.02870942
.0260000	.04000419	-.01200	-.796	.0100498	.06996339	.03600726
.0540000	.03218022	.02182	1.446	.00235267	.06200776	.02933351
.0500000	.02897139	.00903	.598	.00102163	.05896442	.02472841
.03240263	.03240263	-.00240	-.159	.00261740	.06210787	.03004009
.03559618	.03559618	-.01560	-1.034	.00571019	.06548217	.03219122
.04138694	.04138694	-.01339	-.887	.01121722	.07155666	.03603594
.03473521	.03473521	-.01079	-.715	.00502051	.06454992	.03269736
.03693542	.03693542	-.02694	-1.785	.00714461	.06672623	.03450359
.02860672	.02860672	-.00061	-.040	.00157113	.05878456	.02321006
.03493977	.03493977	.02306	1.529	.00515461	.06472494	.03257609
.02939004	.02939004	-.00739	-.490	.00051971	.05930140	.02577661
.03062054	.03062054	-.00662	-.439	.00043096	.06081011	.02515867
.03097187	.03097187	-.00297	-.197	.00115379	.06078996	.02822801
.02876660	.02876660	-.01877	-1.244	.00136196	.05889516	.02365274
.04249765	.04249765	-.01450	-.961	.01220446	.07279085	.03648940
.03329676	.03329676	.01070	.709	.0032513	.06306839	.03111239
.03931747	.03931747	.00068	.045	.00944253	.06919242	.03601385
.03602329	.03602329	.00298	.197	.00623354	.06561303	.03360456
.03580055	.03580055	-.00180	-.119	.00595562	.06564482	.03278354
.03040729	.03040729	.01659	1.100	.00137458	.07044000	.03588228
.02861496	.02861496	.00239	.158	.00155298	.05676290	.02327399
.03510000	.03510000	-.02019	-1.338	.00543949	.06503064	.03215525
.03307043	.03307043	.00092	.061	.00531450	.06430334	.03302365
.03307043	.03307043	.00092	.061	.00531450	.06430334	.03302365

.00000000	.02511039	-.00211	-.140	-.00255331	.05878009	.02044485	.03378594
.01600000	.0213501	-.01614	-1.070	.00232311	.06194690	.02945720	.03481281
.01000000	.03221665	-.02222	-1.473	.00237180	.06206551	.02917827	.0356104
.01200000	.03315699	-.02116	-1.402	.00338506	.06328893	.03096845	.03534554
.01200000	.03539333	-.02339	-1.551	.00562847	.06515819	.03330327	.03748338
.06000000	.02841508	.03158	2.094	-.00180542	.05863657	.02277947	.03405069
.01300000	.03554843	-.02255	-1.495	.00579120	.06530566	.03556995	.03752691
.03760000	.03419939	.00280	.186	.00441709	.06398169	.03187412	.03652466
.03600000	.03660772	-.00061	-.040	.00684095	.06377448	.03449070	.03672474
.03200000	.04123074	-.00923	-.612	.01115026	.07131122	.03640820	.04605328
.03000000	.0298907	.01301	.862	.00009727	.05968087	.02653345	.03344469
.03500000	.03795924	-.01296	-.859	.00816181	.06775668	.03544753	.04047095
.02000000	.03525215	-.01525	-1.011	.00549391	.06501039	.03254857	.03724574
.05100000	.03554888	.00545	.361	.00578198	.06531578	.03342998	.03766778
.02400000	.03214430	-.00814	-.540	.00228847	.06200014	.02901504	.03527357
.03500000	.04040729	-.00541	-.358	.01037458	.07040000	.03589228	.04492230
.02100000	.03375494	-.01275	-.845	.00398656	.06323332	.03161537	.03589451
.03500000	.03514940	-.00015	-.010	.00537720	.06421260	.03295729	.03734151
.07300000	.03579130	.03721	2.466	.00599931	.06598330	.03334497	.03823763
.03000000	.03604103	-.01304	-.864	.00622978	.06555227	.03337044	.03671161
.05200000	.02934099	.02266	1.502	-.00058439	.05926637	.02560605	.03307593
.02300000	.02889518	-.00590	-.391	-.00112203	.05891239	.02448449	.03330587
.02500000	.03083982	-.00584	-.387	.00103902	.06094062	.02828851	.03339112
.07800000	.03541077	.01259	.834	.00563884	.06518270	.03322235	.03759920
.02000000	.03688030	.02302	1.526	.00721071	.06674989	.03482593	.03913667
.02200000	.02986682	-.00767	-.521	.00002345	.05971018	.02685362	.03287481
.03600000	.0316589	.02183	1.447	.00634337	.06598840	.03337236	.03895941
.02400000	.0325711	.00074	.049	.00343696	.06307727	.03048889	.03602533
.04000000	.03265052	-.00865	-.573	.00286103	.06244000	.03023494	.03596609
.04000000	.03578587	.00423	.281	.00596960	.06556214	.03326905	.03826339
.03000000	.03551245	-.00251	-.167	.00566591	.06535898	.03247319	.03635171
.04600000	.03469228	.01331	.882	.00491280	.06447175	.03240346	.03696110
.03400000	.03452138	-.00052	-.035	.00472147	.06432130	.03198044	.03781272
.02400000	.03514465	-.01114	-.739	.00533363	.06495568	.03247658	.03781272
.02900000	.03456789	-.00557	-.369	.00471658	.06441921	.03148202	.03765377
.02200000	.02889232	.00311	.206	-.00125742	.05904205	.02365515	.03412949
.04300000	.03851506	.00448	.297	.00866944	.06836068	.03548477	.04154535
.05100000	.03795157	.01305	.865	.00814556	.06775758	.03534008	.04056305
.02700000	.03201869	-.00502	-.333	.00221658	.06192081	.02945205	.03458534

RESIDUAL ERROR2= .01509 ERROR CHECK RATIO= 1.0000 SORTB1= 1.618 BETA2= 9.012

DATE OF ANALYSIS: 06/01/78 PAGE OF ANALYSIS: 023502+01 MODEL: 2 DIAG INCREMENT: .00000 ITERATION NUMBER: 0

COVARIANCE MATRIX OF REGRESSION COEFFICIENTS

.1639463-06
-.11600591-03

.13282394-00

RESPONSE 1 LEAD

REGRESSION COEFFICIENT	BETA COEFF.	STD.DEV.OF REG.COEFF.	CALCULATED T VALUE
---------------------------	-------------	--------------------------	-----------------------

CONSTANT			
OSMOL-MEAN	.03443285		
LOG D ALA -H	.00000800	.00001	1.310
	.00655276	.00550	1.192

RESIDUAL ERROR: .015078 ERROR SS: .67066000-01 ADJ TOTAL SS: .70393397-01 ADJ REGRESSION SS: .33273978-02
R SQ: .0473 ADJ R SQ: .0408 F-CALC: 7.3180 PROBABILITY: .001 MODEL DF: 2. ERROR DF: 295.

OBSERVED RESPONSE	CALCULATED RESPONSE	RESIDUAL	STD. RESIDUAL	95 PERCENT CONFIDENCE LIMITS-POINT		95 PERCENT CONFIDENCE LIMITS-LINE	
				LOWER	UPPER	LOWER	UPPER
.04400000	.03467705	.00932	.618	.00491442	.0643987	.0328503	.03696906
.03800000	.03455262	.00345	.229	.00482846	.06427678	.0323061	.03627463
.02900000	.02957412	-.00157	-.104	-.00031439	.05946264	.02600163	.03314661
.04000000	.04034462	.00366	.640	.01045684	.07023281	.03677677	.04591287
.01500000	.03226040	-.01726	-1.145	.00250815	.06201265	.03010724	.03441356
.03000000	.03612341	-.00512	-.539	.00819406	.06605276	.03422400	.04202282
.02800000	.03623285	-.00825	-.547	.00650262	.06600307	.03412786	.03837784
.03200000	.03571740	-.00472	-.313	.00689989	.06653491	.03379791	.03963668
.03000000	.03633696	.01166	.773	.00853702	.06814089	.03558307	.04109484
.07700000	.03173138	.04527	3.002	.00197487	.06148788	.02952326	.03394249
.01000000	.03512345	-.02512	-1.666	.00539719	.06484972	.03336553	.03688137
.03200000	.03242645	-.00043	-.028	.00268453	.06216837	.03042109	.03443182
.03500000	.03945540	-.00446	-.295	.00955228	.06935852	.03576473	.04314807
.02200000	.03362494	-.01162	-.771	.00389508	.06335480	.03180723	.03584265
.01700000	.03081164	-.01381	-.916	.00100331	.06061997	.02798743	.03363585
.02300000	.03220645	-.00321	-.611	.00243746	.06197545	.02983318	.03487973
.01000000	.02831921	-.01832	-1.215	-.00159146	.05822988	.02456588	.03207254
.03000000	.03123259	-.00123	-.082	.00140937	.06105581	.02825535	.03420983
.03600000	.03458630	.00344	.228	.00473939	.06437321	.03164298	.03746962
.04600000	.04193509	.00404	.268	.01169450	.07222368	.03601057	.04780761
.02100000	.03533983	-.01434	-.951	.00560371	.06507595	.03422423	.03725722
.01400000	.03344131	-.01944	-1.289	.00368376	.06319887	.03121212	.03586651
.01400000	.03579964	-.02180	-1.446	.00606369	.06553558	.03388500	.03771427
.01200000	.03549978	-.02350	-1.559	.00575601	.06524355	.03346117	.03753239
.02500000	.03118781	-.00619	-.410	.00141651	.06095910	.02878382	.03389979
.02400000	.03504347	-.01104	-.732	.00531782	.06476913	.03329395	.03679100
.03800000	.03917548	-.00318	-.211	.00930832	.06904264	.03578624	.04236472
.01700000	.02763540	-.01064	-.706	-.00228973	.05756853	.02374169	.03153711
.03600000	.03647828	-.00148	-.098	.00673544	.06622111	.03445948	.03889707
.02500000	.03751205	-.01251	-.830	.00773293	.06729117	.03501500	.04000910
.03000000	.03571966	.01428	.947	.00598621	.06545311	.03384420	.03759512
.02500000	.03496350	-.00096	-.661	.00523797	.06468902	.03213413	.03670636
.03700000	.03561090	.00109	.072	.00617661	.06564519	.03402211	.03779969
.03800000	.03695814	-.00196	-.130	.00719520	.06672108	.03466201	.03925427
.03400000	.03780627	-.00381	-.253	.00802647	.06759007	.03527841	.04033712
.02200000	.03228430	.02172	1.440	.00845524	.06211335	.02924914	.03531945
.02800000	.03693189	-.01093	-.725	.00910147	.06876231	.03588338	.04198040
.05400000	.03260421	.02140	1.419	.00881137	.06239704	.02994954	.03525987
.03600000	.02515925	-.00984	-.653	-.00175262	.05807113	.02439532	.03192219
.03000000	.03298020	-.00298	-.198	.00324465	.06271574	.03107180	.03488859
.02000000	.03579988	-.01577	-1.046	.00590407	.06563568	.03239266	.03914709
.02600000	.03976686	-.01177	-.780	.00986786	.06966586	.03610768	.04342604
.02400000	.03513316	-.01113	-.738	.00539744	.06486888	.03322402	.03780431
.01000000	.03693561	-.02700	-1.790	.00722235	.06676886	.03456350	.03942171
.02000000	.02717943	.00082	.054	-.00278463	.06071349	.02302197	.03133689
.05600000	.03523611	.02376	1.510	.00547669	.06499552	.03298517	.03788604
.02200000	.02883427	-.00683	-.453	-.00102897	.05669751	.02547581	.03218873
.02400000	.03173343	-.00779	-.517	.00175370	.06183317	.02712469	.03646517
.02600000	.03114412	-.00318	-.211	.00136763	.06098060	.02848783	.03388041
.01000000	.02743946	-.01744	-1.157	-.00250173	.05736064	.02345021	.03142871
.02500000	.04049065	-.01249	-.828	.01060296	.07037835	.03692301	.04405630
.04400000	.03383499	.01020	.676	.00407572	.06353427	.03199893	.03581305
.04000000	.03859686	.00140	.093	.00878961	.06840412	.03578407	.04140966
.03900000	.03631549	.00268	.178	.00655549	.06608349	.03400372	.03862926
.03400000	.03623957	-.00226	-.150	.00845300	.06606613	.03345407	.03906506
.03700000	.03916592	.01783	1.183	.00929969	.06903215	.03578990	.04250493
.03100000	.02721942	.00378	.251	-.00274334	.05718218	.02307134	.03136750
.01200000	.03570065	-.02078	-1.377	.00596452	.06555679	.03306322	.03845308
.02100000	.02630340	.00062	.041	.00304793	.06511903	.03347504	.03759193

$R^2 = .7859$

VARIABLE	MEAN	STD DEV
LOG. D-ALA * 100	1.40229	.25714
Q5401..MOS/	690.93644	231.50235

[illegible]

DUP040001875

NP15= 69

HASKELL LAB. FEMALES
NOUT= 0

SSYNN 0

R= .1353

[illegible]

DUP040001878

R= .7278

MISS O

[illegible]

DUP040001881

[illegible]

0
NMIS=

DUP040001883

ANALYSIS OF DELTA - ALA +LEAD HASKELL LAB, MALES
NP1SE 290

R= ,2066

NMISS= 0

VARIABLE MEAN STD DEV
OSMOL,MOS/L 690.53689 231.79349
LEAD,MG/L .03443 .01540

+ 1470.0000

+ 1170.0000

+ 870.0000

OSMOL,
MOS/L

+ 570.0000

+ 270.0000

+ -30.0000

DUP040001886

LEAD,MG/L

.0820

.1120

.1420

+ -30.0000

[illegible]

REGRESSION OF DELTA-ALA ON URINE LEAD

VARIABLE	COUNT	MEAN	VARIANCE	STANDARD DEVIATION
DELTA ALA, MG/100ML	69.	.23246373	.02004237	.14157109
LEAD, MG/L	69.	.03218840	.00042645	.02065065
OSMOL., MOS/L	69.	578.04347000	49989.13300000	223.58250000
LOG, U-ALA * 100	69.	1.29103522	.06924455	.26314360
LOG, MOS/L	69.	2.72599840	.03419831	.18492786

CORRELATION ANALYSIS

APPENDIX III

CORRELATION MATRIX REGRESSION OF DELTA-ALA ON URINE LEAD

DELTA ALA, MG/100ML	1.0000	69.			
LEAD, MG/L	.0670	1.0000			
OSMOL., MOS/L	.6903	.2080	1.0000		
LOG. D-ALA * 100	.9316	.1353	.7278	1.0000	
LOG. MOS/L	.6692	.2259	.9775	.7256	1.0000

DELTA ALA, MG /100ML LEAD, MG /L OSMOL, MOS/L LOG. D-ALA * 100 LOG. MOS/L

ADJUSTED VALUES AND VECTORS NORM1 = 2.0122107 NORM2 = 2.0122106 REGRESSION OF DELTA-ALA ON URINE LEAD
 SUM OF DIAG = 3.00000000 SUM OF ROOTS = 3.00000000 FRACTIONAL DIFFERENCE = -.00000002

LATENT ROOTS .1742+01 .9632-00 .2949-00

LATENT ROOTS 1.74191 .96321 .29487

CUM PERCENT 58.06379 90.17086100.00000

DELTA ALA, MG/100ML .67088 -.28383 -.68510

LEAD, MG/L .25576 .95573 -.14550

OSMOL, MOS/L .69607 -.07761 .71377

1.7185632 NORM1 = 1.7185631 REGRESSION OF DELTA-ALA ON URINE LE
SUM OF DIAG = 2.00000000 SUM OF ROOTS = 2.00000000 FRACTIONAL DIFFERENCE = .000

LATENT ROOTS .1690+01 .3095-00

LATENT ROOTS 1.69046 .30954

CUM PERCENT 84.52280100.00000

DELTA ALA, MG/100ML .70711 -.70711

OSMOL., MOS/L .70711 .70711

DUP040001894

EIGENVALUES AND VECTORS NORM1 = 2.0473781 NORM2 = 2.0473780 REGRESSION OF DELTA-ALA ON URINE LEAD
 SUM OF DIAG = 3.00000000 SUM OF ROOTS = 2.99999990 FRACTIONAL DIFFERENCE = -.00000003

LATENT ROOTS .1807401 .9249-00 .2684-00

LATENT ROOTS 1.80675 .92486 .26839

CUM PERCENT 60.22513 91.05381 100.00000

LEAD, MG/L .30269 .94855 -.09286

LOG. D-ALA * 100 .66493 -.27997 -.69245

LOG. MG/L .68282 -.14785 .71547

LIGANDS AND VECTORS $\text{HORN1} = 1.7473125$ $\text{HORN2} = 1.7473125$ REGRESSION OF DELTA-ALA ON URINE LEAD $.00000000$
 SUM OF DIAG = 2.00000000 SUM OF ROOTS = 2.00000000 FRACTIONAL DIFFERENCE =

LATENT ROOTS $.1726+01$ $.2744-90$

LATENT ROOTS 1.72564 $.27436$

CUM PERCENT 86.28190100 $.00000$

LOG. D-ALA * 100 $.70711$ $-.70711$

LOG. M05/L $.70711$ $.70711$

REGRESSION OF DELTA-ALA ON URINE LEAD

VARIABLE	COUNT	MEAN	VARIANCE	STANDARD DEVIATION
DELTA ALA, MG/100ML	299.	.29441448	.02340735	.15299460
LEAD, MG/L	299.	.03508693	.00036413	.01908230
OSMOL, MOS/L	299.	690.93644000	53595.65800000	231.50736000
LOG. U-ALA * 100	299.	1.40229024	.06611846	.25713509
LOG. MOS/L	299.	2.80665200	.03469654	.18627007

CORRELATION ANALYSIS

WITH PLYER

CORRELATION MATRIX REGRESSION OF DELTA-ALA ON URINE LEAD

DELTA ALA, MG/100ML 1.0000
299.

LEAD, MG/L .1544 1.0000
299. 299.

OSMOL., MOS/L .7149 .1840 1.0000
299. 299. 299.

LOG. D-ALA * 100 .9386 .1705 .7859 1.0000
299. 299. 299. 299.

LOG. MOS/L .6485 .1555 .9611 .7673 1.0000
299. 299. 299. 299. 299.

DELTA LEAD, M OSMOL. LOG. D LOG. M
ALA, MG G/L MOS/L -ALA * OS/L
/100ML 100

LIG., VALUES AND VECTORS NORM1 = 2.0341273 NORM2 = 2.0341273 REGRESSION OF DELTA-ALA ON URINE LEAD
 SUM OF DIAG = 3.00000000 SUM OF ROOTS = 3.00000000 FRACTIONAL DIFFERENCE = -.00000002

LATENT ROOTS .1788+01 .9279-00 .2844-00

LATENT ROOTS 1.78766 .92793 .28441

CUM PERCENT 59.58870 90.51969 100.00000

DELTA ALA, MG/100ML .67368 -.22761 -.70310

LEAD, MG/L .29077 .95629 -.03097

OSMOL, MOS/L .67941 -.18358 .71042

EIGENVALUES AND VECTORS NORM1 = 1.7384718 NORM2 = 1.7384718 REGRESSION OF DELTA-ALA ON URINE L
SUM OF DIAG = 2.00000000 SUM OF ROOTS = 2.00000000 FRACTIONAL DIFFERENCE = .00

LATENT ROOTS .1715+01 .2851-00

LATENT ROOTS 1.71494 .28506

CUM PERCENT 85.74710100.00000

DELTA ALA, MG/100ML .70711 -.70711

OSMOL., MOS/L .70711 .70711

DUPO40001900

EIGENVALUES AND VECTORS NORM1 = 2.0697945 NORM2 = 2.0697945 REGRESSION OF DELTA-ALA ON URINE LEAD
 SUM OF DIAG = 3.00000000 SUM OF ROOTS = 3.00000000 FRACTIONAL DIFFERENCE = -.00000001

LATENT ROOTS .1831401 .9362-00 .2325-00

LATENT ROOTS 1.83126 .93620 .23255

CUM PERCENT 61.04197 92.24848 100.00000

LEAD, MG/L .26730 .96350 .01445

LOG. D-ALA * 100 .68263 -.17875 -.70857

LOG. MOD/L .68012 -.19927 .70550

EIGENVALUES AND VECTORS NORM1 = 1.7311111 NORM2 = 1.7825550 REGRESSION OF DELTA-ALA ON URINE L
SUM OF DIAG = 2.00000000 SUM OF ROOTS = 2.00000000 FRACTIONAL DIFFERENCE = .00

LATENT ROOTS .1767+01 .2327-00

LATENT ROOTS 1.76730 .23270

CUM PERCENT 88.36506100.00000

LOG. D-ALA * 100 .70711 -.70711

LOG. MOS/L .70711 .70711

REGRESSION OF DELIA-ALA ON URINE LEAD

VARIABLE	COUNT	MEAN	VARIANCE	STANDARD DEVIATION
DELIA-ALA, MG/100ML	298.	.29446284	.02348546	.15324965
LEAD, MG/L	298.	.03443286	.00023701	.01539529
OSWOL., MOS/L	298.	690.53689000	53728.22200000	231.79349000
LOG _e V-ALA * 100	298.	1.40213966	.06633427	.25755440
LOG _e MOS/L	298.	2.80631030	.03477833	.18648948

CORRELATION ANALYSIS

WITHOUT FLXFA

CORRELATION MATRIX REGRESSION OF DELTA-ALA ON URINE LEAD

DELTA ALA, MG/100ML	1.0000
	298.
LEAD, MG/L	.1957 1.0000
	298. 298.
OSMOL., MOS/L	.7154 .2066 1.0000
	298. 298. 298.
LOG. U-ALA * 100	.9387 .2043 .7860 1.0000
	298. 298. 298. 298.
LOG. MOS/L	.6490 .1699 .9610 .7674 1.0000
	298. 298. 298. 298. 298.

DELTA	LEAD, M	OSMOL.	LOG. D	LOG. M
ALA, MG	G/L	MOS/L	-ALA *	OS/L
/100ML			100	

REGRESSION VALUES AND VECTORS NORM1 = 2.0450887 NORM2 = 2.0450887 REGRESSION OF DELTA-ALA ON URINE LEAD
 SUM OF DIAG = 3.00000000 SUM OF ROOTS = 3.00000000 FRACTIONAL DIFFERENCE = -.00000001

LATENT ROOTS .1815401 .9008400 .2845400

LATENT ROOTS 1.81476 .90076 .28448

CUM PERCENT 60.49207 90.51747 100.00000

DELTA ALA, MG/100ML .66641 -.24141 -.70542

LEAD, MG/L .32965 .94403 -.01165

OSMOL, MOS/L .66875 -.22477 .70869

EIGENVALUES AND VECTORS NORM1 = 1.7388771 NORM2 = 1.7388771 REGRESSION OF DELTA-ALA ON URINE LE
SUM OF DIAG = 2.00000000 SUM OF ROOTS = 2.00000000 FRACTIONAL DIFFERENCE = .000

LATENT ROOTS .1715+01 .2846-00

LATENT ROOTS 1.71543 .28457

CUM PERCENT 85.77173100.00000

DELTA ALA, MG/100ML .70711 -.70711

OSMOL, MOS/L .70711 .70711

EIGENVALUES AND VECTORS NORMAL = 2.0702175 REGRESSION OF DELTA-ALA ON URINE LEAD -0.00000001
 SUM OF DIAG = 3.00000000 SUM OF ROOTS = 3.00000000 FRACTIONAL DIFFERENCE =

LATENT ROOTS .1850401 .9184-00 .2318-00

LATENT ROOTS 1.84980 .91842 .23178

CUM PERCENT 61.66007 92.27416100 .00000

LEAD, MG/L .29736 .95417 .03366

LOG. U-ALA * 100 .67828 -.16631 -.71079

LOG. MG/L .67195 -.23419 .70259

EIGENVALUES AND VECTORS NORM1 = 1.7826444 NORM2 = 1.7826444 REGRESSION OF DELTA-ALA ON URINE LEA
SUM OF DIAG = 2.00000000 SUM OF ROOTS = 2.00000000 FRACTIONAL DIFFERENCE = .0000

LATENT ROOTS .1767+01 .2326-00

LATENT ROOTS 1.76741 .23259

CUM PERCENT 88.37026100,00000

LOG. D-ALA * 100 .70711 -.70711

LOG. MOS/L .70711 .70711

DUP040001908

EXPAND

EXPANDED LIST FROM ... ANALYSIS OF DELTA ALA, LEAD

ROW	LEAD-M EAN	OSMOL- MEAN	LEAD-M *OSMOL -M	LOG D- ALA*10 0	LOG MO S/L	X
1	.00957	79.46310	.76023	1.34242	2.88649	X
2	.00357	4.46310	.01592	1.41497	2.84198	
3	-.00643	-240.53690	1.54734	.95424	2.65321	
4	.01557	419.46311	6.52984	1.79239	3.04532	
5	-.01943	-170.53690	3.31402	1.27875	2.71600	
6	-.00443	119.46310	-.52956	1.81954	2.90849	
7	.00643	154.46310	-.99364	1.49136	2.92686	
8	-.00243	64.46310	-.15683	1.67210	2.87795	
9	.01557	224.46311	3.49425	1.72428	2.96142	
10	.04257	-175.53689	-7.47210	1.20412	2.71181	
11	-.02443	49.46310	-1.20853	1.44716	2.86923	
12	-.00243	-130.53691	.31758	1.25527	2.74819	
13	.00057	414.46310	.23506	1.66276	3.04336	
14	-.01243	-35.53690	.44183	1.32222	2.81624	
15	-.01743	-290.53690	5.06489	1.20412	2.60206	
16	-.01143	-195.53690	2.23555	1.30103	2.69461	
17	-.02443	-355.53690	8.68678	.90309	2.52504	
18	-.00443	-135.53689	.60082	1.07918	2.74429	
19	.00357	-90.53690	-.32296	1.53148	2.77815	
20	.01157	670.46310	7.75534	1.73239	3.13386	
21	-.01343	89.46310	-1.20175	1.43136	2.89209	
22	-.02043	-120.53690	2.46291	1.39794	2.75587	
23	-.02043	109.46310	-2.23664	1.47712	2.90309	
24	-.02243	109.46310	-2.45557	1.43136	2.90309	
25	-.00943	-220.53690	2.08029	1.17609	2.67210	
26	-.01043	39.46310	-.41171	1.44716	2.86332	
27	.00157	379.46311	.59467	1.66276	3.02938	
28	-.01743	-440.53689	7.67982	.90309	2.39794	
29	.00057	139.46310	.07910	1.54407	2.91908	
30	-.00943	239.46311	-2.25882	1.57978	2.96848	
31	.01557	99.46310	1.54836	1.47712	2.89763	
32	-.00943	29.46310	-.27792	1.44716	2.85733	
33	.00257	89.46310	.22966	1.51851	2.89209	
34	.00057	199.46311	.11312	1.54407	2.94939	
35	-.00643	249.46310	-.10798	1.61278	2.97313	
36	.01957	-235.53690	-4.60878	1.36173	2.65801	
37	-.00643	254.46311	-1.63693	1.77815	2.97543	
38	.01957	-195.53690	-3.82610	1.36173	2.69461	
39	.00357	-375.53690	-1.33959	.90309	2.49831	
40	-.00443	-60.53690	.35701	1.27875	2.78533	
41	-.01443	-30.53690	.44073	1.64345	2.81954	
42	-.00643	279.46310	-1.77975	1.87506	2.98077	
43	-.01043	14.46310	-.15089	1.49136	2.84619	
44	-.02443	214.46311	-5.23995	1.53148	2.95665	
45	-.00643	-450.53690	2.89824	.84510	2.38021	
46	.02357	-5.53690	-.13049	1.53148	2.83569	
47	-.01243	-370.53689	4.60683	1.00000	2.50515	
48	-.01043	-.53690	.00560	1.00000	2.83885	
49	-.00643	-265.53690	1.70816	1.23045	2.62839	
50	-.02443	-485.53690	11.37440	.90309	2.35218	

Appendix IV

DUP040001909

EXPAND

ROW	LEAD-M EAN	X 1	OSMOL- MEAN	X 2	LEAD-M *OSMOL -M	X 3	LOG D- ALA*10 0	X 4	LOG MO S/L	X 5	X
51	-.00643	389.46310	-2.50536	1.85126	3.03342						
52	.00957	-60.53690	-.57917	1.38021	2.79934						
53	.00557	299.46311	1.66715	1.67210	2.99564						
54	.00457	174.46311	.79680	1.47712	2.93702						
55	-.00043	204.46310	-.08850	1.43136	2.95182						
56	.02257	244.46311	5.51583	1.82607	2.97081						
57	-.00343	-445.53690	1.52947	.84510	2.38917						
58	-.01943	169.46311	-3.29315	1.39794	2.93450						
59	.00157	34.46310	.05401	1.50515	2.86034						
60	.00857	-30.53690	-.26161	1.36173	2.81954						
61	-.01243	-400.53689	4.97982	1.00000	2.46240						
62	-.00543	199.46311	-1.08385	1.84510	2.94939						
63	.01857	119.46310	2.21809	1.83685	2.90649						
64	-.00343	219.46310	-.75339	1.83251	2.95904						
65	-.02143	-260.53689	5.58405	1.67210	2.53347						
66	-.01843	-480.53690	8.85767	.69897	2.32222						
67	.00257	369.46311	.94846	1.78533	3.02531						
68	.00157	119.46310	.18722	1.57978	2.90849						
69	-.00343	249.46310	-.85637	1.84510	2.97313						
70	-.00743	-255.53690	1.89937	1.32222	2.63849						
71	-.00743	339.46311	-2.52318	1.70757	3.01284						
72	-.00543	-165.53690	.89934	1.36173	2.72016						
73	-.01243	59.46310	-.73930	1.39794	2.87506						
74	-.00443	169.46310	-.83986	1.51851	2.94448						
75	.01357	204.46310	2.77398	1.56820	2.95182						
76	-.00343	209.46310	-.71906	1.44716	2.95424						
77	.01157	44.46310	.51431	1.46240	2.86629						
78	.01557	149.46310	2.32671	1.39794	2.92428						
79	.03757	-110.53690	-4.15256	1.80618	2.76343						
80	-.00143	-210.53690	.30167	.90309	2.68124						
81	-.00543	-230.53689	1.25247	1.04139	2.66276						
82	-.00643	349.46311	-2.94697	1.68124	3.01703						
83	-.01043	39.46310	-.41171	1.27875	2.86332						
84	.00557	129.46311	.72074	1.47712	2.91381						
85	-.00457	94.46310	.43143	1.47712	2.89487						
86	.01957	64.46310	1.65270	1.84510	2.88930						
87	-.00643	129.46311	-.83282	1.71600	2.91381						
88	-.01443	-75.53690	1.09021	1.25527	2.78888						
89	-.02043	-305.53690	6.24299	.95424	2.58546						
90	-.00543	-150.53689	.81785	1.25527	2.73239						
91	-.01143	224.46311	-2.56626	1.56820	2.96142						
92	-.01443	-395.53690	5.70873	1.04139	2.46982						
93	-.02043	-360.53690	7.36680	1.17609	2.51851						
94	-.00643	-175.53689	1.12920	1.59106	2.71181						
95	.02057	214.46311	4.41089	1.69897	2.95865						
96	.01057	-105.53689	-1.11522	1.23045	2.76716						
97	-.00643	-335.53690	2.15846	1.11394	2.55023						
98	.00057	134.46310	.07626	1.67210	2.91645						
99	-.02443	14.46310	-.35337	1.56820	2.84819						
100	-.00443	-120.53690	.53432	1.38021	2.75967						

DUP040001910

EXPAND

EXPANDED LIST FROM ... ANALYSIS OF DELTA ALA, LEAD

ROW	LEAD-M EAN	OSMOL- MEAN	LEAD-M *OSMOL -M	LOG D- ALA*10 0	LOG MO S/L	X	X	X	X	X
	X 1	X 2	X 3	X 4	X 5	X	X	X	X	X
101	.01057	129.46311	1.36805	1.47712	2.91381					
102	-.00143	-470.53690	.67421	1.04139	2.34242					
103	-.01143	-410.53690	4.69361	1.00000	2.44716					
104	.00457	184.46311	.84247	1.72428	2.94201					
105	-.00243	194.46310	-.47310	1.65321	2.94694					
106	-.00143	69.46310	-.09953	1.57978	2.88081					
107	-.00243	-180.53690	.43922	1.14613	2.70757					
108	-.00143	-85.53690	.12256	1.25527	2.78176					
109	.01657	159.46311	2.64185	1.44716	2.92942					
110	.01357	279.46310	3.79152	1.70757	2.98677					
111	-.00357	154.46310	.55099	1.60206	2.92686					
112	-.01043	-365.53690	3.81359	1.00000	2.51188					
113	-.00643	39.46310	-.25386	1.32222	2.86332					
114	-.00543	-175.53689	1.65581	1.20412	2.71181					
115	.00757	129.46311	.97967	1.50515	2.91381					
116	.00057	184.46311	.10462	1.59106	2.94201					
117	.00057	214.46311	.12163	1.59794	2.95665					
118	-.01243	-145.53690	1.80944	1.27875	2.73640					
119	-.00443	39.46310	-.17493	1.44716	2.86332					
120	-.00443	174.46311	-.77337	1.62325	2.93702					
121	-.00443	174.46311	-.77337	1.56820	2.93702					
122	-.01443	-355.53690	5.13141	.84510	2.52504					
123	-.00443	-20.53690	.09104	1.39794	2.82607					
124	-.01243	89.46310	-1.11228	1.51851	2.89209					
125	-.00443	44.46310	-.19710	1.27675	2.86629					
126	-.00943	19.46310	-.18359	1.46240	2.85126					
127	-.00943	-55.53690	.52387	1.25527	2.80277					
128	-.01143	-360.53690	4.12197	1.04139	2.51851					
129	.00357	-30.53690	-.10893	1.25527	2.81934					
130	.02757	249.46310	6.87698	1.66124	2.97313					
131	.06057	109.46310	6.62987	1.54407	2.90309					
132	.00657	4.46310	.02931	1.61278	2.84198					
133	.00657	-170.53690	-1.11994	1.11394	2.71600					
134	.00657	154.46310	8.73754	1.49136	2.92686					
135	.03357	64.46310	2.16384	1.54407	2.87795					
136	-.00543	-20.53690	.11157	1.44716	2.82607					
137	.00357	-65.53690	-.23378	1.62325	2.79588					
138	-.01143	19.46310	-.22252	1.20412	2.85126					
139	.00857	314.46311	2.69405	1.25527	3.00217					
140	-.00043	444.46310	-.19239	1.64345	3.05500					
141	-.01643	84.46310	-1.38797	1.60206	2.88930					
142	.00357	-98.53690	-.35150	1.17609	2.77332					
143	-.01143	119.46310	-1.36580	1.04139	2.90849					
144	.01457	-125.53689	-1.82871	1.25527	2.75205					
145	.00157	-235.53690	-.36912	1.11394	2.65801					
146	.01757	-220.53690	-3.87420	1.30103	2.67210					
147	.03857	264.46310	10.19959	1.60206	2.98000					
148	.00957	-590.53689	-5.64975	.47712	2.00000					
149	.00057	79.46310	.04507	1.38021	2.88649					
150	.03157	159.46311	5.03379	1.51851	2.92942					

DUP040001911

EXPAND

EXPANDED LIST FROM ... ANALYSIS OF DELTA ALA LEAD

ROW	LEAD-M EAN	X 1	OSMOL- MEAN	LEAD-M *OSMOL -M	LOG D- ALA*10 0	LOG MO S/L	X 5	X 4	X 3	X 2	X 1
151	.04357	269.46311	11.73974	1.63347	2.98227	2.84510					
152	.02057	9.46310	.19463	1.41497	2.84510	2.84510					
153	-.02443	-445.53690	10.88574	.90309	2.38917	2.87795					
154	-.02443	64.46310	-1.57502	1.20412	2.87795	3.02938					
155	-.02443	379.46311	-9.27137	1.62325	3.02938	2.88649					
156	-.00443	79.46310	-.35225	1.66276	2.88649	2.89487					
157	-.01443	94.46310	-1.36337	1.60206	2.89487	2.93952					
158	.01157	172.46310	2.07588	1.43136	2.93952	2.75205					
159	-.00543	-125.53689	.68202	1.11394	2.75205	2.57403					
160	.00257	-315.53669	-.81003	.90309	2.57403	2.68124					
161	.00457	-210.53690	-.96155	1.23045	2.68124	2.45484					
162	-.01043	-405.53690	4.23091	.60206	2.45484	2.86629					
163	.00357	44.46310	.15861	1.63347	2.86629	2.94939					
164	.00257	192.46311	.51205	1.51851	2.94939	2.97543					
165	.01557	254.46311	3.96126	1.49136	2.97543	2.95424					
166	-.01743	209.46310	-3.65154	1.47712	2.95424	2.89930					
167	-.00643	-15.53690	.09995	1.27875	2.89930	2.76343					
168	-.00443	-110.53690	.48999	1.43136	2.76343	2.94448					
169	-.00143	189.46310	-.27147	1.55630	2.94448	2.63449					
170	-.02243	-255.53690	5.73242	1.04139	2.63449	2.77452					
171	-.01243	-95.53690	1.18780	1.23045	2.77452	2.90037					
172	-.00343	104.46310	-.35861	1.50515	2.90037	2.88366					
173	.00257	74.46310	.19116	1.49136	2.88366	2.53148					
174	-.00843	-350.53690	2.95603	1.17609	2.53148	2.85733					
175	-.00143	29.46310	-.04222	1.30103	2.85733	2.94939					
176	-.00243	199.46311	-.48527	1.41497	2.94939	2.98344					
177	.01257	294.46311	3.70056	1.59106	2.98344	2.82930					
178	.00757	-15.53690	-.11757	1.34242	2.82930	2.74036					
179	.00257	-140.53690	-.36078	1.14613	2.74036	2.88930					
180	-.00743	84.46310	-.62780	1.38021	2.88930	2.81954					
181	.02557	-30.53690	-.78074	1.49136	2.81954	2.92942					
182	.01357	159.46311	2.16346	1.17609	2.92942	2.84819					
183	.01657	14.46310	.23961	1.46240	2.84819	2.94448					
184	.00557	189.46310	1.05477	1.56820	2.94448	2.23045					
185	-.00643	-520.53689	3.34854	.77915	2.23045	2.56630					
186	.00257	-330.53689	-.84853	1.11394	2.56630	2.99123					
187	.00257	289.46310	.74309	1.62325	2.99123	2.91381					
188	-.00643	129.46311	-.83282	1.66276	2.91381	3.04922					
189	.01957	429.46310	8.40337	1.62325	3.04922	2.56229					
190	-.00043	-325.53690	.14091	1.49136	2.56229	2.30103					
191	.00957	-490.53690	-4.42652	1.14613	2.30103	2.56229					
192	.00957	-325.53690	-3.11446	1.14613	2.56229	2.91908					
193	.00957	139.46310	1.33426	1.65321	2.91908	2.86034					
194	-.00043	34.46310	-.01492	1.49136	2.86034	2.78533					
195	-.01343	-80.53690	1.08184	1.27875	2.78533	2.92169					
196	.00057	144.46311	.08193	1.57978	2.92169	2.94939					
197	.00157	199.46311	.31259	1.66276	2.94939	2.80816					
198	.00057	-50.53690	-.02866	1.34242	2.80816	2.99564					
199	.01957	299.46311	5.85964	1.65321	2.99564	3.00847					
200	-.00743	324.46311	-2.41169	1.79239	3.00847						

DUP040001912

EXPAND

EXPANDED LIST FROM ... ANALYSIS OF DELTA ALA LEAD

ROW	LEAD-M EAN	X 1	OSMOL- MEAN	LEAD-M *OSMOL -M	LOG D- ALA*10 0	LOG MO S/L	X
201	.00957	184.46311	1.76478	1.56820	2.94201		
202	.00157	-30.53690	-.04786	1.53148	2.81954		
203	.00357	-40.53690	-.14460	1.44197	2.81291		
204	.00843	-315.53689	2.66088	1.04139	2.57403		
205	.00757	274.46310	2.07690	1.60206	2.98453		
206	.01443	119.46310	-1.72419	1.38021	2.90849		
207	.01157	-260.53689	-3.01367	1.34242	2.63347		
208	.01043	-255.53690	.11061	1.04139	2.63849		
209	.01157	-260.53689	-3.01367	1.34242	2.63347		
210	.00843	-35.53690	.29968	1.41497	2.81624		
211	.00357	154.46310	.55099	1.76343	2.92686		
212	.00843	-205.53689	1.73326	1.25527	2.68574		
213	.01957	79.46310	1.55487	1.34242	2.88649		
214	.00043	164.46310	-.07119	1.30103	2.93197		
215	.01243	109.46310	-1.36094	1.53148	2.90309		
216	.01243	199.46311	-2.47990	1.64345	2.94939		
217	.00843	-65.53690	.55266	1.41497	2.79588		
218	.00643	69.46310	-.44685	1.69020	2.88081		
219	.00157	-604.53689	-.94739	1.73239	1.93450		
220	.01843	-265.53690	4.89460	1.39794	2.62839		
221	.01043	29.46310	-.30738	1.39794	2.85733		
222	.02443	-350.53690	8.56462	1.07918	2.53148		
223	.00643	99.46310	-.63983	1.70757	2.89763		
224	.01443	139.46310	-2.01285	1.54407	2.91908		
225	.00243	104.46310	-.25414	1.55630	2.90037		
226	.01843	-40.53690	.74721	1.56820	2.81291		
227	.01443	49.46310	-.71389	1.60206	2.86923		
228	.01843	-70.53690	1.30020	1.39794	2.79239		
229	.00643	-145.53690	.93622	1.36173	2.73640		
230	.00557	164.46310	.91559	1.77085	2.93197		
231	.00943	-465.53690	4.39134	1.04139	2.35218		
232	.00243	-275.53689	.67034	1.30103	2.61805		
233	.00243	54.46310	-.13250	1.69897	2.87216		
234	.03057	414.46310	12.66895	1.69897	3.04336		
235	.01557	179.46310	2.79373	1.59106	2.93952		
236	.04257	-15.53690	-.66136	1.30103	2.82930		
237	.00857	294.46311	2.52271	1.60206	2.99344		
238	.00257	-205.53689	-.52764	1.32222	2.68574		
239	.00357	299.46311	1.06823	1.69897	2.99564		
240	.02857	234.46310	6.69794	1.55630	2.96614		
241	.00943	-90.53690	.85402	1.47712	2.77815		
242	.01643	490.46311	-.805971	1.56820	3.07225		
243	.02143	-15.53690	.33300	1.47712	2.82930		
244	.01343	-435.53690	5.85051	1.23045	2.40654		
245	.00843	119.46310	-1.00742	1.25527	2.90649		
246	.01057	379.46311	4.00984	1.84510	3.02938		
247	.01557	44.46310	.69216	1.27875	2.86629		
248	.00557	229.46311	1.27745	1.57978	2.96379		
249	.01557	59.46310	.92567	1.23045	2.87506		
250	.00057	-150.53689	-.08538	1.53148	2.73239		

DUP040001913

EXPAND

EXPANDED LIST FROM ... ANALYSIS OF DELTA ALA, LEAD

ROW	LEAD-M EAN	OSMOL- MEAN	LEAD-M *OSMOL -M	LOG D- ALA*10 0	LOG MO S/L	X
	X 1	X 2	X 3	X 4	X 5	X
251	.00357	39.46310	.14077	1.23045	2.86332	
252	-.00643	199.46311	-1.28312	1.32222	2.84939	
253	.00357	-25.53690	-.09109	1.61278	2.82282	
254	.01557	-225.53690	-3.51096	1.17609	2.66745	
255	.00557	-340.53690	-1.89582	1.11394	2.54407	
256	.01157	369.46311	4.27363	1.44716	3.02531	
257	-.00043	-390.53690	.16905	1.04139	2.47712	
258	.03757	184.46311	6.92975	1.57978	2.94201	
259	-.01443	-275.53689	3.97679	1.04139	2.61805	
260	-.00843	-515.53690	4.34745	.69897	2.24304	
261	-.01843	-65.53690	1.20803	1.23045	2.79588	
262	-.02443	-205.53689	5.02185	1.38021	2.68574	
263	-.02243	-60.53690	1.35802	1.36173	2.79934	
264	-.02243	44.46310	-.99743	1.53148	2.86629	
265	.02557	-415.53690	-10.62409	.77815	2.43933	
266	-.02143	74.46310	-1.59596	1.51851	2.88366	
267	.00257	-40.53690	-.10406	1.47712	2.81291	
268	.00157	164.46310	.25774	1.54407	2.93197	
269	-.00243	344.46310	-.83803	1.79239	3.01494	
270	.00357	-190.53689	-1.63236	1.00000	2.69697	
271	-.00943	209.46310	-1.97584	1.63347	2.95424	
272	-.01443	54.46310	-.78606	1.50515	2.87216	
273	.00657	49.46310	.32483	1.54407	2.86923	
274	-.01043	-215.53690	2.24867	1.38021	2.67669	
275	.00057	244.46311	.13865	1.82607	2.97081	
276	-.01343	-35.53690	.47736	1.41497	2.81624	
277	.00057	104.46310	.05925	1.44716	2.90037	
278	.03857	164.46310	6.34287	1.46240	2.93197	
279	-.01143	194.46310	-2.22327	1.46240	2.94694	
280	.01757	-385.53689	-6.77278	1.00000	2.48430	
281	-.01143	-275.53689	3.15017	.84510	2.61805	
282	-.00943	-200.53690	1.89164	1.14613	2.59020	
283	.01357	34.46310	.46757	1.54407	2.86034	
284	.02557	154.46310	3.94918	1.59106	2.92686	
285	-.01243	-290.53690	3.61220	1.04139	2.60206	
286	.02357	209.46310	4.93645	1.46240	2.95424	
287	-.00043	24.46310	-.01059	1.30103	2.85431	
288	-.01043	-130.53691	1.36187	1.36173	2.74819	
289	.00557	29.46310	.16403	1.59106	2.85733	
290	-.00143	189.46310	-.27147	1.41497	2.94448	
291	.01357	84.46310	1.14592	1.41497	2.88930	
292	-.00043	-40.53690	.01755	1.51851	2.81291	
293	-.01043	-15.53690	.16209	1.56820	2.82930	
294	-.00543	134.46310	-.73052	1.36173	2.91645	
295	-.00243	-520.53689	1.26639	1.00000	2.23045	
296	.00257	299.46311	2.56554	1.60206	2.99564	
297	.01657	179.46310	2.97319	1.66276	2.93952	
298	-.00743	-85.53690	.63578	1.23045	2.78176	

DUP040001914

ESD-MATH. AND STAT. GROUP-MULT. RESP. AND MULT. REG.(MRNR)
ANALYSIS OF DELTA ALA, LEAD

ANALYSIS OF DATA FOR P.SMITH

STATISTICS FOR VARIABLES IN THE COMPLETE MODEL

VARIABLE		MEAN	VARIANCE	STANDARD DEVIATION
LEAD-MEAN	1	.00000003	.00023701	.01539525
USMOL-MEAN	2	.00001690	53728.26200000	231.79357000
LEAD-M*OSMOL-M	3	.73472045	16.50467500	4.06259460
LOG U-ALA*100	4	1.40213966	.06633427	.25755440
LOG MOS/L	5	2.80631030	.03477833	.18648948

ANALYSIS OF DATA FOR P. SMITH

LEAD-MEAN	1.0000				
OSMOL-MEAN	.2066	1.0000			
LEAD-M*OSMOL-M	-.1310	.0087	1.0000		
LOG D-ALA*100	.2043	.7860	-.0528	1.0000	
LOG MUS/L	.1698	.9610	.0002	.7674	1.0000

EIGENVECTORS OF THE CORRELATION MATRIX
SUM OF THE ROOTS = 3.00000

ANALYSIS OF DATA FOR P. SMITH

PRODUCT OF THE ROOTS = ,93961558

LATENT ROOTS .1241+01 .1008+01 .7514-00

LATENT ROOTS 1.24075 1.00787 .75139

LEAD-MEAN .71268 -.01519 -.70132

OSMOL-MEAN .59832 .53506 .59642

LEAD-M*OSMOL-M -.36619 .84467 -.39042

DATE OF INVERSE= .1004205+01 TRACE OF INVERSE= .3129021+01 MODEL= 1 DIAG INCREMENT= .00000 ITERATION NUMBER= 04324/2

COVARIANCE MATRIX OF REGRESSION COEFFICIENTS

.15117736+02
 -.20850709-03
 .76084814-02
 .65549988-07
 -.13507749-06
 .20784765-03

RESPONSE 1 LOG D-ALA*100

	REGRESSION COEFFICIENT	BETA COEFF.	STD. DEV. OF REG. COEFF.	CALCULATED T VALUE
CONSTANT	1.40469331			
LEAD-MEAN	.60484976	.03615	.61831	.978
OSKOL-MEAN	.00086561	.77903	.00004	21.260*
LEAD-M*OSKOL-M	-.000347569	-.05482	.00229	-1.516

RESIDUAL ERROR1= .159024 ERROR SS= .74348962+01 ADJ TOTAL SS= .19701278+02 ADJ REGRESSION SS= .12266382+02
 R SQ= .6226 ADJ R SQ= .6188 FCALC=161.6842 PROBABILITY= .000 MODEL DF= 3. ERROR DF= 294.

OBSERVED RESPONSE	CALCULATED RESPONSE	RESIDUAL	STD. RESIDUAL	95 PERCENT CONFIDENCE LOWER	95 PERCENT CONFIDENCE UPPER	95 PERCENT CONFIDENCE LIMITS-LINE LOWER	95 PERCENT CONFIDENCE LIMITS-LINE UPPER
1.34242000	1.47662187	-1.13420	-1.844	1.16289073	1.79035300	1.45484941	1.49839433
1.41497000	1.41065887	0.0431	.027	1.09711942	1.72419831	1.39184922	1.42948581
1.93423999	1.18721268	-2.3297	-1.465	1.07310714	1.50131822	1.16058359	1.21384177
1.79236999	1.75450575	0.3788	.238	1.43787181	2.07113970	1.70650716	1.80250435
1.27074999	1.23380207	0.0495	.283	1.31921523	1.54838890	1.20199499	1.26560915
1.81953999	1.50726140	3.1228	1.964	1.19346341	1.82105938	1.48454586	1.52997693
1.19159999	1.53796111	-0.4860	-.293	1.22392055	1.85200167	1.51210991	1.56381232
1.67209999	1.45956692	2.1253	1.336	1.14396736	1.77316648	1.43978047	1.47935337
1.17242000	1.59626216	1.2802	.805	1.28158134	1.91094297	1.56353663	1.62898569
1.20412000	1.30446385	-1.0034	-.631	1.06465079	1.62427691	1.23868228	1.37024541
1.44715999	1.42693142	0.0203	.064	1.12168358	1.75217925	1.39914237	1.47472046
1.25526999	1.28912366	0.0385	-.213	1.07545078	1.60279658	1.26820713	1.31004024
1.60275999	1.76296364	-1.0022	-.630	1.44772834	2.07823890	1.72512335	1.80083492
1.32222000	1.35887649	-0.0266	-.268	1.05101708	1.67873591	1.34132755	1.38842544
1.20412000	1.12505282	0.7907	.497	1.0982322	1.44028243	1.08741613	1.16268952
1.30103000	1.22074901	0.8028	.505	1.0665078	1.53484723	1.19420636	1.24729165
1.90306999	1.05196552	-1.4888	-.936	1.3483959	1.36929145	1.09959603	1.10433501
1.07917999	1.28260149	-2.0342	-1.279	1.06893554	1.59629744	1.26134203	1.30386095
1.53148000	1.32960355	2.0188	1.269	1.01594585	1.64326125	1.30891611	1.35029100
1.73236999	1.96509556	-2.3271	-1.463	1.64864532	2.28454580	1.90110125	2.02098990
1.43135999	1.47818567	-0.0483	-.294	1.16390981	1.79246153	1.44961753	1.50675380
1.37939999	1.27943599	1.1650	.745	1.06694195	1.59393004	1.24856010	1.31031188
1.47712000	1.49486095	-0.0174	-.112	1.17966674	1.81005515	1.45752193	1.53219996
1.45135999	1.49441217	0.0630	-.396	1.17893226	1.80989207	1.45473367	1.53409067
1.17608999	1.20085798	-0.0277	-.156	1.08674530	1.51497086	1.17474579	1.22757117
1.44715999	1.43397371	0.0319	.083	1.12101065	1.74784578	1.41025068	1.45769075
1.66275999	1.73204218	-0.0826	-.436	1.47170210	2.04698230	1.69691277	1.76717159
1.90306999	1.98612234	-0.0303	-.522	1.66930307	1.30321431	1.93518972	1.03705496
1.54406999	1.52548239	0.0189	.117	1.21177129	1.83919348	1.50400068	1.54696409
1.57970000	1.61412096	-0.0344	-.216	1.29829119	1.92895073	1.57999474	1.64824718
1.47712000	1.49482395	-0.0170	-.111	1.18070425	1.80894364	1.46802832	1.52161957
1.44715999	1.42545742	0.0210	.136	1.1166371	1.73925112	1.40280122	1.44611362
1.51851000	1.48288613	0.0362	.224	1.16329905	1.79647721	1.46328852	1.50250775
1.54406999	1.57730063	-0.0323	-.209	1.26338390	1.89121777	1.55299741	1.60160425
1.61277999	1.62074508	-0.0797	-.050	1.30656876	1.93492140	1.59329376	1.64819640
1.30172999	1.22866358	0.0730	.837	1.91277544	1.54455172	1.18586017	1.27146699
1.77014999	1.62675617	1.5139	.952	1.31214865	1.94136770	1.59472738	1.65878836
1.36172999	1.28056769	0.1016	.636	1.04510391	1.57603148	1.22101754	1.30011735
1.90306999	1.08843760	-1.8335	-1.153	1.7129194	1.40158325	1.04951058	1.12336461
1.27974999	1.33103753	-0.0523	-.329	1.071746126	1.64465381	1.31132314	1.35079193
1.64344999	1.36799664	2.7545	1.732	1.05001430	1.68198299	1.34283933	1.39315796
1.87505999	1.64895746	2.2610	1.422	1.33416894	1.96374598	1.61521390	1.68270102
1.49135999	1.41142689	0.7993	.503	1.09761061	1.72524317	1.36846016	1.43439361
1.53148000	1.59376939	-0.0629	-.392	1.27650949	1.91102928	1.54180154	1.64573723
1.84509999	1.00073883	-1.5564	-.979	1.09361567	1.31637880	1.09980708	1.04167058
1.53148000	1.41460661	0.1687	.735	1.09361567	1.72940156	1.38082378	1.44839345
1.00000000	1.06042616	-0.0642	-.380	1.74502225	1.37581806	1.02139692	1.09944139
1.00000000	1.39789881	-3.9790	-2.502	1.08410750	1.71169011	1.37527570	1.42052191
1.25044999	1.16501342	0.0644	.411	1.85077952	1.47924732	1.13691078	1.19311605
1.90306999	1.94740688	-0.0432	-.279	1.62761036	1.26700340	1.88268629	1.01212746
1.85115999	1.74663424	1.0463	.658	1.43088450	2.06236400	1.70486438	1.78840411
1.36021000	1.36009149	0.0212	.127	1.04627800	1.87390499	1.33716276	1.38302032
1.67209999	1.66146499	0.0162	.067	1.34707530	1.97589467	1.63114807	1.69148950
1.47712000	1.55570370	-0.0788	-.494	1.24109506	1.85951233	1.53284165	1.57656575
1.43135999	1.58173246	-1.5036	-.946	1.26776144	1.89568824	1.56682838	1.60662130
1.62607000	1.61077847	2.1529	1.354	1.29408355	1.92667338	1.56792504	1.65363190
1.04509999	1.01163886	-1.6654	-1.047	1.69615571	1.33712202	1.07193447	1.05134336
1.53793999	1.05107462	-1.5313	-.963	1.23843997	1.86670928	1.051018392	1.09196833
1.36021000	1.43320515	0.0630	.439	1.12173779	1.46801251	1.41607404	1.45199136

1.07126638	1.06256462	1.32716775	1.37020701
1.07126638	1.38656482	1.03399166	1.10874110
1.07126638	1.69435735	1.36163135	1.39996173
1.07126638	1.29637739	1.56288347	1.66323217
1.07126638	1.18939683	1.13063813	1.59543499
1.07126638	1.09882206	1.3255722	1.43229653
1.07126638	1.95089829	1.57839009	1.29079473
1.07126638	1.21857427	1.45972751	1.62476073
1.07126638	1.15704893	1.42804156	1.51850961
1.07126638	1.06965621	1.36366782	1.40281716
1.07126638	1.03732568	1.33101082	1.37085697
1.07126638	1.10151622	1.39154010	1.43925799
1.07126638	1.35808842	1.60322644	1.70510262
1.07126638	1.47425793	2.10540770	1.83025980
1.07126638	1.15815449	1.78726617	1.50398912
1.07126638	1.00910155	1.63645415	1.34373457
1.07126638	1.1916057	1.82018737	1.53425395
1.07126638	1.99680319	1.62558481	1.34099996
1.07126638	1.8891935	1.51716170	1.22985341
1.07126638	1.92245790	1.19862947	1.27714026
1.07126638	1.30084004	1.55174412	1.69124095
1.07126638	1.60030972	1.23757191	1.97871197
1.07126638	1.16008520	1.45821042	1.49311744
1.07126638	1.22766112	1.49613495	1.59251301
1.07126638	1.30072179	1.54457870	1.70240483
1.07126638	1.11017977	1.39403388	1.45826260
1.07126638	1.64728686	1.9003803	1.02879705
1.07126638	1.13582672	1.26553211	1.48992503
1.07126638	1.42971276	1.67975430	1.82146041
1.07126638	1.15833373	1.45089538	1.49314584
1.07126638	1.16807695	1.45363414	1.51230715
1.07126638	1.24572562	1.53332236	1.58631772
1.07126638	1.97668402	1.26925099	1.31149000
1.07126638	1.82129623	1.10367182	1.16618592
1.07126638	1.91443002	1.20170301	1.25540596
1.07126638	1.71711121	1.34818884	1.07270557
1.07126638	1.13124108	1.46371131	1.42536304
1.07126638	1.26323307	1.55315877	1.60108922
1.07126638	1.30571121	1.58537438	1.63534025
1.07126638	1.27241245	1.54844322	1.62966568
1.07126638	1.07339065	1.36096933	1.40704288
1.07126638	1.99098462	1.70062156	1.32508041
1.07126638	1.25483811	1.61828932	1.59329036
1.07126638	1.8342989	1.54425317	1.53252317
1.07126638	1.99647157	1.10957737	1.19043235
1.07126638	1.16057297	1.28658558	1.33410843
1.07126638	1.15647051	1.47275074	1.51582499
1.07126638	1.77101070	1.45076959	1.48930602
1.07126638	1.11593787	1.05131388	1.12046510
1.07126638	1.26354836	1.44067277	1.44828121
1.07126638	1.33947003	1.55199338	1.60313832
1.07126638	1.08257756	1.61998023	1.68866654
1.07126638	1.97208317	1.37562244	1.41683756
1.07126638	1.16165893	1.28357505	1.50812404
1.07126638	1.08135790	1.45229046	1.49868527
1.07126638	1.22925754	1.36007400	1.43280219
1.07126638	1.11227824	1.51620066	1.57025448
1.07126638	1.25451988	1.39957426	1.45322685
1.07126638	1.62220070	1.59462425	1.59216796
1.07126638	1.80834238	1.89228585	1.98487590
1.07126638	1.33990261	1.08982702	1.15633003
1.07126638	1.20182669	1.62313201	1.5831312
1.07126638	1.44122855	1.82969698	1.54029948
1.07126638	1.60757515	2.07691040	1.81447423
1.07126638	1.80375136	1.43673094	1.15307164
1.07126638	1.57479022	1.09416027	1.44143733

[illegible]

[illegible]

UCL OF INVERSE= .1044579+01 TRACE OF INVERSE= .2009158+01 MODEL= 2 DIAG INCREMENT= .00000 ITERATION NUMBER= 043241

COVARIANCE MATRIX OF REGRESSION COEFFICIENTS

.14839220+02
-120360583-03 .65460899-07

RESPONSE 1 LOG D-ALA*100

	REGRESSION COEFFICIENT	BETA COEFF.	STD.DEV.OF REG.COEFF.	CALCULATED T VALUE
CONSTANT	1.40213965			
LEAD-MEAN	.73208091	.04376	.61394	1.192
USMOL-MEAN	.00086334	.77698	.00004	21.172*
RESIDUAL ERROR1=	.159374	ADJ TOTAL SS= .74930172+01	ADJ REGRESSION SS= .12808261+02	
R SQ= .6197	ADJ R SQ= .6171	FCALC=240.3196	PROBABILITY= .000	ADJ REGRESSION SS= .12808261+02
			MODEL DF= 2	ERROR DF= 295

RESPONSE 1 LOG D-ALA*100 ANALYSIS OF DATA FOR P.SMITH

OBSERVED RESPONSE	CALCULATED RESPONSE	RESIDUAL	STD. RESIDUAL	95 PERCENT CONFIDENCE LIMITS-POINT		95 PERCENT CONFIDENCE LIMITS-LINE	
				UPPER	LOWER	UPPER	LOWER
1.34242000	1.47774696	-1.13533	-.849	1.16333403	1.79215990	1.45597608	1.49951784
1.41497000	1.40660423	.00637	.040	1.09439138	1.72281709	1.38994402	1.42726445
.95423999	1.18976597	-.23553	-1.478	.87499194	1.50454001	1.16328627	1.21624568
1.79238999	1.77567391	.01672	.105	1.45954579	2.09180210	1.73623455	1.81511328
1.27874999	1.24068248	.03807	.239	.92553568	1.55582929	1.21008866	1.27127631
1.81953999	1.50203131	.31751	1.992	1.18762159	1.81644103	1.48030688	1.52375574
1.43135999	1.53078394	-.03942	-.247	1.21619606	1.84537181	1.50661759	1.55495028
1.67209999	1.45601195	.21609	1.356	1.14776150	1.77026241	1.43672922	1.47529468
1.72428000	1.60732326	.11696	.734	1.28228368	1.92236283	1.57785439	1.63679212
1.20412000	1.28173481	-.07763	-.487	.96280792	1.60090169	1.22282083	1.34068078
1.44715999	1.42695613	.02020	.127	1.11128646	1.74262580	1.39137773	1.46253453
1.25526999	1.28766131	-.03239	-.203	.97330910	1.60201353	1.26678565	1.30853698
1.66275999	1.76037602	-.03762	-.612	1.44445039	2.07630160	1.72259407	1.79815398
1.32222000	1.36235750	-.04014	-.252	1.04782966	1.67688534	1.33898580	1.38572919
1.20412000	1.13854626	.06557	.411	.82311632	1.45397620	1.10516179	1.17193073
1.30103000	1.22495571	.07607	.477	.91021906	1.53969236	1.19892421	1.25093720
.90306999	1.07730481	-.17421	-1.093	.76099920	1.39361042	1.03646715	1.11818247
1.07917999	1.26188048	-.20270	-1.272	.96750081	1.59626016	1.26059525	1.30316572
1.50148000	1.32658726	.20489	1.286	1.01222690	1.64090551	1.30622541	1.34694511
1.73238999	1.98944309	-.25705	-1.613	1.67086615	2.30802010	1.93367794	2.04520830
1.43135999	1.46954249	-.03818	-.240	1.15478103	1.78430395	1.44321275	1.49587223
1.39793999	1.26311723	.11482	.720	.96797271	1.59826176	1.25254680	1.31368767
1.47712000	1.48166465	-.00456	-.029	1.16226756	1.79710175	1.44842170	1.51494761
1.43135999	1.48022050	.04866	.307	1.16459116	1.79584983	1.44500186	1.51543914
1.17608999	1.20483646	-.02875	-.180	.89080829	1.51959263	1.17857008	1.23110284
1.44715999	1.42857189	.01859	.117	1.11409283	1.74305096	1.40586585	1.45127794
1.66275999	1.73089132	-.06813	-.427	1.41526693	2.04651570	1.69571705	1.76606558
.90308999	1.00304576	-.10596	-.665	.69266385	1.32542768	.96762118	1.05047035
1.54046999	1.52295844	.02111	.132	1.209357935	1.83733754	1.50168175	1.54423514
1.57976000	1.60197130	-.02219	-.139	1.28685014	1.91709246	1.57164268	1.63229991
1.47712000	1.49940617	-.02229	-.140	1.18165687	1.81415547	1.47322214	1.52559021
1.44715999	1.42067060	.02649	.166	1.10253322	1.73508798	1.39883569	1.44250351
1.51851000	1.48125577	.03725	.234	1.16659897	1.79552257	1.46170834	1.50080330
1.54046999	1.57475863	-.03069	-.193	1.26017348	1.88934378	1.55062774	1.59888353
1.61277999	1.61719342	-.00441	-.028	1.30236483	1.93202201	1.59007296	1.64431387
1.36172999	1.21311675	.14861	.932	.89718553	1.52904797	1.17528799	1.25094551
1.77614999	1.61711760	.16403	1.010	1.30207053	1.93216467	1.58756669	1.64666651
1.36172999	1.24765021	.11408	.716	.93194443	1.56335598	1.21175297	1.28354745
.90308999	1.08053632	-.17745	-1.113	.76679571	1.396627694	1.04433383	1.11673981
1.27874999	1.32836400	-.05061	-.318	1.01509053	1.64363745	1.30970262	1.34901838
1.64344999	1.36521003	.27824	1.746	1.15036083	1.67985922	1.34026315	1.39016190
1.87505999	1.63876102	.23636	1.483	1.32350732	1.95389472	1.60762779	1.66977425
1.49135999	1.40698847	.08437	.529	1.09253982	1.72143713	1.38470769	1.42928925
1.53146000	1.56940669	-.03793	-.238	1.25303775	1.88577563	1.52806433	1.61073205
.84509999	1.00846528	-.16337	-1.025	.69229570	1.32463485	.96869490	1.04823565
1.52146000	1.41461249	.11687	.733	1.0913202	1.73009296	1.38075387	1.44847110
1.00000000	1.07313973	-.07314	-.459	.75748646	1.36879299	1.03770725	1.10857220
1.00000000	1.39403844	-.39404	-2.472	1.07960190	1.70847498	1.37192921	1.41614766
1.20044999	1.16318255	.06227	.391	.85328934	1.48307577	1.14032197	1.19604313
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1.30212000	1.35687986	.02333	.146	1.04240873	1.67135099	1.33428416	1.37947556
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1.47712000	1.55610354	-.07898	-.496	1.24100996	1.87059712	1.53319745	1.57900964
1.43135999	1.57834326	-.14698	-.922	1.26372491	1.89296161	1.55378339	1.60290313
1.62607000	1.62971456	.19636	1.232	1.31408976	1.94533937	1.59453557	1.66488255
.84509999	1.01497820	-.16988	-1.066	.69883566	1.33112054	.97542500	1.05453140
1.27275999	1.53421093	-.13628	-.855	1.21869417	1.84977968	1.49960005	1.56883330
1.35051999	1.43304117	.07211	.452	1.11884162	1.74723373	1.41862258	1.45151577

1.25360999	1.57636747	1.12312	1.0615729	1.32802341	1.04756180	1.11164443
1.253612999	1.63769166	0.04355	1.32154869	1.692383764	1.35943799	1.39733694
1.54406999	1.54090320	0.0309	1.21868101	1.86328539	1.59813333	1.67725000
1.51277999	1.41080047	1.267	1.09651785	1.72508310	1.46684025	1.6152615
1.11333999	1.25971657	1.4578	1.94506313	1.57437001	1.39100015	1.43050079
1.49135999	1.57690501	0.08555	1.25567810	1.89813192	1.23472182	1.28472182
1.54406999	1.48236686	0.6370	1.16567035	1.79906337	1.50758541	1.64622462
1.44715999	1.38043211	0.6673	1.06618223	1.69468200	1.43860431	1.52612941
1.62324999	1.34817068	2.7508	1.33589809	1.66244328	1.36115543	1.39970580
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1.25526999	1.57989901	4.2853	1.36470427	1.99509375	1.38750109	1.43364507
1.64344999	1.78554405	1.14209	1.46932913	2.0175890	1.64881516	1.71098286
1.50205999	1.46302956	1.3303	1.14805743	1.77800170	1.74541487	1.82567324
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1.44136999	1.49690674	4.5552	1.18218605	1.81162743	1.29905716	1.34030339
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1.63347000	1.66667168	0.3320	1.34811243	1.98523092	1.52112247	1.60471688
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1.64483344	1.64483344	-0.0257	-0.267	1.32677760	1.95958929	1.61607382	1.67319326
1.49471051	1.49471051	-0.1450	-0.718	1.17978710	1.80963391	1.46651065	1.52291036
1.18567668	1.18567668	0.1574	0.983	0.87029615	1.50105721	1.15276229	1.2159106
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1.48506777	1.48506777	-0.1265	-0.895	1.17002970	1.80010584	1.45561497	1.51452057
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0.99331897	0.99331897	0.04807	0.302	0.67699418	1.30964376	0.95233300	1.03430495
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1.44737859	1.44737859	0.25159	1.579	1.13314188	1.76161531	1.42832108	1.46643610
1.78233644	1.78233644	-0.0337	-0.523	1.46504605	2.09963080	1.73445380	1.83022308
1.56887312	1.56887312	0.0259	0.142	1.29357482	1.88337141	1.54055206	1.59639117
1.41988868	1.41988868	-0.1886	-0.746	1.0147856	1.73829879	1.36508469	1.47459266
1.66263227	1.66263227	-0.06057	-0.380	1.34755108	1.97771347	1.63272177	1.69254278
1.22657147	1.22657147	0.09565	0.600	0.9190580	1.54123715	1.20141271	1.25173023
1.66328855	1.66328855	0.03568	0.224	1.34822510	1.97835200	1.63356552	1.69301158
1.62547368	1.62547368	-0.0917	-0.434	1.30926369	1.94168366	1.58538333	1.66556403
1.31707022	1.31707022	0.16005	1.004	1.00264990	1.63149053	1.29519296	1.3389747
1.81354424	1.81354424	-0.24534	-1.539	1.49577391	2.13131460	1.76258877	1.86449972
1.37303551	1.37303551	0.1408	0.653	1.05780463	1.68826638	1.34158736	1.4044836
1.01629075	1.01629075	0.2116	1.344	0.70012252	1.33245899	0.97653113	1.05605038
1.49910299	1.49910299	-0.2383	-1.530	1.18454339	1.81366260	1.47530751	1.52289848
1.73748004	1.73748004	0.10762	0.675	1.42161984	2.05314030	1.70198278	1.77297431
1.45192266	1.45192266	-0.17317	-1.087	1.13719285	1.76664546	1.42605305	1.4778626
1.60431914	1.60431914	-0.02454	-0.154	0.92960526	1.91903302	1.57856452	1.63007376
1.46487272	1.46487272	-0.23442	-1.471	1.15014882	1.77959661	1.43899568	1.49074955
1.27259083	1.27259083	0.25889	1.624	0.95816836	1.58701330	1.25068284	1.29449302
1.43882102	1.43882102	-0.20837	-1.307	1.12460035	1.75304168	1.42020998	1.45761205
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1.21882178	1.21882178	-0.04273	-0.268	0.90333217	1.53431138	1.18487814	1.25275542
1.11221726	1.11221726	0.00172	0.011	0.78665476	1.42777976	1.07760270	1.14683183
1.72957876	1.72957876	-0.28242	-1.772	1.41390052	2.04519700	1.69445937	1.76463795
1.06453797	1.06453797	-0.02327	-0.146	0.78892485	1.38039109	1.02852097	1.10079497