

PROSPECCION MINERA DE LAS ZONAS DE
MARINA DE CUDEYO - MEDIO CUDEYO,
PRELLEZO, NANSA - CABANZON Y
COMILLAS (CANTABRIA)

ANEXOS

TOMO IV

Madrid, Diciembre 1990

11256

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**PROSPECCION GEOQUIMICA DE LA
RED DE DRENAJE
(Pb, Zn, Cd, Ba)**

**VALORACION CONJUNTA DE LAS AREAS
INVESTIGADAS (MEDIO CUDEYO,
PRELLEZO, NANSA, COMILLAS,
LA SECADA)**

1*****
 MULTIPLE LINEAR REGRESSION

704-G1-L2020 JAN 1975
 FORTRAN77 VERSION JUL 1986

GEOQUIMICA DRENAJE / CANTABRIA 1990
 CALCULO DE ANOMALIAS
 MEDIO CUDEYO, PRELEZO, NANSA, COMILLAS, LA SECADA

NVAL NCOMB IPRNT IFRMT IDELE DELTA
 4 0 0 0 0 .0000

+ + + + ANALYSIS NO 1 + + +
 DEPENDENT VARIABLE -- Z

IDEP TRANSFORMATION CODES..... NOBR IRES IFOR
 2 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 3

VARIABLE	TRANSFORMATION
Pb	NONE
Zn	NONE
Cd	NONE
Ba	NONE

INPUT DATA (p.p.m.) (0.500 en Cd corresponde a valores inferiores a 1 p.p.m.)

OBS NO	OBS ID	Pb	Zn	Cd	Ba
1	MC 1	56.000	254.000	1.000	448.000
2	2	132.000	154.000	.500	219.000
3	3	229.000	1900.000	.500	332.000
4	4	36.000	161.000	.500	146.000
5	5	22.000	421.000	1.000	235.000
6	6	15.000	115.000	.500	197.000
7	7	16.000	44.000	1.000	282.000
8	8	19.000	101.000	1.000	243.000
9	9	32.000	161.000	.500	196.000
10	10	34.000	62.000	1.000	260.000
11	11	42.000	124.000	1.000	223.000
12	12	53.000	161.000	2.000	236.000

13	13	44.000	158.000	1.000	264.000
14	14	49.000	160.000	2.000	283.000
15	15	151.000	151.000	1.000	195.000
16	16	21.000	43.000	.500	214.000
17	17	41.000	106.000	1.000	309.000
18	18	27.000	72.000	.500	247.000
19	19	56.000	154.000	1.000	391.000
20	20	28.000	89.000	.500	502.000
21	21	25.000	81.000	1.000	283.000
22	22	35.000	112.000	.500	246.000
23	23	10.000	75.000	.500	312.000
24	24	10.000	40.000	.500	251.000
25	25	17.000	50.000	.500	279.000
26	26	14.000	16.000	.500	389.000
27	27	55.000	134.000	1.000	1022.000
28	28	12.000	38.000	1.000	316.000
29	29	7.000	20.000	.500	343.000
30	30	10.000	37.000	1.000	390.000
31	31	9.000	36.000	.500	542.000
32	32	15.000	89.000	1.000	457.000
33	33	27.000	105.000	.500	483.000
34	34	45.000	119.000	.500	260.000
35	35	54.000	234.000	3.000	384.000
36	36	10.000	18.000	1.000	273.000
37	37	5.000	26.000	.500	471.000
38	38	18.000	45.000	.500	638.000
39	39	7.000	37.000	.500	559.000
40	40	21.000	83.000	.500	382.000
41	41	13.000	39.000	.500	670.000
42	42	19.000	66.000	.500	381.000
43	43	12.000	54.000	.500	455.000
44	44	18.000	67.000	.500	571.000
45	45	14.000	49.000	.500	435.000
46	46	24.000	74.000	.500	554.000
47	47	15.000	115.000	1.000	757.000
48	48	14.000	101.000	.500	379.000
49	49	15.000	56.000	.500	455.000
50	50	49.000	192.000	2.000	258.000
51	51	50.000	150.000	2.000	285.000
52	52	47.000	161.000	3.000	253.000
53	53	31.000	91.000	.500	258.000
54	54	24.000	2560.000	.500	290.000
55	55	31.000	104.000	.500	312.000
56	56	26.000	65.000	.500	254.000
57	57	44.000	127.000	.500	319.000
58	58	18.000	52.000	.500	366.000
59	59	16.000	52.000	.500	300.000
60	60	11.000	48.000	.500	277.000

61	61	10.000	47.000	.500	334.000
62	62	10.000	39.000	.500	367.000
63	63	12.000	45.000	.500	412.000
64	64	41.000	83.000	.500	367.000
65	65	12.000	57.000	.500	287.000
66	66	7.000	46.000	.500	278.000
67	67	37.000	279.000	1.000	373.000
68	68	104.000	240.000	.500	289.000
69	69	43.000	94.000	.500	249.000
70	70	14.000	41.000	.500	381.000
71	71	28.000	69.000	.500	242.000
72	72	30.000	98.000	.500	1008.000
73	73	54.000	153.000	.500	194.000
74	74	12.000	59.000	.500	123.000
75	75	14.000	58.000	.500	100.000
76	76	43.000	112.000	1.000	237.000
77	77	25.000	77.000	.500	300.000
78	78	40.000	82.000	.500	295.000
79	79	56.000	167.000	4.000	231.000
80	80	41.000	85.000	1.000	489.000
81	81	23.000	55.000	.500	511.000
82	82	29.000	72.000	1.000	417.000
83	83	45.000	111.000	2.000	371.000
84	84	19.000	72.000	1.000	444.000
85	85	73.000	108.000	1.000	341.000
86	86	60.000	129.000	2.000	400.000
87	87	57.000	183.000	2.000	286.000
88	88	75.000	208.000	2.000	188.000
89	89	59.000	169.000	2.000	438.000
90	90	57.000	166.000	1.000	693.000
91	91	26.000	101.000	.500	466.000
92	92	55.000	102.000	.500	572.000
93	93	50.000	202.000	2.000	608.000
94	94	37.000	78.000	.500	616.000
95	95	21.000	75.000	.500	578.000
96	96	20.000	65.000	.500	574.000
97	97	34.000	84.000	.500	643.000
98	98	17.000	43.000	.500	456.000
99	99	35.000	127.000	.500	565.000
100	100	67.000	168.000	.500	604.000
101	101	72.000	154.000	.500	556.000
102	102	83.000	1630.000	6.000	571.000
103	103	48.000	187.000	.500	668.000
104	104	50.000	137.000	.500	690.000
105	105	13.000	69.000	.500	692.000
106	106	15.000	70.000	.500	799.000
107	107	45.000	93.000	.500	539.000
108	108	31.000	98.000	.500	652.000

109	109	47.000	73.000	.500	527.000
110	110	39.000	86.000	.500	629.000
111	111	21.000	103.000	.500	339.000
112	112	23.000	42.000	.500	324.000
113	113	26.000	39.000	.500	275.000
114	114	11.000	37.000	.500	555.000
115	115	42.000	22.000	.500	362.000
116	116	30.000	62.000	1.000	556.000
117	117	74.000	210.000	1.000	386.000
118	118	48.000	73.000	.500	573.000
119	119	90.000	397.000	.500	519.000
120	120	73.000	660.000	1.000	575.000
121	121	39.000	37.000	.500	501.000
122	122	42.000	50.000	.500	527.000
123	123	33.000	41.000	.500	499.000
124	124	27.000	33.000	.500	490.000
125	125	40.000	414.000	.500	527.000
126	126	26.000	76.000	.500	434.000
127	127	25.000	96.000	.500	565.000
128	128	18.000	46.000	.500	496.000
129	129	55.000	99.000	.500	449.000
130	P130	22.000	41.000	.500	552.000
131	131	21.000	27.000	.500	511.000
132	132	23.000	55.000	.500	542.000
133	133	21.000	30.000	.500	531.000
134	134	29.000	50.000	.500	509.000
135	135	17.000	68.000	.500	596.000
136	136	13.000	38.000	.500	581.000
137	137	21.000	64.000	.500	534.000
138	138	10.000	14.000	.500	387.000
139	139	22.000	55.000	.500	926.000
140	140	76.000	295.000	.500	455.000
141	141	5.000	21.000	.500	481.000
142	142	34.000	196.000	1.000	412.000
143	143	20.000	49.000	.500	468.000
144	144	80.000	243.000	1.000	353.000
145	145	176.000	840.000	3.000	390.000
146	146	14.000	35.000	.500	575.000
147	147	7.000	30.000	.500	581.000
148	148	18.000	109.000	1.000	529.000
149	N149	22.000	24.000	.500	572.000
150	150	31.000	137.000	1.000	652.000
151	151	17.000	82.000	.500	639.000
152	152	26.000	15.000	.500	476.000
153	153	3.000	30.000	.500	607.000
154	154	31.000	23.000	1.000	484.000
155	155	27.000	17.000	.500	546.000
156	156	6.000	18.000	.500	613.000

157	157	31.000	32.000	.500	513.000
158	158	10.000	21.000	.500	552.000
159	159	34.000	73.000	.500	598.000
160	160	18.000	60.000	.500	545.000
161	161	13.000	24.000	.500	552.000
162	162	9.000	23.000	.500	579.000
163	163	11.000	27.000	.500	882.000
164	164	11.000	25.000	.500	527.000
165	165	15.000	33.000	.500	542.000
166	166	13.000	35.000	.500	509.000
167	167	17.000	25.000	.500	620.000
168	168	12.000	19.000	.500	577.000
169	169	6.000	17.000	.500	541.000
170	170	20.000	20.000	.500	594.000
171	171	4.000	15.000	.500	424.000
172	172	18.000	33.000	.500	568.000
173	C173	38.000	262.000	1.000	576.000
174	174	134.000	2550.000	3.000	642.000
175	175	28.000	167.000	.500	735.000
176	176	16.000	69.000	.500	593.000
177	177	38.000	96.000	.500	809.000
178	178	28.000	39.000	.500	395.000
179	179	65.000	257.000	.500	425.000
180	180	31.000	58.000	.500	633.000
181	181	43.000	101.000	.500	752.000
182	182	44.000	94.000	.500	881.000
183	183	34.000	55.000	.500	864.000
184	184	41.000	41.000	.500	651.000
185	185	34.000	62.000	.500	892.000
186	186	9.000	11.000	.500	565.000
187	187	28.000	24.000	.500	634.000
188	188	20.000	21.000	.500	585.000
189	189	75.000	200.000	1.000	570.000
190	190	30.000	49.000	.500	580.000
191	191	25.000	33.000	.500	538.000
192	192	28.000	27.000	.500	758.000
193	193	24.000	90.000	1.000	587.000
194	194	34.000	113.000	.500	497.000
195	195	54.000	169.000	1.000	697.000
196	LS196	21.000	33.000	.500	477.000
197	197	22.000	42.000	.500	487.000
198	198	36.000	46.000	.500	578.000
199	199	37.000	62.000	.500	507.000
200	200	44.000	49.000	.500	570.000
201	201	8.000	34.000	.500	461.000
202	202	22.000	61.000	.500	542.000
203	203	23.000	57.000	.500	506.000
204	204	23.000	56.000	.500	391.000

205	29.000	51.000	1.000	431.000
206	27.000	61.000	1.000	520.000
207	30.000	52.000	1.000	461.000
208	23.000	55.000	1.000	598.000
209	39.000	100.000	1.000	523.000
210	36.000	84.000	1.000	525.000
211	32.000	67.000	.500	400.000
212	42.000	80.000	.500	503.000
213	21.000	33.000	.500	411.000
214	17.000	24.000	.500	414.000
215	21.000	35.000	.500	391.000
216	20.000	54.000	.500	426.000
217	4.000	17.000	.500	372.000
218	15.000	43.000	.500	477.000
219	5.000	23.000	.500	396.000
220	8.000	28.000	.500	402.000
221	14.000	41.000	.500	394.000
222	16.000	55.000	.500	512.000
223	8.000	29.000	.500	518.000
224	16.000	37.000	.500	603.000
225	26.000	38.000	.500	637.000
226	11.000	29.000	.500	425.000
227	9.000	31.000	.500	643.000
228	29.000	67.000	1.000	413.000
229	5.000	16.000	.500	450.000
230	16.000	35.000	.500	481.000
231	14.000	49.000	.500	460.000
232	34.000	77.000	.500	744.000
233	20.000	50.000	.500	564.000
234	21.000	46.000	.500	554.000
235	15.000	34.000	.500	462.000
236	19.000	33.000	.500	428.000
237	17.000	29.000	.500	420.000
238	28.000	29.000	.500	402.000
239	11.000	25.000	.500	392.000
240	12.000	30.000	.500	145.000
241	26.000	46.000	.500	355.000
242	9.000	29.000	.500	364.000
243	12.000	18.000	.500	415.000
244	14.000	30.000	.500	462.000
245	21.000	46.000	.500	455.000
246	18.000	36.000	.500	391.000
247	31.000	28.000	.500	376.000
248	29.000	57.000	.500	387.000
249	8.000	26.000	.500	696.000
250	19.000	38.000	.500	406.000
251	25.000	50.000	.500	428.000
252	123.000	224.000	1.000	384.000

253	253	27.000	57.000	.500	405.000
254	254	18.000	66.000	.500	523.000
255	255	55.000	65.000	.500	590.000
256	256	84.000	256.000	.500	602.000
257	257	46.000	54.000	.500	522.000
258	258	43.000	45.000	.500	430.000
259	259	56.000	61.000	.500	438.000
260	260	43.000	31.000	.500	390.000
261	261	43.000	15.000	.500	375.000
262	262	54.000	34.000	.500	366.000
263	263	63.000	51.000	.500	400.000
264	264	61.000	52.000	.500	398.000
265	265	22.000	57.000	.500	605.000

STATISTICS OF DATA

BASED ON 265 OBSERVATIONS

VARIABLE	AVERAGE	VARIANCE	STANDARD DEVIATION	
Pb	32.1094	725.2343	26.9302	
Cd	.7113	.3378	.5812	
Ba	468.6642	24618.1300	156.9017	
Zn	116.1019	74672.4500	273.2626	DEPENDENT

SIMPLE CORRELATION COEFFICIENTS

VARIABLE	Pb	Cd	Ba	Zn
Pb	1.0000	.3861	-.0669	.5316
Cd	.3861	1.0000	-.1231	.4263
Ba	-.0669	-.1231	1.0000	.0000
Zn	.5316	.4263	.0000	1.0000

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	4.402633	.1925
Cd	125.044500	.0794
Ba	.067311	.0000

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-145.757000	.3447	.3371	222.4830

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	MC 1	254.000	255.990	-1.990	-.007	-.008
2	2	154.000	512.654	-358.654	-1.312	-2.329
3	3	1900.000	947.315	952.685	3.486	.501
4	4	161.000	85.087	75.913	.278	.472
5	5	421.000	91.963	329.037	1.204	.782
6	6	115.000	-3.935	118.935	.435	1.034
7	7	44.000	68.711	-24.711	-.090	-.562
8	8	101.000	79.294	21.706	.079	.215
9	9	161.000	70.842	90.158	.330	.560
10	10	62.000	146.478	-84.478	-.309	-1.363
11	11	124.000	179.208	-55.208	-.202	-.445
12	12	161.000	353.557	-192.557	-.705	-1.196
13	13	158.000	190.773	-32.773	-.120	-.207
14	14	160.000	339.110	-179.110	-.655	-1.119
15	15	151.000	657.211	-506.211	-1.852	-3.352
16	16	43.000	23.625	19.375	.071	.451
17	17	106.000	180.594	-74.594	-.273	-.704
18	18	72.000	52.262	19.738	.072	.274
19	19	154.000	252.153	-98.153	-.359	-.637
20	20	89.000	73.829	15.171	.056	.170
21	21	81.000	108.402	-27.402	-.100	-.338
22	22	112.000	87.416	24.584	.090	.220
23	23	75.000	-18.208	93.208	.341	1.243
24	24	40.000	-22.313	62.313	.228	1.558
25	25	50.000	10.390	39.610	.145	.792
26	26	16.000	4.586	11.414	.042	.713
27	27	134.000	290.224	-156.224	-.572	-1.166
28	28	38.000	53.389	-15.389	-.056	-.405
29	29	20.000	-29.329	49.329	.181	2.466
30	30	37.000	49.565	-12.565	-.046	-.340
31	31	36.000	-7.129	43.129	.158	1.198
32	32	89.000	76.088	12.912	.047	.145
33	33	105.000	68.147	36.853	.135	.351
34	34	119.000	132.384	-13.384	-.049	-.112
35	35	234.000	492.966	-258.966	-.948	-1.107
36	36	18.000	41.690	-23.690	-.087	-1.316
37	37	26.000	-29.518	55.518	.203	2.135
38	38	45.000	38.957	6.043	.022	.134
39	39	37.000	-14.790	51.790	.190	1.400
40	40	83.000	34.933	48.067	.176	.579
41	41	39.000	19.098	19.902	.073	.510
42	42	66.000	26.061	39.939	.146	.605
43	43	54.000	.223	53.777	.197	.996
44	44	67.000	34.447	32.553	.119	.486
45	45	49.000	7.682	41.318	.151	.843

46	46	74.000	59.719	14.281	.052	.193
47	47	115.000	96.281	18.719	.069	.163
48	48	101.000	3.913	97.087	.355	.961
49	49	56.000	13.431	42.569	.156	.760
50	50	192.000	337.427	-145.427	-.532	-.757
51	51	150.000	343.647	-193.647	-.709	-1.291
52	52	161.000	453.330	-292.330	-1.070	-1.816
53	53	91.000	70.613	20.387	.075	.224
54	54	2560.000	41.949	2518.052	9.215	.984
55	55	104.000	74.248	29.752	.109	.286
56	56	65.000	48.331	16.669	.061	.256
57	57	127.000	131.953	-4.953	-.018	-.039
58	58	52.000	20.648	31.352	.115	.603
59	59	52.000	7.401	44.599	.163	.858
60	60	48.000	-16.161	64.161	.235	1.337
61	61	47.000	-16.727	63.727	.233	1.356
62	62	39.000	-14.505	53.505	.196	1.372
63	63	45.000	-2.671	47.671	.174	1.059
64	64	83.000	121.976	-38.976	-.143	-.470
65	65	57.000	-11.085	68.085	.249	1.194
66	66	46.000	-33.704	79.704	.292	1.733
67	67	279.000	167.292	111.708	.409	.400
68	68	240.000	394.092	-154.092	-.564	-.642
69	69	94.000	122.839	-28.839	-.106	-.307
70	70	41.000	4.047	36.953	.135	.901
71	71	69.000	56.328	12.672	.046	.184
72	72	98.000	116.693	-18.693	-.068	-.191
73	73	153.000	167.566	-14.566	-.053	-.095
74	74	59.000	-22.124	81.124	.297	1.375
75	75	58.000	-14.867	72.867	.267	1.256
76	76	112.000	184.553	-72.553	-.266	-.648
77	77	77.000	47.024	29.976	.110	.389
78	78	82.000	112.727	-30.727	-.112	-.375
79	79	167.000	616.517	-449.517	-1.645	-2.692
80	80	85.000	192.710	-107.710	-.394	-1.267
81	81	55.000	52.422	2.578	.009	.047
82	82	72.000	135.032	-63.032	-.231	-.875
83	83	111.000	327.423	-216.423	-.792	-1.950
84	84	72.000	92.823	-20.823	-.076	-.289
85	85	108.000	323.633	-215.633	-.789	-1.997
86	86	129.000	395.414	-266.414	-.975	-2.065
87	87	183.000	374.533	-191.533	-.701	-1.047
88	88	208.000	447.184	-239.184	-.875	-1.150
89	89	169.000	393.569	-224.569	-.822	-1.329
90	90	166.000	276.884	-110.884	-.406	-.668
91	91	101.000	62.600	38.400	.141	.380
92	92	102.000	197.412	-95.412	-.349	-.935
93	93	202.000	365.389	-163.389	-.598	-.809

94	94	78.000	121.126	-43.126	-.158	-.553
95	95	75.000	48.126	26.874	.098	.358
96	96	65.000	43.454	21.546	.079	.331
97	97	84.000	109.736	-25.736	-.094	-.306
98	98	43.000	22.304	20.696	.076	.481
99	99	127.000	108.888	18.112	.066	.143
100	100	168.000	252.397	-84.397	-.309	-.502
101	101	154.000	271.180	-117.180	-.429	-.761
102	102	1630.000	1008.363	621.637	2.275	.381
103	103	187.000	173.055	13.945	.051	.075
104	104	137.000	183.341	-46.341	-.170	-.338
105	105	69.000	20.578	48.422	.177	.702
106	106	70.000	36.586	33.414	.122	.477
107	107	93.000	151.164	-58.164	-.213	-.625
108	108	98.000	97.133	.867	.003	.009
109	109	73.000	159.162	-86.162	-.315	-1.180
110	110	86.000	130.806	-44.806	-.164	-.521
111	111	103.000	32.039	70.961	.260	.689
112	112	42.000	39.834	2.166	.008	.052
113	113	39.000	49.744	-10.744	-.039	-.275
114	114	37.000	2.552	34.448	.126	.931
115	115	22.000	126.042	-104.042	-.381	-4.729
116	116	62.000	148.791	-86.791	-.318	-1.400
117	117	210.000	331.064	-121.064	-.443	-.576
118	118	73.000	166.661	-93.661	-.343	-1.283
119	119	397.000	347.936	49.064	.180	.124
120	120	660.000	339.383	320.617	1.173	.486
121	121	37.000	122.191	-85.191	-.312	-2.302
122	122	50.000	137.149	-87.149	-.319	-1.743
123	123	41.000	95.640	-54.640	-.200	-1.333
124	124	33.000	68.619	-35.619	-.130	-1.079
125	125	414.000	128.343	285.657	1.045	.690
126	126	76.000	60.447	15.553	.057	.205
127	127	96.000	64.862	31.138	.114	.324
128	128	46.000	29.399	16.601	.061	.361
129	129	99.000	189.133	-90.133	-.330	-.910
130	P130	41.000	50.779	-9.779	-.036	-.239
131	131	27.000	43.616	-16.616	-.061	-.615
132	132	55.000	54.508	.492	.002	.009
133	133	30.000	44.963	-14.963	-.055	-.499
134	134	50.000	78.703	-28.703	-.105	-.574
135	135	68.000	31.727	36.273	.133	.533
136	136	38.000	13.107	24.893	.091	.655
137	137	64.000	45.164	18.836	.069	.294
138	138	14.000	-13.159	27.159	.099	1.940
139	139	55.000	75.953	-20.953	-.077	-.381
140	140	295.000	281.992	13.008	.048	.044
141	141	21.000	-28.845	49.845	.182	2.374

142	142	196.000	156.709	39.291	.144	.200
143	143	49.000	36.319	12.681	.046	.259
144	144	243.000	355.259	-112.259	-.411	-.462
145	145	840.000	1030.491	-190.491	-.697	-.227
146	146	35.000	17.106	17.894	.065	.511
147	147	30.000	-13.309	43.309	.158	1.444
148	148	109.000	94.142	14.858	.054	.136
149	N149	24.000	52.125	-28.125	-.103	-1.172
150	150	137.000	159.656	-22.656	-.083	-.165
151	151	82.000	34.622	47.378	.173	.578
152	152	15.000	63.274	-48.274	-.177	-3.218
153	153	30.000	-29.169	59.169	.217	1.972
154	154	23.000	148.347	-125.347	-.459	-5.450
155	155	17.000	72.388	-55.388	-.203	-3.258
156	156	18.000	-15.558	33.558	.123	1.864
157	157	32.000	87.777	-55.777	-.204	-1.743
158	158	21.000	-2.053	23.053	.084	1.098
159	159	73.000	106.707	-33.707	-.123	-.462
160	160	60.000	32.697	27.303	.100	.455
161	161	24.000	11.155	12.845	.047	.535
162	162	23.000	-4.638	27.638	.101	1.202
163	163	27.000	24.562	2.438	.009	.090
164	164	25.000	.667	24.333	.089	.973
165	165	33.000	19.287	13.713	.050	.416
166	166	35.000	8.261	26.739	.098	.764
167	167	25.000	33.343	-8.343	-.031	-.334
168	168	19.000	8.435	10.565	.039	.556
169	169	17.000	-20.404	37.404	.137	2.200
170	170	20.000	44.800	-24.800	-.091	-1.240
171	171	15.000	-37.085	52.085	.191	3.472
172	172	33.000	34.245	-1.245	-.005	-.038
173	C173	262.000	185.358	76.642	.280	.293
174	174	2550.000	862.543	1687.457	6.175	.662
175	175	167.000	89.512	77.488	.284	.464
176	176	69.000	27.123	41.877	.153	.607
177	177	96.000	138.520	-42.520	-.156	-.443
178	178	39.000	66.627	-27.627	-.101	-.708
179	179	257.000	231.543	25.457	.093	.099
180	180	58.000	95.855	-37.855	-.139	-.653
181	181	101.000	156.696	-55.696	-.204	-.551
182	182	94.000	169.782	-75.782	-.277	-.806
183	183	55.000	124.611	-69.611	-.255	-1.266
184	184	41.000	141.092	-100.092	-.366	-2.441
185	185	62.000	126.496	-64.496	-.236	-1.040
186	186	11.000	-5.581	16.581	.061	1.507
187	187	24.000	82.714	-58.714	-.215	-2.446
188	188	21.000	44.195	-23.195	-.085	-1.105
189	189	200.000	347.852	-147.852	-.541	-.739

190	190	49.000	87.884	-38.884	-.142	-.794
191	191	33.000	63.044	-30.044	-.110	-.910
192	192	27.000	91.060	-64.060	-.234	-2.373
193	193	90.000	124.462	-34.462	-.126	-.383
194	194	113.000	99.908	13.092	.048	.116
195	195	169.000	263.945	-94.945	-.347	-.562
196	LS196	33.000	41.328	-8.328	-.030	-.252
197	197	42.000	46.403	-4.403	-.016	-.105
198	198	46.000	114.166	-68.166	-.249	-1.482
199	199	62.000	113.789	-51.789	-.190	-.835
200	200	49.000	148.848	-99.848	-.365	-2.038
201	201	34.000	-16.983	50.983	.187	1.500
202	202	61.000	50.106	10.894	.040	.179
203	203	57.000	52.085	4.915	.018	.086
204	204	56.000	44.344	11.656	.043	.208
205	205	51.000	135.975	-84.975	-.311	-1.666
206	206	61.000	133.160	-72.160	-.264	-1.183
207	207	52.000	142.397	-90.397	-.331	-1.738
208	208	55.000	120.800	-65.800	-.241	-1.196
209	209	100.000	186.194	-86.194	-.315	-.862
210	210	84.000	173.120	-89.120	-.326	-1.061
211	211	67.000	84.574	-17.574	-.064	-.262
212	212	80.000	135.533	-55.533	-.203	-.694
213	213	33.000	36.885	-3.885	-.014	-.118
214	214	24.000	19.477	4.523	.017	.188
215	215	35.000	35.539	-.539	-.002	-.015
216	216	54.000	33.492	20.508	.075	.380
217	217	17.000	-40.585	57.585	.211	3.387
218	218	43.000	14.912	28.088	.103	.653
219	219	23.000	-34.567	57.567	.211	2.503
220	220	28.000	-20.955	48.955	.179	1.748
221	221	41.000	4.922	36.077	.132	.880
222	222	55.000	21.670	33.330	.122	.606
223	223	29.000	-13.147	42.147	.154	1.453
224	224	37.000	27.796	9.204	.034	.249
225	225	38.000	74.111	-36.111	-.132	-.950
226	226	29.000	-6.199	35.199	.129	1.214
227	227	31.000	-.330	31.330	.115	1.011
228	228	67.000	134.763	-67.763	-.248	-1.011
229	229	16.000	-30.932	46.932	.172	2.933
230	230	35.000	19.584	15.416	.056	.440
231	231	49.000	9.365	39.635	.145	.809
232	232	77.000	116.534	-39.534	-.145	-.513
233	233	50.000	42.781	7.219	.026	.144
234	234	46.000	46.511	-.511	-.002	-.011
235	235	34.000	13.902	20.098	.074	.591
236	236	33.000	29.224	3.776	.014	.114
237	237	29.000	19.880	9.120	.033	.314

238	238	29.000	67.098	-38.098	-.139	-1.314
239	239	25.000	-8.420	33.420	.122	1.337
240	240	30.000	-20.643	50.643	.185	1.688
241	241	46.000	55.129	-9.129	-.033	-.198
242	242	29.000	-19.110	48.110	.176	1.659
243	243	18.000	-2.469	20.469	.075	1.137
244	244	30.000	9.500	20.500	.075	.683
245	245	46.000	39.847	6.153	.023	.134
246	246	36.000	22.331	13.669	.050	.380
247	247	28.000	78.556	-50.556	-.185	-1.806
248	248	57.000	70.491	-13.491	-.049	-.237
249	249	26.000	-1.165	27.165	.099	1.045
250	250	38.000	27.743	10.257	.038	.270
251	251	50.000	55.640	-5.640	-.021	-.113
252	252	224.000	546.659	-322.659	-1.181	-1.440
253	253	57.000	62.897	-5.897	-.022	-.103
254	254	66.000	31.216	34.784	.127	.527
255	255	65.000	198.623	-133.623	-.489	-2.056
256	256	256.000	327.107	-71.107	-.260	-.278
257	257	54.000	154.423	-100.423	-.367	-1.860
258	258	45.000	135.022	-90.022	-.329	-2.000
259	259	61.000	192.795	-131.795	-.482	-2.161
260	260	31.000	132.330	-101.330	-.371	-3.269
261	261	15.000	131.320	-116.320	-.426	-7.755
262	262	34.000	179.143	-145.143	-.531	-4.269
263	263	51.000	221.055	-170.055	-.622	-3.334
264	264	52.000	212.115	-160.115	-.586	-3.079
265	265	57.000	54.346	2.654	.010	.047

R BAR SQUARED .3371
STANDARD ERROR OF ESTIMATE 222.4835
MEAN ERROR .0000
MEAN SQUARED ERROR 48751.7400

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INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	4.385413	.1912
Cd	122.859300	.0775

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-112.103600	.3432	.3382	222.3057

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	MC 1	254.000	256.339	-2.339	-.009	-.009
2	2	154.000	528.201	-374.201	-1.369	-2.430
3	3	1900.000	953.586	946.414	3.463	.498
4	4	161.000	107.201	53.799	.197	.334
5	5	421.000	107.235	313.765	1.148	.745
6	6	115.000	15.107	99.893	.366	.869
7	7	44.000	80.922	-36.922	-.135	-.839
8	8	101.000	94.079	6.921	.025	.069
9	9	161.000	89.659	71.341	.261	.443
10	10	62.000	159.860	-97.860	-.358	-1.578
11	11	124.000	194.943	-70.943	-.260	-.572
12	12	161.000	366.042	-205.042	-.750	-1.274
13	13	158.000	203.714	-45.714	-.167	-.289
14	14	160.000	348.500	-188.500	-.690	-1.178
15	15	151.000	672.953	-521.953	-1.910	-3.457
16	16	43.000	41.420	1.580	.006	.037
17	17	106.000	190.558	-84.558	-.309	-.798
18	18	72.000	67.732	4.268	.016	.059
19	19	154.000	256.339	-102.339	-.375	-.665
20	20	89.000	72.118	16.882	.062	.190
21	21	81.000	120.391	-39.391	-.144	-.486
22	22	112.000	102.816	9.184	.034	.082
23	23	75.000	-6.820	81.820	.299	1.091
24	24	40.000	-6.820	46.820	.171	1.170
25	25	50.000	23.878	26.122	.096	.522
26	26	16.000	10.722	5.278	.019	.330
27	27	134.000	251.953	-117.953	-.432	-.880

28	28	38.000	63.381	-25.381	-.093	-.668
29	29	20.000	-19.976	39.976	.146	1.999
30	30	37.000	54.610	-17.610	-.064	-.476
31	31	36.000	-11.205	47.205	.173	1.311
32	32	89.000	76.537	12.463	.046	.140
33	33	105.000	67.732	37.268	.136	.355
34	34	119.000	146.670	-27.670	-.101	-.233
35	35	234.000	493.287	-259.287	-.949	-1.108
36	36	18.000	54.610	-36.610	-.134	-2.034
37	37	26.000	-28.747	54.747	.200	2.106
38	38	45.000	28.263	16.737	.061	.372
39	39	37.000	-19.976	56.976	.209	1.540
40	40	83.000	41.420	41.580	.152	.501
41	41	39.000	6.336	32.664	.120	.838
42	42	66.000	32.649	33.351	.122	.505
43	43	54.000	1.951	52.049	.190	.964
44	44	67.000	28.263	38.737	.142	.578
45	45	49.000	10.722	38.278	.140	.781
46	46	74.000	54.576	19.424	.071	.262
47	47	115.000	76.537	38.463	.141	.334
48	48	101.000	10.722	90.278	.330	.894
49	49	56.000	15.107	40.893	.150	.730
50	50	192.000	348.500	-156.500	-.573	-.815
51	51	150.000	352.886	-202.886	-.742	-1.353
52	52	161.000	462.589	-301.589	-1.104	-1.873
53	53	91.000	85.274	5.726	.021	.063
54	54	2560.000	54.576	2505.424	9.169	.979
55	55	104.000	85.274	18.726	.069	.180
56	56	65.000	63.347	1.653	.006	.025
57	57	127.000	142.284	-15.284	-.056	-.120
58	58	52.000	28.263	23.737	.087	.456
59	59	52.000	19.493	32.507	.119	.625
60	60	48.000	-2.434	50.434	.185	1.051
61	61	47.000	-6.820	53.820	.197	1.145
62	62	39.000	-6.820	45.820	.168	1.175
63	63	45.000	1.951	43.049	.158	.957
64	64	83.000	129.128	-46.128	-.169	-.556
65	65	57.000	1.951	55.049	.201	.966
66	66	46.000	-19.976	65.976	.241	1.434
67	67	279.000	173.016	105.984	.388	.380
68	68	240.000	405.409	-165.409	-.605	-.689
69	69	94.000	137.899	-43.899	-.161	-.467
70	70	41.000	10.722	30.278	.111	.738
71	71	69.000	72.118	-3.118	-.011	-.045
72	72	98.000	80.888	17.112	.063	.175
73	73	153.000	186.138	-33.138	-.121	-.217
74	74	59.000	1.951	57.049	.209	.967
75	75	58.000	10.722	47.278	.173	.815

76	76	112.000	199.328	-87.328	-.320	-.780
77	77	77.000	58.961	18.039	.066	.234
78	78	82.000	124.743	-42.743	-.156	-.521
79	79	167.000	624.917	-457.917	-1.676	-2.742
80	80	85.000	190.558	-105.558	-.386	-1.242
81	81	55.000	50.191	4.809	.018	.087
82	82	72.000	137.933	-65.933	-.241	-.916
83	83	111.000	330.959	-219.959	-.805	-1.982
84	84	72.000	94.079	-22.079	-.081	-.307
85	85	108.000	330.891	-222.891	-.816	-2.064
86	86	129.000	396.740	-267.740	-.980	-2.076
87	87	183.000	383.584	-200.584	-.734	-1.096
88	88	208.000	462.521	-254.521	-.931	-1.224
89	89	169.000	392.354	-223.354	-.817	-1.322
90	90	166.000	260.724	-94.724	-.347	-.571
91	91	101.000	63.347	37.653	.138	.373
92	92	102.000	190.524	-88.524	-.324	-.868
93	93	202.000	352.886	-150.886	-.552	-.747
94	94	78.000	111.586	-33.586	-.123	-.431
95	95	75.000	41.420	33.580	.123	.448
96	96	65.000	37.034	27.966	.102	.430
97	97	84.000	98.430	-14.430	-.053	-.172
98	98	43.000	23.878	19.122	.070	.445
99	99	127.000	102.816	24.184	.089	.190
100	100	168.000	243.149	-75.149	-.275	-.447
101	101	154.000	265.076	-111.076	-.406	-.721
102	102	1630.000	989.042	640.958	2.346	.393
103	103	187.000	159.826	27.174	.099	.145
104	104	137.000	168.597	-31.597	-.116	-.231
105	105	69.000	6.336	62.664	.229	.908
106	106	70.000	15.107	54.893	.201	.784
107	107	93.000	146.670	-53.670	-.196	-.577
108	108	98.000	85.274	12.726	.047	.130
109	109	73.000	155.440	-82.440	-.302	-1.129
110	110	86.000	120.357	-34.357	-.126	-.400
111	111	103.000	41.420	61.580	.225	.598
112	112	42.000	50.191	-8.191	-.030	-.195
113	113	39.000	63.347	-24.347	-.089	-.624
114	114	37.000	-2.434	39.434	.144	1.066
115	115	22.000	133.513	-111.513	-.408	-5.069
116	116	62.000	142.318	-80.318	-.294	-1.295
117	117	210.000	335.276	-125.276	-.458	-.597
118	118	73.000	159.826	-86.826	-.318	-1.189
119	119	397.000	344.013	52.987	.194	.133
120	120	660.000	330.891	329.109	1.204	.499
121	121	37.000	120.357	-83.357	-.305	-2.253
122	122	50.000	133.513	-83.513	-.306	-1.670
123	123	41.000	94.045	-53.045	-.194	-1.294

124	124	33.000	67.732	-34.732	-.127	-1.052
125	125	414.000	124.743	289.257	1.059	.699
126	126	76.000	63.347	12.653	.046	.166
127	127	96.000	58.961	37.039	.136	.386
128	128	46.000	28.263	17.737	.065	.386
129	129	99.000	190.524	-91.524	-.335	-.924
130	P130	41.000	45.805	-4.805	-.018	-.117
131	131	27.000	41.420	-14.420	-.053	-.534
132	132	55.000	50.191	4.809	.018	.087
133	133	30.000	41.420	-11.420	-.042	-.381
134	134	50.000	76.503	-26.503	-.097	-.530
135	135	68.000	23.878	44.122	.161	.649
136	136	38.000	6.336	31.664	.116	.833
137	137	64.000	41.420	22.580	.083	.353
138	138	14.000	-6.820	20.820	.076	1.487
139	139	55.000	45.805	9.195	.034	.167
140	140	295.000	282.617	12.383	.045	.042
141	141	21.000	-28.747	49.747	.182	2.369
142	142	196.000	159.860	36.140	.132	.184
143	143	49.000	37.034	11.966	.044	.244
144	144	243.000	361.589	-118.589	-.434	-.488
145	145	840.000	1028.307	-188.307	-.689	-.224
146	146	35.000	10.722	24.278	.089	.694
147	147	30.000	-19.976	49.976	.183	1.666
148	148	109.000	89.693	19.307	.071	.177
149	N149	24.000	45.805	-21.805	-.080	-.909
150	150	137.000	146.704	-9.704	-.036	-.071
151	151	82.000	23.878	58.122	.213	.709
152	152	15.000	63.347	-48.347	-.177	-3.223
153	153	30.000	-37.518	67.518	.247	2.251
154	154	23.000	146.704	-123.704	-.453	-5.378
155	155	17.000	67.732	-50.732	-.186	-2.984
156	156	18.000	-24.361	42.361	.155	2.353
157	157	32.000	85.274	-53.274	-.195	-1.665
158	158	21.000	-6.820	27.820	.102	1.325
159	159	73.000	98.430	-25.430	-.093	-.348
160	160	60.000	28.263	31.737	.116	.529
161	161	24.000	6.336	17.664	.065	.736
162	162	23.000	-11.205	34.205	.125	1.487
163	163	27.000	-2.434	29.434	.108	1.090
164	164	25.000	-2.434	27.434	.100	1.097
165	165	33.000	15.107	17.893	.065	.542
166	166	35.000	6.336	28.664	.105	.819
167	167	25.000	23.878	1.122	.004	.045
168	168	19.000	1.951	17.049	.062	.897
169	169	17.000	-24.361	41.361	.151	2.433
170	170	20.000	37.034	-17.034	-.062	-.852
171	171	15.000	-33.132	48.132	.176	3.209

172	172	33.000	28.263	4.737	.017	.144
173	C173	262.000	177.401	84.599	.310	.323
174	174	2550.000	844.120	1705.880	6.243	.669
175	175	167.000	72.118	94.882	.347	.568
176	176	69.000	19.493	49.507	.181	.717
177	177	96.000	115.972	-19.972	-.073	-.208
178	178	39.000	72.118	-33.118	-.121	-.849
179	179	257.000	234.378	22.622	.083	.088
180	180	58.000	85.274	-27.274	-.100	-.470
181	181	101.000	137.899	-36.899	-.135	-.365
182	182	94.000	142.284	-48.284	-.177	-.514
183	183	55.000	98.430	-43.430	-.159	-.790
184	184	41.000	129.128	-88.128	-.323	-2.149
185	185	62.000	98.430	-36.430	-.133	-.588
186	186	11.000	-11.205	22.205	.081	2.019
187	187	24.000	72.118	-48.118	-.176	-2.005
188	188	21.000	37.034	-16.034	-.059	-.764
189	189	200.000	339.662	-139.662	-.511	-.698
190	190	49.000	80.888	-31.888	-.117	-.651
191	191	33.000	58.961	-25.961	-.095	-.787
192	192	27.000	72.118	-45.118	-.165	-1.671
193	193	90.000	116.006	-26.006	-.095	-.289
194	194	113.000	98.430	14.570	.053	.129
195	195	169.000	247.568	-78.568	-.288	-.465
196	LS196	33.000	41.420	-8.420	-.031	-.255
197	197	42.000	45.805	-3.805	-.014	-.091
198	198	46.000	107.201	-61.201	-.224	-1.330
199	199	62.000	111.586	-49.586	-.181	-.800
200	200	49.000	142.284	-93.284	-.341	-1.904
201	201	34.000	-15.591	49.591	.181	1.459
202	202	61.000	45.805	15.195	.056	.249
203	203	57.000	50.191	6.809	.025	.119
204	204	56.000	50.191	5.809	.021	.104
205	205	51.000	137.933	-86.933	-.318	-1.705
206	206	61.000	129.162	-68.162	-.249	-1.117
207	207	52.000	142.318	-90.318	-.331	-1.737
208	208	55.000	111.620	-56.620	-.207	-1.029
209	209	100.000	181.787	-81.787	-.299	-.818
210	210	84.000	168.631	-84.631	-.310	-1.008
211	211	67.000	89.659	-22.659	-.083	-.338
212	212	80.000	133.513	-53.513	-.196	-.669
213	213	33.000	41.420	-8.420	-.031	-.255
214	214	24.000	23.878	.122	.000	.005
215	215	35.000	41.420	-6.420	-.023	-.183
216	216	54.000	37.034	16.966	.062	.314
217	217	17.000	-33.132	50.132	.183	2.949
218	218	43.000	15.107	27.893	.102	.649
219	219	23.000	-28.747	51.747	.189	2.250

220	220	28.000	-15.591	43.591	.160	1.557
221	221	41.000	10.722	30.278	.111	.738
222	222	55.000	19.493	35.507	.130	.646
223	223	29.000	-15.591	44.591	.163	1.538
224	224	37.000	19.493	17.507	.064	.473
225	225	38.000	63.347	-25.347	-.093	-.667
226	226	29.000	-2.434	31.434	.115	1.084
227	227	31.000	-11.205	42.205	.154	1.361
228	228	67.000	137.933	-70.933	-.260	-1.059
229	229	16.000	-28.747	44.747	.164	2.797
230	230	35.000	19.493	15.507	.057	.443
231	231	49.000	10.722	38.278	.140	.781
232	232	77.000	98.430	-21.430	-.078	-.278
233	233	50.000	37.034	12.966	.047	.259
234	234	46.000	41.420	4.580	.017	.100
235	235	34.000	15.107	18.893	.069	.556
236	236	33.000	32.649	.351	.001	.011
237	237	29.000	23.878	5.122	.019	.177
238	238	29.000	72.118	-43.118	-.158	-1.487
239	239	25.000	-2.434	27.434	.100	1.097
240	240	30.000	1.951	28.049	.103	.935
241	241	46.000	63.347	-17.347	-.063	-.377
242	242	29.000	-11.205	40.205	.147	1.386
243	243	18.000	1.951	16.049	.059	.892
244	244	30.000	10.722	19.278	.071	.643
245	245	46.000	41.420	4.580	.017	.100
246	246	36.000	28.263	7.737	.028	.215
247	247	28.000	85.274	-57.274	-.210	-2.045
248	248	57.000	76.503	-19.503	-.071	-.342
249	249	26.000	-15.591	41.591	.152	1.600
250	250	38.000	32.649	5.351	.020	.141
251	251	50.000	58.961	-8.961	-.033	-.179
252	252	224.000	550.161	-326.161	-1.194	-1.456
253	253	57.000	67.732	-10.732	-.039	-.188
254	254	66.000	28.263	37.737	.138	.572
255	255	65.000	190.524	-125.524	-.459	-1.931
256	256	256.000	317.701	-61.701	-.226	-.241
257	257	54.000	151.055	-97.055	-.355	-1.797
258	258	45.000	137.899	-92.899	-.340	-2.064
259	259	61.000	194.909	-133.909	-.490	-2.195
260	260	31.000	137.899	-106.899	-.391	-3.448
261	261	15.000	137.899	-122.899	-.450	-8.193
262	262	34.000	186.138	-152.138	-.557	-4.475
263	263	51.000	225.607	-174.607	-.639	-3.424
264	264	52.000	216.836	-164.836	-.603	-3.170
265	265	57.000	45.805	11.195	.041	.196

R BAR SQUARED	.3382
STANDARD ERROR OF ESTIMATE	222.3061
MEAN ERROR	.0000
MEAN SQUARED ERROR	48860.5200

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INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	5.420057	.2826

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-57.933070	.2853	.2826	231.4523

DEPENDENT VARIABLE			Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO	
1	MC 1	254.000	245.590	8.410	.031	.033	
2	2	154.000	657.514	-503.514	-1.843	-3.270	
3	3	1900.000	1183.260	716.740	2.623	.377	
4	4	161.000	137.189	23.811	.087	.148	
5	5	421.000	61.308	359.692	1.316	.854	
6	6	115.000	23.368	91.632	.335	.797	
7	7	44.000	28.788	15.212	.056	.346	
8	8	101.000	45.048	55.952	.205	.554	
9	9	161.000	115.509	45.491	.166	.283	
10	10	62.000	126.349	-64.349	-.235	-1.038	
11	11	124.000	169.709	-45.709	-.167	-.369	
12	12	161.000	229.330	-68.330	-.250	-.424	
13	13	158.000	180.549	-22.549	-.083	-.143	
14	14	160.000	207.650	-47.650	-.174	-.298	
15	15	151.000	760.496	-609.496	-2.230	-4.036	
16	16	43.000	55.888	-12.888	-.047	-.300	
17	17	106.000	164.289	-58.289	-.213	-.550	
18	18	72.000	88.408	-16.408	-.060	-.228	
19	19	154.000	245.590	-91.590	-.335	-.595	
20	20	89.000	93.829	-4.829	-.018	-.054	
21	21	81.000	77.568	3.432	.013	.042	
22	22	112.000	131.769	-19.769	-.072	-.177	
23	23	75.000	-3.732	78.732	.288	1.050	
24	24	40.000	-3.732	43.732	.160	1.093	
25	25	50.000	34.208	15.792	.058	.316	
26	26	16.000	17.948	-1.948	-.007	-.122	
27	27	134.000	240.170	-106.170	-.389	-.792	
28	28	38.000	7.108	30.892	.113	.813	

29	29	20.000	-19.993	39.993	.146	2.000
30	30	37.000	-3.732	40.732	.149	1.101
31	31	36.000	-9.153	45.153	.165	1.254
32	32	89.000	23.368	65.632	.240	.737
33	33	105.000	88.408	16.592	.061	.158
34	34	119.000	185.970	-66.970	-.245	-.563
35	35	234.000	234.750	-.750	-.003	-.003
36	36	18.000	-3.732	21.732	.080	1.207
37	37	26.000	-30.833	56.833	.208	2.186
38	38	45.000	39.628	5.372	.020	.119
39	39	37.000	-19.993	56.993	.209	1.540
40	40	83.000	55.888	27.112	.099	.327
41	41	39.000	12.528	26.472	.097	.679
42	42	66.000	45.048	20.952	.077	.317
43	43	54.000	7.108	46.892	.172	.868
44	44	67.000	39.628	27.372	.100	.409
45	45	49.000	17.948	31.052	.114	.634
46	46	74.000	72.148	1.852	.007	.025
47	47	115.000	23.368	91.632	.335	.797
48	48	101.000	17.948	83.052	.304	.822
49	49	56.000	23.368	32.632	.119	.583
50	50	192.000	207.650	-15.650	-.057	-.082
51	51	150.000	213.070	-63.070	-.231	-.420
52	52	161.000	196.810	-35.810	-.131	-.222
53	53	91.000	110.089	-19.089	-.070	-.210
54	54	2560.000	72.148	2487.852	9.104	.972
55	55	104.000	110.089	-6.089	-.022	-.059
56	56	65.000	82.988	-17.988	-.066	-.277
57	57	127.000	180.549	-53.549	-.196	-.422
58	58	52.000	39.628	12.372	.045	.238
59	59	52.000	28.788	23.212	.085	.446
60	60	48.000	1.688	46.312	.169	.965
61	61	47.000	-3.732	50.732	.186	1.079
62	62	39.000	-3.732	42.732	.156	1.096
63	63	45.000	7.108	37.892	.139	.842
64	64	83.000	164.289	-81.289	-.297	-.979
65	65	57.000	7.108	49.892	.183	.875
66	66	46.000	-19.993	65.993	.241	1.435
67	67	279.000	142.609	136.391	.499	.489
68	68	240.000	505.753	-265.753	-.973	-1.107
69	69	94.000	175.129	-81.129	-.297	-.863
70	70	41.000	17.948	23.052	.084	.562
71	71	69.000	93.829	-24.829	-.091	-.360
72	72	98.000	104.669	-6.669	-.024	-.068
73	73	153.000	234.750	-81.750	-.299	-.534
74	74	59.000	7.108	51.892	.190	.880
75	75	58.000	17.948	40.052	.147	.691
76	76	112.000	175.129	-63.129	-.231	-.564

77	77	77.000	77.568	-.568	-.002	-.007
78	78	82.000	158.869	-76.869	-.281	-.937
79	79	167.000	245.590	-78.590	-.288	-.471
80	80	85.000	164.289	-79.289	-.290	-.933
81	81	55.000	66.728	-11.728	-.043	-.213
82	82	72.000	99.249	-27.249	-.100	-.378
83	83	111.000	185.970	-74.970	-.274	-.675
84	84	72.000	45.048	26.952	.099	.374
85	85	108.000	337.731	-229.731	-.841	-2.127
86	86	129.000	267.270	-138.270	-.506	-1.072
87	87	183.000	251.010	-68.010	-.249	-.372
88	88	208.000	348.571	-140.571	-.514	-.676
89	89	169.000	261.850	-92.850	-.340	-.549
90	90	166.000	251.010	-85.010	-.311	-.512
91	91	101.000	82.988	18.012	.066	.178
92	92	102.000	240.170	-138.170	-.506	-1.355
93	93	202.000	213.070	-11.070	-.041	-.055
94	94	78.000	142.609	-64.609	-.236	-.828
95	95	75.000	55.888	19.112	.070	.255
96	96	65.000	50.468	14.532	.053	.224
97	97	84.000	126.349	-42.349	-.155	-.504
98	98	43.000	34.208	8.792	.032	.204
99	99	127.000	131.769	-4.769	-.017	-.038
100	100	168.000	305.211	-137.211	-.502	-.817
101	101	154.000	332.311	-178.311	-.653	-1.158
102	102	1630.000	391.932	1238.068	4.531	.760
103	103	187.000	202.230	-15.230	-.056	-.081
104	104	137.000	213.070	-76.070	-.278	-.555
105	105	69.000	12.528	56.472	.207	.818
106	106	70.000	23.368	46.632	.171	.666
107	107	93.000	185.970	-92.970	-.340	-1.000
108	108	98.000	110.089	-12.089	-.044	-.123
109	109	73.000	196.810	-123.810	-.453	-1.696
110	110	86.000	153.449	-67.449	-.247	-.784
111	111	103.000	55.888	47.112	.172	.457
112	112	42.000	66.728	-24.728	-.090	-.589
113	113	39.000	82.988	-43.988	-.161	-1.128
114	114	37.000	1.688	35.312	.129	.954
115	115	22.000	169.709	-147.709	-.541	-6.714
116	116	62.000	104.669	-42.669	-.156	-.688
117	117	210.000	343.151	-133.151	-.487	-.634
118	118	73.000	202.230	-129.230	-.473	-1.770
119	119	397.000	429.872	-32.872	-.120	-.083
120	120	660.000	337.731	322.269	1.179	.488
121	121	37.000	153.449	-116.449	-.426	-3.147
122	122	50.000	169.709	-119.709	-.438	-2.394
123	123	41.000	120.929	-79.929	-.292	-1.949
124	124	33.000	88.408	-55.408	-.203	-1.679

125	125	414.000	158.869	255.131	.934	.616
126	126	76.000	82.988	-6.988	-.026	-.092
127	127	96.000	77.568	18.432	.067	.192
128	128	46.000	39.628	6.372	.023	.139
129	129	99.000	240.170	-141.170	-.517	-1.426
130	P130	41.000	61.308	-20.308	-.074	-.495
131	131	27.000	55.888	-28.888	-.106	-1.070
132	132	55.000	66.728	-11.728	-.043	-.213
133	133	30.000	55.888	-25.888	-.095	-.863
134	134	50.000	99.249	-49.249	-.180	-.985
135	135	68.000	34.208	33.792	.124	.497
136	136	38.000	12.528	25.472	.093	.670
137	137	64.000	55.888	8.112	.030	.127
138	138	14.000	-3.732	17.732	.065	1.267
139	139	55.000	61.308	-6.308	-.023	-.115
140	140	295.000	353.991	-58.991	-.216	-.200
141	141	21.000	-30.833	51.833	.190	2.468
142	142	196.000	126.349	69.651	.255	.355
143	143	49.000	50.468	-1.468	-.005	-.030
144	144	243.000	375.672	-132.672	-.486	-.546
145	145	840.000	895.997	-55.997	-.205	-.067
146	146	35.000	17.948	17.052	.062	.487
147	147	30.000	-19.993	49.993	.183	1.666
148	148	109.000	39.628	69.372	.254	.636
149	N149	24.000	61.308	-37.308	-.137	-1.555
150	150	137.000	110.089	26.911	.098	.196
151	151	82.000	34.208	47.792	.175	.583
152	152	15.000	82.988	-67.988	-.249	-4.533
153	153	30.000	-41.673	71.673	.262	2.389
154	154	23.000	110.089	-87.089	-.319	-3.786
155	155	17.000	88.408	-71.408	-.261	-4.200
156	156	18.000	-25.413	43.413	.159	2.412
157	157	32.000	110.089	-78.089	-.286	-2.440
158	158	21.000	-3.732	24.732	.091	1.178
159	159	73.000	126.349	-53.349	-.195	-.731
160	160	60.000	39.628	20.372	.075	.340
161	161	24.000	12.528	11.472	.042	.478
162	162	23.000	-9.153	32.153	.118	1.398
163	163	27.000	1.688	25.312	.093	.937
164	164	25.000	1.688	23.312	.085	.932
165	165	33.000	23.368	9.632	.035	.292
166	166	35.000	12.528	22.472	.082	.642
167	167	25.000	34.208	-9.208	-.034	-.368
168	168	19.000	7.108	11.892	.044	.626
169	169	17.000	-25.413	42.413	.155	2.495
170	170	20.000	50.468	-30.468	-.111	-1.523
171	171	15.000	-36.253	51.253	.188	3.417
172	172	33.000	39.628	-6.628	-.024	-.201

173	C173	262.000	148.029	113.971	.417	.435
174	174	2550.000	668.355	1881.645	6.886	.738
175	175	167.000	93.829	73.171	.268	.438
176	176	69.000	28.788	40.212	.147	.583
177	177	96.000	148.029	-52.029	-.190	-.542
178	178	39.000	93.829	-54.829	-.201	-1.406
179	179	257.000	294.371	-37.371	-.137	-.145
180	180	58.000	110.089	-52.089	-.191	-.898
181	181	101.000	175.129	-74.129	-.271	-.734
182	182	94.000	180.549	-86.549	-.317	-.921
183	183	55.000	126.349	-71.349	-.261	-1.297
184	184	41.000	164.289	-123.289	-.451	-3.007
185	185	62.000	126.349	-64.349	-.235	-1.038
186	186	11.000	-9.153	20.153	.074	1.832
187	187	24.000	93.829	-69.829	-.256	-2.910
188	188	21.000	50.468	-29.468	-.108	-1.403
189	189	200.000	348.571	-148.571	-.544	-.743
190	190	49.000	104.669	-55.669	-.204	-1.136
191	191	33.000	77.568	-44.568	-.163	-1.351
192	192	27.000	93.829	-66.829	-.245	-2.475
193	193	90.000	72.148	17.852	.065	.198
194	194	113.000	126.349	-13.349	-.049	-.118
195	195	169.000	234.750	-65.750	-.241	-.389
196	LS196	33.000	55.888	-22.888	-.084	-.694
197	197	42.000	61.308	-19.308	-.071	-.460
198	198	46.000	137.189	-91.189	-.334	-1.982
199	199	62.000	142.609	-80.609	-.295	-1.300
200	200	49.000	180.549	-131.549	-.481	-2.685
201	201	34.000	-14.573	48.573	.178	1.429
202	202	61.000	61.308	-.308	-.001	-.005
203	203	57.000	66.728	-9.728	-.036	-.171
204	204	56.000	66.728	-10.728	-.039	-.192
205	205	51.000	99.249	-48.249	-.177	-.946
206	206	61.000	88.408	-27.408	-.100	-.449
207	207	52.000	104.669	-52.669	-.193	-1.013
208	208	55.000	66.728	-11.728	-.043	-.213
209	209	100.000	153.449	-53.449	-.196	-.534
210	210	84.000	137.189	-53.189	-.195	-.633
211	211	67.000	115.509	-48.509	-.178	-.724
212	212	80.000	169.709	-89.709	-.328	-1.121
213	213	33.000	55.888	-22.888	-.084	-.694
214	214	24.000	34.208	-10.208	-.037	-.425
215	215	35.000	55.888	-20.888	-.076	-.597
216	216	54.000	50.468	3.532	.013	.065
217	217	17.000	-36.253	53.253	.195	3.133
218	218	43.000	23.368	19.632	.072	.457
219	219	23.000	-30.833	53.833	.197	2.341
220	220	28.000	-14.573	42.573	.156	1.520

221	221	41.000	17.948	23.052	.084	.562
222	222	55.000	28.788	26.212	.096	.477
223	223	29.000	-14.573	43.573	.159	1.503
224	224	37.000	28.788	8.212	.030	.222
225	225	38.000	82.988	-44.988	-.165	-1.184
226	226	29.000	1.688	27.312	.100	.942
227	227	31.000	-9.153	40.153	.147	1.295
228	228	67.000	99.249	-32.249	-.118	-.481
229	229	16.000	-30.833	46.833	.171	2.927
230	230	35.000	28.788	6.212	.023	.177
231	231	49.000	17.948	31.052	.114	.634
232	232	77.000	126.349	-49.349	-.181	-.641
233	233	50.000	50.468	-.468	-.002	-.009
234	234	46.000	55.888	-9.888	-.036	-.215
235	235	34.000	23.368	10.632	.039	.313
236	236	33.000	45.048	-12.048	-.044	-.365
237	237	29.000	34.208	-5.208	-.019	-.180
238	238	29.000	93.829	-64.829	-.237	-2.235
239	239	25.000	1.688	23.312	.085	.932
240	240	30.000	7.108	22.892	.084	.763
241	241	46.000	82.988	-36.988	-.135	-.804
242	242	29.000	-9.153	38.153	.140	1.316
243	243	18.000	7.108	10.892	.040	.605
244	244	30.000	17.948	12.052	.044	.402
245	245	46.000	55.888	-9.888	-.036	-.215
246	246	36.000	39.628	-3.628	-.013	-.101
247	247	28.000	110.089	-82.089	-.300	-2.932
248	248	57.000	99.249	-42.249	-.155	-.741
249	249	26.000	-14.573	40.573	.148	1.560
250	250	38.000	45.048	-7.048	-.026	-.185
251	251	50.000	77.568	-27.568	-.101	-.551
252	252	224.000	608.734	-384.734	-1.408	-1.718
253	253	57.000	88.408	-31.408	-.115	-.551
254	254	66.000	39.628	26.372	.097	.400
255	255	65.000	240.170	-175.170	-.641	-2.695
256	256	256.000	397.352	-141.352	-.517	-.552
257	257	54.000	191.390	-137.390	-.503	-2.544
258	258	45.000	175.129	-130.129	-.476	-2.892
259	259	61.000	245.590	-184.590	-.676	-3.026
260	260	31.000	175.129	-144.129	-.527	-4.649
261	261	15.000	175.129	-160.129	-.586	-10.675
262	262	34.000	234.750	-200.750	-.735	-5.904
263	263	51.000	283.531	-232.531	-.851	-4.559
264	264	52.000	272.690	-220.690	-.808	-4.244
265	265	57.000	61.308	-4.308	-.016	-.076

R BAR SQUARED	.2826
STANDARD ERROR OF ESTIMATE	231.4526
MEAN ERROR	.0000
MEAN SQUARED ERROR	53166.0200

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+++++
+ END OF RUN +
+ NORMAL STOP IN MLRP +
+++++

**VALORACION DE LA ZONA DE
MEDIO CUDEYO**

1*****
MULTIPLE LINEAR REGRESSION

704-G1-L2020 JAN 1975
FORTRAN77 VERSION JUL 1986

GEOQUIMICA DRENAJE / CANTABRIA 1990
CALCULO DE ANOMALIAS
MEDIO CUDEYO

NVAL NCOMB IPRNT IFRMT IDELE DELTA
4 0 0 0 0 .0000

+ + + + ANALYSIS NO 1 + + +

DEPENDENT VARIABLE -- 2

IDEP TRANSFORMATION CODES..... NOBR IRES IFOF
2 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 3 2

VARIABLE TRANSFORMATION
Pb NONE
Zn NONE
Cd NONE
Ba NONE

INPUT DATA (p.p.m.) (.500 en Cd corresponde a valores inferiores a 1 p.p.m.)

OBS NO	OBS ID	Pb	Zn	Cd	Ba
1	1	56.000	254.000	1.000	448.000
2	2	132.000	154.000	.500	219.000
3	3	229.000	1900.000	.500	332.000
4	4	36.000	161.000	.500	146.000
5	5	22.000	421.000	1.000	235.000
6	6	15.000	115.000	.500	197.000
7	7	16.000	44.000	1.000	282.000
8	8	19.000	101.000	1.000	243.000
9	9	32.000	161.000	.500	196.000
10	10	34.000	62.000	1.000	260.000
11	11	42.000	124.000	1.000	223.000
12	12	53.000	161.000	2.000	236.000

13	44.000	158.000	1.000	264.000
14	49.000	160.000	2.000	283.000
15	151.000	151.000	1.000	195.000
16	21.000	43.000	.500	214.000
17	41.000	106.000	1.000	309.000
18	27.000	72.000	.500	247.000
19	56.000	154.000	1.000	391.000
20	28.000	89.000	.500	502.000
21	25.000	81.000	1.000	283.000
22	35.000	112.000	.500	246.000
23	10.000	75.000	.500	312.000
24	10.000	40.000	.500	251.000
25	17.000	50.000	.500	279.000
26	14.000	16.000	.500	389.000
27	55.000	134.000	1.000	1022.000
28	12.000	38.000	1.000	316.000
29	7.000	20.000	.500	343.000
30	10.000	37.000	1.000	390.000
31	9.000	36.000	.500	542.000
32	15.000	89.000	1.000	457.000
33	27.000	105.000	.500	483.000
34	45.000	119.000	.500	260.000
35	54.000	234.000	3.000	384.000
36	10.000	18.000	1.000	273.000
37	5.000	26.000	.500	471.000
38	18.000	45.000	.500	638.000
39	7.000	37.000	.500	559.000
40	21.000	83.000	.500	382.000
41	13.000	39.000	.500	670.000
42	19.000	66.000	.500	381.000
43	12.000	54.000	.500	455.000
44	18.000	67.000	.500	571.000
45	14.000	49.000	.500	435.000
46	24.000	74.000	.500	554.000
47	15.000	115.000	1.000	757.000
48	14.000	101.000	.500	379.000
49	15.000	56.000	.500	455.000
50	49.000	192.000	2.000	258.000
51	50.000	150.000	2.000	285.000
52	47.000	161.000	3.000	253.000
53	31.000	91.000	.500	258.000
54	24.000	2560.000	.500	290.000
55	31.000	104.000	.500	312.000
56	26.000	65.000	.500	254.000
57	44.000	127.000	.500	319.000
58	18.000	52.000	.500	366.000
59	16.000	52.000	.500	300.000
60	11.000	48.000	.500	277.000

61	61	10.000	47.000	.500	334.000
62	62	10.000	39.000	.500	367.000
63	63	12.000	45.000	.500	412.000
64	64	41.000	83.000	.500	367.000
65	65	12.000	57.000	.500	287.000
66	66	7.000	46.000	.500	278.000
67	67	37.000	279.000	1.000	373.000
68	68	104.000	240.000	.500	289.000
69	69	43.000	94.000	.500	249.000
70	70	14.000	41.000	.500	381.000
71	71	28.000	69.000	.500	242.000
72	72	30.000	98.000	.500	1008.000
73	73	54.000	153.000	.500	194.000
74	74	12.000	59.000	.500	123.000
75	75	14.000	58.000	.500	100.000
76	76	43.000	112.000	1.000	237.000
77	77	25.000	77.000	.500	300.000
78	78	40.000	82.000	.500	295.000
79	79	56.000	167.000	4.000	231.000
80	80	41.000	85.000	1.000	489.000
81	81	23.000	55.000	.500	511.000
82	82	29.000	72.000	1.000	417.000
83	83	45.000	111.000	2.000	371.000
84	84	19.000	72.000	1.000	444.000
85	85	73.000	108.000	1.000	341.000
86	86	60.000	129.000	2.000	400.000
87	87	57.000	183.000	2.000	286.000
88	88	75.000	208.000	2.000	188.000
89	89	59.000	169.000	2.000	438.000
90	90	57.000	166.000	1.000	693.000
91	91	26.000	101.000	.500	466.000
92	92	55.000	102.000	.500	572.000
93	93	50.000	202.000	2.000	608.000
94	94	37.000	78.000	.500	616.000
95	95	21.000	75.000	.500	578.000
96	96	20.000	65.000	.500	574.000
97	97	34.000	84.000	.500	643.000
98	98	17.000	43.000	.500	456.000
99	99	35.000	127.000	.500	565.000
100	100	67.000	168.000	.500	604.000
101	101	72.000	154.000	.500	556.000
102	102	83.000	1630.000	6.000	571.000
103	103	48.000	187.000	.500	668.000
104	104	50.000	137.000	.500	690.000
105	105	13.000	69.000	.500	692.000
106	106	15.000	70.000	.500	799.000
107	107	45.000	93.000	.500	539.000
108	108	31.000	98.000	.500	652.000

109	109	47.000	73.000	.500	527.000
110	110	39.000	86.000	.500	629.000
111	111	21.000	103.000	.500	339.000
112	112	23.000	42.000	.500	324.000
113	113	26.000	39.000	.500	275.000
114	114	11.000	37.000	.500	555.000
115	115	42.000	22.000	.500	362.000
116	116	30.000	62.000	1.000	556.000
117	117	74.000	210.000	1.000	386.000
118	118	48.000	73.000	.500	573.000
119	119	90.000	397.000	.500	519.000
120	120	73.000	660.000	1.000	575.000
121	121	39.000	37.000	.500	501.000
122	122	42.000	50.000	.500	527.000
123	123	33.000	41.000	.500	499.000
124	124	27.000	33.000	.500	490.000
125	125	40.000	414.000	.500	527.000
126	126	26.000	76.000	.500	434.000
127	127	25.000	96.000	.500	565.000
128	128	18.000	46.000	.500	496.000
129	129	55.000	99.000	.500	449.000

STATISTICS OF DATA

BASED ON 129 OBSERVATIONS

VARIABLE	AVERAGE	VARIANCE	STANDARD DEVIATION	
Pb	36.2636	858.3362	29.2974	
Cd	.8295	.5488	.7408	
Ba	411.8837	28139.4200	167.7481	
Zn	151.8760	95769.9500	309.4672	DEPENDENT

SIMPLE CORRELATION COEFFICIENTS

VARIABLE	Pb	Cd	Ba	Zn
Pb	1.0000	.2499	.0000	.4481
Cd	.2499	1.0000	-.0338	.2782
Ba	.0000	-.0338	1.0000	.0000
Zn	.4481	.2782	.0000	1.0000

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	4.297560	.1614
Cd	77.073550	.0320
Ba	.020963	.0000

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-76.532230	.2385	.2202	273.2781

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	1	254.000	250.596	3.404	.011	.013
2	2	154.000	533.873	-379.873	-1.228	-2.467
3	3	1900.000	953.105	946.895	3.060	.498
4	4	161.000	119.777	41.223	.133	.256
5	5	421.000	100.014	320.986	1.037	.762
6	6	115.000	30.598	84.402	.273	.734
7	7	44.000	75.214	-31.214	-.101	-.709
8	8	101.000	87.289	13.711	.044	.136

74	.200308	54.000	337.000	.500	2.000	168000.000	5080.00
75	.200309	44.000	267.000	1.000	5.000	205000.000	7705.00
76	.200310	67.000	273.000	1.000	5.000	229000.000	9230.00
77	.400311	127.000	428.000	1.000	5.000	173500.000	4950.00
78	.100317	33.000	79.000	.500	3.000	28100.000	210.00
79	.300318	77.000	685.000	.500	4.000	76300.000	3325.00
80	.100319	69.000	259.000	.500	3.000	71400.000	1713.00
81	.100320	77.000	387.000	.500	2.000	58100.000	1264.00
82	.200323	61.000	365.000	.500	.500	174000.000	4560.00
83	.600324	82.000	555.000	1.000	.500	199000.000	6520.00
84	.500326	53.000	590.000	1.000	1.000	58000.000	2403.00
85	.500327	56.000	655.000	1.000	2.000	71100.000	3725.00
86	.400328	37.000	423.000	1.000	2.000	49300.000	3180.00
87	.400329	59.000	485.000	1.000	1.000	71800.000	2557.00
88	.300330	56.000	600.000	1.000	3.000	69600.000	5500.00
89	.300331	115.000	680.000	1.000	2.000	71700.000	3645.00

STATISTICS OF DATA

BASED ON 89 OBSERVATIONS

VARIABLE	AVERAGE	VARIANCE	STANDARD DEVIATION	
Pb	50.8764	417.9278	20.4433	
Ag	.6067	.0425	.2060	
Cd	5.8876	7.3225	2.7060	
Fe	113652.8000	4017367000.0000	63382.7000	
Mn	4512.7980	6578461.0000	2564.8510	
Hg	.3129	.0196	.1399	
Zn	343.4494	30198.2500	173.7764	DEPENDENT VARIABLE

SIMPLE CORRELATION COEFFICIENTS

VARIABLE	Pb	Ag	Cd	Fe	Mn	Hg	Zn
Pb	1.0000	.1267	.0000	.1489	.0000	.0000	.3254
Ag	.1267	1.0000	-.2255	.1642	.1547	.1559	.2091
Cd	.0000	-.2255	1.0000	.2661	.2392	.0000	-.2258
Fe	.1489	.1642	.2661	1.0000	.8374	.0000	.0000
Mn	.0000	.1547	.2392	.8374	1.0000	.0809	.0000
Hg	.0000	.1559	.0000	.0000	.0809	1.0000	.0000
Zn	.3254	.2091	-.2258	.0000	.0000	.0000	1.0000

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	3.458187	.1622
Ag	133.558900	.0171
Cd	-9.383599	.0122
Fe	-.001804	.1280
Mn	.041876	.1193
Hg	-102.490300	.0000

9	9	161.000	103.635	57.365	.185	.356
10	10	62.000	152.109	-90.109	-.291	-1.453
11	11	124.000	185.714	-61.714	-.199	-.498
12	12	161.000	310.333	-149.333	-.483	-.928
13	13	158.000	195.168	-37.168	-.120	-.235
14	14	160.000	294.128	-134.128	-.433	-.838
15	15	151.000	653.561	-502.561	-1.624	-3.328
16	16	43.000	56.739	-13.739	-.044	-.320
17	17	106.000	183.219	-77.219	-.250	-.728
18	18	72.000	83.216	-11.216	-.036	-.156
19	19	154.000	249.401	-95.401	-.308	-.619
20	20	89.000	92.859	-3.859	-.012	-.043
21	21	81.000	113.913	-32.913	-.106	-.406
22	22	112.000	117.576	-5.576	-.018	-.050
23	23	75.000	11.520	63.480	.205	.846
24	24	40.000	10.242	29.758	.096	.744
25	25	50.000	40.912	9.088	.029	.182
26	26	16.000	30.325	-14.325	-.046	-.895
27	27	134.000	258.331	-124.331	-.402	-.928
28	28	38.000	58.736	-20.736	-.067	-.546
29	29	20.000	-.722	20.722	.067	1.036
30	30	37.000	51.692	-14.692	-.047	-.397
31	31	36.000	12.044	23.956	.077	.665
32	32	89.000	74.585	14.415	.047	.162
33	33	105.000	88.164	16.836	.054	.160
34	34	119.000	160.845	-41.845	-.135	-.352
35	35	234.000	394.806	-160.806	-.520	-.687
36	36	18.000	49.240	-31.240	-.101	-1.736
37	37	26.000	-6.634	32.634	.105	1.255
38	38	45.000	52.735	-7.735	-.025	-.172
39	39	37.000	3.806	33.194	.107	.897
40	40	83.000	60.261	22.739	.073	.274
41	41	39.000	31.918	7.082	.023	.182
42	42	66.000	51.645	14.355	.046	.218
43	43	54.000	23.113	30.887	.100	.572
44	44	67.000	51.330	15.670	.051	.234
45	45	49.000	31.289	17.711	.057	.361
46	46	74.000	76.759	-2.759	-.009	-.037
47	47	115.000	80.873	34.127	.110	.297
48	48	101.000	30.115	70.885	.229	.702
49	49	56.000	36.006	19.994	.065	.357
50	50	192.000	293.604	-101.604	-.328	-.529
51	51	150.000	298.467	-148.467	-.480	-.990
52	52	161.000	361.977	-200.977	-.649	-1.248
53	53	91.000	100.637	-9.637	-.031	-.106
54	54	2560.000	71.225	2488.775	8.042	.972
55	55	104.000	101.769	2.231	.007	.021
56	56	65.000	79.066	-14.066	-.045	-.216

57	57	127.000	157.784	-30.784	-.099	-.242
58	58	52.000	47.033	4.967	.016	.096
59	59	52.000	37.054	14.946	.048	.287
60	60	48.000	15.084	32.916	.106	.686
61	61	47.000	11.982	35.018	.113	.745
62	62	39.000	12.673	26.327	.085	.675
63	63	45.000	22.212	22.788	.074	.506
64	64	83.000	145.898	-62.898	-.203	-.758
65	65	57.000	19.592	37.408	.121	.656
66	66	46.000	-2.085	48.085	.155	1.045
67	67	279.000	167.370	111.630	.361	.400
68	68	240.000	415.009	-175.009	-.566	-.729
69	69	94.000	152.019	-58.019	-.187	-.617
70	70	41.000	30.157	10.843	.035	.264
71	71	69.000	87.409	-18.409	-.059	-.267
72	72	98.000	112.062	-14.062	-.045	-.143
73	73	153.000	198.140	-45.140	-.146	-.295
74	74	59.000	16.154	42.846	.138	.726
75	75	58.000	24.267	33.733	.109	.582
76	76	112.000	190.305	-78.305	-.253	-.699
77	77	77.000	75.732	1.268	.004	.016
78	78	82.000	140.091	-58.091	-.188	-.708
79	79	167.000	477.268	-310.268	-1.003	-1.858
80	80	85.000	186.992	-101.992	-.330	-1.200
81	81	55.000	71.560	-16.560	-.054	-.301
82	82	72.000	133.912	-61.912	-.200	-.860
83	83	111.000	278.782	-167.782	-.542	-1.512
84	84	72.000	91.502	-19.502	-.063	-.271
85	85	108.000	321.411	-213.411	-.690	-1.976
86	86	129.000	343.854	-214.854	-.694	-1.666
87	87	183.000	328.571	-145.571	-.470	-.795
88	88	208.000	403.873	-195.873	-.633	-.942
89	89	169.000	340.353	-171.353	-.554	-1.014
90	90	166.000	260.029	-94.029	-.304	-.566
91	91	101.000	83.510	17.490	.057	.173
92	92	102.000	210.361	-108.361	-.350	-1.062
93	93	202.000	305.238	-103.238	-.334	-.511
94	94	78.000	133.927	-55.927	-.181	-.717
95	95	75.000	64.370	10.630	.034	.142
96	96	65.000	59.988	5.012	.016	.077
97	97	84.000	121.601	-37.601	-.122	-.448
98	98	43.000	44.622	-1.622	-.005	-.038
99	99	127.000	124.263	2.737	.009	.022
100	100	168.000	262.602	-94.602	-.306	-.563
101	101	154.000	283.084	-129.084	-.417	-.838
102	102	1630.000	754.576	875.424	2.829	.537
103	103	187.000	182.290	4.710	.015	.025
104	104	137.000	191.347	-54.347	-.176	-.397

105	105	69.000	32.379	36.621	.118	.531
106	106	70.000	43.217	26.783	.087	.383
107	107	93.000	166.694	-73.694	-.238	-.792
108	108	98.000	108.896	-10.896	-.035	-.111
109	109	73.000	175.037	-102.037	-.330	-1.398
110	110	86.000	142.795	-56.795	-.184	-.660
111	111	103.000	59.360	43.640	.141	.424
112	112	42.000	67.640	-25.640	-.083	-.610
113	113	39.000	79.506	-40.506	-.131	-1.039
114	114	37.000	20.912	16.088	.052	.435
115	115	22.000	150.091	-128.091	-.414	-5.822
116	116	62.000	141.123	-79.123	-.256	-1.276
117	117	210.000	326.652	-116.652	-.377	-.555
118	118	73.000	180.299	-107.299	-.347	-1.470
119	119	397.000	359.665	37.335	.121	.094
120	120	660.000	326.317	333.683	1.078	.506
121	121	37.000	140.112	-103.112	-.333	-2.787
122	122	50.000	153.549	-103.549	-.335	-2.071
123	123	41.000	114.284	-73.284	-.237	-1.787
124	124	33.000	88.310	-55.310	-.179	-1.676
125	125	414.000	144.954	269.046	.869	.650
126	126	76.000	82.839	-6.839	-.022	-.090
127	127	96.000	81.287	14.713	.048	.153
128	128	46.000	49.758	-3.758	-.012	-.082
129	129	99.000	207.783	-108.783	-.352	-1.099

R BAR SQUARED .2202
STANDARD ERROR OF ESTIMATE 273.2780
MEAN ERROR .0000
MEAN SQUARED ERROR 72365.2100

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INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	4.294155	.1613
Cd	76.660160	.0319

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-67.431720	.2384	.2263	272.2143

DEPENDENT VARIABLE			Zn	ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	1	254.000	249.701	4.299	.014	.017
2	2	154.000	537.727	-383.727	-1.240	-2.492
3	3	1900.000	954.260	945.740	3.056	.498
4	4	161.000	125.488	35.512	.115	.221
5	5	421.000	103.700	317.300	1.025	.754
6	6	115.000	35.311	79.689	.258	.693
7	7	44.000	77.935	-33.935	-.110	-.771
8	8	101.000	90.817	10.183	.033	.101
9	9	161.000	108.311	52.689	.170	.327
10	10	62.000	155.230	-93.230	-.301	-1.504
11	11	124.000	189.583	-65.583	-.212	-.529
12	12	161.000	313.479	-152.479	-.493	-.947
13	13	158.000	198.171	-40.171	-.130	-.254
14	14	160.000	296.302	-136.302	-.440	-.852
15	15	151.000	657.646	-506.646	-1.637	-3.355
16	16	43.000	61.076	-18.076	-.058	-.420
17	17	106.000	185.289	-79.289	-.256	-.748
18	18	72.000	86.841	-14.841	-.048	-.206
19	19	154.000	249.701	-95.701	-.309	-.621
20	20	89.000	91.135	-2.135	-.007	-.024
21	21	81.000	116.582	-35.582	-.115	-.439
22	22	112.000	121.194	-9.194	-.030	-.082
23	23	75.000	13.840	61.160	.198	.815
24	24	40.000	13.840	26.160	.085	.654
25	25	50.000	43.899	6.101	.020	.122
26	26	16.000	31.017	-15.017	-.049	-.939
27	27	134.000	245.407	-111.407	-.360	-.831

28	28	38.000	60.758	-22.758	-.074	-.599
29	29	20.000	.957	19.043	.062	.952
30	30	37.000	52.170	-15.170	-.049	-.410
31	31	36.000	9.546	26.454	.085	.735
32	32	89.000	73.641	15.359	.050	.173
33	33	105.000	86.841	18.159	.059	.173
34	34	119.000	164.135	-45.135	-.146	-.379
35	35	234.000	394.433	-160.433	-.518	-.686
36	36	18.000	52.170	-34.170	-.110	-1.898
37	37	26.000	-7.631	33.631	.109	1.293
38	38	45.000	48.193	-3.193	-.010	-.071
39	39	37.000	.957	36.043	.116	.974
40	40	83.000	61.076	21.924	.071	.264
41	41	39.000	26.722	12.278	.040	.315
42	42	66.000	52.487	13.513	.044	.205
43	43	54.000	22.428	31.572	.102	.585
44	44	67.000	48.193	18.807	.061	.281
45	45	49.000	31.017	17.983	.058	.367
46	46	74.000	73.958	.042	.000	.001
47	47	115.000	73.641	41.359	.134	.360
48	48	101.000	31.017	69.983	.226	.693
49	49	56.000	35.311	20.689	.067	.369
50	50	192.000	296.302	-104.302	-.337	-.543
51	51	150.000	300.596	-150.596	-.487	-1.004
52	52	161.000	364.374	-203.374	-.657	-1.263
53	53	91.000	104.017	-13.017	-.042	-.143
54	54	2560.000	73.958	2486.042	8.033	.971
55	55	104.000	104.017	-.017	.000	.000
56	56	65.000	82.546	-17.546	-.057	-.270
57	57	127.000	159.841	-32.841	-.106	-.259
58	58	52.000	48.193	3.807	.012	.073
59	59	52.000	39.605	12.395	.040	.238
60	60	48.000	18.134	29.866	.097	.622
61	61	47.000	13.840	33.160	.107	.706
62	62	39.000	13.840	25.160	.081	.645
63	63	45.000	22.428	22.572	.073	.502
64	64	83.000	146.959	-63.959	-.207	-.771
65	65	57.000	22.428	34.572	.112	.607
66	66	46.000	.957	45.043	.146	.979
67	67	279.000	168.112	110.888	.358	.397
68	68	240.000	417.490	-177.490	-.574	-.740
69	69	94.000	155.547	-61.547	-.199	-.655
70	70	41.000	31.017	9.983	.032	.243
71	71	69.000	91.135	-22.135	-.072	-.321
72	72	98.000	99.723	-1.723	-.006	-.018
73	73	153.000	202.783	-49.783	-.161	-.325
74	74	59.000	22.428	36.572	.118	.620
75	75	58.000	31.017	26.983	.087	.465

76	76	112.000	193.877	-81.877	-.265	-.731
77	77	77.000	78.252	-1.252	-.004	-.016
78	78	82.000	142.665	-60.665	-.196	-.740
79	79	167.000	479.682	-312.682	-1.010	-1.872
80	80	85.000	185.289	-100.289	-.324	-1.180
81	81	55.000	69.664	-14.664	-.047	-.267
82	82	72.000	133.759	-61.759	-.200	-.858
83	83	111.000	279.126	-168.126	-.543	-1.515
84	84	72.000	90.817	-18.817	-.061	-.261
85	85	108.000	322.702	-214.702	-.694	-1.988
86	86	129.000	343.538	-214.538	-.693	-1.663
87	87	183.000	330.655	-147.655	-.477	-.807
88	88	208.000	407.950	-199.950	-.646	-.961
89	89	169.000	339.244	-170.244	-.550	-1.007
90	90	166.000	253.995	-87.995	-.284	-.530
91	91	101.000	82.546	18.454	.060	.183
92	92	102.000	207.077	-105.077	-.340	-1.030
93	93	202.000	300.596	-98.596	-.319	-.488
94	94	78.000	129.782	-51.782	-.167	-.664
95	95	75.000	61.076	13.924	.045	.186
96	96	65.000	56.781	8.219	.027	.126
97	97	84.000	116.900	-32.900	-.106	-.392
98	98	43.000	43.899	-.899	-.003	-.021
99	99	127.000	121.194	5.806	.019	.046
100	100	168.000	258.607	-90.607	-.293	-.539
101	101	154.000	280.078	-126.078	-.407	-.819
102	102	1630.000	748.944	881.056	2.847	.541
103	103	187.000	177.018	9.982	.032	.053
104	104	137.000	185.606	-48.606	-.157	-.355
105	105	69.000	26.722	42.278	.137	.613
106	106	70.000	35.311	34.689	.112	.496
107	107	93.000	164.135	-71.135	-.230	-.765
108	108	98.000	104.017	-6.017	-.019	-.061
109	109	73.000	172.724	-99.724	-.322	-1.366
110	110	86.000	138.370	-52.370	-.169	-.609
111	111	103.000	61.076	41.924	.135	.407
112	112	42.000	69.664	-27.664	-.089	-.659
113	113	39.000	82.546	-43.546	-.141	-1.117
114	114	37.000	18.134	18.866	.061	.510
115	115	22.000	151.253	-129.253	-.418	-5.875
116	116	62.000	138.053	-76.053	-.246	-1.227
117	117	210.000	326.996	-116.996	-.378	-.557
118	118	73.000	177.018	-104.018	-.336	-1.425
119	119	397.000	357.372	39.628	.128	.100
120	120	660.000	322.702	337.298	1.090	.511
121	121	37.000	138.370	-101.370	-.328	-2.740
122	122	50.000	151.253	-101.253	-.327	-2.025
123	123	41.000	112.605	-71.605	-.231	-1.746

124	124	33.000	86.841	-53.841	-.174	-1.632
125	125	414.000	142.665	271.335	.877	.655
126	126	76.000	82.546	-6.546	-.021	-.086
127	127	96.000	78.252	17.748	.057	.185
128	128	46.000	48.193	-2.193	-.007	-.048
129	129	99.000	207.077	-108.077	-.349	-1.092

R BAR SQUARED .2263
STANDARD ERROR OF ESTIMATE 272.2143
MEAN ERROR .0000
MEAN SQUARED ERROR 72377.3600

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VARIABLE DELETED IS C

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Fb	4.806166	.2008

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-22.412730	.2070	.2008	276.6605

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIC
1	1	254.000	246.733	7.267	.023	.029
2	2	154.000	612.001	-458.001	-1.480	-2.974
3	3	1900.000	1078.199	821.801	2.656	.433
4	4	161.000	150.609	10.391	.034	.065
5	5	421.000	83.323	337.677	1.091	.802
6	6	115.000	49.680	65.320	.211	.568
7	7	44.000	54.486	-10.486	-.034	-.238
8	8	101.000	68.904	32.096	.104	.318
9	9	161.000	131.385	29.615	.096	.184
10	10	62.000	140.997	-78.997	-.255	-1.274
11	11	124.000	179.446	-55.446	-.179	-.447
12	12	161.000	232.314	-71.314	-.230	-.443
13	13	158.000	189.059	-31.059	-.100	-.197
14	14	160.000	213.089	-53.089	-.172	-.332
15	15	151.000	703.318	-552.318	-1.785	-3.658
16	16	43.000	78.517	-35.517	-.115	-.826
17	17	106.000	174.640	-68.640	-.222	-.648
18	18	72.000	107.354	-35.354	-.114	-.491
19	19	154.000	246.733	-92.733	-.300	-.602
20	20	89.000	112.160	-23.160	-.075	-.260
21	21	81.000	97.741	-16.741	-.054	-.207
22	22	112.000	145.803	-33.803	-.109	-.302
23	23	75.000	25.649	49.351	.159	.658
24	24	40.000	25.649	14.351	.046	.359
25	25	50.000	59.292	-9.292	-.030	-.186
26	26	16.000	44.874	-28.874	-.093	-1.805
27	27	134.000	241.926	-107.926	-.349	-.805
28	28	38.000	35.261	2.739	.009	.072

29	29	20.000	11.230	8.770	.028	.438
30	30	37.000	25.649	11.351	.037	.307
31	31	36.000	20.843	15.157	.049	.421
32	32	89.000	49.680	39.320	.127	.442
33	33	105.000	107.354	-2.354	-.008	-.022
34	34	119.000	193.865	-74.865	-.242	-.629
35	35	234.000	237.120	-3.120	-.010	-.013
36	36	18.000	25.649	-7.649	-.025	-.425
37	37	26.000	1.618	24.382	.079	.938
38	38	45.000	64.098	-19.098	-.062	-.424
39	39	37.000	11.230	25.770	.083	.696
40	40	83.000	78.517	4.483	.014	.054
41	41	39.000	40.067	-1.067	-.003	-.027
42	42	66.000	68.904	-2.904	-.009	-.044
43	43	54.000	35.261	18.739	.061	.347
44	44	67.000	64.098	2.902	.009	.043
45	45	49.000	44.874	4.126	.013	.084
46	46	74.000	92.935	-18.935	-.061	-.256
47	47	115.000	49.680	65.320	.211	.568
48	48	101.000	44.874	56.126	.181	.556
49	49	56.000	49.680	6.320	.020	.113
50	50	192.000	213.089	-21.089	-.068	-.110
51	51	150.000	217.896	-67.896	-.219	-.453
52	52	161.000	203.477	-42.477	-.137	-.264
53	53	91.000	126.578	-35.578	-.115	-.391
54	54	2560.000	92.935	2467.065	7.972	.964
55	55	104.000	126.578	-22.578	-.073	-.217
56	56	65.000	102.548	-37.548	-.121	-.578
57	57	127.000	189.059	-62.059	-.201	-.489
58	58	52.000	64.098	-12.098	-.039	-.233
59	59	52.000	54.486	-2.486	-.008	-.048
60	60	48.000	30.455	17.545	.057	.366
61	61	47.000	25.649	21.351	.069	.454
62	62	39.000	25.649	13.351	.043	.342
63	63	45.000	35.261	9.739	.031	.216
64	64	83.000	174.640	-91.640	-.296	-1.104
65	65	57.000	35.261	21.739	.070	.381
66	66	46.000	11.230	34.770	.112	.756
67	67	279.000	155.415	123.585	.399	.443
68	68	240.000	477.428	-237.428	-.767	-.989
69	69	94.000	184.252	-90.252	-.292	-.960
70	70	41.000	44.874	-3.874	-.013	-.094
71	71	69.000	112.160	-43.160	-.139	-.626
72	72	98.000	121.772	-23.772	-.077	-.243
73	73	153.000	237.120	-84.120	-.272	-.550
74	74	59.000	35.261	23.739	.077	.402
75	75	58.000	44.874	13.126	.042	.226
76	76	112.000	184.252	-72.252	-.233	-.645

117	117	210.000	333.244	-123.244	-.398	-.587
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77	77	77.000	97.741	-20.741	-.067	-.269
78	78	82.000	169.834	-87.834	-.284	-1.071
79	79	167.000	246.733	-79.733	-.258	-.477
80	80	85.000	174.640	-89.640	-.290	-1.055
81	81	55.000	88.129	-33.129	-.107	-.602
82	82	72.000	116.966	-44.966	-.145	-.625
83	83	111.000	193.865	-82.865	-.268	-.747
84	84	72.000	68.904	3.096	.010	.043
85	85	108.000	328.437	-220.437	-.712	-2.041
86	86	129.000	265.957	-136.957	-.443	-1.062
87	87	183.000	251.539	-68.539	-.221	-.375
88	88	208.000	338.050	-130.050	-.420	-.625
89	89	169.000	261.151	-92.151	-.298	-.545
90	90	166.000	251.539	-85.539	-.276	-.515
91	91	101.000	102.548	-1.548	-.005	-.015
92	92	102.000	241.926	-139.926	-.452	-1.372
93	93	202.000	217.896	-15.896	-.051	-.079
94	94	78.000	155.415	-77.415	-.250	-.993
95	95	75.000	78.517	-3.517	-.011	-.047
96	96	65.000	73.711	-8.711	-.028	-.134
97	97	84.000	140.997	-56.997	-.184	-.679
98	98	43.000	59.292	-16.292	-.053	-.379
99	99	127.000	145.803	-18.803	-.061	-.148
100	100	168.000	299.600	-131.600	-.425	-.783
101	101	154.000	323.631	-169.631	-.548	-1.102
102	102	1630.000	376.499	1253.501	4.051	.769
103	103	187.000	208.283	-21.283	-.069	-.114
104	104	137.000	217.896	-80.896	-.261	-.590
105	105	69.000	40.067	28.933	.093	.419
106	106	70.000	49.680	20.320	.066	.290
107	107	93.000	193.865	-100.865	-.326	-1.085
108	108	98.000	126.578	-28.578	-.092	-.292
109	109	73.000	203.477	-130.477	-.422	-1.787
110	110	86.000	165.028	-79.028	-.255	-.919
111	111	103.000	78.517	24.483	.079	.238
112	112	42.000	88.129	-46.129	-.149	-1.098
113	113	39.000	102.548	-63.548	-.205	-1.629
114	114	37.000	30.455	6.545	.021	.177
115	115	22.000	179.446	-157.446	-.509	-7.157
116	116	62.000	121.772	-59.772	-.193	-.964
117	117	210.000	333.244	-123.244	-.398	-.587
118	118	73.000	208.283	-135.283	-.437	-1.853
119	119	397.000	410.142	-13.142	-.042	-.033
120	120	660.000	328.437	331.563	1.071	.502
121	121	37.000	165.028	-128.028	-.414	-3.460
122	122	50.000	179.446	-129.446	-.418	-2.589
123	123	41.000	136.191	-95.191	-.308	-2.322
124	124	33.000	107.354	-74.354	-.240	-2.253

125	125	414.000	169.834	244.166	.789	.590
126	126	76.000	102.548	-26.548	-.086	-.349
127	127	96.000	97.741	-1.741	-.006	-.018
128	128	46.000	64.098	-18.098	-.058	-.393
129	129	99.000	241.926	-142.926	-.462	-1.444

R BAR SQUARED	.2008
STANDARD ERROR OF ESTIMATE	276.6605
MEAN ERROR	.0000
MEAN SQUARED ERROR	75354.3500

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+ END OF RUN +
+ NORMAL STOP IN MLRP +
+++++

**VALORACION DE LA ZONA DE
MATIENZO**

 MULTIPLE LINEAR REGRESSION

704-G1-L2020 JAN 1975
 FORTRAN77 VERSION JUL 1986

GEOQUIMICA DRENAJE / CANTABRIA 1990
 CALCULO DE ANOMALIAS
 LA SECADA

NVAL NCOMB IPRNT IFRMT IDELE DELTA
 4 0 0 0 0 .0000

+ + + ANALYSIS NO 1 + + +

DEPENDENT VARIABLE --

IDEP TRANSFORMATION CODES..... NOBR IRES IFO
 2 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 3

VARIABLE	TRANSFORMATION
Pb	NONE
Zn	NONE
Cd	NONE
Ba	NONE

INPUT DATA (p.p.m.) (.500 en Cd corresponde a valores inferiores a 1 p.p.m.)

OBS NO	OBS ID	Pb	Zn	Cd	Ba
1	196	21.000	33.000	.500	477.000
2	197	22.000	42.000	.500	487.000
3	198	36.000	46.000	.500	578.000
4	199	37.000	62.000	.500	507.000
5	200	44.000	49.000	.500	570.000
6	201	8.000	34.000	.500	461.000
7	202	22.000	61.000	.500	542.000
8	203	23.000	57.000	.500	506.000
9	204	23.000	56.000	.500	391.000
10	205	29.000	51.000	1.000	431.000
11	206	27.000	61.000	1.000	520.000
12	207	30.000	52.000	1.000	461.000

13	208	23.000	55.000	1.000	598.000
14	209	39.000	100.000	1.000	523.000
15	210	36.000	84.000	1.000	525.000
16	211	32.000	67.000	1.000	400.000
17	212	42.000	80.000	1.000	503.000
18	213	21.000	33.000	1.000	411.000
19	214	17.000	24.000	1.000	414.000
20	215	21.000	35.000	1.000	391.000
21	216	20.000	54.000	1.000	426.000
22	217	4.000	17.000	1.000	372.000
23	218	15.000	43.000	1.000	477.000
24	219	5.000	23.000	1.000	396.000
25	220	8.000	28.000	1.000	402.000
26	221	14.000	41.000	1.000	394.000
27	222	16.000	55.000	1.000	512.000
28	223	8.000	29.000	1.000	518.000
29	224	16.000	37.000	1.000	603.000
30	225	26.000	38.000	1.000	637.000
31	226	11.000	29.000	1.000	425.000
32	227	9.000	31.000	1.000	643.000
33	228	29.000	67.000	.500	413.000
34	229	5.000	16.000	1.000	450.000
35	230	16.000	35.000	1.000	481.000
36	231	14.000	49.000	.500	460.000
37	232	34.000	77.000	.500	744.000
38	233	20.000	50.000	.500	564.000
39	234	21.000	46.000	.500	554.000
40	235	15.000	34.000	.500	462.000
41	236	19.000	33.000	.500	428.000
42	237	17.000	29.000	.500	420.000
43	238	28.000	29.000	.500	402.000
44	239	11.000	25.000	.500	392.000
45	240	12.000	30.000	.500	145.000
46	241	26.000	46.000	.500	355.000
47	242	9.000	29.000	.500	364.000
48	243	12.000	18.000	.500	415.000
49	244	14.000	30.000	.500	462.000
50	245	21.000	46.000	.500	455.000
51	246	18.000	36.000	.500	391.000
52	247	31.000	28.000	.500	376.000
53	248	29.000	57.000	.500	387.000
54	249	8.000	26.000	.500	696.000
55	250	19.000	38.000	.500	406.000
56	251	25.000	50.000	.500	428.000
57	252	123.000	224.000	1.000	384.000
58	253	27.000	57.000	.500	405.000
59	254	18.000	66.000	.500	523.000
60	255	55.000	65.000	.500	590.000

61	256	84.000	256.000	.500	602.000
62	257	46.000	54.000	.500	522.000
63	258	43.000	45.000	.500	430.000
64	259	56.000	61.000	.500	438.000
65	260	43.000	31.000	.500	390.000
66	261	43.000	15.000	.500	375.000
67	262	54.000	34.000	.500	366.000
68	263	63.000	51.000	.500	400.000
69	264	61.000	52.000	.500	398.000
70	265	22.000	57.000	.500	605.000

STATISTICS OF DATA

BASED ON 70 OBSERVATIONS

VARIABLE	AVERAGE	VARIANCE	STANDARD DEVIATION
Pb	27.0857	377.3549	19.4256
Cd	.6857	.0592	.2433
Ba	465.4143	8945.5260	94.5808
Zn	49.9857	1372.5360	37.0478

RIABLE

DEPENDENT

SIMPLE CORRELATION COEFFICIENTS

VARIABLE	Pb	Cd	Ba	Zn
Pb	1.0000	-.0717	.0000	.7481
Cd	-.0717	1.0000	.0000	.0000
Ba	.0000	.0000	1.0000	.1820
Zn	.7481	.0000	.1820	1.0000

INDEPENDENT
VARIABLE

REGRESSION
COEFFICIENT

PARTIAL
DETERMINATION
COEFFICIENT

Pb	1.458513	.5951
Cd	19.721650	.0268
Ba	.072749	.0689

REGRESSION
CONSTANT
-36.901090

R
SQUARE
.6201

R BAR
SQUARE
.6028

STANDARD
ERROR OF
ESTIMATE
23.3490

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIC
1	196	33.000	38.290	-5.290	-.143	-.160
2	197	42.000	40.476	1.524	.041	.036
3	198	46.000	67.515	-21.515	-.581	-.468
4	199	62.000	63.809	-1.809	-.049	-.029
5	200	49.000	78.601	-29.601	-.799	-.604
6	201	34.000	18.165	15.835	.427	.466
7	202	61.000	44.477	16.523	.446	.271
8	203	57.000	43.317	13.683	.369	.240
9	204	56.000	34.950	21.050	.568	.376
10	205	51.000	56.472	-5.472	-.148	-.107
11	206	61.000	60.030	.970	.026	.016
12	207	52.000	60.113	-8.113	-.219	-.156
13	208	55.000	59.870	-4.870	-.131	-.089
14	209	100.000	77.750	22.250	.601	.222
15	210	84.000	73.520	10.480	.283	.125
16	211	67.000	58.593	8.407	.227	.125
17	212	80.000	80.671	-.671	-.018	-.008
18	213	33.000	43.349	-10.349	-.279	-.314
19	214	24.000	37.733	-13.733	-.371	-.572
20	215	35.000	41.894	-6.894	-.186	-.197
21	216	54.000	42.982	11.018	.297	.204
22	217	17.000	15.717	1.283	.035	.075
23	218	43.000	39.400	3.600	.097	.084
24	219	23.000	18.922	4.078	.110	.177
25	220	28.000	23.734	4.266	.115	.152
26	221	41.000	31.903	9.097	.246	.222
27	222	55.000	43.404	11.596	.313	.211
28	223	29.000	32.173	-3.173	-.086	-.109
29	224	37.000	50.025	-13.025	-.352	-.352
30	225	38.000	67.083	-29.083	-.785	-.765
31	226	29.000	29.783	-.783	-.021	-.027
32	227	31.000	42.725	-11.725	-.316	-.378
33	228	67.000	45.302	21.698	.586	.324
34	229	16.000	22.850	-6.850	-.185	-.428
35	230	35.000	41.149	-6.149	-.166	-.176
36	231	49.000	26.844	22.156	.598	.452
37	232	77.000	76.675	.325	.009	.004
38	233	50.000	43.161	6.839	.185	.137
39	234	46.000	43.892	2.108	.057	.046
40	235	34.000	28.448	5.552	.150	.163
41	236	33.000	31.808	1.192	.032	.036
42	237	29.000	28.309	.691	.019	.024
43	238	29.000	43.043	-14.043	-.379	-.484
44	239	25.000	17.521	7.479	.202	.299
45	240	30.000	1.011	28.989	.782	.966

46	241	46.000	36.707	9.293	.251	.202
47	242	29.000	12.567	16.433	.444	.567
48	243	18.000	20.653	-2.653	-.072	-.147
49	244	30.000	26.989	3.011	.081	.100
50	245	46.000	36.689	9.311	.251	.202
51	246	36.000	27.658	8.342	.225	.232
52	247	28.000	45.527	-17.527	-.473	-.626
53	248	57.000	43.411	13.589	.367	.238
54	249	26.000	35.261	-9.261	-.250	-.356
55	250	38.000	30.208	7.792	.210	.205
56	251	50.000	40.559	9.441	.255	.189
57	252	224.000	190.153	33.847	.914	.151
58	253	57.000	41.803	15.197	.410	.267
59	254	66.000	37.261	28.739	.776	.435
60	255	65.000	96.100	-31.100	-.839	-.478
61	256	256.000	139.270	116.730	3.151	.456
62	257	54.000	78.026	-24.026	-.649	-.445
63	258	45.000	66.958	-21.958	-.593	-.488
64	259	61.000	86.501	-25.501	-.688	-.418
65	260	31.000	64.048	-33.048	-.892	-1.066
66	261	15.000	62.957	-47.957	-1.294	-3.197
67	262	34.000	78.346	-44.346	-1.197	-1.304
68	263	51.000	93.946	-42.946	-1.159	-.842
69	264	52.000	90.883	-38.883	-1.050	-.748
70	265	57.000	49.060	7.940	.214	.139

R BAR SQUARED	.6028
STANDARD ERROR OF ESTIMATE	23.3490
MEAN ERROR	.0000
MEAN SQUARED ERROR	514.0232

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VARIABLE DELETED IS Cd

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	1.423465	.5779
Ba	.076104	.0733

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-23.989690	.6037	.5919	23.6683

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATI.
1	196	33.000	42.205	-9.205	-.248	-.279
2	197	42.000	44.389	-2.389	-.064	-.057
3	198	46.000	71.243	-25.243	-.681	-.549
4	199	62.000	67.263	-5.263	-.142	-.085
5	200	49.000	82.022	-33.022	-.891	-.674
6	201	34.000	22.482	11.518	.311	.339
7	202	61.000	48.575	12.425	.335	.204
8	203	57.000	47.259	9.741	.263	.171
9	204	56.000	38.507	17.493	.472	.312
10	205	51.000	50.092	.908	.025	.018
11	206	61.000	54.018	6.982	.188	.114
12	207	52.000	53.798	-1.798	-.049	-.035
13	208	55.000	54.260	.740	.020	.013
14	209	100.000	71.328	28.672	.774	.287
15	210	84.000	67.210	16.790	.453	.200
16	211	67.000	52.003	14.997	.405	.224
17	212	80.000	74.076	5.924	.160	.074
18	213	33.000	37.182	-4.182	-.113	-.127
19	214	24.000	31.716	-7.716	-.208	-.322
20	215	35.000	35.660	-.660	-.018	-.019
21	216	54.000	36.900	17.100	.462	.317
22	217	17.000	10.015	6.985	.189	.411
23	218	43.000	33.664	9.336	.252	.217
24	219	23.000	13.265	9.735	.263	.423
25	220	28.000	17.992	10.008	.270	.357
26	221	41.000	25.924	15.076	.407	.368
27	222	55.000	37.751	17.249	.466	.314

28	223	29.000	26.820	2.180	.059	.075
29	224	37.000	44.676	-7.676	-.207	-.207
30	225	38.000	61.499	-23.499	-.634	-.618
31	226	29.000	24.013	4.987	.135	.172
32	227	31.000	37.756	-6.756	-.182	-.218
33	228	67.000	48.722	18.278	.493	.273
34	229	16.000	17.374	-1.374	-.037	-.086
35	230	35.000	35.392	-.392	-.011	-.011
36	231	49.000	30.947	18.053	.487	.368
37	232	77.000	81.029	-4.029	-.109	-.052
38	233	50.000	47.402	2.598	.070	.052
39	234	46.000	48.065	-2.065	-.056	-.045
40	235	34.000	32.522	1.478	.040	.043
41	236	33.000	35.629	-2.629	-.071	-.080
42	237	29.000	32.173	-3.173	-.086	-.109
43	238	29.000	46.461	-17.461	-.471	-.602
44	239	25.000	21.501	3.499	.094	.140
45	240	30.000	4.127	25.873	.698	.862
46	241	46.000	40.037	5.963	.161	.130
47	242	29.000	16.523	12.477	.337	.430
48	243	18.000	24.675	-6.675	-.180	-.371
49	244	30.000	31.099	-1.099	-.030	-.037
50	245	46.000	40.530	5.470	.148	.119
51	246	36.000	31.389	4.611	.124	.128
52	247	28.000	48.753	-20.753	-.560	-.741
53	248	57.000	46.743	10.257	.277	.180
54	249	26.000	40.366	-14.366	-.388	-.553
55	250	38.000	33.954	4.046	.109	.106
56	251	50.000	44.169	5.831	.157	.117
57	252	224.000	180.320	43.680	1.179	.195
58	253	57.000	45.266	11.734	.317	.206
59	254	66.000	41.435	24.565	.663	.372
60	255	65.000	99.202	-34.202	-.923	-.526
61	256	256.000	141.396	114.604	3.093	.448
62	257	54.000	81.216	-27.216	-.735	-.504
63	258	45.000	69.944	-24.944	-.673	-.554
64	259	61.000	89.058	-28.058	-.757	-.460
65	260	31.000	66.900	-35.900	-.969	-1.158
66	261	15.000	65.758	-50.758	-1.370	-3.384
67	262	34.000	80.731	-46.731	-1.261	-1.374
68	263	51.000	96.130	-45.130	-1.218	-.885
69	264	52.000	93.131	-41.131	-1.110	-.791
70	265	57.000	53.369	3.631	.098	.064

R BAR SQUARED	.5919
STANDARD ERROR OF ESTIMATE	23.6683
MEAN ERROR	.0000
MEAN SQUARED ERROR	536.1816

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VARIABLE DELETED IS 1

INDEPENDENT VARIABLE REGRESSION COEFFICIENT PARTIAL DETERMINATION COEFFICIENT

Pb 1.434781 .5596

REGRESSION CONSTANT R SQUARE R BAR SQUARE STANDARD ERROR OF ESTIMATE

11.123650 .5660 .5596 24.5861

DEPENDENT VARIABLE Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	196	33.000	41.254	-8.254	-.223	-.250
2	197	42.000	42.689	-.689	-.019	-.016
3	198	46.000	62.776	-16.776	-.453	-.365
4	199	62.000	64.211	-2.211	-.060	-.036
5	200	49.000	74.254	-25.254	-.682	-.515
6	201	34.000	22.602	11.398	.308	.335
7	202	61.000	42.689	18.311	.494	.300
8	203	57.000	44.124	12.876	.348	.226
9	204	56.000	44.124	11.876	.321	.212
10	205	51.000	52.732	-1.732	-.047	-.034
11	206	61.000	49.863	11.137	.301	.183
12	207	52.000	54.167	-2.167	-.058	-.042
13	208	55.000	44.124	10.876	.294	.198
14	209	100.000	67.080	32.920	.889	.329
15	210	84.000	62.776	21.224	.573	.253
16	211	67.000	57.037	9.963	.269	.149
17	212	80.000	71.384	8.616	.233	.108
18	213	33.000	41.254	-8.254	-.223	-.250
19	214	24.000	35.515	-11.515	-.311	-.480
20	215	35.000	41.254	-6.254	-.169	-.179
21	216	54.000	39.819	14.181	.383	.263
22	217	17.000	16.863	.137	.004	.008
23	218	43.000	32.645	10.355	.279	.241
24	219	23.000	18.298	4.702	.127	.204
25	220	28.000	22.602	5.398	.146	.193

26	221	41.000	31.211	9.789	.264	.239
27	222	55.000	34.080	20.920	.565	.380
28	223	29.000	22.602	6.398	.173	.221
29	224	37.000	34.080	2.920	.079	.079
30	225	38.000	48.428	-10.428	-.281	-.274
31	226	29.000	26.906	2.094	.057	.072
32	227	31.000	24.037	6.963	.188	.225
33	228	67.000	52.732	14.268	.385	.213
34	229	16.000	18.298	-2.298	-.062	-.144
35	230	35.000	34.080	.920	.025	.026
36	231	49.000	31.211	17.789	.480	.363
37	232	77.000	59.906	17.094	.461	.222
38	233	50.000	39.819	10.181	.275	.204
39	234	46.000	41.254	4.746	.128	.103
40	235	34.000	32.645	1.355	.037	.040
41	236	33.000	38.384	-5.384	-.145	-.163
42	237	29.000	35.515	-6.515	-.176	-.225
43	238	29.000	51.298	-22.298	-.602	-.769
44	239	25.000	26.906	-1.906	-.051	-.076
45	240	30.000	28.341	1.659	.045	.055
46	241	46.000	48.428	-2.428	-.066	-.053
47	242	29.000	24.037	4.963	.134	.171
48	243	18.000	28.341	-10.341	-.279	-.575
49	244	30.000	31.211	-1.211	-.033	-.040
50	245	46.000	41.254	4.746	.128	.103
51	246	36.000	36.950	-.950	-.026	-.026
52	247	28.000	55.602	-27.602	-.745	-.986
53	248	57.000	52.732	4.268	.115	.075
54	249	26.000	22.602	3.398	.092	.131
55	250	38.000	38.384	-.384	-.010	-.010
56	251	50.000	46.993	3.007	.081	.060
57	252	224.000	187.602	36.398	.982	.162
58	253	57.000	49.863	7.137	.193	.125
59	254	66.000	36.950	29.050	.784	.440
60	255	65.000	90.037	-25.037	-.676	-.385
61	256	256.000	131.645	124.355	3.357	.486
62	257	54.000	77.124	-23.124	-.624	-.428
63	258	45.000	72.819	-27.819	-.751	-.618
64	259	61.000	91.471	-30.471	-.822	-.500
65	260	31.000	72.819	-41.819	-1.129	-1.349
66	261	15.000	72.819	-57.819	-1.561	-3.855
67	262	34.000	88.602	-54.602	-1.474	-1.606
68	263	51.000	101.515	-50.515	-1.364	-.990
69	264	52.000	98.645	-46.645	-1.259	-.897
70	265	57.000	42.689	14.311	.386	.251

R BAR SQUARED	.5596
STANDARD ERROR OF ESTIMATE	24.5861
MEAN ERROR	.0000
MEAN SQUARED ERROR	587.2046

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+++++
+ END OF RUN +
+ NORMAL STOP IN MLRP +
+++++

PROSPECCION GEOQUIMICA DE SUELOS
(Pb, Zn, Cd, Ag, Mn, Fe, Hg)

PROSPECCION GEOQUIMICA DE SUELOS
(Pb, Zn, Cd, Ag, Mn, Fe, Hg)
ZONA DE MEDIO CUDEYO

MULTIPLE LINEAR REGRESSION

704-G1-L2020 JAN 1975

FORTTRAN77 VERSION JUL 1986

GEOQUIMICA DE SUELOS / CANTABRIA 1990

CALCULO DE ANOMALIAS

MEDIO CUDEYO

NVAL	NCOMB	IPRNT	IFRMT	IDELE	DELTA
7	0	0	0	0	.0000

+ + + + ANALYSIS NO 1 + + + +

DEPENDENT VARIABLE -- Zn

IDEFTRANSFORMATION CODES.....	NOBR	IRES	IFORC
2	1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0	0	6	0

VARIABLE	TRANSFORMATION
Pb	NONE
Zn	NONE
Ag	NONE
Cd	NONE
Fe	NONE
Mn	NONE
Hg	NONE

INPUT DATA (p.p.m.) (en Ag y Cd los valores .500 corresponden a contenidos inferiores a 1p.p.m. y en Hg los valores .050 corresponden a contenidos inferiores a .1p.p.m.).

OBS NO	OBS ID	Pb	Zn	Ag	Cd	Fe	Mn	Hg
1	MC194	103	263	.500	8.000	39300	1415	.500
2	195	30	67	1.000	6.000	70000	2407	.400
3	196	32	71	1.000	7.000	100000	2700	.300
4	197	21	84	.500	8.000	143000	4440	.200
5	198	68	215	.500	9.000	162000	7090	.400
6	199	39	148	.500	8.000	200000	8970	.300
7	200	61	192	.500	10.000	275000	9030	.400

8	201	38	137	.500	9.000	180000	7720	.400
9	202	16	110	.500	7.000	141500	3745	.300
10	203	43	650	1.000	9.000	172000	7400	.300
11	204	38	565	.500	10.000	165000	9740	.400
12	205	54	261	.500	10.000	163000	6000	.400
13	206	52	199	.500	9.000	192000	6650	.400
14	207	51	209	.500	9.000	70500	3520	.300
15	208	54	182	.500	7.000	59900	2083	.400
16	209	45	188	.500	9.000	72300	4285	.200
17	210	54	249	.500	6.000	74100	2306	.400
18	211	33	280	1.000	8.000	8000	6280	.400
19	212	45	525	1.000	8.000	144500	5160	.300
20	213	56	263	.500	9.000	150000	7600	.400
21	214	39	224	1.000	9.000	174000	8735	.300
22	215	28	155	.500	8.000	170000	7900	.400
23	216	39	160	.500	6.000	88500	3030	.300
24	217	25	137	.500	7.000	94800	3090	.300
25	218	31	149	.500	7.000	103600	3440	.200
26	219	28	120	.500	6.000	73300	1859	.400
27	220	37	133	.500	6.000	77000	2870	.400
28	221	37	143	.500	7.000	94500	3900	.400
29	222	51	352	1.000	9.000	231000	5305	.400
30	223	51	115	.500	9.000	174000	5220	.500
31	224	128	234	.500	10.000	284500	4930	.300
32	225	36	206	.500	6.000	51000	1460	.400
33	226	73	417	.500	8.000	50000	3110	.400
34	227	53	460	.500	9.000	83400	5670	.400
35	228	40	330	.500	6.000	51500	1400	.400
36	229	30	423	.500	6.000	61100	1447	.200
37	230	31	322	.500	7.000	59200	1448	.200
38	231	38	367	.500	8.000	58400	2400	.200
39	232	47	376	.500	8.000	64000	3940	.100
40	233	42	216	.500	6.000	46400	1098	.050
41	234	44	260	.500	7.000	58700	950	.050
42	235	56	385	.500	8.000	60000	2419	.100
43	236	43	282	.500	7.000	48400	3050	.300
44	237	62	410	.500	7.000	63600	2980	.300
45	238	68	530	.500	9.000	66900	3570	.100
46	239	54	525	.500	8.000	105000	4150	.200
47	240	60	560	.500	9.000	85200	4960	.200
48	241	50	550	.500	6.000	63800	2383	.050
49	242	61	1075	.500	3.000	68900	5990	.300
50	243	55	775	.500	7.000	73200	3370	.100
51	244	32	421	.500	1.000	63700	2637	.300
52	245	33	395	.500	1.000	64300	2130	.400
53	246	52	1330	.500	7.000	137000	5025	.600
54	247	64	1330	.500	11.000	136000	4160	.100
55	248	54	1770	1.000	13.000	182000	6570	.400

STATISTICS OF DATA

BASED ON 155 OBSERVATIONS

VARIABLE	AVERAGE	VARIANCE	STANDARD DEVIATION	
Pb	58.6968	691.2127	26.2909	
Ag	.6419	.0706	.2658	
Cd	6.4581	11.3115	3.3633	
Fe	129245.2000	3745107000.0000	61197.2800	
Mn	5129.7350	5990927.0000	2447.6370	
Hg	.3371	.0241	.1551	
Zn	979.9484	1289264.0000	1135.4580	DEP. VARIABLE

SIMPLE CORRELATION COEFFICIENTS

VARIABLE	Pb	Ag	Cd	Fe	Mn	Hg	Zn
Pb	1.0000	.1661	.0598	.0782	.0000	.2497	.4224
Ag	.1661	1.0000	.0755	.1080	.0957	.3599	.4717
Cd	.0598	.0755	1.0000	.1662	.1472	.1082	.4556
Fe	.0782	.1080	.1662	1.0000	.8475	.1184	.1969
Mn	.0000	.0957	.1472	.8475	1.0000	.1427	.2011
Hg	.2497	.3599	.1082	.1184	.1427	1.0000	.3489
Zn	.4224	.4717	.4556	.1969	.2011	.3489	1.0000

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	13.094230	.1400
Ag	1447.206000	.1602
Cd	125.078200	.2046
Fe	-.000930	.0000
Mn	.055508	.0013
Hg	665.107200	.0068

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-1914.102000	.5101	.4902	810.7140

56	249	49	1870	.500	7.000	157500	6910	.500
57	250	59	1800	.500	6.000	140000	5830	.300
58	251	107	3550	.500	11.000	128000	4805	.500
59	252	78	1915	.500	10.000	154000	6040	.300
60	253	108	1330	.500	6.000	134500	4945	.300
61	254	56	755	.500	3.000	100000	3985	.200
62	255	69	895	.500	4.000	130000	4470	.200
63	256	57	820	.500	8.000	105000	6260	.200
64	257	67	955	.500	8.000	82200	5455	.300
65	258	50	850	.500	5.000	73900	3780	.300
66	259	102	1330	.500	7.000	80000	4770	.300
67	260	107	1235	.500	9.000	85200	4555	.400
68	261	66	940	.500	6.000	63300	5080	.400
69	262	74	835	.500	5.000	67000	4235	.300
70	263	50	384	.500	3.000	75500	3950	.400
71	264	40	285	.500	3.000	60800	2930	.500
72	265	64	367	.500	4.000	53900	4515	.900
73	266	49	320	.500	4.000	60400	2865	.400
74	267	49	385	.500	4.000	58800	2081	.600
75	268	41	320	.500	3.000	52000	2060	.200
76	269	52	205	.500	2.000	48000	2434	.300
77	270	41	201	.500	3.000	50200	2815	.200
78	271	39	520	.500	6.000	96000	5850	.300
79	272	41	565	.500	5.000	82800	2840	.200
80	273	49	970	.500	6.000	108000	5090	.300
81	274	61	1840	.500	8.000	173000	7300	.300
82	275	43	965	.500	6.000	152000	5430	.300
83	276	60	1060	.500	7.000	151500	5160	.300
84	277	60	1810	.500	9.000	195000	7440	.100
85	278	36	2415	.500	9.000	190000	7920	.100
86	279	50	1190	.500	9.000	205000	8670	.200
87	280	54	1530	.500	9.000	198500	7400	.200
88	281	61	2140	.500	10.000	160000	7830	.300
89	282	47	1010	.500	7.000	170500	6110	.100
90	283	49	1355	.500	8.000	156000	7000	.200
91	284	41	620	.500	7.000	221000	11160	.300
92	285	29	113	.500	8.000	160000	7535	.200
93	286	78	330	.500	7.000	216000	6860	.200
94	287	36	218	.500	8.000	235000	10170	.400
95	288	57	960	.500	8.000	173500	5595	.400
96	289	77	580	.500	7.000	119100	3200	.500
97	290	69	2240	.500	8.000	194000	6105	.500
98	291	61	735	.500	8.000	190500	6095	.300
99	292	54	1010	1.000	9.000	189000	7320	.900
100	293	65	955	.500	9.000	184000	5825	.500
101	294	60	1040	.500	9.000	190000	5940	.300
102	295	73	825	.500	9.000	156500	6365	.300
103	296	87	1120	.500	8.000	161000	4150	.200

104	297	79	1175	.500	7.000	142000	4720	.200
105	298	66	1370	.500	9.000	155000	6180	.200
106	299	66	860	.500	8.000	154000	5845	.200
107	300	56	505	.500	5.000	76400	2050	.100
108	301	72	258	1.000	2.000	230000	9850	.300
109	302	41	1220	1.000	4.000	168500	6100	.400
110	303	48	615	1.000	3.000	140000	5895	.400
111	304	59	510	.500	4.000	133600	6330	.300
112	305	50	252	.500	3.000	211000	9680	.300
113	306	33	675	.500	5.000	103300	6875	.300
114	307	52	321	.500	2.000	175000	8010	.100
115	308	54	337	.500	2.000	168000	5080	.200
116	309	44	267	1.000	5.000	205000	7705	.200
117	310	67	273	1.000	5.000	229000	9230	.200
118	311	127	428	1.000	5.000	173500	4950	.400
119	312	46	860	1.000	5.000	173000	4795	.500
120	313	80	1385	.500	2.000	204000	6590	.300
121	314	43	2810	1.000	5.000	140500	4965	.400
122	315	108	5900	1.000	25.000	137000	4590	.900
123	316	172	4800	1.000	13.000	170000	5060	.600
124	317	33	79	.500	3.000	28100	210	.100
125	318	77	685	.500	4.000	76300	3325	.300
126	319	69	259	.500	3.000	71400	1713	.100
127	320	77	387	.500	2.000	58100	1264	.100
128	321	67	1150	.500	1.000	90800	1718	.300
129	322	52	2060	.500	7.000	133500	4800	.400
130	323	61	365	.500	.500	174000	4560	.200
131	324	82	555	1.000	.500	199000	6520	.600
132	325	60	840	1.000	2.000	66700	2028	.500
133	326	53	590	1.000	1.000	58000	2403	.500
134	327	56	655	1.000	2.000	71100	3725	.500
135	328	37	423	1.000	2.000	49300	3180	.400
136	329	59	485	1.000	1.000	71800	2557	.400
137	330	56	600	1.000	3.000	69600	5500	.300
138	331	115	680	1.000	2.000	71700	3645	.300
139	332	50	935	1.000	4.000	82900	4110	.400
140	333	233	2570	1.000	4.000	169000	5495	.600
141	334	49	1160	1.000	4.000	107600	4880	.600
142	335	72	3010	1.000	8.000	166500	7500	.600
143	336	73	4140	1.000	11.000	141000	5604	.400
144	337	67	4900	2.000	15.000	189500	7415	.400
145	338	69	3940	2.000	11.000	91300	5425	.500
146	339	84	5000	1.000	16.000	137000	7260	.500
147	340	68	5800	1.000	7.000	138500	5850	.600
148	341	56	3920	1.000	5.000	100400	4345	.300
149	342	51	1895	.500	3.000	161000	5365	.400
150	343	55	2120	1.000	4.000	210000	8550	.400
151	344	81	1330	1.000	1.000	176000	4745	.400

152	345	66	995	.500	1.000	263000	12060	.600
153	346	54	800	.500	1.000	290000	12870	.500
154	347	96	3740	1.000	9.000	255000	9290	.500
155	348	91	845	.500	1.000	299000	12430	.300

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	MC194	263.000	1533.361	-1270.361	-1.119	-4.830
2	195	67.000	1010.916	-943.916	-.831	-14.088
3	196	71.000	1084.021	-1013.021	-.892	-14.268
4	197	84.000	527.936	-443.936	-.391	-5.285
5	198	215.000	719.039	-504.039	-.444	-2.344
6	199	148.000	1211.875	-1063.875	-.937	-7.188
7	200	192.000	1082.353	-890.353	-.784	-4.637
8	201	137.000	1261.029	-1124.029	-.990	-8.205
9	202	110.000	458.374	-348.374	-.307	-3.167
10	203	650.000	1318.563	-668.563	-.589	-1.029
11	204	565.000	1276.495	-711.495	-.627	-1.259
12	205	261.000	1005.285	-744.285	-.655	-2.852
13	206	199.000	1098.810	-899.810	-.792	-4.522
14	207	209.000	945.426	-736.426	-.649	-3.524
15	208	182.000	678.784	-496.784	-.438	-2.730
16	209	188.000	945.892	-757.892	-.667	-4.031
17	210	249.000	474.305	-225.305	-.198	-.905
18	211	280.000	1717.738	-1437.738	-1.266	-5.135
19	212	525.000	1317.337	-792.337	-.698	-1.509
20	213	263.000	1072.776	-809.776	-.713	-3.079
21	214	224.000	1914.574	-1690.574	-1.489	-7.547
22	215	155.000	867.175	-712.175	-.627	-4.595
23	216	160.000	211.982	-51.982	-.046	-.325
24	217	137.000	478.565	-341.565	-.301	-2.493
25	218	149.000	239.974	-90.974	-.080	-.611
26	219	120.000	266.918	-146.918	-.129	-1.224
27	220	133.000	280.312	-147.312	-.130	-1.108
28	221	143.000	564.128	-421.128	-.371	-2.945
29	222	352.000	1515.052	-1163.052	-1.024	-3.304
30	223	115.000	1063.411	-948.411	-.835	-8.247
31	224	234.000	700.854	-466.854	-.411	-1.995
32	225	206.000	1535.661	-1329.661	-1.171	-6.455
33	226	417.000	673.667	-256.667	-.226	-.616
34	227	460.000	1394.254	-934.254	-.823	-2.031
35	228	330.000	549.798	-219.798	-.194	-.666
36	229	423.000	240.228	182.772	.161	.432
37	230	322.000	236.187	85.813	.076	.266
38	231	367.000	519.607	-152.607	-.134	-.416
39	232	376.000	651.216	-275.216	-.242	-.732
40	233	216.000	160.956	55.044	.048	.255
41	234	260.000	292.562	-32.562	-.029	-.125
42	235	385.000	688.359	-303.359	-.267	-.788
43	236	282.000	571.896	-289.896	-.255	-1.028

44	237	410.000	802.657	-392.657	-.346	-.958
45	238	530.000	1028.037	-498.037	-.439	-.940
46	239	525.000	782.893	-257.893	-.227	-.491
47	240	560.000	1049.922	-489.922	-.431	-.875
48	241	550.000	320.847	229.153	.202	.417
49	242	1075.000	451.398	623.602	.549	.580
50	243	775.000	590.692	184.308	.162	.238
51	244	421.000	-359.771	780.771	.688	1.855
52	245	395.000	-308.867	703.867	.620	1.782
53	246	1330.000	916.463	413.537	.364	.311
54	247	1330.000	1194.269	135.731	.120	.102
55	248	1770.000	2327.590	-557.590	-.491	-.315
56	249	1870.000	896.227	973.773	.858	.521
57	250	1800.000	725.405	1074.595	.946	.597
58	251	3550.000	2066.611	1483.389	1.306	.418
59	252	1915.000	1473.138	441.862	.389	.231
60	253	1330.000	1323.015	6.985	.006	.005
61	254	755.000	179.184	575.816	.507	.763
62	255	895.000	473.494	421.506	.371	.471
63	256	820.000	939.298	-119.298	-.105	-.145
64	257	955.000	1113.282	-158.282	-.139	-.166
65	258	850.000	430.193	419.807	.370	.494
66	259	1330.000	1410.526	-80.526	-.071	-.061
67	260	1235.000	1775.892	-540.892	-.476	-.438
68	261	940.000	913.313	26.687	.024	.028
69	262	835.000	776.131	58.869	.052	.071
70	263	384.000	254.494	129.506	.114	.337
71	264	285.000	147.123	137.877	.121	.484
72	265	367.000	946.906	-579.906	-.511	-1.580
73	266	320.000	320.303	-.303	.000	-.001
74	267	385.000	411.294	-26.294	-.023	-.068
75	268	320.000	-79.419	399.419	.352	1.248
76	269	205.000	30.532	174.468	.154	.851
77	270	201.000	-35.835	236.835	.209	1.178
78	271	520.000	505.572	14.428	.013	.028
79	272	565.000	185.375	379.625	.334	.672
80	273	970.000	583.162	386.838	.341	.399
81	274	1840.000	1052.641	787.359	.693	.428
82	275	965.000	482.528	482.472	.425	.500
83	276	1060.000	815.686	244.314	.215	.230
84	277	1810.000	1018.903	791.097	.697	.437
85	278	2415.000	735.938	1679.062	1.479	.695
86	279	1190.000	1013.442	176.558	.155	.148
87	280	1530.000	1001.372	528.628	.466	.346
88	281	2140.000	1344.313	795.687	.701	.372
89	282	1010.000	547.493	462.507	.407	.458
90	283	1355.000	828.165	526.835	.464	.389
91	284	620.000	835.275	-215.275	-.190	-.347

92	285	113.000	592.255	-479.255	-.422	-4.241
93	286	330.000	1019.219	-689.219	-.607	-2.089
94	287	218.000	893.413	-675.413	-.595	-3.098
95	288	960.000	971.668	-11.668	-.010	-.012
96	289	580.000	1092.662	-512.662	-.452	-.884
97	290	2240.000	1204.543	1035.457	.912	.462
98	291	735.000	969.470	-234.470	-.206	-.319
99	292	1010.000	2194.948	-1184.948	-1.044	-1.173
100	293	955.000	1271.007	-316.007	-.278	-.331
101	294	1040.000	1073.315	-33.315	-.029	-.032
102	295	825.000	1298.302	-473.302	-.417	-.574
103	296	1120.000	1162.895	-42.895	-.038	-.038
104	297	1175.000	982.382	192.618	.170	.164
105	298	1370.000	1131.259	238.741	.210	.174
106	299	860.000	988.516	-128.516	-.113	-.149
107	300	505.000	277.381	227.619	.200	.451
108	301	258.000	1258.318	-1000.318	-.881	-3.877
109	302	1220.000	1018.134	201.866	.178	.165
110	303	615.000	999.855	-384.855	-.339	-.626
111	304	510.000	508.958	1.042	.001	.002
112	305	252.000	379.963	-127.963	-.113	-.508
113	306	675.000	352.032	322.968	.284	.478
114	307	321.000	88.851	232.149	.204	.723
115	308	337.000	25.425	311.575	.274	.925
116	309	267.000	1104.601	-837.601	-.738	-3.137
117	310	273.000	1468.086	-1195.086	-1.053	-4.378
118	311	428.000	2200.829	-1772.829	-1.561	-4.142
119	312	860.000	1198.569	-338.569	-.298	-.394
120	313	1385.000	482.705	902.295	.795	.651
121	314	2810.000	1132.453	1677.547	1.477	.597
122	315	5900.000	4800.137	1099.863	.969	.186
123	316	4800.000	3933.079	866.921	.763	.181
124	317	79.000	-331.135	410.135	.361	5.192
125	318	685.000	631.169	53.831	.047	.079
126	319	259.000	183.396	75.604	.067	.292
127	320	387.000	150.524	236.476	.208	.611
128	321	1150.000	22.298	1127.702	.993	.981
129	322	2060.000	774.209	1285.791	1.132	.624
130	323	365.000	-104.980	469.980	.414	1.288
131	324	555.000	1245.178	-690.178	-.608	-1.244
132	325	840.000	951.974	-111.974	-.099	-.133
133	326	590.000	764.147	-174.147	-.153	-.295
134	327	655.000	989.700	-334.700	-.295	-.511
135	328	423.000	664.432	-241.432	-.213	-.571
136	329	485.000	771.909	-286.909	-.253	-.592
137	330	600.000	1081.679	-481.679	-.424	-.803
138	331	680.000	1624.239	-944.239	-.832	-1.389
139	332	935.000	1105.171	-170.171	-.150	-.182

140	333	2570.000	3631.199	-1061.199	-.935	-.413
141	334	1160.000	1244.857	-84.857	-.075	-.073
142	335	3010.000	2136.962	873.038	.769	.290
143	336	4140.000	2310.754	1829.246	1.611	.442
144	337	4900.000	4235.103	664.897	.586	.136
145	338	3940.000	3808.403	131.597	.116	.033
146	339	5000.000	3242.335	1757.665	1.548	.352
147	340	5800.000	1893.972	3906.028	3.440	.673
148	341	3920.000	1239.065	2680.935	2.361	.684
149	342	1895.000	266.575	1628.425	1.434	.859
150	343	2120.000	1298.833	821.167	.723	.387
151	344	1330.000	1084.476	245.524	.216	.185
152	345	995.000	622.570	372.430	.328	.374
153	346	800.000	418.767	381.233	.336	.477
154	347	3740.000	2526.802	1213.198	1.068	.324
155	348	845.000	737.434	107.566	.095	.127

R BAR SQUARED .4902
STANDARD ERROR OF ESTIMATE 810.7139
MEAN ERROR -.0001
MEAN SQUARED ERROR 627574.4000

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VARIABLE DELETED IS Fe

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	12.974890	.1389
Ag	1442.144000	.1593
Cd	124.423900	.2036
Mn	.035983	.0049
Hg	673.425900	.0072

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-1922.528000	.5094	.4929	808.5581

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	MC194	263.000	1517.977	-1254.977	-1.105	-4.772
2	195	67.000	1011.387	-944.387	-.832	-14.095
3	196	71.000	1104.961	-1033.961	-.911	-14.563
4	197	84.000	555.479	-471.479	-.415	-5.613
5	198	215.000	715.319	-500.319	-.441	-2.327
6	199	148.000	1201.020	-1053.020	-.927	-7.115
7	200	192.000	1143.098	-951.098	-.838	-4.954
8	201	137.000	1256.984	-1119.984	-.986	-8.175
9	202	110.000	499.340	-389.340	-.343	-3.539
10	203	650.000	1315.329	-665.329	-.586	-1.024
11	204	565.000	1220.545	-655.545	-.577	-1.160
12	205	261.000	1021.095	-760.095	-.669	-2.912
13	206	199.000	1127.658	-928.658	-.818	-4.667
14	207	209.000	921.740	-712.740	-.628	-3.410
15	208	182.000	675.553	-493.553	-.435	-2.712
16	209	188.000	907.874	-719.874	-.634	-3.829
17	210	249.000	481.304	-232.304	-.205	-.933
18	211	280.000	1710.993	-1430.993	-1.260	-5.111
19	212	525.000	1330.877	-805.877	-.710	-1.535
20	213	263.000	1045.068	-782.068	-.689	-2.974
21	214	224.000	1882.361	-1658.361	-1.461	-7.403
22	215	155.000	853.589	-698.589	-.615	-4.507

23	216	160.000	219.439	-59.439	-.052	-.371
24	217	137.000	488.746	-351.746	-.310	-2.567
25	218	149.000	252.349	-103.349	-.091	-.694
26	219	120.000	283.571	-163.571	-.144	-1.363
27	220	133.000	281.025	-148.025	-.130	-1.113
28	221	143.000	559.285	-416.285	-.367	-2.911
29	222	352.000	1605.710	-1253.710	-1.104	-3.562
30	223	115.000	1104.621	-989.621	-.872	-8.605
31	224	234.000	850.377	-616.377	-.543	-2.634
32	225	206.000	1527.779	-1321.779	-1.164	-6.416
33	226	417.000	642.308	-225.308	-.198	-.540
34	227	460.000	1338.918	-878.918	-.774	-1.911
35	228	330.000	552.503	-222.503	-.196	-.674
36	229	423.000	250.835	172.165	.152	.407
37	230	322.000	245.546	76.454	.067	.237
38	231	367.000	508.024	-141.024	-.124	-.384
39	232	376.000	612.869	-236.869	-.209	-.630
40	233	216.000	163.213	52.787	.046	.244
41	234	260.000	308.261	-48.261	-.043	-.186
42	235	385.000	674.914	-289.914	-.255	-.753
43	236	282.000	539.206	-257.206	-.227	-.912
44	237	410.000	783.211	-373.211	-.329	-.910
45	238	530.000	996.452	-466.452	-.411	-.880
46	239	525.000	778.592	-253.592	-.223	-.483
47	240	560.000	1010.012	-450.012	-.396	-.804
48	241	550.000	313.250	236.750	.209	.430
49	242	1075.000	380.848	694.152	.611	.646
50	243	775.000	571.734	203.266	.179	.262
51	244	421.000	-364.922	785.922	.692	1.867
52	245	395.000	-302.847	697.847	.615	1.767
53	246	1330.000	929.074	400.926	.353	.301
54	247	1330.000	1214.630	115.370	.102	.087
55	248	1770.000	2343.547	-573.547	-.505	-.324
56	249	1870.000	890.634	979.366	.863	.524
57	250	1800.000	722.413	1077.587	.949	.599
58	251	3550.000	2065.130	1484.870	1.308	.418
59	252	1915.000	1474.188	440.813	.388	.230
60	253	1330.000	1326.338	3.662	.003	.003
61	254	755.000	176.486	578.514	.509	.766
62	255	895.000	487.035	407.965	.359	.456
63	256	820.000	893.441	-73.441	-.065	-.090
64	257	955.000	1061.566	-106.566	-.094	-.112
65	258	850.000	407.450	442.550	.390	.521
66	259	1330.000	1366.615	-36.615	-.032	-.028
67	260	1235.000	1739.944	-504.944	-.445	-.409
68	261	940.000	853.593	86.407	.076	.092
69	262	835.000	735.220	99.780	.088	.119
70	263	384.000	232.062	151.938	.134	.396

71	264	285.000	132.954	152.046	.134	.533
72	265	367.000	895.178	-528.178	-.465	-1.439
73	266	320.000	304.470	15.530	.014	.049
74	267	385.000	410.945	-25.945	-.023	-.067
75	268	320.000	-87.404	407.404	.359	1.273
76	269	205.000	11.696	193.304	.170	.943
77	270	201.000	-60.237	261.237	.230	1.300
78	271	520.000	463.635	56.365	.050	.108
79	272	565.000	189.510	375.490	.331	.665
80	273	970.000	566.037	403.963	.356	.416
81	274	1840.000	1050.105	789.895	.696	.429
82	275	965.000	500.421	464.579	.409	.481
83	276	1060.000	835.703	224.297	.198	.212
84	277	1810.000	1031.906	778.094	.685	.430
85	278	2415.000	737.780	1677.219	1.477	.695
86	279	1190.000	1013.758	176.242	.155	.148
87	280	1530.000	1019.960	510.040	.449	.333
88	281	2140.000	1318.023	821.977	.724	.384
89	282	1010.000	566.528	443.472	.391	.439
90	283	1355.000	816.269	538.731	.474	.398
91	284	620.000	805.076	-185.076	-.163	-.299
92	285	113.000	576.022	-463.022	-.408	-4.098
93	286	330.000	1063.079	-733.079	-.646	-2.221
94	287	218.000	896.345	-678.345	-.597	-3.112
95	288	960.000	1004.197	-44.197	-.039	-.046
96	289	580.000	1120.435	-540.435	-.476	-.932
97	290	2240.000	1245.590	994.410	.876	.444
98	291	735.000	1006.746	-271.746	-.239	-.370
99	292	1010.000	2209.552	-1199.552	-1.056	-1.188
100	293	955.000	1308.039	-353.039	-.311	-.370
101	294	1040.000	1112.617	-72.617	-.064	-.070
102	295	825.000	1296.584	-471.584	-.415	-.572
103	296	1120.000	1206.764	-86.764	-.076	-.077
104	297	1175.000	999.051	175.949	.155	.150
105	298	1370.000	1131.760	238.240	.210	.174
106	299	860.000	995.282	-135.282	-.119	-.157
107	300	505.000	288.364	216.636	.191	.429
108	301	258.000	1259.114	-1001.114	-.882	-3.880
109	302	1220.000	1038.147	181.853	.160	.149
110	303	615.000	997.171	-382.171	-.337	-.621
111	304	510.000	491.556	18.444	.016	.036
112	305	252.000	370.901	-118.901	-.105	-.472
113	306	675.000	298.244	376.756	.332	.558
114	307	321.000	77.650	243.350	.214	.758
115	308	337.000	65.513	271.487	.239	.806
116	309	267.000	1124.563	-857.563	-.755	-3.212
117	310	273.000	1477.859	-1204.859	-1.061	-4.413
118	311	428.000	2237.031	-1809.031	-1.593	-4.227

119	312	860.000	1247.830	-387.830	-.342	-.451
120	313	1385.000	524.537	860.463	.758	.621
121	314	2810.000	1147.680	1662.320	1.464	.592
122	315	5900.000	4802.745	1097.255	.966	.186
123	316	4800.000	3954.936	845.064	.744	.176
124	317	79.000	-325.114	404.114	.356	5.115
125	318	685.000	616.977	68.023	.060	.099
126	319	259.000	196.064	62.936	.055	.243
127	320	387.000	159.283	227.717	.201	.588
128	321	1150.000	56.132	1093.868	.963	.951
129	322	2060.000	786.293	1273.707	1.122	.618
130	323	365.000	-49.009	414.009	.365	1.134
131	324	555.000	1284.432	-729.432	-.642	-1.314
132	325	840.000	956.643	-116.643	-.103	-.139
133	326	590.000	754.889	-164.889	-.145	-.279
134	327	655.000	965.806	-310.806	-.274	-.475
135	328	423.000	632.330	-209.330	-.184	-.495
136	329	485.000	770.937	-285.937	-.252	-.590
137	330	600.000	1019.414	-419.414	-.369	-.699
138	331	680.000	1593.761	-913.761	-.805	-1.344
139	332	935.000	1083.315	-148.315	-.131	-.159
140	333	2570.000	3642.242	-1072.242	-.944	-.417
141	334	1160.000	1232.732	-72.732	-.064	-.063
142	335	3010.000	2123.125	886.875	.781	.295
143	336	4140.000	2306.463	1833.537	1.615	.443
144	337	4900.000	4233.618	666.382	.587	.136
145	338	3940.000	3757.609	182.391	.161	.046
146	339	5000.000	3198.236	1801.764	1.587	.360
147	340	5800.000	1887.430	3912.570	3.446	.675
148	341	3920.000	1226.702	2693.298	2.372	.687
149	342	1895.000	295.953	1599.047	1.408	.844
150	343	2120.000	1307.953	812.047	.715	.383
151	344	1330.000	1135.115	194.885	.172	.147
152	345	995.000	617.318	377.682	.333	.380
153	346	800.000	423.423	376.577	.332	.471
154	347	3740.000	2556.013	1183.987	1.043	.317
155	348	845.000	752.976	92.024	.081	.109

R BAR SQUARED .4929
STANDARD ERROR OF ESTIMATE 808.5581
MEAN ERROR -.0001
MEAN SQUARED ERROR 628459.1000

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VARIABLE DELETED IS Mn

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
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Pb	13.001770	.1380
Ag	1463.342000	.1623
Cd	128.183100	.2153
Hg	740.749900	.0101

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-1800.104000	.5037	.4904	810.5294

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	MC194	263.000	1666.589	-1403.589	-1.236	-5.337
2	195	67.000	1118.690	-1051.690	-.926	-15.697
3	196	71.000	1198.801	-1127.801	-.993	-15.885
4	197	84.000	573.246	-489.246	-.431	-5.824
5	198	215.000	654.552	-439.552	-.387	-2.044
6	199	148.000	1063.377	-915.377	-.806	-6.185
7	200	192.000	1016.767	-824.767	-.726	-4.296
8	201	137.000	1174.623	-1037.623	-.914	-7.574
9	202	110.000	545.141	-435.141	-.383	-3.956
10	203	650.000	1247.139	-597.139	-.526	-.919
11	204	565.000	1068.774	-503.774	-.444	-.892
12	205	261.000	1003.766	-742.766	-.654	-2.846
13	206	199.000	1083.611	-884.611	-.779	-4.445
14	207	209.000	983.532	-774.532	-.682	-3.706
15	208	182.000	788.239	-606.239	-.534	-3.331
16	209	188.000	935.461	-747.461	-.658	-3.976
17	210	249.000	582.045	-333.045	-.293	-1.338
18	211	280.000	1687.098	-1407.098	-1.239	-5.025
19	212	525.000	1339.986	-814.986	-.718	-1.552
20	213	263.000	966.595	-703.595	-.620	-2.675
21	214	224.000	1767.210	-1543.210	-1.359	-6.889
22	215	155.000	760.401	-605.401	-.533	-3.906
23	216	160.000	286.940	-126.940	-.112	-.793
24	217	137.000	558.143	-421.143	-.371	-3.074

25	149.000	302.043	-153.043	--.135	-1.027
26	120.000	400.021	-280.021	-.247	-2.334
27	133.000	361.015	-228.015	-.201	-1.714
28	143.000	606.214	-463.214	-.408	-3.239
29	352.000	1620.255	-1268.255	-1.117	-3.603
30	115.000	1118.680	-1003.680	-.884	-8.728
31	234.000	864.682	-630.682	-.555	-2.695
32	206.000	1661.192	-1455.192	-1.282	-7.064
33	417.000	721.396	-304.396	-.268	-.730
34	460.000	1330.644	-870.644	-.767	-1.893
35	330.000	686.060	-356.060	-.314	-1.079
36	423.000	368.887	54.113	.048	.128
37	322.000	367.052	-45.052	-.040	-.140
38	367.000	599.249	-232.249	-.205	-.633
39	376.000	642.190	-266.190	-.234	-.708
40	216.000	283.778	-67.778	-.060	-.314
41	260.000	437.964	-177.964	-.157	-.684
42	385.000	759.206	-374.206	-.330	-.972
43	282.000	610.150	-328.150	-.289	-1.164
44	410.000	857.184	-447.184	-.394	-1.091
45	530.000	1043.411	-513.411	-.452	-1.969
46	525.000	807.278	-282.278	-.249	-.538
47	560.000	1013.471	-453.471	-.399	-.810
48	550.000	387.792	162.208	.143	.295
49	1075.000	331.449	743.551	.655	.692
50	775.000	618.021	156.979	.138	.203
51	421.000	-301.968	722.968	.637	1.717
52	395.000	-214.891	609.891	.537	1.544
53	1330.000	949.391	380.609	.335	.286
54	1330.000	1247.770	82.230	.072	.062
55	1770.000	2328.014	-558.014	-.491	-.315
56	1870.000	836.311	1033.689	.910	.553
57	1800.000	689.995	1110.005	.978	.617
58	3550.000	2103.146	1446.854	1.274	.408
59	1915.000	1449.761	465.239	.410	.243
60	1330.000	1327.082	2.918	.003	.002
61	755.000	192.365	562.635	.496	.745
62	895.000	489.572	405.428	.357	.453
63	820.000	846.283	-26.283	-.023	-.032
64	955.000	1050.376	-95.376	-.084	-.100
65	850.000	444.796	405.204	.357	.477
66	1330.000	1377.255	-47.255	-.042	-.036
67	1235.000	1772.705	-537.705	-.474	-.435
68	940.000	855.083	84.917	.075	.090
69	835.000	756.839	78.161	.069	.094
70	384.000	262.505	121.495	.107	.316
71	285.000	206.562	78.438	.069	.275
72	367.000	943.088	-576.088	-.507	-1.570

73	266	320.000	377.686	-57.686	-.051	-.180
74	267	385.000	525.836	-140.836	-.124	-.366
75	268	320.000	-2.661	322.661	.284	1.008
76	269	205.000	86.250	118.750	.105	.579
77	270	201.000	-2.661	203.661	.179	1.013
78	271	520.000	429.960	90.040	.079	.173
79	272	565.000	253.705	311.295	.274	.551
80	273	970.000	559.978	410.022	.361	.423
81	274	1840.000	972.365	867.635	.764	.472
82	275	965.000	481.967	483.033	.425	.501
83	276	1060.000	831.180	228.820	.202	.216
84	277	1810.000	939.396	870.604	.767	.481
85	278	2415.000	627.354	1787.646	1.574	.740
86	279	1190.000	883.454	306.546	.270	.258
87	280	1530.000	935.461	594.539	.524	.389
88	281	2140.000	1228.731	911.269	.803	.426
89	282	1010.000	514.007	495.993	.437	.491
90	283	1355.000	742.269	612.731	.540	.452
91	284	620.000	584.146	35.854	.032	.058
92	285	113.000	482.233	-369.233	-.325	-3.268
93	286	330.000	991.137	-661.137	-.582	-2.003
94	287	218.000	721.396	-503.396	-.443	-2.309
95	288	960.000	994.433	-34.433	-.030	-.036
96	289	580.000	1200.360	-620.360	-.546	-1.070
97	290	2240.000	1224.529	1015.471	.894	.453
98	291	735.000	972.365	-237.365	-.209	-.323
99	292	1010.000	2185.656	-1175.656	-1.035	-1.164
100	293	955.000	1300.705	-345.705	-.304	-.362
101	294	1040.000	1087.546	-47.546	-.042	-.046
102	295	825.000	1256.569	-431.569	-.380	-.523
103	296	1120.000	1236.336	-116.336	-.102	-.104
104	297	1175.000	1004.139	170.861	.150	.145
105	298	1370.000	1091.482	278.518	.245	.203
106	299	860.000	963.299	-103.299	-.091	-.120
107	300	505.000	374.657	130.343	.115	.258
108	301	258.000	1077.957	-819.957	-.722	-3.178
109	302	1220.000	1005.343	214.657	.189	.176
110	303	615.000	968.172	-353.172	-.311	-.574
111	304	510.000	433.629	76.371	.067	.150
112	305	252.000	188.430	63.570	.056	.252
113	306	675.000	223.766	451.234	.397	.668
114	307	321.000	-61.900	382.900	.337	1.193
115	308	337.000	38.179	298.821	.263	.887
116	309	267.000	1024.381	-757.381	-.667	-2.837
117	310	273.000	1323.422	-1050.422	-.925	-3.848
118	311	428.000	2251.678	-1823.678	-1.606	-4.261
119	312	860.000	1272.610	-412.610	-.363	-.480
120	313	1385.000	450.300	934.700	.823	.675

121	314	2810.000	1159.530	1650.470	1.454	.587
122	315	5900.000	4938.682	961.318	.847	.163
123	316	4800.000	4010.373	789.627	.695	.165
124	317	79.000	-180.750	259.750	.229	3.288
125	318	685.000	667.661	17.339	.015	.025
126	319	259.000	287.314	-28.314	-.025	-.109
127	320	387.000	263.145	123.855	.109	.320
128	321	1150.000	153.094	996.906	.878	.867
129	322	2060.000	801.241	1258.759	1.109	.611
130	323	365.000	-63.083	428.083	.377	1.173
131	324	555.000	1237.924	-682.924	-.601	-1.230
132	325	840.000	1070.085	-230.085	-.203	-.274
133	326	590.000	850.890	-260.890	-.230	-.442
134	327	655.000	1018.078	-363.078	-.320	-.554
135	328	423.000	696.970	-273.970	-.241	-.648
136	329	485.000	854.825	-369.825	-.326	-.763
137	330	600.000	998.111	-398.111	-.351	-.664
138	331	680.000	1637.033	-957.033	-.843	-1.407
139	332	935.000	1122.359	-187.359	-.165	-.200
140	333	2570.000	3649.833	-1079.833	-.951	-.420
141	334	1160.000	1257.507	-97.507	-.086	-.084
142	335	3010.000	2069.280	940.720	.828	.313
143	336	4140.000	2318.682	1821.318	1.604	.440
144	337	4900.000	4216.745	683.255	.602	.139
145	338	3940.000	3804.091	135.909	.120	.034
146	339	5000.000	3176.692	1823.308	1.606	.365
147	340	5800.000	1889.090	3910.910	3.444	.674
148	341	3920.000	1254.478	2665.522	2.348	.680
149	342	1895.000	275.507	1619.493	1.426	.855
150	343	2120.000	1187.368	932.632	.821	.440
151	344	1330.000	1140.864	189.136	.167	.142
152	345	995.000	362.317	632.683	.557	.636
153	346	800.000	132.221	667.779	.588	.835
154	347	3740.000	2435.431	1304.569	1.149	.349
155	348	845.000	465.136	379.864	.335	.450

R BAR SQUARED .4904
STANDARD ERROR OF ESTIMATE 810.5295
MEAN ERROR .0000
MEAN SQUARED ERROR 635765.8000

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VARIABLE DELETED IS Hg

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
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Fb	13.850160	.1580
Ag	1603.030000	.2056
Cd	130.901100	.2210

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-1707.421000	.4953	.4853	814.6413

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	MC194	263.000	1567.870	-1304.870	-1.149	-4.961
2	195	67.000	1096.520	-1029.520	-.907	-15.366
3	196	71.000	1255.122	-1184.122	-1.043	-16.678
4	197	84.000	639.909	-555.909	-.490	-6.618
5	198	215.000	563.057	-348.057	-.307	-1.619
6	199	148.000	1083.114	-935.114	-.824	-6.318
7	200	192.000	943.261	-751.261	-.662	-3.913
8	201	137.000	1117.064	-980.064	-.863	-7.154
9	202	110.000	536.708	-426.708	-.376	-3.879
10	203	650.000	1295.321	-645.321	-.568	-.993
11	204	565.000	998.662	-433.662	-.382	-.768
12	205	261.000	929.411	-668.411	-.589	-2.561
13	206	199.000	1020.113	-821.113	-.723	-4.126
14	207	209.000	992.412	-783.412	-.690	-3.748
15	208	182.000	716.760	-534.760	-.471	-2.938
16	209	188.000	1020.113	-832.113	-.733	-4.426
17	210	249.000	502.758	-253.758	-.223	-1.019
18	211	280.000	1690.726	-1410.726	-1.242	-5.038
19	212	525.000	1399.873	-874.873	-.771	-1.666
20	213	263.000	895.461	-632.461	-.557	-2.405
21	214	224.000	1849.328	-1625.328	-1.431	-7.256
22	215	155.000	681.459	-526.459	-.464	-3.397
23	216	160.000	267.305	-107.305	-.095	-.671
24	217	137.000	550.558	-413.558	-.364	-3.019

25	218	149.000	356.656	-207.656	-.183	-1.394
26	219	120.000	308.856	-188.856	-.166	-1.574
27	220	133.000	267.305	-134.305	-.118	-1.010
28	221	143.000	522.858	-379.858	-.335	-2.656
29	222	352.000	1613.875	-1261.875	-1.111	-3.585
30	223	115.000	978.562	-863.562	-.761	-7.509
31	224	234.000	860.160	-626.160	-.551	-2.676
32	225	206.000	1652.321	-1446.321	-1.274	-7.021
33	226	417.000	639.909	-222.909	-.196	-.535
34	227	460.000	1283.266	-823.266	-.725	-1.790
35	228	330.000	613.559	-283.559	-.250	-.859
36	229	423.000	433.507	-10.507	-.009	-.025
37	230	322.000	425.907	-103.907	-.092	-.323
38	231	367.000	667.609	-300.609	-.265	-.819
39	232	376.000	792.260	-416.260	-.367	-1.107
40	233	216.000	461.207	-245.207	-.216	-1.135
41	234	260.000	619.809	-359.809	-.317	-1.384
42	235	385.000	916.912	-531.912	-.468	-1.382
43	236	282.000	605.959	-323.959	-.285	-1.149
44	237	410.000	869.112	-459.112	-.404	-1.120
45	238	530.000	1214.015	-684.015	-.602	-1.291
46	239	525.000	889.211	-364.211	-.321	-.694
47	240	560.000	1103.214	-543.214	-.478	-.970
48	241	550.000	572.009	-22.009	-.019	-.040
49	242	1075.000	331.657	743.343	.655	.691
50	243	775.000	772.161	2.839	.003	.004
51	244	421.000	-331.799	752.799	.663	1.788
52	245	395.000	-317.949	712.949	.628	1.805
53	246	1330.000	730.610	599.390	.528	.451
54	247	1330.000	1420.416	-90.416	-.080	-.068
55	248	1770.000	2345.232	-575.232	-.507	-.325
56	249	1870.000	689.060	1180.940	1.040	.632
57	250	1800.000	696.660	1103.340	.972	.613
58	251	3550.000	2015.973	1534.027	1.351	.432
59	252	1915.000	1483.417	431.583	.380	.225
60	253	1330.000	1375.318	-45.318	-.040	-.034
61	254	755.000	262.407	492.593	.434	.652
62	255	895.000	573.360	321.640	.283	.359
63	256	820.000	930.762	-110.762	-.098	-.135
64	257	955.000	1069.264	-114.264	-.101	-.120
65	258	850.000	441.108	408.892	.360	.481
66	259	1330.000	1423.118	-93.118	-.082	-.070
67	260	1235.000	1754.171	-519.171	-.457	-.420
68	261	940.000	793.611	146.389	.129	.156
69	262	835.000	773.512	61.488	.054	.074
70	263	384.000	179.306	204.694	.180	.533
71	264	285.000	40.804	244.196	.215	.857
72	265	367.000	504.109	-137.109	-.121	-.374

73	266	320.000	296.356	23.644	.021	.074
74	267	385.000	296.356	88.644	.078	.230
75	268	320.000	54.654	265.346	.234	.829
76	269	205.000	76.105	128.895	.114	.629
77	270	201.000	54.654	146.346	.129	.728
78	271	520.000	419.657	100.343	.088	.193
79	272	565.000	316.456	248.544	.219	.440
80	273	970.000	558.159	411.841	.363	.425
81	274	1840.000	986.163	853.837	.752	.464
82	275	965.000	475.058	489.942	.431	.508
83	276	1060.000	841.411	218.589	.193	.206
84	277	1810.000	1103.214	706.786	.622	.390
85	278	2415.000	770.810	1644.190	1.448	.681
86	279	1190.000	964.712	225.288	.198	.189
87	280	1530.000	1020.113	509.887	.449	.333
88	281	2140.000	1247.965	892.035	.786	.417
89	282	1010.000	661.359	348.641	.307	.345
90	283	1355.000	819.961	535.039	.471	.395
91	284	620.000	578.258	41.742	.037	.067
92	285	113.000	542.957	-429.957	-.379	-3.805
93	286	330.000	1090.714	-760.714	-.670	-2.305
94	287	218.000	639.909	-421.909	-.372	-1.935
95	288	960.000	930.762	29.238	.026	.030
96	289	580.000	1076.864	-496.864	-.438	-.857
97	290	2240.000	1096.964	1143.036	1.007	.510
98	291	735.000	986.163	-251.163	-.221	-.342
99	292	1010.000	1821.627	-811.627	-.715	-.804
100	293	955.000	1172.464	-217.464	-.192	-.228
101	294	1040.000	1103.214	-63.214	-.056	-.061
102	295	825.000	1283.266	-458.266	-.404	-.555
103	296	1120.000	1346.267	-226.267	-.199	-.202
104	297	1175.000	1104.564	70.436	.062	.060
105	298	1370.000	1186.314	183.686	.162	.134
106	299	860.000	1055.413	-195.413	-.172	-.227
107	300	505.000	524.209	-19.209	-.017	-.038
108	301	258.000	1154.623	-896.623	-.790	-3.475
109	302	1220.000	987.070	232.930	.205	.191
110	303	615.000	953.120	-338.120	-.298	-.550
111	304	510.000	434.858	75.142	.066	.147
112	305	252.000	179.306	72.694	.064	.288
113	306	675.000	205.655	469.345	.413	.695
114	307	321.000	76.105	244.895	.216	.763
115	308	337.000	103.805	233.195	.205	.692
116	309	267.000	1159.521	-892.521	-.786	-3.343
117	310	273.000	1478.075	-1205.075	-1.061	-4.414
118	311	428.000	2309.085	-1881.085	-1.657	-4.395
119	312	860.000	1187.222	-327.222	-.288	-.380
120	313	1385.000	463.909	921.091	.811	.665

121	314	2810.000	1145.671	1664.329	1.466	.592
122	315	5900.000	4663.953	1236.047	1.089	.209
123	316	4800.000	3979.551	820.449	.723	.171
124	317	79.000	-56.147	135.147	.119	1.711
125	318	685.000	684.161	.839	.001	.001
126	319	259.000	442.459	-183.459	-.162	-.708
127	320	387.000	422.359	-35.359	-.031	-.091
128	321	1150.000	152.956	997.044	.878	.867
129	322	2060.000	730.610	1329.390	1.171	.645
130	323	365.000	4.405	360.595	.318	.988
131	324	555.000	1096.773	-541.773	-.477	-.976
132	325	840.000	988.421	-148.421	-.131	-.177
133	326	590.000	760.569	-170.569	-.150	-.289
134	327	655.000	933.020	-278.020	-.245	-.424
135	328	423.000	669.867	-246.867	-.217	-.584
136	329	485.000	843.670	-358.670	-.316	-.740
137	330	600.000	1063.921	-463.921	-.409	-.773
138	331	680.000	1750.180	-1070.180	-.943	-1.574
139	332	935.000	1111.721	-176.721	-.156	-.189
140	333	2570.000	3646.301	-1076.301	-.948	-.419
141	334	1160.000	1097.871	62.129	.055	.054
142	335	3010.000	1940.029	1069.971	.942	.355
143	336	4140.000	2346.583	1793.417	1.579	.433
144	337	4900.000	4390.116	509.884	.449	.104
145	338	3940.000	3894.212	45.788	.040	.012
146	339	5000.000	3153.440	1846.560	1.626	.369
147	340	5800.000	1753.728	4046.272	3.564	.698
148	341	3920.000	1325.724	2594.276	2.285	.662
149	342	1895.000	193.156	1701.844	1.499	.898
150	343	2120.000	1180.972	939.028	.827	.443
151	344	1330.000	1148.373	181.627	.160	.137
152	345	995.000	139.106	855.894	.754	.860
153	346	800.000	-27.096	827.096	.728	1.034
154	347	3740.000	2403.334	1336.666	1.177	.357
155	348	845.000	485.360	359.640	.317	.426

R BAR SQUARED .4853
STANDARD ERROR OF ESTIMATE 814.6414
MEAN ERROR .0000
MEAN SQUARED ERROR 646514.4000

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VARIABLE DELETED IS Pb

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Ag	1843.138000	.2285
Cd	139.662800	.2137

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-1105.179000	.3966	.3887	887.7988

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	MC194	263.000	933.693	-670.693	-.591	-2.550
2	195	67.000	1575.936	-1508.936	-1.329	-22.521
3	196	71.000	1715.599	-1644.599	-1.448	-23.163
4	197	84.000	933.693	-849.693	-.748	-10.115
5	198	215.000	1073.356	-858.356	-.756	-3.992
6	199	148.000	933.693	-785.693	-.692	-5.309
7	200	192.000	1213.018	-1021.018	-.899	-5.318
8	201	137.000	1073.356	-936.356	-.825	-6.835
9	202	110.000	794.030	-684.030	-.602	-6.218
10	203	650.000	1994.925	-1344.925	-1.184	-2.069
11	204	565.000	1213.018	-648.018	-.571	-1.147
12	205	261.000	1213.018	-952.018	-.838	-3.648
13	206	199.000	1073.356	-874.356	-.770	-4.394
14	207	209.000	1073.356	-864.356	-.761	-4.136
15	208	182.000	794.030	-612.030	-.539	-3.363
16	209	188.000	1073.356	-885.356	-.780	-4.709
17	210	249.000	654.367	-405.367	-.357	-1.628
18	211	280.000	1855.262	-1575.262	-1.387	-5.626
19	212	525.000	1855.262	-1330.262	-1.172	-2.534
20	213	263.000	1073.356	-810.356	-.714	-3.081
21	214	224.000	1994.925	-1770.925	-1.560	-7.906
22	215	155.000	933.693	-778.693	-.686	-5.024
23	216	160.000	654.367	-494.367	-.435	-3.090
24	217	137.000	794.030	-657.030	-.579	-4.796
25	218	149.000	794.030	-645.030	-.568	-4.329
26	219	120.000	654.367	-534.367	-.471	-4.453

27	220	133.000	654.367	-521.367	-.459	-3.920
28	221	143.000	794.030	-651.030	-.573	-4.553
29	222	352.000	1994.925	-1642.925	-1.447	-4.667
30	223	115.000	1073.356	-958.356	-.844	-8.334
31	224	234.000	1213.018	-979.018	-.862	-4.184
32	225	206.000	654.367	-448.367	-.395	-2.177
33	226	417.000	933.693	-516.693	-.455	-1.239
34	227	460.000	1073.356	-613.356	-.540	-1.333
35	228	330.000	654.367	-324.367	-.286	-.983
36	229	423.000	654.367	-231.367	-.204	-.547
37	230	322.000	794.030	-472.030	-.416	-1.466
38	231	367.000	933.693	-566.693	-.499	-1.544
39	232	376.000	933.693	-557.693	-.491	-1.483
40	233	216.000	654.367	-438.367	-.386	-2.029
41	234	260.000	794.030	-534.030	-.470	-2.054
42	235	385.000	933.693	-548.693	-.483	-1.425
43	236	282.000	794.030	-512.030	-.451	-1.816
44	237	410.000	794.030	-384.030	-.338	-.937
45	238	530.000	1073.356	-543.356	-.479	-1.025
46	239	525.000	933.693	-408.693	-.360	-.778
47	240	560.000	1073.356	-513.356	-.452	-.917
48	241	550.000	654.367	-104.367	-.092	-.190
49	242	1075.000	235.379	839.621	.739	.781
50	243	775.000	794.030	-19.030	-.017	-.025
51	244	421.000	-43.947	464.947	.409	1.104
52	245	395.000	-43.947	438.947	.387	1.111
53	246	1330.000	794.030	535.970	.472	.403
54	247	1330.000	1352.681	-22.681	-.020	-.017
55	248	1770.000	2553.576	-783.576	-.690	-.443
56	249	1870.000	794.030	1075.970	.948	.575
57	250	1800.000	654.367	1145.633	1.009	.636
58	251	3550.000	1352.681	2197.319	1.935	.619
59	252	1915.000	1213.018	701.982	.618	.367
60	253	1330.000	654.367	675.633	.595	.508
61	254	755.000	235.379	519.621	.458	.688
62	255	895.000	375.041	519.959	.458	.581
63	256	820.000	933.693	-113.693	-.100	-.139
64	257	955.000	933.693	21.307	.019	.022
65	258	850.000	514.704	335.296	.295	.394
66	259	1330.000	794.030	535.970	.472	.403
67	260	1235.000	1073.356	161.644	.142	.131
68	261	940.000	654.367	285.633	.252	.304
69	262	835.000	514.704	320.296	.282	.384
70	263	384.000	235.379	148.621	.131	.387
71	264	285.000	235.379	49.621	.044	.174
72	265	367.000	375.041	-8.041	-.007	-.022
73	266	320.000	375.041	-55.041	-.048	-.172
74	267	385.000	375.041	9.959	.009	.026

75	268	320.000	235.379	84.621	.075	.264
76	269	205.000	95.716	109.284	.096	.533
77	270	201.000	235.379	-34.379	-.030	-.171
78	271	520.000	654.367	-134.367	-.118	-.258
79	272	565.000	514.704	50.296	.044	.089
80	273	970.000	654.367	315.633	.278	.325
81	274	1840.000	933.693	906.307	.798	.493
82	275	965.000	654.367	310.633	.274	.322
83	276	1060.000	794.030	265.970	.234	.251
84	277	1810.000	1073.356	736.644	.649	.407
85	278	2415.000	1073.356	1341.644	1.182	.556
86	279	1190.000	1073.356	116.644	.103	.098
87	280	1530.000	1073.356	456.644	.402	.298
88	281	2140.000	1213.018	926.982	.816	.433
89	282	1010.000	794.030	215.970	.190	.214
90	283	1355.000	933.693	421.307	.371	.311
91	284	620.000	794.030	-174.030	-.153	-.281
92	285	113.000	933.693	-820.693	-.723	-7.263
93	286	330.000	794.030	-464.030	-.409	-1.406
94	287	218.000	933.693	-715.693	-.630	-3.283
95	288	960.000	933.693	26.307	.023	.027
96	289	580.000	794.030	-214.030	-.188	-.369
97	290	2240.000	933.693	1306.307	1.150	.583
98	291	735.000	933.693	-198.693	-.175	-.270
99	292	1010.000	1994.925	-984.925	-.867	-.975
100	293	955.000	1073.356	-118.356	-.104	-.124
101	294	1040.000	1073.356	-33.356	-.029	-.032
102	295	825.000	1073.356	-248.356	-.219	-.301
103	296	1120.000	933.693	186.307	.164	.166
104	297	1175.000	794.030	380.970	.336	.324
105	298	1370.000	1073.356	296.644	.261	.217
106	299	860.000	933.693	-73.693	-.065	-.086
107	300	505.000	514.704	-9.704	-.009	-.019
108	301	258.000	1017.285	-759.285	-.669	-2.943
109	302	1220.000	1296.611	-76.611	-.067	-.063
110	303	615.000	1156.948	-541.948	-.477	-.881
111	304	510.000	375.041	134.959	.119	.265
112	305	252.000	235.379	16.621	.015	.066
113	306	675.000	514.704	160.296	.141	.237
114	307	321.000	95.716	225.284	.198	.702
115	308	337.000	95.716	241.284	.212	.716
116	309	267.000	1436.273	-1169.273	-1.030	-4.379
117	310	273.000	1436.273	-1163.273	-1.024	-4.261
118	311	428.000	1436.273	-1008.273	-.888	-2.356
119	312	860.000	1436.273	-576.273	-.508	-.670
120	313	1385.000	95.716	1289.284	1.135	.931
121	314	2810.000	1436.273	1373.727	1.210	.489
122	315	5900.000	4229.530	1670.470	1.471	.283

123	316	4800.000	2553.576	2246.424	1.978	.468
124	317	79.000	235.379	-156.379	-.138	-1.979
125	318	685.000	375.041	309.959	.273	.452
126	319	259.000	235.379	23.621	.021	.091
127	320	387.000	95.716	291.284	.257	.753
128	321	1150.000	-43.947	1193.947	1.052	1.038
129	322	2060.000	794.030	1265.970	1.115	.615
130	323	365.000	-113.778	478.778	.422	1.312
131	324	555.000	807.791	-252.791	-.223	-.455
132	325	840.000	1017.285	-177.285	-.156	-.211
133	326	590.000	877.622	-287.622	-.253	-.487
134	327	655.000	1017.285	-362.285	-.319	-.553
135	328	423.000	1017.285	-594.285	-.523	-1.405
136	329	485.000	877.622	-392.622	-.346	-.810
137	330	600.000	1156.948	-556.948	-.491	-.928
138	331	680.000	1017.285	-337.285	-.297	-.496
139	332	935.000	1296.611	-361.611	-.318	-.387
140	333	2570.000	1296.611	1273.389	1.121	.495
141	334	1160.000	1296.611	-136.611	-.120	-.118
142	335	3010.000	1855.262	1154.738	1.017	.384
143	336	4140.000	2274.250	1865.750	1.643	.451
144	337	4900.000	4676.040	223.960	.197	.046
145	338	3940.000	4117.389	-177.389	-.156	-.045
146	339	5000.000	2972.564	2027.436	1.786	.405
147	340	5800.000	1715.599	4084.401	3.597	.704
148	341	3920.000	1436.273	2483.727	2.187	.634
149	342	1895.000	235.379	1659.621	1.462	.876
150	343	2120.000	1296.611	823.389	.725	.388
151	344	1330.000	877.622	452.378	.398	.340
152	345	995.000	-43.947	1038.947	.915	1.044
153	346	800.000	-43.947	843.947	.743	1.055
154	347	3740.000	1994.925	1745.075	1.537	.467
155	348	845.000	-43.947	888.947	.783	1.052

R BAR SQUARED .3887
STANDARD ERROR OF ESTIMATE 887.7989
MEAN ERROR -.0001
MEAN SQUARED ERROR 772931.7000

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VARIABLE DELETED IS Cd

INDEPENDENT VARIABLE REGRESSION COEFFICIENT PARTIAL DETERMINATION COEFFICIENT

Ag 2037.950000 .2225

REGRESSION CONSTANT R SQUARE R BAR SQUARE STANDARD ERROR OF ESTIMATE

-328.283900 .2275 .2225 1001.2090

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	MC194	263.000	690.691	-427.691	-.377	-1.626
2	195	67.000	1709.666	-1642.666	-1.447	-24.517
3	196	71.000	1709.666	-1638.666	-1.443	-23.080
4	197	84.000	690.691	-606.691	-.534	-7.223
5	198	215.000	690.691	-475.691	-.419	-2.213
6	199	148.000	690.691	-542.691	-.478	-3.667
7	200	192.000	690.691	-498.691	-.439	-2.597
8	201	137.000	690.691	-553.691	-.488	-4.042
9	202	110.000	690.691	-580.691	-.511	-5.279
10	203	650.000	1709.666	-1059.666	-.933	-1.630
11	204	565.000	690.691	-125.691	-.111	-.222
12	205	261.000	690.691	-429.691	-.378	-1.646
13	206	199.000	690.691	-491.691	-.433	-2.471
14	207	209.000	690.691	-481.691	-.424	-2.305
15	208	182.000	690.691	-508.691	-.448	-2.795
16	209	188.000	690.691	-502.691	-.443	-2.674
17	210	249.000	690.691	-441.691	-.389	-1.774
18	211	280.000	1709.666	-1429.666	-1.259	-5.106
19	212	525.000	1709.666	-1184.666	-1.043	-2.257
20	213	263.000	690.691	-427.691	-.377	-1.626
21	214	224.000	1709.666	-1485.666	-1.308	-6.632
22	215	155.000	690.691	-535.691	-.472	-3.456
23	216	160.000	690.691	-530.691	-.467	-3.317
24	217	137.000	690.691	-553.691	-.488	-4.042
25	218	149.000	690.691	-541.691	-.477	-3.636
26	219	120.000	690.691	-570.691	-.503	-4.756
27	220	133.000	690.691	-557.691	-.491	-4.193

28	221	143.000	690.691	-547.691	-.482	-3.830
29	222	352.000	1709.666	-1357.666	-1.196	-3.857
30	223	115.000	690.691	-575.691	-.507	-5.006
31	224	234.000	690.691	-456.691	-.402	-1.952
32	225	206.000	690.691	-484.691	-.427	-2.353
33	226	417.000	690.691	-273.691	-.241	-.656
34	227	460.000	690.691	-230.691	-.203	-.502
35	228	330.000	690.691	-360.691	-.318	-1.093
36	229	423.000	690.691	-267.691	-.236	-.633
37	230	322.000	690.691	-368.691	-.325	-1.145
38	231	367.000	690.691	-323.691	-.285	-.882
39	232	376.000	690.691	-314.691	-.277	-.837
40	233	216.000	690.691	-474.691	-.418	-2.198
41	234	260.000	690.691	-430.691	-.379	-1.657
42	235	385.000	690.691	-305.691	-.269	-.794
43	236	282.000	690.691	-408.691	-.360	-1.449
44	237	410.000	690.691	-280.691	-.247	-.685
45	238	530.000	690.691	-160.691	-.142	-.303
46	239	525.000	690.691	-165.691	-.146	-.316
47	240	560.000	690.691	-130.691	-.115	-.233
48	241	550.000	690.691	-140.691	-.124	-.256
49	242	1075.000	690.691	384.309	.338	.357
50	243	775.000	690.691	84.309	.074	.109
51	244	421.000	690.691	-269.691	-.238	-.641
52	245	395.000	690.691	-295.691	-.260	-.749
53	246	1330.000	690.691	639.309	.563	.481
54	247	1330.000	690.691	639.309	.563	.481
55	248	1770.000	1709.666	60.334	.053	.034
56	249	1870.000	690.691	1179.309	1.039	.631
57	250	1800.000	690.691	1109.309	.977	.616
58	251	3550.000	690.691	2859.309	2.518	.805
59	252	1915.000	690.691	1224.309	1.078	.639
60	253	1330.000	690.691	639.309	.563	.481
61	254	755.000	690.691	64.309	.057	.085
62	255	895.000	690.691	204.309	.180	.228
63	256	820.000	690.691	129.309	.114	.158
64	257	955.000	690.691	264.309	.233	.277
65	258	850.000	690.691	159.309	.140	.187
66	259	1330.000	690.691	639.309	.563	.481
67	260	1235.000	690.691	544.309	.479	.441
68	261	940.000	690.691	249.309	.220	.265
69	262	835.000	690.691	144.309	.127	.173
70	263	384.000	690.691	-306.691	-.270	-.799
71	264	285.000	690.691	-405.691	-.357	-1.423
72	265	367.000	690.691	-323.691	-.285	-.882
73	266	320.000	690.691	-370.691	-.326	-1.158
74	267	385.000	690.691	-305.691	-.269	-.794
75	268	320.000	690.691	-370.691	-.326	-1.158

76	269	205.000	690.691	-485.691	-.428	-2.369
77	270	201.000	690.691	-489.691	-.431	-2.436
78	271	520.000	690.691	-170.691	-.150	-.328
79	272	565.000	690.691	-125.691	-.111	-.222
80	273	970.000	690.691	279.309	.246	.288
81	274	1840.000	690.691	1149.309	1.012	.625
82	275	965.000	690.691	274.309	.242	.284
83	276	1060.000	690.691	369.309	.325	.348
84	277	1810.000	690.691	1119.309	.986	.618
85	278	2415.000	690.691	1724.309	1.519	.714
86	279	1190.000	690.691	499.309	.440	.420
87	280	1530.000	690.691	839.309	.739	.549
88	281	2140.000	690.691	1449.309	1.276	.677
89	282	1010.000	690.691	319.309	.281	.316
90	283	1355.000	690.691	664.309	.585	.490
91	284	620.000	690.691	-70.691	-.062	-.114
92	285	113.000	690.691	-577.691	-.509	-5.112
93	286	330.000	690.691	-360.691	-.318	-1.093
94	287	218.000	690.691	-472.691	-.416	-2.168
95	288	960.000	690.691	269.309	.237	.281
96	289	580.000	690.691	-110.691	-.097	-.191
97	290	2240.000	690.691	1549.309	1.364	.692
98	291	735.000	690.691	44.309	.039	.060
99	292	1010.000	1709.666	-699.666	-.616	-.693
100	293	955.000	690.691	264.309	.233	.277
101	294	1040.000	690.691	349.309	.308	.336
102	295	825.000	690.691	134.309	.118	.163
103	296	1120.000	690.691	429.309	.378	.383
104	297	1175.000	690.691	484.309	.427	.412
105	298	1370.000	690.691	679.309	.598	.496
106	299	860.000	690.691	169.309	.149	.197
107	300	505.000	690.691	-185.691	-.164	-.368
108	301	258.000	1709.666	-1451.666	-1.278	-5.627
109	302	1220.000	1709.666	-489.666	-.431	-.401
110	303	615.000	1709.666	-1094.666	-.964	-1.780
111	304	510.000	690.691	-180.691	-.159	-.354
112	305	252.000	690.691	-438.691	-.386	-1.741
113	306	675.000	690.691	-15.691	-.014	-.023
114	307	321.000	690.691	-369.691	-.326	-1.152
115	308	337.000	690.691	-353.691	-.311	-1.050
116	309	267.000	1709.666	-1442.666	-1.271	-5.403
117	310	273.000	1709.666	-1436.666	-1.265	-5.263
118	311	428.000	1709.666	-1281.666	-1.129	-2.995
119	312	860.000	1709.666	-849.666	-.748	-.988
120	313	1385.000	690.691	694.309	.611	.501
121	314	2810.000	1709.666	1100.334	.969	.392
122	315	5900.000	1709.666	4190.334	3.690	.710
123	316	4800.000	1709.666	3090.334	2.722	.644

124	317	79.000	690.691	-611.691	-.539	-7.743
125	318	685.000	690.691	-5.691	-.005	-.008
126	319	259.000	690.691	-431.691	-.380	-1.667
127	320	387.000	690.691	-303.691	-.267	-.785
128	321	1150.000	690.691	459.309	.405	.399
129	322	2060.000	690.691	1369.309	1.206	.665
130	323	365.000	690.691	-325.691	-.287	-.892
131	324	555.000	1709.666	-1154.666	-1.017	-2.080
132	325	840.000	1709.666	-869.666	-.766	-1.035
133	326	590.000	1709.666	-1119.666	-.986	-1.898
134	327	655.000	1709.666	-1054.666	-.929	-1.610
135	328	423.000	1709.666	-1286.666	-1.133	-3.042
136	329	485.000	1709.666	-1224.666	-1.079	-2.525
137	330	600.000	1709.666	-1109.666	-.977	-1.849
138	331	680.000	1709.666	-1029.666	-.907	-1.514
139	332	935.000	1709.666	-774.666	-.682	-.829
140	333	2570.000	1709.666	860.334	.758	.335
141	334	1160.000	1709.666	-549.666	-.484	-.474
142	335	3010.000	1709.666	1300.334	1.145	.432
143	336	4140.000	1709.666	2430.334	2.140	.587
144	337	4900.000	3747.616	1152.384	1.015	.235
145	338	3940.000	3747.616	192.384	.169	.049
146	339	5000.000	1709.666	3290.334	2.898	.658
147	340	5800.000	1709.666	4090.334	3.602	.705
148	341	3920.000	1709.666	2210.334	1.947	.564
149	342	1895.000	690.691	1204.309	1.061	.636
150	343	2120.000	1709.666	410.334	.361	.194
151	344	1330.000	1709.666	-379.666	-.334	-.285
152	345	995.000	690.691	304.309	.268	.306
153	346	800.000	690.691	109.309	.096	.137
154	347	3740.000	1709.666	2030.334	1.788	.543
155	348	845.000	690.691	154.309	.136	.183

R BAR SQUARED .2225
STANDARD ERROR OF ESTIMATE 1001.2090
MEAN ERROR -.0003
MEAN SQUARED ERROR 989484.5000

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+ END OF RUN +
+ NORMAL STOP IN MLRF +
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 MULTIPLE LINEAR REGRESSION

704-G1-L2020 JAN 1975
 FORTRAN77 VERSION JUL 1986

GEOQUIMICA DE SUELOS / CANTABRIA 1990
 CALCULO DE ANOMALIAS
 MEDIO CUDEYO (sólo con muestras inferiores a 3000 p.p.m. en Zn)

NVAL NCOMB IFRNT IFRMT IDELE DELTA
 7 0 0 0 0 .0000

+ + + + ANALYSIS NO 1 + + + +
 DEPENDENT VARIABLE -- Zn

IDEF TRANSFORMATION CODES..... NOBR IRES IFORC
 2 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 6 0

VARIABLE	TRANSFORMATION
Pb	NONE
Zn	NONE
Ag	NONE
Cd	NONE
Fe	NONE
Mn	NONE
Hg	NONE

INPUT DATA

OBS NO	OBS ID	Pb	Zn	Ag	Cd	Fe	Mn	Hg
1	MC194	103	263	.500	8.000	39300	1415	.500
2	195	30	67	1.000	6.000	70000	2407	.400
3	196	32	71	1.000	7.000	100000	2700	.300
4	197	21	84	.500	8.000	143000	4440	.200
5	198	68	215	.500	9.000	162000	7090	.400
6	199	39	148	.500	8.000	200000	8970	.300
7	200	61	192	.500	10.000	275000	9030	.400
8	201	38	137	.500	9.000	180000	7720	.400

9	202	16	110	.500	7.000	141500	3745	.300
10	203	43	650	1.000	9.000	172000	7400	.300
11	204	38	565	.500	10.000	165000	9740	.400
12	205	54	261	.500	10.000	163000	6000	.400
13	206	52	199	.500	9.000	192000	6650	.400
14	207	51	209	.500	9.000	70500	3520	.300
15	208	54	182	.500	7.000	59900	2083	.400
16	209	45	188	.500	9.000	72300	4285	.200
17	210	54	249	.500	6.000	74100	2306	.400
18	211	33	280	1.000	8.000	148000	6280	.400
19	212	45	525	1.000	8.000	144500	5160	.300
20	213	56	263	.500	9.000	150000	7600	.400
21	214	39	224	1.000	9.000	174000	8735	.300
22	215	28	155	.500	8.000	170000	7900	.400
23	216	39	160	.500	6.000	88500	3030	.300
24	217	25	137	.500	7.000	94800	3090	.300
25	218	31	149	.500	7.000	103600	3440	.200
26	219	28	120	.500	6.000	73300	1859	.400
27	220	37	133	.500	6.000	77000	2870	.400
28	221	39	143	.500	7.000	94500	3900	.400
29	222	51	352	1.000	9.000	231000	5305	.400
30	223	33	115	.500	9.000	174000	5220	.500
31	224	128	234	.500	10.000	284500	4930	.300
32	225	36	206	.500	6.000	51000	1460	.400
33	226	73	417	.500	8.000	50000	3110	.400
34	227	53	460	.500	9.000	83400	5670	.400
35	228	40	330	.500	6.000	51500	1400	.400
36	229	30	423	.500	6.000	61100	1447	.200
37	230	31	322	.500	7.000	59200	1448	.200
38	231	38	367	.500	8.000	58400	2400	.200
39	232	47	376	.500	8.000	64000	3940	.100
40	233	42	216	.500	6.000	46400	1098	.050
41	234	44	260	.500	7.000	58700	950	.050
42	235	56	385	.500	8.000	60000	2419	.100
43	236	43	282	.500	7.000	48400	3050	.300
44	237	62	410	.500	7.000	63600	2980	.300
45	238	68	530	.500	9.000	66900	3570	.100
46	239	54	525	.500	8.000	105000	4150	.200
47	240	60	560	.500	9.000	85200	4960	.200
48	241	50	550	.500	6.000	63800	2383	.050
49	242	61	1075	.500	3.000	68900	5990	.300
50	243	55	775	.500	7.000	73200	3370	.100
51	244	32	421	.500	1.000	63700	2637	.300
52	245	33	395	.500	1.000	64300	2130	.400
53	246	52	1330	.500	7.000	137000	5025	.600
54	247	64	1330	.500	11.000	136000	4160	.100
55	248	54	1770	1.000	13.000	182000	6570	.400
56	249	49	1870	.500	7.000	157500	6910	.500

57	250	59	1800	.500	6.000	140000	5830	.300
58	252	78	1915	.500	10.000	154000	6040	.300
59	253	108	1330	.500	6.000	134500	4945	.300
60	254	56	755	.500	3.000	100000	3985	.200
61	255	69	895	.500	4.000	130000	4470	.200
62	256	57	820	.500	8.000	105000	6260	.200
63	257	67	955	.500	8.000	82200	5455	.300
64	258	50	850	.500	5.000	73900	3780	.300
65	259	102	1330	.500	7.000	80000	4770	.300
66	260	107	1235	.500	9.000	85200	4555	.400
67	261	66	940	.500	6.000	63300	5080	.400
68	262	74	835	.500	5.000	67000	4235	.300
69	263	50	384	.500	3.000	75500	3950	.400
70	264	40	285	.500	3.000	60800	2930	.500
71	265	64	367	.500	4.000	53900	4515	.900
72	266	49	320	.500	4.000	60400	2865	.400
73	267	49	385	.500	4.000	58800	2081	.600
74	268	41	320	.500	3.000	52000	2060	.200
75	269	52	205	.500	2.000	48000	2434	.300
76	270	41	201	.500	3.000	502000	2815	.200
77	271	39	520	.500	6.000	96000	5850	.300
78	272	41	565	.500	5.000	82800	2840	.200
79	273	49	970	.500	6.000	108000	5090	.300
80	274	61	1840	.500	8.000	173000	7300	.300
81	275	43	965	.500	6.000	152000	5430	.300
82	276	60	1060	.500	7.000	151500	5160	.300
83	277	60	1810	.500	9.000	195000	7440	.100
84	278	36	2415	.500	9.000	190000	7920	.100
85	279	50	1190	.500	9.000	205000	8670	.200
86	280	54	1530	.500	9.000	198500	7400	.200
87	281	61	2140	.500	10.000	160000	7830	.300
88	282	47	1010	.500	7.000	170500	6110	.100
89	283	49	1355	.500	8.000	156000	7000	.200
90	284	41	620	.500	7.000	221000	11160	.300
91	285	29	113	.500	8.000	160000	7535	.200
92	286	78	330	.500	7.000	216000	6860	.200
93	287	36	218	.500	8.000	235000	10170	.400
94	288	57	960	.500	8.000	173500	5595	.400
95	289	77	580	.500	7.000	119100	3200	.500
96	290	69	2240	.500	8.000	194000	6105	.500
97	291	61	735	.500	8.000	190500	6095	.300
98	292	54	1010	1.000	9.000	189000	7320	.900
99	293	65	955	.500	9.000	184000	5825	.500
100	294	60	1040	.500	9.000	190000	5940	.300
101	295	73	825	.500	9.000	156500	6365	.300
102	296	87	1120	.500	8.000	161000	4150	.200
103	297	79	1175	.500	7.000	142000	4720	.200
104	298	66	1370	.500	9.000	155000	6180	.200

105	299	66	860	.500	8.000	154000	5845	.200
106	300	56	505	.500	5.000	76400	2050	.100
107	301	72	258	1.000	2.000	230000	9850	.300
108	302	41	1220	1.000	4.000	168500	6100	.400
109	303	48	615	1.000	3.000	140000	5895	.400
110	304	59	510	.500	4.000	133600	6330	.300
111	305	50	252	.500	3.000	211000	9680	.300
112	306	33	675	.500	5.000	103300	6875	.300
113	307	52	321	.500	2.000	175000	8010	.100
114	308	54	337	.500	2.000	168000	5080	.200
115	309	44	267	1.000	5.000	205000	7705	.200
116	310	67	273	1.000	5.000	229000	9230	.200
117	311	127	428	1.000	5.000	173500	4950	.400
118	312	46	860	1.000	5.000	173000	4795	.500
119	313	80	1385	.500	2.000	204000	6590	.300
120	314	43	2810	1.000	5.000	140500	4965	.400
121	317	33	79	.500	3.000	28100	210	.100
122	318	77	685	.500	4.000	76300	3325	.300
123	319	69	259	.500	3.000	71400	1713	.100
124	320	77	387	.500	2.000	58100	1264	.100
125	321	67	1150	.500	1.000	90800	1718	.300
126	322	52	2060	.500	7.000	133500	4800	.400
127	323	61	365	.500	.500	174000	4560	.200
128	324	82	555	1.000	.500	199000	6520	.600
129	325	60	840	1.000	2.000	66700	2028	.500
130	326	53	590	1.000	1.000	58000	2403	.500
131	327	56	655	1.000	2.000	71100	3725	.500
132	328	37	423	1.000	2.000	49300	3180	.400
133	329	59	485	1.000	1.000	71800	2557	.400
134	330	56	600	1.000	3.000	69600	5500	.300
135	331	115	680	1.000	2.000	71700	3645	.300
136	332	50	935	1.000	4.000	82900	4110	.400
137	333	233	2570	1.000	4.000	169000	5495	.600
138	334	49	1160	1.000	4.000	107600	4880	.600
139	342	51	1895	.500	3.000	161000	5365	.400
140	343	55	2120	1.000	4.000	210000	8550	.400
141	344	81	1330	1.000	1.000	176000	4745	.400
142	345	66	995	.500	1.000	263000	12060	.600
143	346	54	800	.500	1.000	290000	12870	.500
144	348	91	845	.500	1.000	299000	12430	.300

STATISTICS OF DATA

BASED ON 144 OBSERVATIONS

VARIABLE	AVERAGE	VARIANCE	STANDARD DEVIATION	
Pb	56.3958	598.9681	24.4738	
Ag	.6042	.0415	.2038	
Cd	6.0417	7.6451	2.7650	
Fe	127630.6000	3854962000.0000	62088.3400	
Mn	5055.3130	6204685.0000	2490.9200	
Hg	.3226	.0212	.1457	
Zn	716.6111	344507.4000	586.9475	DEF.VARIABLE

SIMPLE CORRELATION COEFFICIENTS

VARIABLE	Pb	Ag	Cd	Fe	Mn	Hg	Zn
Pb	1.0000	.0783	.0000	.1598	.0000	.1138	.3504
Ag	.0783	1.0000	-.2263	.0900	.0000	.3108	.0369
Cd	.0000	-.2263	1.0000	.1611	.1404	-.0905	.0063
Fe	.1598	.0900	.1611	1.0000	.8478	.0885	.2650
Mn	.0000	.0000	.1404	.8478	1.0000	.1228	.2556
Hg	.1138	.3108	-.0905	.0885	.1228	1.0000	.0538
Zn	.3504	.0369	.0063	.2650	.2556	.0538	1.0000

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	8.134285	.1099
Ag	148.637800	.0000
Cd	18.460910	.0010
Fe	.000140	.0000
Mn	.049306	.0072
Hg	51.944260	.0000

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-227.306400	.1953	.1600	537.9404

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	MC194	263.000	933.761	-670.761	-1.143	-2.550
2	195	67.000	425.361	-358.361	-.611	-5.349
3	196	71.000	473.534	-402.534	-.686	-5.669
4	197	84.000	414.803	-330.803	-.564	-3.938
5	198	215.000	959.278	-744.278	-1.268	-3.462
6	199	148.000	797.732	-649.732	-1.107	-4.390
7	200	192.000	1032.238	-840.238	-1.432	-4.376
8	201	137.000	748.827	-611.827	-1.042	-4.466
9	202	110.000	326.388	-216.388	-.369	-1.967
10	203	650.000	841.727	-191.727	-.327	-.295
11	204	565.000	864.789	-299.789	-.511	-.531
12	205	261.000	810.256	-549.256	-.936	-2.104
13	206	199.000	811.626	-612.626	-1.044	-3.079
14	207	209.000	626.997	-417.997	-.712	-2.000
15	208	182.000	547.340	-365.340	-.622	-2.007
16	209	188.000	610.967	-422.967	-.721	-2.250
17	210	249.000	541.858	-292.858	-.499	-1.176
18	211	280.000	688.543	-408.543	-.696	-1.459
19	212	525.000	725.249	-200.249	-.341	-.381
20	213	263.000	885.136	-622.136	-1.060	-2.366
21	214	224.000	875.292	-651.292	-1.110	-2.908
22	215	155.000	656.501	-501.501	-.854	-3.235
23	216	160.000	452.358	-292.358	-.498	-1.827
24	217	137.000	360.777	-223.777	-.381	-1.633
25	218	149.000	422.875	-273.875	-.467	-1.838
26	219	120.000	308.215	-188.215	-.321	-1.568
27	220	133.000	431.788	-298.788	-.509	-2.247
28	221	143.000	519.747	-376.747	-.642	-2.635
29	222	352.000	816.943	-464.943	-.792	-1.321
30	223	115.000	589.248	-474.248	-.808	-4.124
31	224	234.000	1371.216	-1137.216	-1.938	-4.860
32	225	206.000	350.501	-144.501	-.246	-.701
33	226	417.000	769.606	-352.606	-.601	-.846
34	227	460.000	756.269	-296.269	-.505	-.644
35	228	330.000	380.150	-50.150	-.085	-.152
36	229	423.000	292.076	130.924	.223	.310
37	230	322.000	318.455	3.545	.006	.011
38	231	367.000	440.683	-73.683	-.126	-.201
39	232	376.000	585.410	-209.410	-.357	-.557
40	233	216.000	362.635	-146.635	-.250	-.679
41	234	260.000	391.786	-131.786	-.225	-.507
42	235	385.000	583.067	-198.067	-.337	-.514
43	236	282.000	498.740	-216.740	-.369	-.769
44	237	410.000	651.964	-241.964	-.412	-.590

45	238	530.000	756.853	-226.853	-.386	-.428
46	239	525.000	663.627	-138.627	-.236	-.264
47	240	560.000	768.065	-208.065	-.354	-.372
48	241	550.000	493.498	56.502	.096	.103
49	242	1075.000	719.136	355.864	.606	.331
50	243	775.000	605.205	169.795	.289	.219
51	244	421.000	280.272	140.728	.240	.334
52	245	395.000	268.686	126.314	.215	.320
53	246	1330.000	697.288	632.712	1.078	.476
54	247	1330.000	799.982	530.018	.903	.399
55	248	1770.000	970.716	799.284	1.362	.452
56	249	1870.000	763.496	1106.504	1.885	.592
57	250	1800.000	760.294	1039.706	1.771	.578
58	252	1915.000	1000.999	914.001	1.557	.477
59	253	1330.000	1114.470	215.530	.367	.162
60	254	755.000	578.757	176.243	.300	.233
61	255	895.000	731.068	163.932	.279	.183
62	256	820.000	792.064	27.936	.048	.034
63	257	955.000	835.725	119.275	.203	.125
64	258	850.000	558.314	291.686	.497	.343
65	259	1330.000	1067.883	262.117	.447	.197
66	260	1235.000	1140.796	94.204	.160	.076
67	261	940.000	774.734	165.266	.282	.176
68	262	835.000	775.006	59.994	.102	.072
69	263	384.000	535.192	-151.192	-.258	-.394
70	264	285.000	406.698	-121.698	-.207	-.427
71	265	367.000	718.345	-351.345	-.599	-.957
72	266	320.000	489.912	-169.912	-.289	-.531
73	267	385.000	461.422	-76.422	-.130	-.198
74	268	320.000	355.124	-35.124	-.060	-.110
75	269	205.000	449.216	-244.216	-.416	-1.191
76	270	201.000	392.098	-191.098	-.326	-.951
77	271	520.000	592.447	-72.447	-.123	-.139
78	272	565.000	434.807	130.193	.222	.230
79	273	970.000	637.994	332.006	.566	.342
80	274	1840.000	890.574	949.426	1.618	.516
81	275	965.000	612.100	352.900	.601	.366
82	276	1060.000	755.461	304.539	.519	.287
83	277	1810.000	900.488	909.512	1.550	.502
84	278	2415.000	728.233	1686.767	2.874	.698
85	279	1190.000	886.382	303.618	.517	.255
86	280	1530.000	855.393	674.607	1.149	.441
87	281	2140.000	951.811	1188.189	2.024	.555
88	282	1010.000	688.821	321.179	.547	.318
89	283	1355.000	770.601	584.399	.996	.431
90	284	620.000	906.452	-286.452	-.488	-.462
91	285	113.000	634.853	-521.853	-.889	-4.618
92	286	330.000	989.514	-659.514	-1.124	-1.999

93	287	218.000	842.580	-624.580	-1.064	-2.865
94	288	960.000	779.235	180.765	.308	.188
95	289	580.000	802.967	-222.967	-.380	-.384
96	290	2240.000	910.050	1329.949	2.266	.594
97	291	735.000	833.605	-98.605	-.168	-.134
98	292	1010.000	960.801	49.199	.084	.049
99	293	955.000	880.772	74.228	.126	.078
100	294	1040.000	836.220	203.780	.347	.196
101	295	825.000	958.240	-133.240	-.227	-.162
102	296	1120.000	939.882	180.118	.307	.161
103	297	1175.000	881.796	293.204	.500	.250
104	298	1370.000	886.775	483.225	.823	.353
105	299	860.000	851.657	8.343	.014	.010
106	300	505.000	511.781	-6.781	-.012	-.013
107	301	258.000	1077.297	-819.297	-1.396	-3.176
108	302	1220.000	673.762	546.238	.931	.448
109	303	615.000	698.152	-83.152	-.142	-.135
110	304	510.000	747.131	-237.131	-.404	-.465
111	305	252.000	831.448	-579.448	-.987	-2.299
112	306	675.000	576.739	98.261	.167	.146
113	307	321.000	731.497	-410.497	-.699	-1.279
114	308	337.000	607.517	-270.517	-.461	-.803
115	309	267.000	790.472	-523.472	-.892	-1.961
116	310	273.000	1056.104	-783.104	-1.334	-2.869
117	311	428.000	1335.769	-907.769	-1.547	-2.121
118	312	860.000	674.374	185.626	.316	.216
119	313	1385.000	903.684	481.316	.820	.348
120	314	2810.000	648.618	2161.382	3.682	.769
121	317	79.000	190.301	-111.301	-.190	-1.409
122	318	685.000	737.380	-52.380	-.089	-.076
123	319	259.000	563.291	-304.291	-.518	-1.175
124	320	387.000	585.908	-198.908	-.339	-.514
125	321	1150.000	523.446	626.554	1.067	.545
126	322	2060.000	675.317	1384.683	2.359	.672
127	323	365.000	611.965	-246.965	-.421	-.677
128	324	555.000	978.013	-423.013	-.721	-.762
129	325	840.000	581.592	258.408	.440	.308
130	326	590.000	523.466	66.534	.113	.113
131	327	655.000	633.341	21.659	.037	.033
132	328	423.000	443.678	-20.678	-.035	-.049
133	329	485.000	576.598	-91.598	-.156	-.189
134	330	600.000	728.721	-128.721	-.219	-.215
135	331	680.000	1099.015	-419.015	-.714	-.616
136	332	935.000	636.894	298.106	.508	.319
137	333	2570.000	2216.174	353.826	.603	.138
138	334	1160.000	680.565	479.435	.817	.413
139	342	1895.000	625.038	1269.962	2.164	.670
140	343	2120.000	914.239	1205.761	2.054	.569

141	344	1330.000	877.990	452.010	.770	.340
142	345	995.000	1064.870	-69.870	-.119	-.070
143	346	800.000	1005.773	-205.773	-.351	-.257
144	348	845.000	1275.916	-430.916	-.734	-.510

R BAR SQUARED .1600
 STANDARD ERROR OF ESTIMATE 537.9407
 MEAN ERROR .0000
 MEAN SQUARED ERROR 275313.1000

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VARIABLE DELETED IS Fe

INDEPENDENT VARIABLE REGRESSION COEFFICIENT PARTIAL DETERMINATION COEFFICIENT

Fb	8.175847	.1163
Ag	151.754900	.0000
Cd	18.675950	.0014
Mn	.052189	.0471
Hg	49.994290	.0000

REGRESSION CONSTANT -228.948200 R SQUARE .1952 R BAR SQUARE .1660 STANDARD ERROR OF ESTIMATE 536.0065

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	MC194	263.000	937.293	-674.293	-1.149	-2.564
2	195	67.000	425.754	-358.754	-.611	-5.355
3	196	71.000	471.073	-400.073	-.682	-5.635
4	197	84.000	409.746	-325.746	-.555	-3.878
5	198	215.000	960.986	-745.986	-1.271	-3.470
6	199	148.000	798.325	-650.325	-1.108	-4.394
7	200	192.000	1023.677	-831.677	-1.417	-4.332
8	201	137.000	748.589	-611.589	-1.042	-4.464
9	202	110.000	318.919	-208.919	-.356	-1.899
10	203	650.000	843.646	-193.646	-.330	-.298
11	204	565.000	872.686	-307.686	-.524	-.545
12	205	261.000	808.314	-547.314	-.932	-2.097

13	206	199.000	807.209	-608.209	-1.036	-3.056
14	207	209.000	630.683	-421.683	-.718	-2.018
15	208	182.000	547.863	-365.863	-.623	-2.010
16	209	188.000	616.553	-428.553	-.730	-2.280
17	210	249.000	540.825	-291.825	-.497	-1.172
18	211	280.000	689.760	-409.760	-.698	-1.463
19	212	525.000	724.419	-199.419	-.340	-.380
20	213	263.000	889.492	-626.492	-1.067	-2.382
21	214	224.000	880.614	-656.614	-1.119	-2.931
22	215	155.000	657.549	-502.549	-.856	-3.242
23	216	160.000	450.973	-290.973	-.496	-1.819
24	217	137.000	358.318	-221.318	-.377	-1.615
25	218	149.000	420.640	-271.640	-.463	-1.823
26	219	120.000	304.925	-184.925	-.315	-1.541
27	220	133.000	431.270	-298.270	-.508	-2.243
28	221	143.000	520.052	-377.052	-.642	-2.637
29	222	352.000	804.717	-452.717	-.771	-1.286
30	223	115.000	582.238	-467.238	-.796	-4.063
31	224	234.000	1352.485	-1118.485	-1.906	-4.780
32	225	206.000	349.509	-143.509	-.244	-.697
33	226	417.000	775.478	-358.478	-.611	-.860
34	227	460.000	764.240	-304.240	-.518	-.661
35	228	330.000	379.081	-49.081	-.084	-.149
36	229	423.000	289.776	133.224	.227	.315
37	230	322.000	316.680	5.320	.009	.017
38	231	367.000	442.271	-75.271	-.128	-.205
39	232	376.000	591.224	-215.224	-.367	-.572
40	233	216.000	362.173	-146.173	-.249	-.677
41	234	260.000	389.477	-129.477	-.221	-.498
42	235	385.000	585.428	-200.428	-.341	-.521
43	236	282.000	503.396	-221.396	-.377	-.785
44	237	410.000	655.084	-245.084	-.418	-.598
45	238	530.000	762.283	-232.283	-.396	-.438
46	239	525.000	664.414	-139.414	-.238	-.266
47	240	560.000	774.418	-214.418	-.365	-.383
48	241	550.000	494.643	55.357	.094	.101
49	242	1075.000	729.292	345.708	.589	.322
50	243	775.000	608.208	166.792	.284	.215
51	244	421.000	279.852	141.148	.240	.335
52	245	395.000	266.568	128.432	.219	.325
53	246	1330.000	695.049	634.951	1.082	.477
54	247	1330.000	797.723	532.277	.907	.400
55	248	1770.000	969.967	800.033	1.363	.452
56	249	1870.000	763.898	1106.102	1.884	.591
57	250	1800.000	760.618	1039.382	1.771	.577
58	252	1915.000	1001.622	913.378	1.556	.477
59	253	1330.000	1115.047	214.953	.366	.162
60	254	755.000	578.775	176.225	.300	.233

61	255	895.000	729.049	165.951	.283	.185
62	256	820.000	799.060	20.940	.036	.026
63	257	955.000	843.806	111.194	.189	.116
64	258	850.000	561.373	288.627	.492	.340
65	259	1330.000	1075.535	254.465	.434	.191
66	260	1235.000	1147.545	87.455	.149	.071
67	261	940.000	783.707	156.293	.266	.166
68	262	835.000	781.339	53.661	.091	.064
69	263	384.000	537.892	-153.892	-.262	-.401
70	264	285.000	407.901	-122.901	-.209	-.431
71	265	367.000	725.514	-358.514	-.611	-.977
72	266	320.000	491.768	-171.768	-.293	-.537
73	267	385.000	460.851	-75.851	-.129	-.197
74	268	320.000	355.674	-35.674	-.061	-.111
75	269	205.000	451.451	-246.451	-.420	-1.202
76	270	201.000	395.077	-194.077	-.331	-.966
77	271	520.000	598.145	-78.145	-.133	-.150
78	272	565.000	433.733	131.267	.224	.232
79	273	970.000	640.240	329.760	.562	.340
80	274	1840.000	891.039	948.961	1.617	.516
81	275	965.000	608.929	356.071	.607	.369
82	276	1060.000	752.503	307.497	.524	.290
83	277	1810.000	898.846	911.154	1.552	.503
84	278	2415.000	727.677	1687.323	2.875	.699
85	279	1190.000	886.279	303.721	.517	.255
86	280	1530.000	852.703	677.297	1.154	.443
87	281	2140.000	956.051	1183.949	2.017	.553
88	282	1010.000	685.798	324.202	.552	.321
89	283	1355.000	772.273	582.727	.993	.430
90	284	620.000	910.294	-290.294	-.495	-.468
91	285	113.000	636.677	-523.677	-.892	-4.634
92	286	330.000	983.390	-653.390	-1.113	-1.980
93	287	218.000	841.424	-623.424	-1.062	-2.860
94	288	960.000	774.353	185.647	.316	.193
95	289	580.000	799.202	-219.202	-.373	-.378
96	290	2240.000	904.079	1335.921	2.276	.596
97	291	735.000	828.152	-93.152	-.159	-.127
98	292	1010.000	959.402	50.598	.086	.050
99	293	955.000	875.439	79.561	.136	.083
100	294	1040.000	830.562	209.438	.357	.201
101	295	825.000	959.029	-134.029	-.228	-.162
102	296	1120.000	934.217	185.783	.317	.166
103	297	1175.000	879.882	295.118	.503	.251
104	298	1370.000	887.143	482.857	.823	.352
105	299	860.000	850.984	9.016	.015	.010
106	300	505.000	510.143	-5.143	-.009	-.010
107	301	258.000	1077.876	-819.876	-1.397	-3.178
108	302	1220.000	671.069	548.931	.935	.450

109	303	615.000	698.925	-83.925	-.143	-.136
110	304	510.000	749.360	-239.360	-.408	-.469
111	305	252.000	831.934	-579.934	-.988	-2.301
112	306	675.000	583.907	91.093	.155	.135
113	307	321.000	732.456	-411.456	-.701	-1.282
114	308	337.000	600.894	-263.894	-.450	-.783
115	309	267.000	788.036	-521.036	-.888	-1.951
116	310	273.000	1055.668	-782.668	-1.333	-2.867
117	311	428.000	1332.850	-904.850	-1.542	-2.114
118	312	860.000	667.517	192.483	.328	.224
119	313	1385.000	897.270	487.730	.831	.352
120	314	2810.000	646.862	2163.138	3.685	.770
121	317	79.000	188.719	-109.719	-.187	-1.389
122	318	685.000	739.699	-54.699	-.093	-.080
123	319	259.000	561.489	-302.489	-.515	-1.168
124	320	387.000	584.787	-197.787	-.337	-.511
125	321	1150.000	518.045	631.955	1.077	.550
126	322	2060.000	673.308	1386.692	2.363	.673
127	323	365.000	602.973	-237.973	-.405	-.652
128	324	555.000	972.831	-417.831	-.712	-.753
129	325	840.000	581.545	258.455	.440	.308
130	326	590.000	525.209	64.791	.110	.110
131	327	655.000	637.406	17.594	.030	.027
132	328	423.000	448.622	-25.622	-.044	-.061
133	329	485.000	577.302	-92.302	-.157	-.190
134	330	600.000	738.718	-138.718	-.236	-.231
135	331	680.000	1105.607	-425.607	-.725	-.626
136	332	935.000	640.796	294.204	.501	.315
137	333	2570.000	2219.256	350.744	.598	.136
138	334	1160.000	682.804	477.196	.813	.411
139	342	1895.000	619.915	1275.085	2.172	.673
140	343	2120.000	913.393	1206.607	2.056	.569
141	344	1330.000	871.359	458.641	.781	.345
142	345	995.000	1064.603	-69.603	-.119	-.070
143	346	800.000	1003.766	-203.766	-.347	-.255
144	348	845.000	1273.310	-428.310	-.730	-.507

R BAR SQUARED .1660
STANDARD ERROR OF ESTIMATE 536.0070
MEAN ERROR .0000
MEAN SQUARED ERROR 275332.5000

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VARIABLE DELETED IS Hg

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	8.203536	.1182
Ag	161.889400	.0000
Cd	18.494150	.0013
Mn	.052571	.0489

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-221.339100	.1951	.1719	534.1193

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	MC194	263.000	926.911	-663.911	-1.131	-2.524
2	195	67.000	424.159	-357.159	-.609	-5.331
3	196	71.000	474.463	-403.463	-.687	-5.683
4	197	84.000	413.247	-329.247	-.561	-3.920
5	198	215.000	956.620	-741.620	-1.264	-3.449
6	199	148.000	799.056	-651.056	-1.109	-4.399
7	200	192.000	1019.676	-827.676	-1.410	-4.311
8	201	137.000	743.633	-606.633	-1.034	-4.428
9	202	110.000	317.198	-207.198	-.353	-1.884
10	203	650.000	848.773	-198.773	-.339	-.306
11	204	565.000	868.320	-303.320	-.517	-.537
12	205	261.000	802.962	-541.962	-.923	-2.076
13	206	199.000	802.232	-603.232	-1.028	-3.031
14	207	209.000	629.482	-420.482	-.716	-2.012
15	208	182.000	541.560	-359.560	-.613	-1.976
16	209	188.000	620.477	-432.477	-.737	-2.300
17	210	249.000	534.789	-285.789	-.487	-1.148
18	211	280.000	689.364	-409.364	-.697	-1.462
19	212	525.000	728.927	-203.927	-.347	-.388
20	213	263.000	884.988	-621.988	-1.060	-2.365
21	214	224.000	886.141	-662.141	-1.128	-2.956
22	215	155.000	652.566	-497.566	-.848	-3.210
23	216	160.000	449.798	-289.798	-.494	-1.811
24	217	137.000	356.596	-219.596	-.374	-1.603
25	218	149.000	424.217	-275.217	-.469	-1.847

26	219	120.000	297.998	-177.998	-.303	-1.483
27	220	133.000	424.979	-291.979	-.497	-2.195
28	221	143.000	514.028	-371.028	-.632	-2.595
29	222	352.000	804.266	-452.266	-.771	-1.285
30	223	115.000	571.189	-456.189	-.777	-3.967
31	224	234.000	1353.773	-1119.773	-1.908	-4.785
32	225	206.000	342.651	-136.651	-.233	-.663
33	226	417.000	769.912	-352.912	-.601	-.846
34	227	460.000	758.916	-298.916	-.509	-.650
35	228	330.000	372.311	-42.311	-.072	-.128
36	229	423.000	292.746	130.254	.222	.308
37	230	322.000	319.497	2.503	.004	.008
38	231	367.000	445.463	-78.463	-.134	-.214
39	232	376.000	600.254	-224.254	-.382	-.596
40	233	216.000	372.842	-156.842	-.267	-.726
41	234	260.000	399.962	-139.962	-.238	-.538
42	235	385.000	594.125	-209.125	-.356	-.543
43	236	282.000	502.157	-220.157	-.375	-.781
44	237	410.000	654.345	-244.345	-.416	-.596
45	238	530.000	771.571	-241.571	-.412	-.456
46	239	525.000	668.718	-143.718	-.245	-.274
47	240	560.000	779.016	-219.016	-.373	-.391
48	241	550.000	506.023	43.977	.075	.080
49	242	1075.000	730.402	344.598	.587	.321
50	243	775.000	617.422	157.578	.268	.203
51	244	421.000	279.242	141.758	.242	.337
52	245	395.000	260.792	134.208	.229	.340
53	246	1330.000	679.816	650.184	1.108	.489
54	247	1330.000	806.762	523.238	.891	.393
55	248	1770.000	969.355	800.645	1.364	.452
56	249	1870.000	754.301	1115.699	1.901	.597
57	250	1800.000	761.066	1038.934	1.770	.577
58	252	1915.000	1001.950	913.050	1.556	.477
59	253	1330.000	1116.514	213.486	.364	.161
60	254	755.000	583.980	171.020	.291	.227
61	255	895.000	734.617	160.383	.273	.179
62	256	820.000	804.253	15.747	.027	.019
63	257	955.000	843.969	111.031	.189	.116
64	258	850.000	560.970	289.030	.492	.340
65	259	1330.000	1076.588	253.412	.432	.191
66	260	1235.000	1143.291	91.709	.156	.074
67	261	940.000	779.063	160.937	.274	.171
68	262	835.000	781.775	53.225	.091	.064
69	263	384.000	532.919	-148.919	-.254	-.388
70	264	285.000	397.262	-112.262	-.191	-.394
71	265	367.000	695.965	-328.965	-.560	-.896
72	266	320.000	486.171	-166.171	-.283	-.519
73	267	385.000	444.955	-59.955	-.102	-.156

74	268	320.000	359.729	-39.729	-.068	-.124
75	269	205.000	451.135	-246.135	-.419	-1.201
76	270	201.000	399.420	-198.420	-.338	-.987
77	271	520.000	598.047	-78.047	-.133	-.150
78	272	565.000	437.722	127.278	.217	.225
79	273	970.000	640.129	329.871	.562	.340
80	274	1840.000	891.741	948.259	1.616	.515
81	275	965.000	608.781	356.219	.607	.369
82	276	1060.000	752.542	307.458	.524	.290
83	277	1810.000	909.391	900.609	1.534	.498
84	278	2415.000	737.740	1677.260	2.858	.695
85	279	1190.000	892.018	297.982	.508	.250
86	280	1530.000	858.067	671.933	1.145	.439
87	281	2140.000	956.591	1183.409	2.016	.553
88	282	1010.000	695.838	314.162	.535	.311
89	283	1355.000	777.527	577.473	.984	.426
90	284	620.000	912.099	-292.099	-.498	-.471
91	285	113.000	641.581	-528.581	-.901	-4.678
92	286	330.000	989.575	-659.575	-1.124	-1.999
93	287	218.000	837.530	-619.530	-1.056	-2.842
94	288	960.000	769.293	190.707	.325	.199
95	289	580.000	788.963	-208.963	-.356	-.360
96	290	2240.000	894.547	1345.453	2.292	.601
97	291	735.000	828.393	-93.393	-.159	-.127
98	292	1010.000	934.806	75.194	.128	.074
99	293	955.000	865.507	89.493	.152	.094
100	294	1040.000	830.535	209.465	.357	.201
101	295	825.000	959.524	-134.524	-.229	-.163
102	296	1120.000	939.435	180.565	.308	.161
103	297	1175.000	885.278	289.722	.494	.247
104	298	1370.000	892.373	477.627	.814	.349
105	299	860.000	856.268	3.732	.006	.004
106	300	505.000	519.244	-14.244	-.024	-.028
107	301	258.000	1086.015	-828.015	-1.411	-3.209
108	302	1220.000	671.553	548.447	.934	.450
109	303	615.000	699.707	-84.707	-.144	-.138
110	304	510.000	750.363	-240.363	-.410	-.471
111	305	252.000	834.149	-582.149	-.992	-2.310
112	306	675.000	584.217	90.783	.155	.134
113	307	321.000	744.269	-423.269	-.721	-1.319
114	308	337.000	606.644	-269.644	-.459	-.800
115	309	267.000	799.034	-532.034	-.906	-1.993
116	310	273.000	1067.885	-794.885	-1.354	-2.912
117	311	428.000	1335.095	-907.095	-1.545	-2.119
118	312	860.000	662.460	197.540	.337	.230
119	313	1385.000	899.318	485.682	.827	.351
120	314	2810.000	646.787	2163.213	3.686	.770
121	317	79.000	196.845	-117.845	-.201	-1.492

122	318	685.000	740.052	-55.052	-.094	-.080
123	319	259.000	571.186	-312.186	-.532	-1.205
124	320	387.000	594.716	-207.716	-.354	-.537
125	321	1150.000	518.053	631.947	1.077	.550
126	322	2060.000	667.988	1392.012	2.372	.676
127	323	365.000	608.991	-243.991	-.416	-.668
128	324	555.000	965.248	-410.248	-.699	-.739
129	325	840.000	576.364	263.636	.449	.314
130	326	590.000	520.159	69.841	.119	.118
131	327	655.000	632.762	22.238	.038	.034
132	328	423.000	448.244	-25.244	-.043	-.060
133	329	485.000	577.476	-92.476	-.158	-.191
134	330	600.000	744.570	-144.570	-.246	-.241
135	331	680.000	1112.565	-432.565	-.737	-.636
136	332	935.000	640.769	294.231	.501	.315
137	333	2570.000	2214.827	355.173	.605	.138
138	334	1160.000	673.045	486.955	.830	.420
139	342	1895.000	615.510	1279.490	2.180	.675
140	343	2120.000	915.201	1204.799	2.053	.568
141	344	1330.000	872.979	457.021	.779	.344
142	345	995.000	1053.536	-58.536	-.100	-.059
143	346	800.000	997.675	-197.675	-.337	-.247
144	348	845.000	1278.075	-433.075	-.738	-.513

R BAR SQUARED .1719
STANDARD ERROR OF ESTIMATE 534.1198
MEAN ERROR .0000
MEAN SQUARED ERROR 275378.3000

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VARIABLE DELETED IS Ag

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	8.320258	.1218
Cd	15.489150	.0000
Mn	.054033	.0524

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-119.353000	.1922	.1749	533.1694

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	MC194	263.000	938.004	-675.004	-1.150	-2.567
2	195	67.000	353.248	-286.248	-.488	-4.272
3	196	71.000	401.210	-330.210	-.563	-4.651
4	197	84.000	419.194	-335.194	-.571	-3.990
5	198	215.000	968.924	-753.924	-1.284	-3.507
6	199	148.000	813.730	-665.730	-1.134	-4.498
7	200	192.000	1030.996	-838.996	-1.429	-4.370
8	201	137.000	753.357	-616.357	-1.050	-4.499
9	202	110.000	324.550	-214.550	-.366	-1.950
10	203	650.000	777.668	-127.668	-.218	-.196
11	204	565.000	877.994	-312.994	-.533	-.554
12	205	261.000	809.033	-548.033	-.934	-2.100
13	206	199.000	812.025	-613.025	-1.044	-3.081
14	207	209.000	634.580	-425.580	-.725	-2.036
15	208	182.000	550.917	-368.917	-.629	-2.027
16	209	188.000	625.994	-437.994	-.746	-2.330
17	210	249.000	547.477	-298.477	-.509	-1.199
18	211	280.000	618.459	-338.459	-.577	-1.209
19	212	525.000	657.784	-132.784	-.226	-.253
20	213	263.000	896.638	-633.638	-1.080	-2.409
21	214	224.000	816.522	-592.522	-1.009	-2.645
22	215	155.000	664.392	-509.392	-.868	-3.286
23	216	160.000	461.793	-301.793	-.514	-1.886
24	217	137.000	364.041	-227.041	-.387	-1.657
25	218	149.000	432.874	-283.874	-.484	-1.905
26	219	120.000	306.997	-186.997	-.319	-1.558

27	220	133.000	436.507	-303.507	-.517	-2.282
28	221	143.000	524.292	-381.292	-.650	-2.666
29	222	352.000	731.030	-379.030	-.646	-1.077
30	223	115.000	576.672	-461.672	-.787	-4.015
31	224	234.000	1366.917	-1132.917	-1.930	-4.842
32	225	206.000	352.000	-146.000	-.249	-.709
33	226	417.000	779.983	-362.983	-.618	-.870
34	227	460.000	767.393	-307.393	-.524	-.668
35	228	330.000	382.039	-52.039	-.089	-.158
36	229	423.000	301.376	121.624	.207	.288
37	230	322.000	325.239	-3.239	-.006	-.010
38	231	367.000	450.410	-83.410	-.142	-.227
39	232	376.000	608.504	-232.504	-.396	-.618
40	233	216.000	382.361	-166.361	-.283	-.770
41	234	260.000	406.494	-146.494	-.250	-.563
42	235	385.000	601.202	-216.202	-.368	-.562
43	236	282.000	511.644	-229.644	-.391	-.814
44	237	410.000	665.947	-255.947	-.436	-.624
45	238	530.000	778.726	-248.726	-.424	-.469
46	239	525.000	678.093	-153.093	-.261	-.292
47	240	560.000	787.271	-227.271	-.387	-.406
48	241	550.000	518.357	31.643	.054	.058
49	242	1075.000	758.310	316.690	.540	.295
50	243	775.000	628.778	146.222	.249	.189
51	244	421.000	304.871	116.129	.198	.276
52	245	395.000	285.796	109.204	.186	.276
53	246	1330.000	693.242	636.758	1.085	.479
54	247	1330.000	808.303	521.697	.889	.392
55	248	1770.000	886.300	883.700	1.506	.499
56	249	1870.000	770.135	1099.865	1.874	.588
57	250	1800.000	779.492	1020.508	1.739	.567
58	252	1915.000	1010.881	904.119	1.540	.472
59	253	1330.000	1139.365	190.635	.325	.143
60	254	755.000	608.372	146.628	.250	.194
61	255	895.000	758.231	136.769	.233	.153
62	256	820.000	817.064	2.936	.005	.004
63	257	955.000	856.770	98.230	.167	.103
64	258	850.000	578.352	271.648	.463	.320
65	259	1330.000	1095.477	234.523	.400	.176
66	260	1235.000	1156.439	78.561	.134	.064
67	261	940.000	797.209	142.791	.243	.152
68	262	835.000	802.623	32.377	.055	.039
69	263	384.000	556.559	-172.559	-.294	-.449
70	264	285.000	418.243	-133.243	-.227	-.468
71	265	367.000	719.061	-352.061	-.600	-.959
72	266	320.000	505.102	-185.102	-.315	-.578
73	267	385.000	462.740	-77.740	-.132	-.202
74	268	320.000	379.554	-59.554	-.101	-.186

75	269	205.000	475.796	-270.796	-.461	-1.321
76	270	201.000	420.349	-219.349	-.374	-1.091
77	271	520.000	614.168	-94.168	-.160	-.181
78	272	565.000	452.678	112.322	.191	.199
79	273	970.000	656.305	313.695	.534	.323
80	274	1840.000	906.540	933.460	1.590	.507
81	275	965.000	624.755	340.245	.580	.353
82	276	1060.000	767.099	292.901	.499	.276
83	277	1810.000	921.274	888.726	1.514	.491
84	278	2415.000	747.523	1667.477	2.841	.690
85	279	1190.000	904.532	285.468	.486	.240
86	280	1530.000	869.191	660.809	1.126	.432
87	281	2140.000	966.156	1173.844	2.000	.549
88	282	1010.000	710.268	299.732	.511	.297
89	283	1355.000	790.487	564.513	.962	.417
90	284	620.000	933.215	-313.215	-.534	-.505
91	285	113.000	652.990	-539.990	-.920	-4.779
92	286	330.000	1008.721	-678.721	-1.156	-2.057
93	287	218.000	853.610	-635.610	-1.083	-2.916
94	288	960.000	781.132	178.868	.305	.186
95	289	580.000	802.638	-222.638	-.379	-.384
96	290	2240.000	908.532	1331.468	2.268	.594
97	291	735.000	841.430	-106.430	-.181	-.145
98	292	1010.000	864.868	145.132	.247	.144
99	293	955.000	875.611	79.389	.135	.083
100	294	1040.000	840.223	199.777	.340	.192
101	295	825.000	971.351	-146.351	-.249	-.177
102	296	1120.000	952.661	167.339	.285	.149
103	297	1175.000	901.409	273.591	.466	.233
104	298	1370.000	903.113	466.887	.795	.341
105	299	860.000	869.523	-9.523	-.016	-.011
106	300	505.000	534.796	-29.796	-.051	-.059
107	301	258.000	1042.913	-784.913	-1.337	-3.042
108	302	1220.000	613.338	606.662	1.034	.497
109	303	615.000	645.014	-30.014	-.051	-.049
110	304	510.000	775.531	-265.531	-.452	-.521
111	305	252.000	866.171	-614.171	-1.046	-2.437
112	306	675.000	604.141	70.859	.121	.105
113	307	321.000	777.087	-456.087	-.777	-1.421
114	308	337.000	635.409	-298.409	-.508	-.885
115	309	267.000	740.512	-473.512	-.807	-1.773
116	310	273.000	1014.279	-741.279	-1.263	-2.715
117	311	428.000	1282.231	-854.231	-1.455	-1.996
118	312	860.000	599.915	260.085	.443	.302
119	313	1385.000	933.326	451.674	.770	.326
120	314	2810.000	584.140	2225.860	3.792	.792
121	317	79.000	213.030	-134.030	-.228	-1.697
122	318	685.000	762.925	-77.925	-.133	-.114

123	319	259.000	593.772	-334.772	-.570	-1.293
124	320	387.000	620.583	-233.583	-.398	-.604
125	321	1150.000	546.423	603.577	1.028	.525
126	322	2060.000	681.085	1378.915	2.349	.669
127	323	365.000	642.320	-277.320	-.472	-.760
128	324	555.000	922.951	-367.951	-.627	-.663
129	325	840.000	520.421	319.579	.544	.380
130	326	590.000	466.952	123.048	.210	.209
131	327	655.000	578.834	76.166	.130	.116
132	328	423.000	391.301	31.699	.054	.075
133	329	485.000	525.195	-40.195	-.068	-.083
134	330	600.000	690.233	-90.233	-.154	-.150
135	331	680.000	1065.407	-385.407	-.657	-.567
136	332	935.000	580.694	354.306	.604	.379
137	333	2570.000	2178.137	391.863	.668	.152
138	334	1160.000	613.979	546.021	.930	.471
139	342	1895.000	641.337	1253.663	2.136	.662
140	343	2120.000	862.204	1257.796	2.143	.593
141	344	1330.000	826.466	503.534	.858	.379
142	345	995.000	1096.917	-101.917	-.174	-.102
143	346	800.000	1040.840	-240.840	-.410	-.301
144	348	845.000	1324.915	-479.915	-.818	-.568

R BAR SQUARED .1749
STANDARD ERROR OF ESTIMATE 533.1698
MEAN ERROR .0000
MEAN SQUARED ERROR 276373.6000

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VARIABLE DELETED IS Cd

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	8.163639	.1179
Mn	.056955	.0601

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-31.711120	.1870	.1755	532.9628

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	MC194	263.000	889.735	-626.735	-1.068	-2.383
2	195	67.000	350.290	-283.290	-.483	-4.228
3	196	71.000	383.305	-312.305	-.532	-4.399
4	197	84.000	392.607	-308.607	-.526	-3.674
5	198	215.000	927.230	-712.230	-1.213	-3.313
6	199	148.000	797.560	-649.560	-1.107	-4.389
7	200	192.000	980.577	-788.577	-1.344	-4.107
8	201	137.000	718.202	-581.202	-.990	-4.242
9	202	110.000	312.205	-202.205	-.345	-1.838
10	203	650.000	740.795	-90.795	-.155	-.140
11	204	565.000	833.252	-268.252	-.457	-.475
12	205	261.000	750.857	-489.857	-.835	-1.877
13	206	199.000	771.551	-572.551	-.975	-2.877
14	207	209.000	585.117	-376.117	-.641	-1.800
15	208	182.000	527.763	-345.763	-.589	-1.900
16	209	188.000	579.706	-391.706	-.667	-2.084
17	210	249.000	540.464	-291.464	-.497	-1.171
18	211	280.000	595.368	-315.368	-.537	-1.126
19	212	525.000	629.542	-104.542	-.178	-.199
20	213	263.000	858.313	-595.313	-1.014	-2.264
21	214	224.000	784.176	-560.176	-.954	-2.501
22	215	155.000	646.818	-491.818	-.838	-3.173
23	216	160.000	459.245	-299.245	-.510	-1.870
24	217	137.000	348.372	-211.372	-.360	-1.543
25	218	149.000	417.288	-268.288	-.457	-1.801
26	219	120.000	302.751	-182.751	-.311	-1.523
27	220	133.000	433.805	-300.805	-.512	-2.262

28	221	143.000	508.797	-365.797	-.623	-2.558
29	222	352.000	686.782	-334.782	-.570	-.951
30	223	115.000	534.996	-419.996	-.716	-3.652
31	224	234.000	1294.024	-1060.024	-1.806	-4.530
32	225	206.000	345.335	-139.335	-.237	-.676
33	226	417.000	741.366	-324.366	-.553	-.778
34	227	460.000	723.898	-263.898	-.450	-.574
35	228	330.000	374.572	-44.572	-.076	-.135
36	229	423.000	295.612	127.388	.217	.301
37	230	322.000	303.833	18.167	.031	.056
38	231	367.000	415.200	-48.200	-.082	-.131
39	232	376.000	576.384	-200.384	-.341	-.533
40	233	216.000	373.699	-157.699	-.269	-.730
41	234	260.000	381.597	-121.597	-.207	-.468
42	235	385.000	563.228	-178.228	-.304	-.463
43	236	282.000	493.039	-211.039	-.360	-.748
44	237	410.000	644.161	-234.161	-.399	-.571
45	238	530.000	726.747	-196.747	-.335	-.371
46	239	525.000	645.490	-120.490	-.205	-.230
47	240	560.000	740.606	-180.606	-.308	-.323
48	241	550.000	512.195	37.805	.064	.069
49	242	1075.000	807.433	267.567	.456	.249
50	243	775.000	609.228	165.772	.282	.214
51	244	421.000	379.717	41.283	.070	.098
52	245	395.000	359.004	35.996	.061	.091
53	246	1330.000	678.999	651.001	1.109	.489
54	247	1330.000	727.696	602.304	1.026	.453
55	248	1770.000	783.322	986.678	1.681	.557
56	249	1870.000	761.868	1108.132	1.888	.593
57	250	1800.000	781.993	1018.007	1.734	.566
58	252	1915.000	949.063	965.937	1.646	.504
59	253	1330.000	1131.606	198.394	.338	.149
60	254	755.000	652.420	102.580	.175	.136
61	255	895.000	786.170	108.830	.185	.122
62	256	820.000	790.157	29.843	.051	.036
63	257	955.000	825.944	129.056	.220	.135
64	258	850.000	591.762	258.238	.440	.304
65	259	1330.000	1072.657	257.343	.438	.193
66	260	1235.000	1101.230	133.770	.228	.108
67	261	940.000	796.422	143.578	.245	.153
68	262	835.000	813.604	21.396	.036	.026
69	263	384.000	601.444	-217.444	-.370	-.566
70	264	285.000	461.714	-176.714	-.301	-.620
71	265	367.000	747.915	-380.915	-.649	-1.038
72	266	320.000	531.484	-211.484	-.360	-.661
73	267	385.000	486.831	-101.831	-.173	-.264
74	268	320.000	420.326	-100.326	-.171	-.314
75	269	205.000	531.427	-326.427	-.556	-1.592

76	270	201.000	463.327	-262.327	-.447	-1.305
77	271	520.000	619.859	-99.859	-.170	-.192
78	272	565.000	464.751	100.249	.171	.177
79	273	970.000	658.210	311.790	.531	.321
80	274	1840.000	882.045	957.955	1.632	.521
81	275	965.000	628.593	336.407	.573	.349
82	276	1060.000	751.997	308.003	.525	.291
83	277	1810.000	881.855	928.145	1.581	.513
84	278	2415.000	713.266	1701.734	2.899	.705
85	279	1190.000	870.273	319.727	.545	.269
86	280	1530.000	830.595	699.405	1.192	.457
87	281	2140.000	912.231	1227.769	2.092	.574
88	282	1010.000	699.977	310.023	.528	.307
89	283	1355.000	766.994	588.006	1.002	.434
90	284	620.000	938.620	-318.620	-.543	-.514
91	285	113.000	634.193	-521.193	-.888	-4.612
92	286	330.000	995.766	-665.766	-1.134	-2.017
93	287	218.000	841.416	-623.416	-1.062	-2.860
94	288	960.000	752.281	207.719	.354	.216
95	289	580.000	779.146	-199.146	-.339	-.343
96	290	2240.000	879.292	1360.708	2.318	.607
97	291	735.000	813.414	-78.414	-.134	-.107
98	292	1010.000	826.038	183.962	.313	.182
99	293	955.000	830.690	124.310	.212	.130
100	294	1040.000	796.422	243.578	.415	.234
101	295	825.000	926.755	-101.755	-.173	-.123
102	296	1120.000	914.890	205.110	.349	.183
103	297	1175.000	882.046	292.954	.499	.249
104	298	1370.000	859.073	510.927	.870	.373
105	299	860.000	839.993	20.007	.034	.023
106	300	505.000	542.211	-37.211	-.063	-.074
107	301	258.000	1117.081	-859.081	-1.464	-3.330
108	302	1220.000	650.426	569.574	.970	.467
109	303	615.000	695.895	-80.895	-.138	-.132
110	304	510.000	810.471	-300.471	-.512	-.589
111	305	252.000	927.798	-675.798	-1.151	-2.682
112	306	675.000	629.257	45.743	.078	.068
113	307	321.000	849.010	-528.010	-.900	-1.645
114	308	337.000	698.458	-361.458	-.616	-1.073
115	309	267.000	766.330	-499.330	-.851	-1.870
116	310	273.000	1040.950	-767.950	-1.308	-2.813
117	311	428.000	1287.000	-859.000	-1.464	-2.007
118	312	860.000	616.917	243.083	.414	.283
119	313	1385.000	996.716	388.284	.662	.280
120	314	2810.000	602.109	2207.892	3.762	.786
121	317	79.000	249.650	-170.650	-.291	-2.160
122	318	685.000	786.266	-101.266	-.173	-.148
123	319	259.000	629.144	-370.144	-.631	-1.429

124	320	387.000	668.881	-281.881	-.480	-.728
125	321	1150.000	613.102	536.898	.915	.467
126	322	2060.000	666.184	1393.816	2.375	.677
127	323	365.000	725.987	-360.987	-.615	-.989
128	324	555.000	1009.056	-454.056	-.774	-.818
129	325	840.000	573.613	266.387	.454	.317
130	326	590.000	537.825	52.175	.089	.088
131	327	655.000	637.611	17.389	.030	.027
132	328	423.000	451.461	-28.461	-.048	-.067
133	329	485.000	595.578	-110.578	-.188	-.228
134	330	600.000	738.707	-138.707	-.236	-.231
135	331	680.000	1114.709	-434.709	-.741	-.639
136	332	935.000	610.557	324.443	.553	.347
137	333	2570.000	2183.386	386.614	.659	.150
138	334	1160.000	646.249	513.751	.875	.443
139	342	1895.000	690.200	1204.800	2.053	.636
140	343	2120.000	904.257	1215.743	2.071	.573
141	344	1330.000	899.797	430.203	.733	.323
142	345	995.000	1193.970	-198.970	-.339	-.200
143	346	800.000	1142.141	-342.141	-.583	-.428
144	348	845.000	1419.135	-574.135	-.978	-.679

R BAR SQUARED .1755
STANDARD ERROR OF ESTIMATE 532.9633
MEAN ERROR .0000
MEAN SQUARED ERROR 278132.2000

VARIABLE DELETED IS Mn

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	8.612028	.1228

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
230.928600	.1289	.1228	549.7244

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	MC194	263.000	1117.968	-854.968	-1.457	-3.251
2	195	67.000	489.289	-422.289	-.719	-6.303
3	196	71.000	506.513	-435.513	-.742	-6.134
4	197	84.000	411.781	-327.781	-.558	-3.902
5	198	215.000	816.547	-601.547	-1.025	-2.798
6	199	148.000	566.798	-418.798	-.714	-2.830
7	200	192.000	756.262	-564.262	-.961	-2.939
8	201	137.000	558.186	-421.186	-.718	-3.074
9	202	110.000	368.721	-258.721	-.441	-2.352
10	203	650.000	601.246	48.754	.083	.075
11	204	565.000	558.186	6.814	.012	.012
12	205	261.000	695.978	-434.978	-.741	-1.667
13	206	199.000	678.754	-479.754	-.817	-2.411
14	207	209.000	670.142	-461.142	-.786	-2.206
15	208	182.000	695.978	-513.978	-.876	-2.824
16	209	188.000	618.470	-430.470	-.733	-2.290
17	210	249.000	695.978	-446.978	-.762	-1.795
18	211	280.000	515.125	-235.125	-.401	-.840
19	212	525.000	618.470	-93.470	-.159	-.178
20	213	263.000	713.202	-450.202	-.767	-1.712
21	214	224.000	566.798	-342.798	-.584	-1.530
22	215	155.000	472.065	-317.065	-.540	-2.046
23	216	160.000	566.798	-406.798	-.693	-2.542
24	217	137.000	446.229	-309.229	-.527	-2.257
25	218	149.000	497.901	-348.901	-.594	-2.342
26	219	120.000	472.065	-352.065	-.600	-2.934
27	220	133.000	549.574	-416.574	-.710	-3.132
28	221	143.000	566.798	-423.798	-.722	-2.964

29	222	352.000	670.142	-318.142	-.542	-.904
30	223	115.000	515.125	-400.125	-.682	-3.479
31	224	234.000	1333.268	-1099.268	-1.873	-4.698
32	225	206.000	540.962	-334.962	-.571	-1.626
33	226	417.000	859.607	-442.607	-.754	-1.061
34	227	460.000	687.366	-227.366	-.387	-.494
35	228	330.000	575.410	-245.410	-.418	-.744
36	229	423.000	489.289	-66.289	-.113	-.157
37	230	322.000	497.901	-175.901	-.300	-.546
38	231	367.000	558.186	-191.186	-.326	-.521
39	232	376.000	635.694	-259.694	-.442	-.691
40	233	216.000	592.634	-376.634	-.642	-1.744
41	234	260.000	609.858	-349.858	-.596	-1.346
42	235	385.000	713.202	-328.202	-.559	-.852
43	236	282.000	601.246	-319.246	-.544	-1.132
44	237	410.000	764.874	-354.874	-.605	-.866
45	238	530.000	816.547	-286.547	-.488	-.541
46	239	525.000	695.978	-170.978	-.291	-.326
47	240	560.000	747.650	-187.650	-.320	-.335
48	241	550.000	661.530	-111.530	-.190	-.203
49	242	1075.000	756.262	318.738	.543	.297
50	243	775.000	704.590	70.410	.120	.091
51	244	421.000	506.513	-85.513	-.146	-.203
52	245	395.000	515.125	-120.125	-.205	-.304
53	246	1330.000	678.754	651.246	1.110	.490
54	247	1330.000	782.098	547.902	.933	.412
55	248	1770.000	695.978	1074.022	1.830	.607
56	249	1870.000	652.918	1217.082	2.074	.651
57	250	1800.000	739.038	1060.962	1.808	.589
58	252	1915.000	902.667	1012.333	1.725	.529
59	253	1330.000	1161.028	168.972	.288	.127
60	254	755.000	713.202	41.798	.071	.055
61	255	895.000	825.159	69.841	.119	.078
62	256	820.000	721.814	98.186	.167	.120
63	257	955.000	807.934	147.066	.251	.154
64	258	850.000	661.530	188.470	.321	.222
65	259	1330.000	1109.355	220.645	.376	.166
66	260	1235.000	1152.416	82.584	.141	.067
67	261	940.000	799.322	140.678	.240	.150
68	262	835.000	868.219	-33.219	-.057	-.040
69	263	384.000	661.530	-277.530	-.473	-.723
70	264	285.000	575.410	-290.410	-.495	-1.019
71	265	367.000	782.098	-415.098	-.707	-1.131
72	266	320.000	652.918	-332.918	-.567	-1.040
73	267	385.000	652.918	-267.918	-.456	-.696
74	268	320.000	584.022	-264.022	-.450	-.825
75	269	205.000	678.754	-473.754	-.807	-2.311
76	270	201.000	584.022	-383.022	-.653	-1.906

77	271	520.000	566.798	-46.798	-.080	-.090
78	272	565.000	584.022	-19.022	-.032	-.034
79	273	970.000	652.918	317.082	.540	.327
80	274	1840.000	756.262	1083.738	1.846	.589
81	275	965.000	601.246	363.754	.620	.377
82	276	1060.000	747.650	312.350	.532	.295
83	277	1810.000	747.650	1062.350	1.810	.587
84	278	2415.000	540.962	1874.038	3.193	.776
85	279	1190.000	661.530	528.470	.900	.444
86	280	1530.000	695.978	834.022	1.421	.545
87	281	2140.000	756.262	1383.738	2.358	.647
88	282	1010.000	635.694	374.306	.638	.371
89	283	1355.000	652.918	702.082	1.196	.518
90	284	620.000	584.022	35.978	.061	.058
91	285	113.000	480.677	-367.677	-.626	-3.254
92	286	330.000	902.667	-572.667	-.976	-1.735
93	287	218.000	540.962	-322.962	-.550	-1.481
94	288	960.000	721.814	238.186	.406	.248
95	289	580.000	894.055	-314.055	-.535	-.541
96	290	2240.000	825.159	1414.842	2.411	.632
97	291	735.000	756.262	-21.262	-.036	-.029
98	292	1010.000	695.978	314.022	.535	.311
99	293	955.000	790.710	164.290	.280	.172
100	294	1040.000	747.650	292.350	.498	.281
101	295	825.000	859.607	-34.607	-.059	-.042
102	296	1120.000	980.175	139.825	.238	.125
103	297	1175.000	911.279	263.721	.449	.224
104	298	1370.000	799.322	570.678	.972	.417
105	299	860.000	799.322	60.678	.103	.071
106	300	505.000	713.202	-208.202	-.355	-.412
107	301	258.000	850.995	-592.995	-1.010	-2.298
108	302	1220.000	584.022	635.978	1.084	.521
109	303	615.000	644.306	-29.306	-.050	-.048
110	304	510.000	739.038	-229.038	-.390	-.449
111	305	252.000	661.530	-409.530	-.698	-1.625
112	306	675.000	515.125	159.875	.272	.237
113	307	321.000	678.754	-357.754	-.610	-1.114
114	308	337.000	695.978	-358.978	-.612	-1.065
115	309	267.000	609.858	-342.858	-.584	-1.284
116	310	273.000	807.934	-534.934	-.911	-1.959
117	311	428.000	1324.656	-896.656	-1.528	-2.095
118	312	860.000	627.082	232.918	.397	.271
119	313	1385.000	919.891	465.109	.792	.336
120	314	2810.000	601.246	2208.754	3.763	.786
121	317	79.000	515.125	-436.125	-.743	-5.521
122	318	685.000	894.055	-209.055	-.356	-.305
123	319	259.000	825.159	-566.159	-.965	-2.186
124	320	387.000	894.055	-507.055	-.864	-1.310

125	321	1150.000	807.934	342.066	.583	.297
126	322	2060.000	678.754	1381.246	2.353	.671
127	323	365.000	756.262	-391.262	-.667	-1.072
128	324	555.000	937.115	-382.115	-.651	-.688
129	325	840.000	747.650	92.350	.157	.110
130	326	590.000	687.366	-97.366	-.166	-.165
131	327	655.000	713.202	-58.202	-.099	-.089
132	328	423.000	549.574	-126.574	-.216	-.299
133	329	485.000	739.038	-254.038	-.433	-.524
134	330	600.000	713.202	-113.202	-.193	-.189
135	331	680.000	1221.312	-541.312	-.922	-.796
136	332	935.000	661.530	273.470	.466	.292
137	333	2570.000	2237.531	332.469	.566	.129
138	334	1160.000	652.918	507.082	.864	.437
139	342	1895.000	670.142	1224.858	2.087	.646
140	343	2120.000	704.590	1415.410	2.411	.668
141	344	1330.000	928.503	401.497	.684	.302
142	345	995.000	799.322	195.678	.333	.197
143	346	800.000	695.978	104.022	.177	.130
144	348	845.000	1014.623	-169.623	-.289	-.201

R BAR SQUARED .1228
STANDARD ERROR OF ESTIMATE 549.7247
MEAN ERROR .0000
MEAN SQUARED ERROR 298000.1000

+++++

+++++
+ END OF RUN +
+ NORMAL STOP IN MLRP +
+++++

129 .300348 91.000 845.000 .500 1.000 299000.000 12430.0

STATISTICS OF DATA

BASED ON 129 OBSERVATIONS

VARIABLE	AVERAGE	VARIANCE	STANDARD DEVIATION	
Pb	55.0853	412.8287	20.3182	
Ag	.6008	.0405	.2014	
Cd	5.8760	7.4650	2.7322	
Fe	122641.9000	4004537000.0000	63281.4100	
Mn	4879.4180	6485697.0000	2546.7030	
Hg	.3198	.0215	.1465	
Zn	561.2946	138846.7000	372.6214	DEPENDENT VARIABLE

SIMPLE CORRELATION COEFFICIENTS

VARIABLE	Pb	Ag	Cd	Fe	Mn	Hg	Z
Pb	1.0000	.0000	.0000	.1682	.0000	.0000	.415
Ag	.0000	1.0000	-.2429	.0774	.0000	.2907	.000
Cd	.0000	-.2429	1.0000	.1176	.0863	-.0552	.000
Fe	.1682	.0774	.1176	1.0000	.8425	.0935	.142
Mn	.0000	.0000	.0863	.8425	1.0000	.1481	.175
Hg	.0000	.2907	-.0552	.0935	.1481	1.0000	.000
Zn	.4158	.0000	.0000	.1427	.1752	.0000	1.000

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	7.778082	.1694
Ag	15.577490	.0000
Cd	-5.112554	.0000
Fe	-.000924	.0001
Mn	.042963	.0215
Hg	13.509340	.0000

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
52.865700	.2136	.1749	338.4720

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	MC194	263.000	852.137	-589.137	-1.581	-2.240
2	195	67.000	315.258	-248.258	-.666	-3.705
3	196	71.000	309.224	-238.224	-.639	-3.355
4	197	84.000	244.443	-160.443	-.431	-1.910
5	198	215.000	703.901	-488.901	-1.312	-2.274

REGRESSION
CONSTANT
189.800000

R
SQUARE
.3009

R BAR
SQUARE
.2497

STANDARD
ERROR OF
ESTIMATE
150.5240

DEPENDENT VARIABLE

Zn

ERROR AS
DEVIATE

RATIO

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	MC194	263.000	474.831	-211.831	-1.219	-.805
2	195	67.000	304.349	-237.349	-1.366	-3.543
3	196	71.000	270.293	-199.293	-1.147	-2.807
4	197	84.000	161.647	-77.647	-.447	-.924
5	198	215.000	371.003	-156.003	-.898	-.726
6	199	148.000	300.538	-152.538	-.878	-1.031
7	200	192.000	214.844	-22.844	-.131	-.119
8	201	137.000	261.174	-124.174	-.715	-.906
9	202	110.000	117.093	-7.093	-.041	-.064
10	203	650.000	356.522	293.478	1.689	.452
11	204	565.000	363.434	201.566	1.160	.357
12	205	261.000	265.757	-4.757	-.027	-.018
13	206	199.000	243.138	-44.138	-.254	-.222
14	207	209.000	337.996	-128.996	-.742	-.617
15	208	182.000	315.832	-133.832	-.770	-.735
16	209	188.000	356.285	-168.285	-.968	-.895
17	210	249.000	308.942	-59.942	-.345	-.241
18	211	280.000	317.461	-37.461	-.216	-.134
19	212	525.000	328.620	196.380	1.130	.374
20	213	263.000	372.505	-109.505	-.630	-.416
21	214	224.000	394.987	-170.987	-.984	-.763
22	215	155.000	261.550	-106.550	-.613	-.687
23	216	160.000	271.665	-111.665	-.643	-.698
24	217	137.000	205.016	-68.016	-.391	-.496
25	218	149.000	234.799	-85.799	-.494	-.576
26	219	120.000	201.754	-81.754	-.470	-.681
27	220	133.000	268.541	-135.541	-.780	-1.019
28	221	143.000	277.642	-134.642	-.775	-.942
29	222	352.000	179.796	172.204	.991	.489
30	223	115.000	139.766	-24.766	-.143	-.215
31	224	234.000	267.966	-33.966	-.195	-.145
32	225	206.000	252.931	-46.931	-.270	-.228
33	226	417.000	433.016	-16.016	-.092	-.038
34	227	460.000	401.430	58.570	.337	.127
35	228	330.000	263.350	66.650	.384	.202
36	229	423.000	233.919	189.081	1.088	.447
37	230	322.000	231.463	90.537	.521	.281
38	231	367.000	287.595	79.405	.457	.216
39	232	376.000	383.357	-7.357	-.042	-.020
40	233	216.000	302.689	-86.689	-.499	-.401
41	234	260.000	271.840	-11.840	-.068	-.046
42	235	385.000	358.001	26.999	.155	.070
43	236	282.000	349.276	-67.276	-.387	-.239
44	237	410.000	384.635	25.365	.146	.062
45	238	530.000	425.870	104.130	.599	.196
46	239	525.000	332.161	192.839	1.110	.367

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*****
MULTIPLE LINEAR REGRESSION
704-G1-L2020      JAN 1975
FORTRAN77 VERSION JUL 1986
*****
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GEOQUIMICA DE SUELOS / CANTABRIA 1990
 CALCULO DE ANOMALIAS
 MEDIO CUDEYO (sólo con muestras inferiores a 750 p.p.m. en Zn)

```
NVAL  NCOMB  IPRNT  IFRMT  IDELE  DELTA
  7      0      0      0      0      .0000
```

++++ ANALYSIS NO 1 + + + +
 DEPENDENT VARIABLE -- Zn

```
IDEP  .....TRANSFORMATION CODES.....  NOBR  IRES  IFORC
  2      1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0      0      6      0
```

```
VARIABLE  TRANSFORMATION
Pb         NONE
Zn         NONE
Ag         NONE
Cd         NONE
Fe         NONE
Mn         NONE
Hg         NONE
```

INPUT DATA

OBS NO	OBS ID	Pb	Zn	Ag	Cd	Fe	I
1	.500194	103.000	263.000	.500	8.000	39300.000	1415.00
2	.400195	30.000	67.000	1.000	6.000	70000.000	2407.00
3	.300196	32.000	71.000	1.000	7.000	100000.000	2700.00
4	.200197	21.000	84.000	.500	8.000	143000.000	4440.00
5	.400198	68.000	215.000	.500	9.000	162000.000	7090.00
6	.300199	39.000	148.000	.500	8.000	200000.000	8970.00
7	.400200	61.000	192.000	.500	10.000	275000.000	9030.00
8	.400201	38.000	137.000	.500	9.000	180000.000	7720.00
9	.300202	16.000	110.000	.500	7.000	141500.000	3745.00
10	.300203	43.000	650.000	1.000	9.000	172000.000	7400.00
11	.400204	38.000	565.000	.500	10.000	165000.000	9740.00
12	.400205	54.000	261.000	.500	10.000	163000.000	6000.00
13	.400206	52.000	199.000	.500	9.000	192000.000	6650.00
14	.300207	51.000	209.000	.500	9.000	70500.000	3520.00
15	.400208	54.000	182.000	.500	7.000	59900.000	2083.00
16	.200209	45.000	188.000	.500	9.000	72300.000	4285.00
17	.400210	54.000	249.000	.500	6.000	74100.000	2306.00

74	.200308	54.000	337.000	.500	2.000	168000.000	5080.00
75	.200309	44.000	267.000	1.000	5.000	205000.000	7705.00
76	.200310	67.000	273.000	1.000	5.000	229000.000	9230.00
77	.400311	127.000	428.000	1.000	5.000	173500.000	4950.00
78	.100317	33.000	79.000	.500	3.000	28100.000	210.00
79	.300318	77.000	685.000	.500	4.000	76300.000	3325.00
80	.100319	69.000	259.000	.500	3.000	71400.000	1713.00
81	.100320	77.000	387.000	.500	2.000	58100.000	1264.00
82	.200323	61.000	365.000	.500	.500	174000.000	4560.00
83	.600324	82.000	555.000	1.000	.500	199000.000	6520.00
84	.500326	53.000	590.000	1.000	1.000	58000.000	2403.00
85	.500327	56.000	655.000	1.000	2.000	71100.000	3725.00
86	.400328	37.000	423.000	1.000	2.000	49300.000	3180.00
87	.400329	59.000	485.000	1.000	1.000	71800.000	2557.00
88	.300330	56.000	600.000	1.000	3.000	69600.000	5500.00
89	.300331	115.000	680.000	1.000	2.000	71700.000	3645.00

STATISTICS OF DATA

BASED ON 89 OBSERVATIONS

VARIABLE	AVERAGE	VARIANCE	STANDARD DEVIATION	
Pb	50.8764	417.9278	20.4433	
Ag	.6067	.0425	.2060	
Cd	5.8876	7.3225	2.7060	
Fe	113652.8000	4017367000.0000	63382.7000	
Mn	4512.7980	6578461.0000	2564.8510	
Hg	.3129	.0196	.1399	
Zn	343.4494	30198.2500	173.7764	DEPENDENT VARIABLE

SIMPLE CORRELATION COEFFICIENTS

VARIABLE	Pb	Ag	Cd	Fe	Mn	Hg	Zn
Pb	1.0000	.1267	.0000	.1489	.0000	.0000	.3254
Ag	.1267	1.0000	-.2255	.1642	.1547	.1559	.2091
Cd	.0000	-.2255	1.0000	.2661	.2392	.0000	-.2258
Fe	.1489	.1642	.2661	1.0000	.8374	.0000	.0000
Mn	.0000	.1547	.2392	.8374	1.0000	.0809	.0000
Hg	.0000	.1559	.0000	.0000	.0809	1.0000	.0000
Zn	.3254	.2091	-.2258	.0000	.0000	.0000	1.0000

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	3.458187	.1622
Ag	133.558900	.0171
Cd	-9.383599	.0122
Fe	-.001804	.1280
Mn	.041876	.1193
Hg	-102.490300	.0000

PROSPECCION GEOQUIMICA DE SUELOS
(Pb, Zn, Cd, Ag, Mn, Fe, Hg)
ZONA DE PRELLEZO

 MULTIPLE LINEAR REGRESSION
 704-G1-L2020 JAN 1975
 FORTRAN77 VERSION JUL 1986

GEOQUIMICA DE SUELOS / CANTABRIA 1990
 CALCULO DE ANOMALIAS
 PRELLEZO (sólo con muestras inferiores a 1000 p.p.m. en Pb ó Zn)

NVAL NCOMB IPRNT IFRMT IDELE DELTA
 7 0 0 0 0 .0000

+ + + + ANALYSIS NO 1 + + + +

DEPENDENT VARIABLE -- Zn

IDEF TRANSFORMATION CODES..... NOBR IRES IFORC
 2 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 6 0

VARIABLE	TRANSFORMATION
Pb	NONE
Zn	NONE
Ag	NONE
Cd	NONE
Fe	NONE
Mn	NONE
Hg	NONE

INPUT DATA (p.p.m.) (en Ag y Cd los valores .500 corresponden a contenidos inferiores a 1 p.p.m. y en Hg los valores .050 corresponden a contenidos inferiores a .1 p.p.m.)

OBS NO	OBS ID	Pb	Zn	Ag	Cd	Fe	Mn	Hg
1	P112	3	10	.500	.500	400	15	.100
2	113	3	15	.500	.500	700	12	.050
3	114	26	83	.500	1.000	8600	28	.300
4	116	114	510	1.000	4.000	14500	164	1.700
5	118	140	3320	1.000	60.000	11400	583	4.300
6	120	49	119	1.000	3.000	26500	1040	.400
7	121	50	89	1.000	3.000	21900	1184	.400

8	122	13	28	1.000	1.000	22500	761	.050
9	123	10	32	1.000	1.000	16300	271	.050
10	124	16	36	1.000	3.000	22300	480	.050
11	125	5	33	.500	1.000	14200	296	.050
12	126	22	54	1.000	1.000	5700	512	.100
13	127	3	24	1.000	5.000	7500	100	.050
14	128	3	30	.500	1.000	11200	186	.050
15	129	4	29	1.000	1.000	15300	112	.050
16	130	5	24	1.000	1.000	11900	109	.050
17	131	3	22	1.000	1.000	5900	115	.050
18	132	33	53	.500	1.000	11100	232	.200
19	133	37	75	.500	2.000	24000	800	.200
20	134	41	104	.500	2.000	27000	779	.200
21	135	31	139	.500	2.000	17500	675	.200
22	136	30	113	.500	1.000	15400	539	.200
23	137	15	101	.500	1.000	18100	433	.100
24	138	12	88	.500	1.000	15000	520	.400
25	139	23	166	.500	2.000	29700	1193	.500
26	140	54	187	.500	3.000	29100	553	.400
27	141	168	260	.500	3.000	47000	3410	1.100
28	142	283	387	.500	4.000	55300	3180	2.600
29	143	174	565	.500	5.000	67700	3630	2.100
30	144	227	570	.500	5.000	62000	3450	3.500
31	145	97	297	.500	2.000	21500	774	.700
32	146	24	179	.500	1.000	12100	192	.400
33	147	37	124	.500	1.000	13500	329	.300
34	149	40	112	.500	3.000	32100	474	.200
35	150	22	57	.500	2.000	15000	196	.200
36	151	38	114	.500	1.000	24300	500	.300
37	152	19	154	.500	4.000	10000	211	.050
38	153	22	69	1.000	2.000	24000	762	.200
39	154	17	47	.500	1.000	15500	156	.050
40	155	13	34	.500	1.000	15000	89	.050
41	156	16	43	.500	1.000	14500	107	.050
42	157	15	51	.500	1.000	13100	132	.050
43	158	14	40	.500	.500	11200	48	.100
44	159	13	47	.500	1.000	12200	55	.200
45	160	32	34	.500	1.000	2000	20	.050
46	161	13	18	.500	1.000	1700	7	.200
47	162	16	15	.500	1.000	4500	7	.050
48	163	26	12	.500	1.000	14700	6	.100
49	164	17	13	.500	1.000	7400	7	.050
50	165	43	275	.500	1.000	17300	46	3.000
51	166	28	76	.500	1.000	6500	14	.400
52	167	25	33	.500	1.000	5700	10	.100
53	168	102	194	.500	1.000	10400	80	.200
54	169	30	71	.500	1.000	11400	68	.200
55	170	23	70	.500	1.000	8300	30	.200

STATISTICS OF DATA

BASED ON 78 OBSERVATIONS

VARIABLE	AVERAGE	VARIANCE	STANDARD DEVIATION	
Pb	38.9872	2362.0650	48.6011	
Ag	.5897	.0373	.1931	
Cd	3.2244	47.0626	6.8602	
Fe	17653.8500	154671400.0000	12436.7000	
Mn	533.2308	580366.4000	761.8179	
Hg	.5071	.7393	.8598	
Zn	157.5256	147147.2000	383.5977	DEF. VARIABLE

SIMPLE CORRELATION COEFFICIENTS

VARIABLE	Pb	Ag	Cd	Fe	Mn	Hg	Zn
Pb	1.0000	.0000	.3094	.7375	.8123	.7054	.4685
Ag	.0000	1.0000	.2064	.0000	.0000	.0000	.1669
Cd	.3094	.2064	1.0000	.0000	.0938	.6247	.9529
Fe	.7375	.0000	.0000	1.0000	.8991	.4686	.1341
Mn	.8123	.0000	.0938	.8991	1.0000	.5246	.1992
Hg	.7054	.0000	.6247	.4686	.5246	1.0000	.7085
Zn	.4685	.1669	.9529	.1341	.1992	.7085	1.0000

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	2.403861	.2920
Ag	16.620870	.0000
Cd	46.913410	.8784
Fe	-.000225	.0000
Mn	-.085093	.0621
Hg	27.090800	.0095

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-61.648120	.9511	.9469	88.3541

56	171	13	43	.500	1.000	7800	27	.100
57	172	14	44	.500	1.000	9400	60	.100
58	173	11	40	.500	1.000	10300	61	.100
59	174	22	66	.500	1.000	12200	56	.200
60	175	18	35	.500	1.000	8000	40	.100
61	176	9	44	.500	1.000	5500	40	.050
62	177	14	35	.500	1.000	5700	6	.050
63	178	24	65	.500	2.000	19400	270	.050
64	179	28	63	.500	3.000	19800	750	.100
65	180	39	88	.500	4.000	21600	1195	.300
66	181	42	118	.500	6.000	29100	647	.600
67	182	28	115	.500	6.000	22300	845	.300
68	183	36	159	.500	5.000	18600	331	.900
69	184	40	145	1.000	7.000	18600	680	.800
70	185	33	144	.500	6.000	17800	953	.300
71	186	18	73	.500	4.000	14000	176	.400
72	187	47	197	.500	6.000	25200	486	.600
73	188	48	125	.500	6.000	22900	870	.400
74	189	37	107	.500	5.000	22200	866	.100
75	190	26	162	.500	9.000	20300	1080	2.500
76	191	53	418	.500	10.000	15300	726	2.900
77	192	71	455	.500	7.000	37100	903	1.300
78	193	31	101	.500	6.000	34300	842	.400

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	P112	10.000	-21.327	31.327	.082	3.133
2	113	15.000	-22.494	37.494	.098	2.500
3	114	83.000	59.884	23.116	.060	.279
4	116	510.000	445.500	64.500	.168	.126
5	118	3320.000	3170.632	149.368	.389	.045
6	120	119.000	129.873	-10.873	-.028	-.091
7	121	89.000	121.060	-32.060	-.084	-.360
8	122	28.000	-35.332	63.332	.165	2.262
9	123	32.000	.548	31.452	.082	.983
10	124	36.000	89.662	-53.662	-.140	-1.491
11	125	33.000	-21.436	54.436	.142	1.650
12	126	54.000	12.629	41.371	.108	.766
13	127	24.000	187.908	-163.908	-.427	-6.829
14	128	30.000	-16.208	46.208	.120	1.540
15	129	29.000	-.120	29.120	.076	1.004
16	130	24.000	3.305	20.695	.054	.862
17	131	22.000	-.662	22.662	.059	1.030
18	132	53.000	56.080	-3.080	-.008	-.058
19	133	75.000	61.370	13.630	.036	.182
20	134	104.000	72.097	31.903	.083	.307
21	135	139.000	59.048	79.952	.208	.575
22	136	113.000	21.776	91.224	.238	.807
23	137	101.000	-8.579	109.579	.286	1.085
24	138	88.000	-14.368	102.368	.267	1.163
25	139	166.000	1.118	164.882	.430	.993
26	140	187.000	174.437	12.563	.033	.067
27	141	260.000	220.298	39.702	.103	.153
28	142	387.000	601.994	-214.994	-.560	-.556
29	143	565.000	332.256	232.744	.607	.412
30	144	570.000	514.189	55.811	.145	.098
31	145	297.000	221.923	75.077	.196	.253
32	146	179.000	43.042	135.958	.354	.760
33	147	124.000	59.610	64.390	.168	.519
34	149	112.000	141.412	-29.412	-.077	-.263
35	150	57.000	78.736	-21.736	-.057	-.381
36	151	114.000	45.030	68.969	.180	.605
37	152	154.000	161.137	-7.137	-.019	-.046
38	153	69.000	36.857	32.143	.084	.466
39	154	47.000	19.031	27.969	.073	.595
40	155	34.000	15.229	18.771	.049	.557
41	156	43.000	21.022	21.978	.057	.510
42	157	51.000	16.806	34.194	.089	.670
43	158	40.000	-.125	40.125	.105	1.000
44	159	47.000	22.816	24.184	.063	.511

45	160	34.000	69.702	-35.702	-.093	-1.050
46	161	18.000	29.266	-11.266	-.029	-.626
47	162	15.000	31.783	-16.783	-.044	-1.119
48	163	12.000	54.964	-42.964	-.112	-3.580
49	164	13.000	33.534	-20.534	-.054	-1.580
50	165	275.000	170.404	104.596	.273	.380
51	166	76.000	69.065	6.935	.018	.091
52	167	33.000	54.247	-21.247	-.055	-.644
53	168	194.000	235.038	-41.038	-.107	-.212
54	169	71.000	62.756	8.244	.021	.116
55	170	70.000	49.861	20.139	.053	.288
56	171	43.000	23.481	19.519	.051	.454
57	172	44.000	22.716	21.284	.055	.484
58	173	40.000	15.217	24.783	.065	.620
59	174	66.000	44.366	21.634	.056	.328
60	175	35.000	34.349	.651	.002	.019
61	176	44.000	11.923	32.077	.084	.729
62	177	35.000	26.790	8.210	.021	.235
63	178	65.000	72.192	-7.192	-.019	-.111
64	179	63.000	89.141	-26.141	-.068	-.415
65	180	88.000	129.643	-41.643	-.109	-.473
66	181	118.000	283.751	-165.751	-.432	-1.405
67	182	115.000	226.652	-111.652	-.291	-.971
68	183	159.000	259.795	-100.795	-.263	-.634
69	184	145.000	339.141	-194.141	-.506	-1.339
70	185	144.000	230.495	-86.495	-.225	-.601
71	186	73.000	170.292	-97.292	-.254	-1.333
72	187	197.000	310.348	-113.348	-.295	-.575
73	188	125.000	275.176	-150.176	-.391	-1.201
74	189	107.000	194.191	-87.191	-.227	-.815
75	190	162.000	402.638	-240.638	-.627	-1.485
76	191	418.000	556.541	-138.541	-.361	-.331
77	192	455.000	395.754	59.246	.154	.130
78	193	101.000	234.126	-133.126	-.347	-1.318

	R BAR SQUARED	.9469
	STANDARD ERROR OF ESTIMATE	88.3539
	MEAN ERROR	.0000
	MEAN SQUARED ERROR	7105.8420

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INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	2.402166	.2921
Ag	17.004270	.0000
Cd	46.936080	.8794
Mn	-.088280	.1548
Hg	26.986090	.0095

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-64.104600	.9511	.9477	87.7471

DEPENDENT VARIABLE		Zn		ERROR AS			RATIO
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE		
1	F112	10.000	-23.554	33.554	.087		3.355
2	113	15.000	-24.638	39.638	.103		2.643
3	114	83.000	59.414	23.586	.061		.284
4	116	510.000	445.889	64.111	.167		.126
5	118	3320.000	3169.941	150.059	.391		.045
6	120	119.000	130.397	-11.397	-.030		-.096
7	121	89.000	120.087	-31.087	-.081		-.349
8	122	28.000	-34.768	62.768	.164		2.242
9	123	32.000	1.283	30.717	.080		.960
10	124	36.000	91.117	-55.117	-.144		-1.531
11	125	33.000	-21.437	54.437	.142		1.650
12	126	54.000	10.183	43.817	.114		.811
13	127	24.000	187.308	-163.308	-.426		-6.804
14	128	30.000	-16.531	46.531	.121		1.551
15	129	29.000	.906	28.094	.073		.969
16	130	24.000	3.573	20.427	.053		.851
17	131	22.000	-1.761	23.761	.062		1.080
18	132	53.000	55.521	-2.521	-.007		-.048
19	133	75.000	61.923	13.077	.034		.174
20	134	104.000	73.385	30.615	.080		.294
21	135	139.000	58.545	80.455	.210		.579
22	136	113.000	21.213	91.787	.239		.812
23	137	101.000	-8.161	109.161	.285		1.081
24	138	88.000	-14.952	102.952	.268		1.170

25	139	166.000	1.694	164.306	.428	.990
26	140	187.000	176.898	10.102	.026	.054
27	141	260.000	217.419	42.581	.111	.164
28	142	387.000	601.388	-214.388	-.559	-.554
29	143	565.000	333.269	231.731	.604	.410
30	144	570.000	514.254	55.746	.145	.098
31	145	297.000	221.841	75.159	.196	.253
32	146	179.000	42.830	136.170	.355	.761
33	147	124.000	59.265	64.735	.169	.522
34	149	112.000	144.845	-32.845	-.086	-.293
35	150	57.000	79.212	-22.212	-.058	-.390
36	151	114.000	46.572	67.428	.176	.591
37	152	154.000	160.505	-6.505	-.017	-.042
38	153	69.000	37.747	31.253	.081	.453
39	154	47.000	19.748	27.252	.071	.580
40	155	34.000	16.054	17.946	.047	.528
41	156	43.000	21.672	21.328	.056	.496
42	157	51.000	17.062	33.938	.088	.665
43	158	40.000	-.043	40.043	.104	1.001
44	159	47.000	23.104	23.896	.062	.508
45	160	34.000	67.787	-33.787	-.088	-.994
46	161	18.000	27.341	-9.341	-.024	-.519
47	162	15.000	30.500	-15.500	-.040	-1.033
48	163	12.000	55.959	-43.959	-.115	-3.663
49	164	13.000	32.902	-19.902	-.052	-1.531
50	165	275.000	171.524	103.476	.270	.376
51	166	76.000	68.153	7.847	.020	.103
52	167	33.000	53.204	-20.204	-.053	-.612
53	168	194.000	234.689	-40.689	-.106	-.210
54	169	71.000	62.793	8.207	.021	.116
55	170	70.000	49.332	20.668	.054	.295
56	171	43.000	22.877	20.123	.052	.468
57	172	44.000	22.366	21.634	.056	.492
58	173	40.000	15.071	24.929	.065	.623
59	174	66.000	44.635	21.365	.056	.324
60	175	35.000	33.740	1.260	.003	.036
61	176	44.000	10.771	33.229	.087	.755
62	177	35.000	25.784	9.216	.024	.263
63	178	65.000	73.435	-8.435	-.022	-.130
64	179	63.000	88.955	-25.955	-.068	-.412
65	180	88.000	128.427	-40.427	-.105	-.459
66	181	118.000	285.979	-167.979	-.438	-1.424
67	182	115.000	226.774	-111.774	-.291	-.972
68	183	159.000	260.623	-101.623	-.265	-.639
69	184	145.000	339.097	-194.097	-.506	-1.339
70	185	144.000	229.250	-85.250	-.222	-.592
71	186	73.000	170.638	-97.638	-.255	-1.338
72	187	197.000	312.203	-115.203	-.300	-.585

73	188	125.000	275.309	-150.309	-.392	-1.202
74	189	107.000	194.206	-87.206	-.227	-.815
75	190	162.000	401.401	-239.401	-.624	-1.478
76	191	418.000	555.241	-137.241	-.358	-.328
77	192	455.000	398.869	56.131	.146	.123
78	193	101.000	236.944	-135.944	-.354	-1.346

R BAR SQUARED	.9477
STANDARD ERROR OF ESTIMATE	87.7471
MEAN ERROR	.0000
MEAN SQUARED ERROR	7107.2800

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VARIABLE DELETED IS

Ag

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	2.391093	.2914
Cd	47.102770	.8872
Mn	-.087754	.1538
Hg	26.514620	.0090

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-54.223600	.9510	.9483	87.2040

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	F112	10.000	-22.164	32.164	.084	3.216
2	113	15.000	-23.226	38.226	.100	2.548
3	114	83.000	60.545	22.455	.059	.271
4	116	510.000	437.455	72.545	.189	.142
5	118	3320.000	3169.548	150.452	.392	.045
6	120	119.000	123.590	-4.590	-.012	-.039
7	121	89.000	113.344	-24.344	-.063	-.274
8	122	28.000	-41.492	69.492	.181	2.482
9	123	32.000	-5.666	37.666	.098	1.177
10	124	36.000	84.546	-48.546	-.127	-1.348
11	125	33.000	-19.815	52.815	.138	1.600
12	126	54.000	3.205	50.795	.132	.941
13	127	24.000	181.014	-157.014	-.409	-6.542
14	128	30.000	-14.944	44.944	.117	1.498
15	129	29.000	-6.059	35.059	.091	1.209
16	130	24.000	-3.405	27.405	.071	1.142
17	131	22.000	-8.714	30.714	.080	1.396
18	132	53.000	56.729	-3.729	-.010	-.070
19	133	75.000	63.552	11.448	.030	.153
20	134	104.000	74.959	29.041	.076	.279
21	135	139.000	60.175	78.825	.205	.567
22	136	113.000	22.615	90.385	.236	.800
23	137	101.000	-6.601	107.601	.281	1.065
24	138	88.000	-13.454	101.454	.264	1.153
25	139	166.000	3.544	162.456	.424	.979

26	140	187.000	178.282	8.718	.023	.047
27	141	260.000	218.713	41.287	.108	.159
28	142	387.000	600.746	-213.746	-.557	-.552
29	143	565.000	334.473	230.527	.601	.408
30	144	570.000	514.117	55.883	.146	.098
31	145	297.000	222.556	74.444	.194	.251
32	146	179.000	44.022	134.978	.352	.754
33	147	124.000	60.433	63.567	.166	.513
34	149	112.000	146.436	-34.436	-.090	-.307
35	150	57.000	80.689	-23.689	-.062	-.416
36	151	114.000	47.818	66.182	.173	.581
37	152	154.000	162.428	-8.428	-.022	-.055
38	153	69.000	31.020	37.980	.099	.550
39	154	47.000	21.164	25.836	.067	.550
40	155	34.000	17.479	16.521	.043	.486
41	156	43.000	23.073	19.927	.052	.463
42	157	51.000	18.488	32.512	.085	.637
43	158	40.000	1.242	38.758	.101	.969
44	159	47.000	24.440	22.560	.059	.480
45	160	34.000	68.965	-34.965	-.091	-1.028
46	161	18.000	28.652	-10.652	-.028	-.592
47	162	15.000	31.848	-16.848	-.044	-1.123
48	163	12.000	57.173	-45.173	-.118	-3.764
49	164	13.000	34.239	-21.239	-.055	-1.634
50	165	275.000	171.203	103.797	.271	.377
51	166	76.000	69.207	6.793	.018	.089
52	167	33.000	54.430	-21.430	-.056	-.649
53	168	194.000	235.053	-41.053	-.107	-.212
54	169	71.000	63.948	7.052	.018	.099
55	170	70.000	50.545	19.455	.051	.278
56	171	43.000	24.245	18.755	.049	.436
57	172	44.000	23.741	20.259	.053	.460
58	173	40.000	16.480	23.520	.061	.588
59	174	66.000	45.872	20.128	.052	.305
60	175	35.000	35.060	-.060	.000	-.002
61	176	44.000	12.215	31.785	.083	.722
62	177	35.000	27.154	7.846	.020	.224
63	178	65.000	75.000	-10.000	-.026	-.154
64	179	63.000	90.871	-27.871	-.073	-.442
65	180	88.000	130.528	-42.528	-.111	-.483
66	181	118.000	287.951	-169.951	-.443	-1.440
67	182	115.000	229.146	-114.146	-.298	-.993
68	183	159.000	262.186	-103.186	-.269	-.649
69	184	145.000	332.678	-187.678	-.489	-1.294
70	185	144.000	231.624	-87.624	-.228	-.608
71	186	73.000	172.388	-99.388	-.259	-1.361
72	187	197.000	314.035	-117.035	-.305	-.594
73	188	125.000	277.425	-152.425	-.397	-1.216

74	189	107.000	196.417	-89.417	-.233	-.836
75	190	162.000	403.382	-241.382	-.629	-1.490
76	191	418.000	556.715	-138.715	-.362	-.332
77	192	455.000	400.490	54.510	.142	.120
78	193	101.000	239.234	-138.234	-.360	-1.369

R BAR SQUARED	.9483
STANDARD ERROR OF ESTIMATE	87.2041
MEAN ERROR	.0000
MEAN SQUARED ERROR	7117.0840

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VARIABLE DELETED IS Hg

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	2.645030	.3870
Cd	48.597270	.9266
Mn	-.086973	.1485

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-55.914930	.9499	.9478	87.6000

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	F112	10.000	-24.986	34.986	.091	3.499
2	113	15.000	-24.725	39.725	.104	2.648
3	114	83.000	59.018	23.982	.063	.289
4	116	510.000	425.744	84.256	.220	.165
5	118	3320.000	3179.520	140.480	.366	.042
6	120	119.000	129.031	-10.031	-.026	-.084
7	121	89.000	119.152	-30.152	-.079	-.339
8	122	28.000	-39.119	67.119	.175	2.397
9	123	32.000	-4.437	36.437	.095	1.139
10	124	36.000	90.450	-54.450	-.142	-1.513
11	125	33.000	-19.837	52.837	.138	1.601
12	126	54.000	6.343	47.657	.124	.883
13	127	24.000	186.309	-162.309	-.423	-6.763
14	128	30.000	-15.560	45.560	.119	1.519
15	129	29.000	-6.479	35.479	.092	1.223
16	130	24.000	-3.573	27.573	.072	1.149
17	131	22.000	-9.384	31.384	.082	1.427
18	132	53.000	59.791	-6.791	-.018	-.128
19	133	75.000	69.567	5.433	.014	.072
20	134	104.000	81.974	22.026	.057	.212
21	135	139.000	64.569	74.431	.194	.535
22	136	113.000	25.155	87.845	.229	.777
23	137	101.000	-5.302	106.302	.277	1.052
24	138	88.000	-20.803	108.803	.284	1.236
25	139	166.000	-1.644	167.644	.437	1.010
26	140	187.000	184.612	2.388	.006	.013

27	141	260.000	237.664	22.336	.058	.086
28	142	387.000	610.443	-223.443	-.582	-.577
29	143	565.000	331.594	233.406	.608	.413
30	144	570.000	487.436	82.564	.215	.145
31	145	297.000	230.530	66.470	.173	.224
32	146	179.000	39.464	139.536	.364	.780
33	147	124.000	61.934	62.066	.162	.501
34	149	112.000	154.453	-42.453	-.111	-.379
35	150	57.000	82.424	-25.424	-.066	-.446
36	151	114.000	49.707	64.293	.168	.564
37	152	154.000	170.378	-16.378	-.043	-.106
38	153	69.000	33.197	35.803	.093	.519
39	154	47.000	24.080	22.920	.060	.488
40	155	34.000	19.327	14.673	.038	.432
41	156	43.000	25.697	17.303	.045	.402
42	157	51.000	20.877	30.123	.079	.591
43	158	40.000	1.239	38.761	.101	.969
44	159	47.000	22.284	24.716	.064	.526
45	160	34.000	75.584	-41.584	-.108	-1.223
46	161	18.000	26.459	-8.459	-.022	-.470
47	162	15.000	34.394	-19.394	-.051	-1.293
48	163	12.000	60.931	-48.931	-.128	-4.078
49	164	13.000	37.039	-24.039	-.063	-1.849
50	165	275.000	102.418	172.582	.450	.628
51	166	76.000	65.526	10.474	.027	.138
52	167	33.000	57.938	-24.938	-.065	-.756
53	168	194.000	255.518	-61.518	-.160	-.317
54	169	71.000	66.119	4.881	.013	.069
55	170	70.000	50.909	19.091	.050	.273
56	171	43.000	24.719	18.281	.048	.425
57	172	44.000	24.494	19.506	.051	.443
58	173	40.000	16.472	23.528	.061	.588
59	174	66.000	46.003	19.997	.052	.303
60	175	35.000	36.814	-1.814	-.005	-.052
61	176	44.000	13.009	30.991	.081	.704
62	177	35.000	29.191	5.809	.015	.166
63	178	65.000	81.278	-16.278	-.042	-.250
64	179	63.000	98.708	-35.708	-.093	-.567
65	180	88.000	137.697	-49.697	-.130	-.565
66	181	118.000	290.488	-172.488	-.450	-1.462
67	182	115.000	236.237	-121.237	-.316	-1.054
68	183	159.000	253.504	-94.504	-.246	-.594
69	184	145.000	330.925	-185.925	-.485	-1.282
70	185	144.000	240.069	-96.069	-.250	-.667
71	186	73.000	170.777	-97.777	-.255	-1.339
72	187	197.000	317.716	-120.716	-.315	-.613
73	188	125.000	286.964	-161.964	-.422	-1.296
74	189	107.000	209.619	-102.619	-.268	-.959

75	190	162.000	356.300	-194.300	-.507	-1.199
76	191	418.000	507.102	-89.102	-.232	-.213
77	192	455.000	393.526	61.474	.160	.135
78	193	101.000	244.433	-143.433	-.374	-1.420

R BAR SQUARED	.9478
STANDARD ERROR OF ESTIMATE	87.5999
MEAN ERROR	.0000
MEAN SQUARED ERROR	7280.2250

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VARIABLE DELETED IS

Mn

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	1.473839	.3341
Cd	49.895190	.9215

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-60.815200	.9403	.9388	94.9310

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	P112	10.000	-31.446	41.446	.108	4.145
2	113	15.000	-31.446	46.446	.121	3.096
3	114	83.000	27.400	55.600	.145	.670
4	116	510.000	306.783	203.217	.530	.398
5	118	3320.000	3139.234	180.766	.471	.054
6	120	119.000	161.088	-42.088	-.110	-.354
7	121	89.000	162.562	-73.562	-.192	-.827
8	122	28.000	8.240	19.760	.052	.706
9	123	32.000	3.818	28.182	.073	.881
10	124	36.000	112.452	-76.452	-.199	-2.124
11	125	33.000	-3.551	36.551	.095	1.108
12	126	54.000	21.504	32.496	.085	.602
13	127	24.000	193.082	-169.082	-.441	-7.045
14	128	30.000	-6.498	36.498	.095	1.217
15	129	29.000	-5.025	34.025	.089	1.173
16	130	24.000	-3.551	27.551	.072	1.148
17	131	22.000	-6.498	28.498	.074	1.295
18	132	53.000	37.717	15.283	.040	.288
19	133	75.000	93.507	-18.507	-.048	-.247
20	134	104.000	99.403	4.597	.012	.044
21	135	139.000	84.664	54.336	.142	.391
22	136	113.000	33.295	79.705	.208	.705
23	137	101.000	11.188	89.812	.234	.889
24	138	88.000	6.766	81.234	.212	.923
25	139	166.000	72.873	93.127	.243	.561
26	140	187.000	168.458	18.542	.048	.099
27	141	260.000	336.475	-76.475	-.199	-.294

28	142	387.000	555.862	-168.862	-.440	-.436
29	143	565.000	445.109	119.891	.313	.212
30	144	570.000	523.222	46.778	.122	.082
31	145	297.000	181.938	115.062	.300	.387
32	146	179.000	24.452	154.548	.403	.863
33	147	124.000	43.612	80.388	.210	.648
34	149	112.000	147.824	-35.824	-.093	-.320
35	150	57.000	71.400	-14.400	-.038	-.253
36	151	114.000	45.086	68.914	.180	.605
37	152	154.000	166.769	-12.769	-.033	-.083
38	153	69.000	71.400	-2.400	-.006	-.035
39	154	47.000	14.135	32.865	.086	.699
40	155	34.000	8.240	25.760	.067	.758
41	156	43.000	12.661	30.339	.079	.706
42	157	51.000	11.188	39.812	.104	.781
43	158	40.000	-15.234	55.234	.144	1.381
44	159	47.000	8.240	38.760	.101	.825
45	160	34.000	36.243	-2.243	-.006	-.066
46	161	18.000	8.240	9.760	.025	.542
47	162	15.000	12.661	2.339	.006	.156
48	163	12.000	27.400	-15.400	-.040	-1.283
49	164	13.000	14.135	-1.135	-.003	-.087
50	165	275.000	52.455	222.545	.580	.809
51	166	76.000	30.347	45.653	.119	.601
52	167	33.000	25.926	7.074	.018	.214
53	168	194.000	139.412	54.588	.142	.281
54	169	71.000	33.295	37.705	.098	.531
55	170	70.000	22.978	47.022	.123	.672
56	171	43.000	8.240	34.760	.091	.808
57	172	44.000	9.714	34.286	.089	.779
58	173	40.000	5.292	34.708	.090	.868
59	174	66.000	21.504	44.496	.116	.674
60	175	35.000	15.609	19.391	.051	.554
61	176	44.000	2.345	41.655	.109	.947
62	177	35.000	9.714	25.286	.066	.722
63	178	65.000	74.347	-9.347	-.024	-.144
64	179	63.000	130.138	-67.138	-.175	-1.066
65	180	88.000	196.245	-108.245	-.282	-1.230
66	181	118.000	300.457	-182.457	-.476	-1.546
67	182	115.000	279.823	-164.823	-.430	-1.433
68	183	159.000	241.719	-82.719	-.216	-.520
69	184	145.000	347.405	-202.405	-.528	-1.396
70	185	144.000	287.193	-143.193	-.373	-.994
71	186	73.000	165.295	-92.295	-.241	-1.264
72	187	197.000	307.826	-110.826	-.289	-.563
73	188	125.000	309.300	-184.300	-.480	-1.474
74	189	107.000	243.193	-136.193	-.355	-1.273
75	190	162.000	426.561	-264.561	-.690	-1.633

76	191	418.000	516.250	-98.250	-.256	-.235
77	192	455.000	393.094	61.906	.161	.136
78	193	101.000	284.245	-183.245	-.478	-1.814

R BAR SQUARED .9388
STANDARD ERROR OF ESTIMATE 94.9311
MEAN ERROR .0000
MEAN SQUARED ERROR 8665.2950

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VARIABLE DELETED IS

Pb

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Cd	53.317940	.9080
REGRESSION CONSTANT		
-14.390530	R SQUARE .9092	R BAR SQUARE .9080
		STANDARD ERROR OF ESTIMATE 116.3319

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	P112	10.000	12.268	-2.268	-.006	-.227
2	113	15.000	12.268	2.732	.007	.182
3	114	83.000	38.927	44.073	.115	.531
4	116	510.000	198.881	311.119	.811	.610
5	118	3320.000	3184.686	135.314	.353	.041
6	120	119.000	145.563	-26.563	-.069	-.223
7	121	89.000	145.563	-56.563	-.147	-.636
8	122	28.000	38.927	-10.927	-.028	-.390
9	123	32.000	38.927	-6.927	-.018	-.216
10	124	36.000	145.563	-109.563	-.286	-3.043
11	125	33.000	38.927	-5.927	-.015	-.180
12	126	54.000	38.927	15.073	.039	.279
13	127	24.000	252.199	-228.199	-.595	-9.508
14	128	30.000	38.927	-8.927	-.023	-.298
15	129	29.000	38.927	-9.927	-.026	-.342
16	130	24.000	38.927	-14.927	-.039	-.622
17	131	22.000	38.927	-16.927	-.044	-.769
18	132	53.000	38.927	14.073	.037	.266
19	133	75.000	92.245	-17.245	-.045	-.230
20	134	104.000	92.245	11.755	.031	.113
21	135	139.000	92.245	46.755	.122	.336
22	136	113.000	38.927	74.073	.193	.656
23	137	101.000	38.927	62.073	.162	.615
24	138	88.000	38.927	49.073	.128	.558
25	139	166.000	92.245	73.755	.192	.444
26	140	187.000	145.563	41.437	.108	.222
27	141	260.000	145.563	114.437	.298	.440
28	142	387.000	198.881	188.119	.490	.486

29	143	565.000	252.199	312.801	.815	.554
30	144	570.000	252.199	317.801	.828	.558
31	145	297.000	92.245	204.755	.534	.689
32	146	179.000	38.927	140.073	.365	.783
33	147	124.000	38.927	85.073	.222	.686
34	149	112.000	145.563	-33.563	-.087	-.300
35	150	57.000	92.245	-35.245	-.092	-.618
36	151	114.000	38.927	75.073	.196	.659
37	152	154.000	198.881	-44.881	-.117	-.291
38	153	69.000	92.245	-23.245	-.061	-.337
39	154	47.000	38.927	8.073	.021	.172
40	155	34.000	38.927	-4.927	-.013	-.145
41	156	43.000	38.927	4.073	.011	.095
42	157	51.000	38.927	12.073	.031	.237
43	158	40.000	12.268	27.732	.072	.693
44	159	47.000	38.927	8.073	.021	.172
45	160	34.000	38.927	-4.927	-.013	-.145
46	161	18.000	38.927	-20.927	-.055	-1.163
47	162	15.000	38.927	-23.927	-.062	-1.595
48	163	12.000	38.927	-26.927	-.070	-2.244
49	164	13.000	38.927	-25.927	-.068	-1.994
50	165	275.000	38.927	236.073	.615	.858
51	166	76.000	38.927	37.073	.097	.488
52	167	33.000	38.927	-5.927	-.015	-.180
53	168	194.000	38.927	155.073	.404	.799
54	169	71.000	38.927	32.073	.084	.452
55	170	70.000	38.927	31.073	.081	.444
56	171	43.000	38.927	4.073	.011	.095
57	172	44.000	38.927	5.073	.013	.115
58	173	40.000	38.927	1.073	.003	.027
59	174	66.000	38.927	27.073	.071	.410
60	175	35.000	38.927	-3.927	-.010	-.112
61	176	44.000	38.927	5.073	.013	.115
62	177	35.000	38.927	-3.927	-.010	-.112
63	178	65.000	92.245	-27.245	-.071	-.419
64	179	63.000	145.563	-82.563	-.215	-1.311
65	180	88.000	198.881	-110.881	-.289	-1.260
66	181	118.000	305.517	-187.517	-.489	-1.589
67	182	115.000	305.517	-190.517	-.497	-1.657
68	183	159.000	252.199	-93.199	-.243	-.586
69	184	145.000	358.835	-213.835	-.557	-1.475
70	185	144.000	305.517	-161.517	-.421	-1.122
71	186	73.000	198.881	-125.881	-.328	-1.724
72	187	197.000	305.517	-108.517	-.283	-.551
73	188	125.000	305.517	-180.517	-.471	-1.444
74	189	107.000	252.199	-145.199	-.379	-1.357
75	190	162.000	465.471	-303.471	-.791	-1.873
76	191	418.000	518.789	-100.789	-.263	-.241

77	192	455.000	358.835	96.165	.251	.211
78	193	101.000	305.517	-204.517	-.533	-2.025

R BAR SQUARED	.9080
STANDARD ERROR OF ESTIMATE	116.3319
MEAN ERROR	.0000
MEAN SQUARED ERROR	13186.1100

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+ END OF RUN +
+ NORMAL STOP IN MLRP +
+++++

 MULTIPLE LINEAR REGRESSION

704-G1-L2020 JAN 1975
 FORTRAN77 VERSION JUL 1986

GEOQUIMICA DE SUELOS / CANTABRIA 1990
 CALCULO DE ANOMALIAS
FRELLEZO

NVAL NCOMB IPRNT IFRMT IDELE DELTA
 7 0 0 0 0 .0000

+ + + + ANALYSIS NO 1 + + + +
 DEPENDENT VARIABLE -- Zn

IDEP TRANSFORMATION CODES..... NOBR IRES IFORC
 2 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 6 0

VARIABLE	TRANSFORMATION
Pb	NONE
Zn	NONE
Ag	NONE
Cd	NONE
Fe	NONE
Mn	NONE
Hg	NONE

INPUT DATA (p.p.m.) (en Ag y Cd los valores .500 corresponden a contenidos inferiores a 1 p.p.m. y en Hg los valores .050 corresponden a valores inferiores a .1 p.p.m.)

OBS NO	OBS ID	Pb	Zn	Ag	Cd	Fe	Mn	Hg
1	P112	3	10	.500	.500	400	15	.100
2	113	3	15	.500	.500	700	12	.050
3	114	26	83	.500	1.000	8600	28	.300
4	115	3820	4400	2.000	17.000	47000	1397	5.000
5	116	114	510	1.000	4.000	14500	164	1.700
6	117	1610	3710	1.000	5.000	6000	160	1.000
7	118	140	3320	1.000	60.000	11400	583	4.300

8	119	22500	38800	5.000	150.000	16800	779	9.000
9	120	49	119	1.000	3.000	26500	1040	.400
10	121	50	89	1.000	3.000	21900	1184	.400
11	122	13	28	1.000	1.000	22500	761	.050
12	123	10	32	1.000	1.000	16300	271	.050
13	124	16	36	1.000	3.000	22300	480	.050
14	125	5	33	.500	1.000	14200	296	.050
15	126	22	54	1.000	1.000	5700	512	.100
16	127	3	24	1.000	5.000	7500	100	.050
17	128	3	30	.500	1.000	11200	186	.050
18	129	4	29	1.000	1.000	15300	112	.050
19	130	5	24	1.000	1.000	11900	109	.050
20	131	3	22	1.000	1.000	5900	115	.050
21	132	33	53	.500	1.000	11100	232	.200
22	133	37	75	.500	2.000	24000	800	.200
23	134	41	104	.500	2.000	27000	779	.200
24	135	31	139	.500	2.000	17500	675	.200
25	136	30	113	.500	1.000	15400	539	.200
26	137	15	101	.500	1.000	18100	433	.100
27	138	12	88	.500	1.000	15000	520	.400
28	139	23	166	.500	2.000	29700	1193	.500
29	140	54	187	.500	3.000	29100	553	.400
30	141	168	260	.500	3.000	47000	3410	1.100
31	142	283	387	.500	4.000	55300	3180	2.600
32	143	174	565	.500	5.000	67700	3630	2.100
33	144	227	570	.500	5.000	62000	3450	3.500
34	145	97	297	.500	2.000	21500	774	.700
35	146	24	179	.500	1.000	12100	192	.400
36	147	37	124	.500	1.000	13500	329	.300
37	148	235	1770	1.000	5.000	59000	735	4.800
38	149	40	112	.500	3.000	32100	474	.200
39	150	22	57	.500	2.000	15000	196	.200
40	151	38	114	.500	1.000	24300	500	.300
41	152	19	154	.500	4.000	10000	211	.050
42	153	22	69	1.000	2.000	24000	762	.200
43	154	17	47	.500	1.000	15500	156	.050
44	155	13	34	.500	1.000	15000	89	.050
45	156	16	43	.500	1.000	14500	107	.050
46	157	15	51	.500	1.000	13100	132	.050
47	158	14	40	.500	.500	11200	48	.100
48	159	13	47	.500	1.000	12200	55	.200
49	160	32	34	.500	1.000	2000	20	.050
50	161	13	18	.500	1.000	1700	7	.200
51	162	16	15	.500	1.000	4500	7	.050
52	163	26	12	.500	1.000	14700	6	.100
53	164	17	13	.500	1.000	7400	7	.050
54	165	43	275	.500	1.000	17300	46	3.000
55	166	28	76	.500	1.000	6500	14	.400

56	167	25	33	.500	1.000	5700	10	.100
57	168	102	194	.500	1.000	10400	80	.200
58	169	30	71	.500	1.000	11400	68	.200
59	170	23	70	.500	1.000	8300	30	.200
50	171	13	43	.500	1.000	7800	27	.100
51	172	14	44	.500	1.000	9400	60	.100
52	173	11	40	.500	1.000	10300	61	.100
53	174	22	66	.500	1.000	12200	56	.200
54	175	18	35	.500	1.000	8000	40	.100
55	176	9	44	.500	1.000	5500	40	.050
56	177	14	35	.500	1.000	5700	6	.050
57	178	24	65	.500	2.000	19400	270	.050
58	179	28	63	.500	3.000	19800	750	.100
59	180	39	88	.500	4.000	21600	1195	.300
70	181	42	118	.500	6.000	29100	647	.600
71	182	28	115	.500	6.000	22300	845	.300
72	183	36	159	.500	5.000	18600	331	.900
73	184	40	145	1.000	7.000	18600	680	.800
74	185	33	144	.500	6.000	17800	953	.300
75	186	18	73	.500	4.000	14000	176	.400
76	187	47	197	.500	6.000	25200	486	.600
77	188	48	125	.500	6.000	22900	870	.400
78	189	37	107	.500	5.000	22200	866	.100
79	190	26	162	.500	9.000	20300	1080	2.500
80	191	53	418	.500	10.000	15300	726	2.900
81	192	71	455	.500	7.000	37100	903	1.300
82	193	31	101	.500	6.000	34300	842	.400

STATISTICS OF DATA

BASED ON 82 OBSERVATIONS

VARIABLE	AVERAGE	VARIANCE	STANDARD DEVIATION	
Pb	380.5610	6319931.0000	2513.9470	
Ag	.6707	.2977	.5456	
Cd	5.2256	309.0688	17.5804	
Fe	18363.4100	179946400.0000	13414.4100	
Mn	544.6707	563752.8000	750.8347	
Hg	.7238	2.0255	1.4232	
Zn	743.5000	18637450.0000	4317.1110	DEF. VARIABLE

SIMPLE CORRELATION COEFFICIENTS

VARIABLE	Pb	Ag	Cd	Fe	Mn	Hg	Zn
Pb	1.0000	.9245	.9220	.0000	.0000	.7050	.9943
Ag	.9245	1.0000	.8721	.0000	.0000	.7095	.9204
Cd	.9220	.8721	1.0000	.0000	.0000	.7704	.9487
Fe	.0000	.0000	.0000	1.0000	.8487	.4270	.0000
Mn	.0000	.0000	.0000	.8487	1.0000	.3713	.0000
Hg	.7050	.7095	.7704	.4270	.3713	1.0000	.7266
Zn	.9943	.9204	.9487	.0000	.0000	.7266	1.0000

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	1.404062	.9314
Ag	-223.062400	.0116
Cd	52.217150	.5222
Fe	.002678	.0000
Mn	-.124057	.0151
Hg	33.122510	.0000

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
80.329830	.9958	.9955	290.7979

DEPENDENT VARIABLE

Zn

ERROR AS
DEVIATE

RATIO

BS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	P112	10.000	1.642	8.358	.002	.836
2	113	15.000	1.162	13.838	.003	.923
3	114	83.000	87.019	-4.019	-.001	-.048
4	115	4400.000	6003.604	-1603.604	-.371	-.364
5	116	510.000	300.999	209.001	.048	.410
6	117	3710.000	2408.237	1301.763	.302	.351
7	118	3320.000	3287.500	32.500	.008	.010
8	119	38800.000	38635.450	164.547	.038	.004
9	120	119.000	37.925	81.075	.019	.681
10	121	89.000	9.144	79.856	.018	.897
11	122	28.000	-104.750	132.750	.031	4.741
12	123	32.000	-64.781	96.781	.022	3.024
13	124	36.000	38.220	-2.220	-.001	-.062
14	125	33.000	31.004	1.996	.000	.060
15	126	54.000	-104.564	158.564	.037	2.936
16	127	24.000	131.904	-107.904	-.025	-4.496
17	128	30.000	33.807	-3.807	-.001	-.127
18	129	29.000	-56.158	85.158	.020	2.936
19	130	24.000	-63.489	87.489	.020	3.645
20	131	22.000	-83.111	105.111	.024	4.778
21	132	53.000	74.923	-21.923	-.005	-.414
22	133	75.000	96.843	-21.843	-.005	-.291
23	134	104.000	113.100	-9.100	-.002	-.087
24	135	139.000	86.517	52.483	.012	.378
25	136	113.000	44.143	68.857	.016	.609
26	137	101.000	40.151	60.849	.014	.602
27	138	88.000	26.780	61.220	.014	.696
28	139	166.000	53.636	112.364	.026	.677
29	140	187.000	223.856	-36.856	-.009	-.197
30	141	260.000	100.617	159.383	.037	.613
31	142	387.000	414.749	-27.749	-.006	-.072
32	143	565.000	274.748	290.252	.067	.514
33	144	570.000	402.599	167.401	.039	.294
34	145	297.000	194.178	102.822	.024	.346
35	146	179.000	76.552	102.448	.024	.572
36	147	124.000	78.246	45.754	.011	.369
37	148	1770.000	674.138	1095.862	.254	.619
38	149	112.000	215.410	-103.410	-.024	-.923
39	150	57.000	126.607	-69.607	-.016	-1.221
40	151	114.000	87.363	26.637	.006	.234
41	152	154.000	206.608	-52.608	-.012	-.342
42	153	69.000	-31.035	100.035	.023	1.450
43	154	47.000	68.703	-21.703	-.005	-.462
44	155	34.000	70.059	-36.059	-.008	-1.061
45	156	43.000	70.699	-27.699	-.006	-.644

46	157	51.000	62.444	-11.444	-.003	-.224
47	158	40.000	41.919	-1.919	.000	-.048
48	159	47.000	71.746	-24.746	-.006	-.527
49	160	34.000	70.478	-36.478	-.008	-1.073
50	161	18.000	49.578	-31.578	-.007	-1.754
51	162	15.000	56.321	-41.321	-.010	-2.755
52	163	12.000	99.461	-87.461	-.020	-7.288
53	164	13.000	65.493	-52.493	-.012	-4.038
54	165	275.000	221.387	53.613	.012	.195
55	166	76.000	89.251	-13.251	-.003	-.174
56	167	33.000	73.456	-40.456	-.009	-1.226
57	168	194.000	188.785	5.215	.001	.027
58	169	71.000	91.860	-20.860	-.005	-.294
59	170	70.000	78.443	-8.443	-.002	-.121
60	171	43.000	60.123	-17.123	-.004	-.398
61	172	44.000	61.718	-17.718	-.004	-.403
62	173	40.000	59.793	-19.793	-.005	-.495
63	174	66.000	84.259	-18.259	-.004	-.277
64	175	35.000	66.066	-31.066	-.007	-.888
65	176	44.000	45.077	-1.077	.000	-.024
66	177	35.000	56.851	-21.851	-.005	-.624
67	178	65.000	127.052	-62.052	-.014	-.955
68	179	63.000	128.065	-65.065	-.015	-1.033
69	180	88.000	151.967	-63.967	-.015	-.727
70	181	118.000	358.622	-240.622	-.056	-2.039
71	182	115.000	286.252	-171.252	-.040	-1.489
72	183	159.000	318.996	-159.996	-.037	-1.006
73	184	145.000	270.907	-125.907	-.029	-.868
74	185	144.000	267.821	-123.821	-.029	-.860
75	186	73.000	231.853	-158.853	-.037	-2.176
76	187	197.000	375.169	-178.169	-.041	-.904
77	188	125.000	316.151	-191.151	-.044	-1.529
78	189	107.000	237.174	-130.174	-.030	-1.217
79	190	162.000	478.455	-316.455	-.073	-1.953
80	191	418.000	612.355	-194.355	-.045	-.465
81	192	455.000	464.411	-9.411	-.002	-.021
82	193	101.000	326.289	-225.289	-.052	-2.231

R BAR SQUARED .9955
STANDARD ERROR OF ESTIMATE 290.8278
MEAN ERROR .0000
MEAN SQUARED ERROR 77360.5200

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VARIABLE DELETED IS

Fe

DEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	1.404407	.9313
Ag	-217.542200	.0106
Cd	51.262330	.5412
Mn	-.089684	.0281
Hg	44.391420	.0016

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
.03.791800	.9958	.9955	289.3733

IDENT VARIABLE	Zn	RESIDUAL	ERROR AS DEVIATE	RATIO		
NO	OBS ID	OBSERVED	CALCULATED			
1	P112	10.000	27.959	-17.959	-.004	-1.796
2	113	15.000	26.008	-11.008	-.003	-.734
3	114	83.000	93.604	-10.604	-.002	-.128
4	115	4400.000	6001.670	-1601.670	-.371	-.364
5	116	510.000	312.159	197.841	.046	.388
6	117	3710.000	2433.698	1276.302	.296	.344
7	118	3320.000	3297.203	22.797	.005	.007
8	119	38800.000	38634.250	165.750	.038	.004
9	120	119.000	33.337	85.663	.020	.720
10	121	89.000	21.827	67.173	.016	.755
11	122	28.000	-110.261	138.261	.032	4.938
12	123	32.000	-70.529	102.529	.024	3.204
13	124	36.000	21.678	14.322	.003	.398
14	125	33.000	28.978	4.022	.001	.122
15	126	54.000	-73.070	127.070	.029	2.353
16	127	24.000	140.026	-116.026	-.027	-4.834
17	128	30.000	36.035	-6.035	-.001	-.201
18	129	29.000	-64.695	93.695	.022	3.231
19	130	24.000	-63.022	87.022	.020	3.626
20	131	22.000	-66.369	88.369	.020	4.017
21	132	53.000	80.700	-27.700	-.006	-.523
22	133	75.000	86.639	-11.639	-.003	-.155
23	134	104.000	94.140	9.860	.002	.095
24	135	139.000	89.423	49.577	.011	.357
25	136	113.000	48.954	64.046	.015	.567

26	137	101.000	32.955	68.045	.016	.674
27	138	88.000	34.257	53.743	.012	.611
28	139	166.000	45.049	120.951	.028	.729
29	140	187.000	192.807	-5.807	-.001	-.031
30	141	260.000	127.755	132.245	.031	.509
31	142	387.000	427.738	-40.738	-.009	-.105
32	143	565.000	263.366	301.634	.070	.534
33	144	570.000	416.091	153.909	.036	.270
34	145	297.000	195.431	101.569	.024	.342
35	146	179.000	80.526	98.474	.023	.550
36	147	124.000	82.057	41.943	.010	.338
37	148	1770.000	619.758	1150.242	.266	.650
38	149	112.000	171.352	-59.352	-.014	-.530
39	150	57.000	119.742	-62.742	-.015	-1.101
40	151	114.000	68.126	45.874	.011	.402
41	152	154.000	210.050	-56.050	-.013	-.364
42	153	69.000	-39.790	108.790	.025	1.577
43	154	47.000	58.387	-11.387	-.003	-.242
44	155	34.000	58.778	-24.778	-.006	-.729
45	156	43.000	61.377	-18.377	-.004	-.427
46	157	51.000	57.730	-6.730	-.002	-.132
47	158	40.000	40.448	-.448	.000	-.011
48	159	47.000	68.486	-21.486	-.005	-.457
49	160	34.000	91.650	-57.650	-.013	-1.696
50	161	18.000	72.791	-54.791	-.013	-3.044
51	162	15.000	70.345	-55.345	-.013	-3.690
52	163	12.000	86.699	-74.699	-.017	-6.225
53	164	13.000	71.750	-58.750	-.014	-4.519
54	165	275.000	235.721	39.279	.009	.143
55	166	76.000	102.107	-26.107	-.006	-.344
56	167	33.000	84.936	-51.936	-.012	-1.574
57	168	194.000	191.236	2.764	.001	.014
58	169	71.000	91.195	-20.195	-.005	-.284
59	170	70.000	84.772	-14.772	-.003	-.211
60	171	43.000	66.558	-23.558	-.005	-.548
61	172	44.000	65.003	-21.003	-.005	-.477
62	173	40.000	60.700	-20.700	-.005	-.517
63	174	66.000	81.036	-15.036	-.003	-.228
64	175	35.000	72.414	-37.414	-.009	-1.069
65	176	44.000	57.555	-13.555	-.003	-.308
66	177	35.000	67.626	-32.626	-.008	-.932
67	178	65.000	109.256	-44.256	-.010	-.681
68	179	63.000	125.307	-62.307	-.014	-.989
69	180	88.000	160.986	-72.986	-.017	-.829
70	181	118.000	330.189	-212.189	-.049	-1.798
71	182	115.000	279.452	-164.452	-.038	-1.430
72	183	159.000	312.158	-153.158	-.035	-.963
73	184	145.000	275.790	-130.790	-.030	-.902

74	185	144.000	276.788	-132.788	-.031	-.922
75	186	73.000	227.321	-154.321	-.036	-2.114
76	187	197.000	351.650	-154.650	-.036	-.785
77	188	125.000	309.737	-184.737	-.043	-1.478
78	189	107.000	230.068	-123.068	-.029	-1.150
79	190	162.000	507.016	-345.016	-.080	-2.130
80	191	418.000	645.702	-227.702	-.053	-.545
81	192	455.000	430.294	24.706	.006	.054
82	193	101.000	288.374	-187.374	-.043	-1.855

R BAR SQUARED .9955
STANDARD ERROR OF ESTIMATE 289.4032
MEAN ERROR .0000
MEAN SQUARED ERROR 77625.8500

VARIABLE DELETED IS Hg

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	1.398419	.9309
Ag	-180.560500	.0041
Cd	53.718600	.6120
Mn	-.063070	.0143

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
86.063950	.9957	.9955	289.5997

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	P112	10.000	25.892	-15.892	-.004	-1.589
2	113	15.000	26.081	-11.081	-.003	-.739
3	114	83.000	84.095	-1.095	.000	-.013
4	115	4400.000	5892.010	-1492.010	-.346	-.339
5	116	510.000	269.454	240.546	.056	.472
6	117	3710.000	2415.459	1294.541	.300	.349
7	118	3320.000	3287.628	32.372	.007	.010
8	119	38800.000	38656.340	143.656	.033	.004
9	120	119.000	69.589	49.411	.011	.415
10	121	89.000	61.905	27.095	.006	.304
11	122	28.000	-70.595	98.595	.023	3.521
12	123	32.000	-43.886	75.886	.018	2.371
13	124	36.000	58.760	-22.760	-.005	-.632
14	125	33.000	37.826	-4.826	-.001	-.146
15	126	54.000	-42.305	96.305	.022	1.783
16	127	24.000	171.985	-147.985	-.034	-6.166
17	128	30.000	41.967	-11.967	-.003	-.399
18	129	29.000	-42.248	71.248	.017	2.457
19	130	24.000	-40.660	64.660	.015	2.694
20	131	22.000	-43.836	65.836	.015	2.993
21	132	53.000	81.018	-28.018	-.006	-.529
22	133	75.000	104.506	-29.506	-.007	-.393
23	134	104.000	111.425	-7.425	-.002	-.071
24	135	139.000	104.000	35.000	.008	.252
25	136	113.000	57.460	55.540	.013	.492
26	137	101.000	43.169	57.831	.013	.573

27	138	88.000	33.487	54.513	.013	.619
28	139	166.000	60.142	105.858	.025	.638
29	140	187.000	197.576	-10.576	-.002	-.057
30	141	260.000	176.805	83.195	.019	.320
31	142	387.000	405.848	-18.848	-.004	-.049
32	143	565.000	278.757	286.243	.066	.507
33	144	570.000	364.226	205.774	.048	.361
34	145	297.000	190.051	106.949	.025	.360
35	146	179.000	70.955	108.045	.025	.604
36	147	124.000	80.494	43.506	.010	.351
37	148	1770.000	456.368	1313.632	.304	.742
38	149	112.000	182.981	-70.981	-.016	-.634
39	150	57.000	121.624	-64.624	-.015	-1.134
40	151	114.000	71.107	42.893	.010	.376
41	152	154.000	223.920	-69.920	-.016	-.454
42	153	69.000	-4.353	73.353	.017	1.063
43	154	47.000	63.437	-16.437	-.004	-.350
44	155	34.000	62.069	-28.069	-.007	-.826
45	156	43.000	65.129	-22.129	-.005	-.515
46	157	51.000	62.153	-11.153	-.003	-.219
47	158	40.000	39.194	.806	.000	.020
48	159	47.000	64.213	-17.213	-.004	-.366
49	160	34.000	92.990	-58.990	-.014	-1.735
50	161	18.000	67.240	-49.240	-.011	-2.736
51	162	15.000	71.436	-56.436	-.013	-3.762
52	163	12.000	85.483	-73.483	-.017	-6.124
53	164	13.000	72.834	-59.834	-.014	-4.603
54	165	275.000	106.733	168.267	.039	.612
55	166	76.000	87.775	-11.775	-.003	-.155
56	167	33.000	83.832	-50.832	-.012	-1.540
57	168	194.000	187.095	6.905	.002	.036
58	169	71.000	87.166	-16.166	-.004	-.228
59	170	70.000	79.774	-9.774	-.002	-.140
60	171	43.000	65.979	-22.979	-.005	-.534
61	172	44.000	65.296	-21.296	-.005	-.484
62	173	40.000	61.038	-21.038	-.005	-.526
63	174	66.000	76.736	-10.736	-.002	-.163
64	175	35.000	72.151	-37.151	-.009	-1.061
65	176	44.000	59.565	-15.565	-.004	-.354
66	177	35.000	68.702	-33.702	-.008	-.963
67	178	65.000	119.754	-54.754	-.013	-.842
68	179	63.000	148.793	-85.793	-.020	-1.362
69	180	88.000	189.828	-101.828	-.024	-1.157
70	181	118.000	336.023	-218.023	-.051	-1.848
71	182	115.000	303.957	-188.957	-.044	-1.643
72	183	159.000	293.844	-134.844	-.031	-.848
73	184	145.000	294.583	-149.583	-.035	-1.032
74	185	144.000	304.137	-160.137	-.037	-1.112

75	186	73.000	224.729	-151.729	-.035	-2.078
76	187	197.000	353.169	-156.169	-.036	-.793
77	188	125.000	330.349	-205.349	-.048	-1.643
78	189	107.000	261.500	-154.500	-.036	-1.444
79	190	162.000	447.494	-285.494	-.066	-1.762
80	191	418.000	561.297	-143.297	-.033	-.343
81	192	455.000	414.149	40.851	.009	.090
82	193	101.000	308.341	-207.341	-.048	-2.053

R BAR SQUARED .9955
STANDARD ERROR OF ESTIMATE 289.6307
MEAN ERROR .0000
MEAN SQUARED ERROR 78770.9600

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VARIABLE DELETED IS Ag

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	1.366987	.9549
Cd	52.965130	.6057
Mn	-.061640	.0129

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-19.923800	.9956	.9955	290.1937

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	P112	10.000	9.735	.265	.000	.026
2	113	15.000	9.920	5.080	.001	.339
3	114	83.000	66.857	16.143	.004	.194
4	115	4400.000	6016.265	-1616.265	-.374	-.367
5	116	510.000	337.664	172.336	.040	.338
6	117	3710.000	2435.889	1274.111	.295	.343
7	118	3320.000	3313.427	6.573	.002	.002
8	119	38800.000	38634.050	165.949	.038	.004
9	120	119.000	141.849	-22.849	-.005	-.192
10	121	89.000	134.339	-45.339	-.011	-.509
11	122	28.000	3.904	24.096	.006	.861
12	123	32.000	30.007	1.993	.000	.062
13	124	36.000	131.256	-95.256	-.022	-2.646
14	125	33.000	21.631	11.369	.003	.345
15	126	54.000	31.555	22.445	.005	.416
16	127	24.000	242.839	-218.839	-.051	-9.118
17	128	30.000	25.677	4.323	.001	.144
18	129	29.000	31.606	-2.606	-.001	-.090
19	130	24.000	33.158	-9.158	-.002	-.382
20	131	22.000	30.054	-8.054	-.002	-.366
21	132	53.000	63.851	-10.851	-.003	-.205
22	133	75.000	87.273	-12.273	-.003	-.164
23	134	104.000	94.036	9.964	.002	.096
24	135	139.000	86.776	52.224	.012	.376
25	136	113.000	40.827	72.173	.017	.639
26	137	101.000	26.856	74.144	.017	.734
27	138	88.000	17.392	70.608	.016	.802

28	139	166.000	43.911	122.089	.028	.735
29	140	187.000	178.702	8.298	.002	.044
30	141	260.000	158.434	101.566	.024	.391
31	142	387.000	382.780	4.220	.001	.011
32	143	565.000	259.005	305.995	.071	.542
33	144	570.000	342.551	227.449	.053	.399
34	145	297.000	170.895	126.105	.029	.425
35	146	179.000	54.014	124.986	.029	.698
36	147	124.000	63.340	60.660	.014	.489
37	148	1770.000	520.839	1249.161	.289	.706
38	149	112.000	164.434	-52.434	-.012	-.468
39	150	57.000	103.999	-46.999	-.011	-.825
40	151	114.000	54.167	59.833	.014	.525
41	152	154.000	204.904	-50.904	-.012	-.331
42	153	69.000	69.111	-.111	.000	-.002
43	154	47.000	46.664	.336	.000	.007
44	155	34.000	45.326	-11.326	-.003	-.333
45	156	43.000	48.318	-5.318	-.001	-.124
46	157	51.000	45.410	5.590	.001	.110
47	158	40.000	22.738	17.262	.004	.432
48	159	47.000	47.422	-.422	.000	-.009
49	160	34.000	75.552	-41.552	-.010	-1.222
50	161	18.000	50.381	-32.381	-.008	-1.799
51	162	15.000	54.482	-39.482	-.009	-2.632
52	163	12.000	68.213	-56.213	-.013	-4.684
53	164	13.000	55.849	-42.849	-.010	-3.296
54	165	275.000	88.986	186.014	.043	.676
55	166	76.000	70.454	5.546	.001	.073
56	167	33.000	66.600	-33.600	-.008	-1.018
57	168	194.000	167.543	26.457	.006	.136
58	169	71.000	69.859	1.141	.000	.016
59	170	70.000	62.633	7.367	.002	.105
60	171	43.000	49.148	-6.148	-.001	-.143
61	172	44.000	48.481	-4.481	-.001	-.102
62	173	40.000	44.318	-4.318	-.001	-.108
63	174	66.000	59.663	6.337	.001	.096
64	175	35.000	55.182	-20.182	-.005	-.577
65	176	44.000	42.879	1.121	.000	.025
66	177	35.000	51.809	-16.809	-.004	-.480
67	178	65.000	102.171	-37.171	-.009	-.572
68	179	63.000	131.017	-68.017	-.016	-1.080
69	180	88.000	171.590	-83.590	-.019	-.950
70	181	118.000	315.400	-197.400	-.046	-1.673
71	182	115.000	284.057	-169.057	-.039	-1.470
72	183	159.000	273.711	-114.711	-.027	-.721
73	184	145.000	363.597	-218.597	-.051	-1.508
74	185	144.000	284.235	-140.235	-.032	-.974
75	186	73.000	205.694	-132.694	-.031	-1.818

76	187	197.000	332.158	-135.158	-.031	-.686
77	188	125.000	309.856	-184.856	-.043	-1.479
78	189	107.000	242.100	-135.100	-.031	-1.263
79	190	162.000	425.733	-263.733	-.061	-1.628
80	191	418.000	537.427	-119.427	-.028	-.286
81	192	455.000	392.228	62.772	.015	.138
82	193	101.000	288.343	-187.343	-.043	-1.855

R BAR SQUARED	.9955
STANDARD ERROR OF ESTIMATE	290.2214
MEAN ERROR	-.0001
MEAN SQUARED ERROR	80119.7300

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VARIABLE DELETED IS Mn

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	1.369933	.9542
Cd	52.317700	.5957

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-51.234990	.9955	.9954	292.0824

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	P112	10.000	-20.966	30.966	.007	3.097
2	113	15.000	-20.966	35.966	.008	2.398
3	114	83.000	36.701	46.299	.011	.558
4	115	4400.000	6071.311	-1671.311	-.387	-.380
5	116	510.000	314.208	195.792	.045	.384
6	117	3710.000	2415.946	1294.054	.300	.349
7	118	3320.000	3279.617	40.383	.009	.012
8	119	38800.000	38619.920	180.082	.042	.005
9	120	119.000	172.845	-53.845	-.012	-.452
10	121	89.000	174.215	-85.215	-.020	-.957
11	122	28.000	18.892	9.108	.002	.325
12	123	32.000	14.782	17.218	.004	.538
13	124	36.000	127.637	-91.637	-.021	-2.545
14	125	33.000	7.932	25.068	.006	.760
15	126	54.000	31.221	22.779	.005	.422
16	127	24.000	214.463	-190.463	-.044	-7.936
17	128	30.000	5.193	24.807	.006	.827
18	129	29.000	6.562	22.438	.005	.774
19	130	24.000	7.932	16.068	.004	.669
20	131	22.000	5.193	16.807	.004	.764
21	132	53.000	46.291	6.709	.002	.127
22	133	75.000	104.088	-29.088	-.007	-.388
23	134	104.000	109.568	-5.568	-.001	-.054
24	135	139.000	95.868	43.132	.010	.310
25	136	113.000	42.181	70.819	.016	.627
26	137	101.000	21.632	79.368	.018	.786
27	138	88.000	17.522	70.478	.016	.801
28	139	166.000	84.909	81.091	.019	.489

29	140	187.000	179.694	7.306	.002	.039
30	141	260.000	335.867	-75.867	-.018	-.292
31	142	387.000	545.727	-158.727	-.037	-.410
32	143	565.000	448.722	116.278	.027	.206
33	144	570.000	521.328	48.672	.011	.085
34	145	297.000	186.284	110.716	.026	.373
35	146	179.000	33.961	145.039	.034	.810
36	147	124.000	51.770	72.230	.017	.582
37	148	1770.000	532.288	1237.712	.287	.699
38	149	112.000	160.515	-48.515	-.011	-.433
39	150	57.000	83.539	-26.539	-.006	-.466
40	151	114.000	53.140	60.860	.014	.534
41	152	154.000	184.065	-30.065	-.007	-.195
42	153	69.000	83.539	-14.539	-.003	-.211
43	154	47.000	24.372	22.628	.005	.481
44	155	34.000	18.892	15.108	.003	.444
45	156	43.000	23.002	19.998	.005	.465
46	157	51.000	21.632	29.368	.007	.576
47	158	40.000	-5.897	45.897	.011	1.147
48	159	47.000	18.892	28.108	.007	.598
49	160	34.000	44.921	-10.921	-.003	-.321
50	161	18.000	18.892	-.892	.000	-.050
51	162	15.000	23.002	-8.002	-.002	-.533
52	163	12.000	36.701	-24.701	-.006	-2.058
53	164	13.000	24.372	-11.372	-.003	-.875
54	165	275.000	59.990	215.010	.050	.782
55	166	76.000	39.441	36.559	.008	.481
56	167	33.000	35.331	-2.331	-.001	-.071
57	168	194.000	140.816	53.184	.012	.274
58	169	71.000	42.181	28.819	.007	.406
59	170	70.000	32.591	37.409	.009	.534
60	171	43.000	18.892	24.108	.006	.561
61	172	44.000	20.262	23.738	.005	.540
62	173	40.000	16.152	23.848	.006	.596
63	174	66.000	31.221	34.779	.008	.527
64	175	35.000	25.742	9.258	.002	.265
65	176	44.000	13.412	30.588	.007	.695
66	177	35.000	20.262	14.738	.003	.421
67	178	65.000	86.279	-21.279	-.005	-.327
68	179	63.000	144.076	-81.076	-.019	-1.287
69	180	88.000	211.463	-123.463	-.029	-1.403
70	181	118.000	320.208	-202.208	-.047	-1.714
71	182	115.000	301.029	-186.029	-.043	-1.618
72	183	159.000	259.671	-100.671	-.023	-.633
73	184	145.000	369.786	-224.786	-.052	-1.550
74	185	144.000	307.879	-163.879	-.038	-1.138
75	186	73.000	182.695	-109.695	-.025	-1.503
76	187	197.000	327.058	-130.058	-.030	-.660

77	188	125.000	328.428	-203.428	-.047	-1.627
78	189	107.000	261.041	-154.041	-.036	-1.440
79	190	162.000	455.243	-293.243	-.068	-1.810
80	191	418.000	544.548	-126.548	-.029	-.303
81	192	455.000	412.254	42.746	.010	.094
82	193	101.000	305.139	-204.139	-.047	-2.021

R BAR SQUARED .9954
STANDARD ERROR OF ESTIMATE 292.1112
MEAN ERROR .0000
MEAN SQUARED ERROR 82207.1600

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VARIABLE DELETED IS Cd

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	1.707635	.9887

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
93.640920	.9888	.9887	459.3876

DEPENDENT VARIABLE

Zn

ERROR AS

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	P112	10.000	98.764	-88.764	-.021	-8.876
2	113	15.000	98.764	-83.764	-.019	-5.584
3	114	83.000	138.039	-55.039	-.013	-.663
4	115	4400.000	6616.805	-2216.805	-.513	-.504
5	116	510.000	288.311	221.689	.051	.435
6	117	3710.000	2842.933	867.067	.201	.234
7	118	3320.000	332.710	2987.290	.692	.900
8	119	38800.000	38515.420	284.582	.066	.007
9	120	119.000	177.315	-58.315	-.014	-.490
10	121	89.000	179.023	-90.023	-.021	-1.011
11	122	28.000	115.840	-87.840	-.020	-3.137
12	123	32.000	110.717	-78.717	-.018	-2.460
13	124	36.000	120.963	-84.963	-.020	-2.360
14	125	33.000	102.179	-69.179	-.016	-2.096
15	126	54.000	131.209	-77.209	-.018	-1.430
16	127	24.000	98.764	-74.764	-.017	-3.115
17	128	30.000	98.764	-68.764	-.016	-2.292
18	129	29.000	100.471	-71.471	-.017	-2.465
19	130	24.000	102.179	-78.179	-.018	-3.257
20	131	22.000	98.764	-76.764	-.018	-3.489
21	132	53.000	149.993	-96.993	-.022	-1.830
22	133	75.000	156.823	-81.823	-.019	-1.091
23	134	104.000	163.654	-59.654	-.014	-.574
24	135	139.000	146.578	-7.578	-.002	-.055
25	136	113.000	144.870	-31.870	-.007	-.282
26	137	101.000	119.255	-18.255	-.004	-.181
27	138	88.000	114.133	-26.133	-.006	-.297
28	139	166.000	132.917	33.083	.008	.199
29	140	187.000	185.853	1.147	.000	.006

30	141	260.000	380.524	-120.524	-.028	-.464
31	142	387.000	576.901	-189.901	-.044	-.491
32	143	565.000	390.769	174.231	.040	.308
33	144	570.000	481.274	88.726	.021	.156
34	145	297.000	259.281	37.719	.009	.127
35	146	179.000	134.624	44.376	.010	.248
36	147	124.000	156.823	-32.823	-.008	-.265
37	148	1770.000	494.935	1275.065	.295	.720
38	149	112.000	161.946	-49.946	-.012	-.446
39	150	57.000	131.209	-74.209	-.017	-1.302
40	151	114.000	158.531	-44.531	-.010	-.391
41	152	154.000	126.086	27.914	.006	.181
42	153	69.000	131.209	-62.209	-.014	-.902
43	154	47.000	122.671	-75.671	-.018	-1.610
44	155	34.000	115.840	-81.840	-.019	-2.407
45	156	43.000	120.963	-77.963	-.018	-1.813
46	157	51.000	119.255	-68.255	-.016	-1.338
47	158	40.000	117.548	-77.548	-.018	-1.939
48	159	47.000	115.840	-68.840	-.016	-1.465
49	160	34.000	148.285	-114.285	-.026	-3.361
50	161	18.000	115.840	-97.840	-.023	-5.436
51	162	15.000	120.963	-105.963	-.025	-7.064
52	163	12.000	138.039	-126.039	-.029	-10.503
53	164	13.000	122.671	-109.671	-.025	-8.436
54	165	275.000	167.069	107.931	.025	.392
55	166	76.000	141.455	-65.455	-.015	-.861
56	167	33.000	136.332	-103.332	-.024	-3.131
57	168	194.000	267.820	-73.820	-.017	-.381
58	169	71.000	144.870	-73.870	-.017	-1.040
59	170	70.000	132.917	-62.917	-.015	-.899
60	171	43.000	115.840	-72.840	-.017	-1.694
61	172	44.000	117.548	-73.548	-.017	-1.672
62	173	40.000	112.425	-72.425	-.017	-1.811
63	174	66.000	131.209	-65.209	-.015	-.988
64	175	35.000	124.378	-89.378	-.021	-2.554
65	176	44.000	109.010	-65.010	-.015	-1.477
66	177	35.000	117.548	-82.548	-.019	-2.359
67	178	65.000	134.624	-69.624	-.016	-1.071
68	179	63.000	141.455	-78.455	-.018	-1.245
69	180	88.000	160.239	-72.239	-.017	-.821
70	181	118.000	165.362	-47.362	-.011	-.401
71	182	115.000	141.455	-26.455	-.006	-.230
72	183	159.000	155.116	3.884	.001	.024
73	184	145.000	161.946	-16.946	-.004	-.117
74	185	144.000	149.993	-5.993	-.001	-.042
75	186	73.000	124.378	-51.378	-.012	-.704
76	187	197.000	173.900	23.100	.005	.117
77	188	125.000	175.607	-50.607	-.012	-.405

78	189	107.000	156.823	-49.823	-.012	-.466
79	190	162.000	138.039	23.961	.006	.148
80	191	418.000	184.146	233.854	.054	.559
81	192	455.000	214.883	240.117	.056	.528
82	193	101.000	146.578	-45.578	-.011	-.451

R BAR SQUARED .9887
STANDARD ERROR OF ESTIMATE 459.4084
MEAN ERROR .0000
MEAN SQUARED ERROR 205908.3000

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+ END OF RUN +
+ NORMAL STOP IN MLRP +
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PROSPECCION GEOQUIMICA DE SUELOS
(Pb, Zn, Cd, Ag, Mn, Fe, Hg)
ZONA DE LA SECADA (MATIENZO)

 MULTIPLE LINEAR REGRESSION

704-G1-L2020 JAN 1975
 FORTRAN77 VERSION JUL 1986

GEOQUIMICA SUELOS / CANTABRIA 1990
 CALCULO DE ANOMALIAS
 LA SECADA

NVAL NCOMB IPRNT IFRMT IDELE DELTA
 7 0 0 0 0 .0000

+ + + + ANALYSIS NO 1 + + + +

DEPENDENT VARIABLE -- Zn

IDEF TRANSFORMATION CODES..... NOBR IRES IFORC
 2 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 6 0

VARIABLE	TRANSFORMATION
Pb	NONE
Zn	NONE
Ag	NONE
Cd	NONE
Fe	NONE
Mn	NONE
Hg	NONE

INPUT DATA (p.p.m.) (en Ag y Cd los valores .500 corresponden a contenidos inferiores a 1 p.p.m. y en Hg los valores .050 corresponden a contenidos inferiores a .1 p.p.m.)

OBS NO	OBS ID	Pb	Zn	Ag	Cd	Fe	Mn	Hg
1	LS 1	13	50	.500	2.000	22000	341	.300
2	2	16	40	.500	2.000	21500	321	.100
3	3	9	18	.500	1.000	14400	200	.050
4	4	12	25	.500	2.000	13800	309	.100
5	5	10	10	.500	1.000	8600	30	.100
6	6	17	35	.500	1.000	10100	44	.100

7	7	16	10	.500	1.000	6200	33	.100
8	8	12	31	.500	1.000	10600	108	.050
9	9	13	10	.500	1.000	6800	35	.050
10	10	17	29	.500	2.000	12800	136	.050
11	11	27	33	.500	2.000	15300	79	.400
12	12	14	12	.500	1.000	9700	20	.100
13	13	11	8	.500	1.000	8000	15	.200
14	14	13	7	.500	.500	7500	20	.050
15	15	14	9	1.000	1.000	11600	22	.200
16	16	13	8	.500	1.000	6700	6	.200
17	17	15	24	1.000	.500	10800	17	.200
18	18	12	14	1.000	1.000	3300	5	.100
19	19	17	8	1.000	1.000	6100	6	.200
20	20	15	20	.500	2.000	15100	439	.100
21	21	5	40	.500	2.000	19300	248	.200
22	22	4	26	.500	2.000	17600	120	.100
23	23	4	13	.500	2.000	15000	43	.200
24	24	13	45	.500	2.000	24300	378	.100
25	25	7	10	.500	1.000	1400	12	.100
26	26	5	15	.500	2.000	4900	116	.200
27	27	5	24	.500	1.000	4500	155	.050
28	28	5	37	.500	2.000	13800	260	.100
29	29	6	20	.500	2.000	9800	106	.050
30	30	14	65	.500	3.000	18700	219	.300
31	31	18	52	.500	3.000	16100	334	.300
32	32	19	35	.500	1.000	12900	282	.100
33	33	9	15	.500	1.000	14400	37	.050
34	34	29	66	.500	2.000	12000	451	.100
35	35	23	34	.500	1.000	11500	239	.100
36	36	18	31	.500	1.000	17900	300	.100
37	37	22	31	.500	1.000	7700	108	.100
38	38	15	36	.500	2.000	19000	250	.050
39	39	11	19	.500	1.000	18200	111	.050
40	40	13	27	.500	1.000	15300	122	.050
41	41	17	35	.500	3.000	27000	253	.200
42	42	20	25	.500	5.000	24700	649	.050
43	43	26	34	.500	4.000	44000	910	.050
44	44	48	87	.500	4.000	59000	2217	.200
45	45	46	89	.500	3.000	24000	1520	.050
46	46	26	10	.500	4.000	36300	1585	.050
47	47	22	46	.500	1.000	22000	243	.050
48	48	16	33	.500	1.000	11100	110	.050
49	49	51	94	.500	2.000	17600	1800	.050
50	50	12	26	.500	1.000	5800	133	.100
51	51	17	33	.500	2.000	17800	259	.100
52	52	18	28	.500	2.000	16700	567	.050
53	53	16	27	.500	1.000	18900	92	.050
54	54	23	35	.500	2.000	23800	651	.050

55	55	18	28	.500	1.000	14700	206	.050
56	56	16	42	.500	1.000	13000	200	.050
57	57	4	20	.500	.500	7700	95	.050
58	58	9	34	.500	2.000	25000	199	.050
59	59	19	25	.500	1.000	15800	300	.050
60	60	11	19	.500	1.000	9400	88	.050
61	61	20	26	.500	1.000	14000	53	.050
62	62	18	25	.500	1.000	15100	55	.100
63	63	2	26	.500	2.000	17900	45	.200
64	64	5	40	.500	2.000	10400	240	.100
65	65	11	47	1.000	3.000	24500	271	.200
66	66	5	39	.500	2.000	19400	90	.200
67	67	4	14	.500	2.000	9000	43	.100
68	68	9	48	.500	3.000	24600	275	.100
69	69	15	50	1.000	3.000	26600	390	.100
70	70	21	43	1.000	2.000	26300	173	.100
71	71	38	73	.500	2.000	26800	535	.200
72	72	18	21	.500	1.000	30000	270	.200
73	73	31	42	.500	2.000	25600	618	.200
74	74	17	34	.500	2.000	20500	396	.100
75	75	17	28	.500	2.000	12900	311	.050
76	76	11	16	.500	1.000	12900	30	.050
77	77	22	41	.500	2.000	29000	240	.050
78	78	40	24	.500	1.000	11000	91	.050
79	79	15	14	.500	1.000	4400	31	.050
80	80	10	24	.500	1.000	10900	111	.050
81	81	5	20	.500	1.000	8000	16	.050
82	82	15	45	.500	2.000	19300	137	.200
83	83	5	17	.500	1.000	8800	13	.100
84	84	6	22	.500	1.000	11600	19	.050
85	85	4	11	.500	1.000	7200	6	.050
86	86	4	13	.500	1.000	10000	7	.050
87	87	16	53	.500	2.000	21500	424	.050
88	88	4	32	.500	2.000	16100	183	.050
89	89	13	28	1.000	1.000	15100	175	.050
90	90	16	23	.500	1.000	8300	15	.050
91	91	18	44	.500	1.000	8200	340	.050
92	92	15	13	.500	.500	3300	12	.050
93	93	21	23	.500	1.000	2600	27	.050
94	94	21	18	.500	1.000	10800	16	.100
95	95	23	19	.500	1.000	9100	12	.100
96	96	16	28	1.000	1.000	12800	36	.050
97	97	18	34	1.000	1.000	15200	60	.100
98	98	16	44	.500	2.000	16000	143	.300
99	99	24	54	1.000	2.000	21400	190	.050

DEPENDENT VARIABLE

Zn

ERROR AS

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	LS 1	50.000	38.602	11.398	.655	.228
2	2	40.000	34.032	5.968	.343	.149
3	3	18.000	22.254	-4.254	-.244	-.236
4	4	25.000	29.187	-4.187	-.240	-.167
5	5	10.000	20.821	-10.821	-.621	-1.082
6	6	35.000	25.861	9.139	.525	.261
7	7	10.000	24.004	-14.004	-.804	-1.400
8	8	31.000	22.033	8.967	.515	.289
9	9	10.000	20.758	-10.758	-.618	-1.076
10	10	29.000	28.557	.443	.025	.015
11	11	33.000	45.655	-12.655	-.727	-.383
12	12	12.000	23.561	-11.561	-.664	-.963
13	13	8.000	24.170	-16.170	-.929	-2.021
14	14	7.000	19.580	-12.580	-.722	-1.797
15	15	9.000	28.368	-19.368	-1.112	-2.152
16	16	8.000	24.975	-16.975	-.975	-2.122
17	17	24.000	27.523	-3.523	-.202	-.147
18	18	14.000	21.516	-7.516	-.432	-.537
19	19	8.000	28.551	-20.551	-1.180	-2.569
20	20	20.000	32.969	-12.969	-.745	-.648
21	21	40.000	28.618	11.382	.654	.285
22	22	26.000	22.966	3.034	.174	.117
23	23	13.000	24.398	-11.398	-.655	-.877
24	24	45.000	33.567	11.433	.657	.254
25	25	10.000	16.683	-6.683	-.384	-.668
26	26	15.000	23.050	-8.050	-.462	-.537
27	27	24.000	16.410	7.590	.436	.316
28	28	37.000	24.161	12.839	.737	.347
29	29	20.000	20.363	-.363	-.021	-.018
30	30	65.000	39.298	25.702	1.476	.395
31	31	52.000	42.450	9.550	.548	.184
32	32	35.000	30.680	4.320	.248	.123
33	33	15.000	20.364	-5.364	-.308	-.358
34	34	66.000	41.154	24.846	1.427	.376
35	35	34.000	32.336	1.664	.096	.049
36	36	31.000	31.654	-.654	-.038	-.021
37	37	31.000	29.115	1.885	.108	.061
38	38	36.000	30.343	5.657	.325	.157
39	39	19.000	23.561	-4.561	-.262	-.240
40	40	27.000	24.149	2.851	.164	.106
41	41	35.000	40.875	-5.875	-.337	-.168
42	42	25.000	46.949	-21.949	-1.260	-.878
43	43	34.000	56.808	-22.808	-1.310	-.671

44	44	87.000	94.761	-7.761	-.446	-.089
45	45	89.000	68.612	20.388	1.171	.229
46	46	10.000	62.477	-52.477	-3.013	-5.248
47	47	46.000	33.162	12.838	.737	.279
48	48	33.000	24.743	8.257	.474	.250
49	49	94.000	70.850	23.150	1.329	.246
50	50	26.000	22.504	3.496	.201	.134
51	51	33.000	32.912	.088	.005	.003
52	52	28.000	35.285	-7.285	-.418	-.260
53	53	27.000	26.721	.279	.016	.010
54	54	35.000	41.434	-6.434	-.369	-.184
55	55	28.000	28.139	-.139	-.008	-.005
56	56	42.000	26.319	15.681	.900	.373
57	57	20.000	14.775	5.225	.300	.261
58	58	34.000	27.613	6.387	.367	.188
59	59	25.000	30.174	-5.174	-.297	-.207
60	60	19.000	20.827	-1.827	-.105	-.096
61	61	26.000	27.442	-1.442	-.083	-.055
62	62	25.000	28.028	-3.028	-.174	-.121
63	63	26.000	23.961	2.039	.117	.078
64	64	40.000	22.976	17.024	.978	.426
65	65	47.000	37.759	9.241	.531	.197
66	66	39.000	26.814	12.186	.700	.312
67	67	14.000	19.662	-5.662	-.325	-.404
68	68	48.000	32.309	15.691	.901	.327
69	69	50.000	39.220	10.780	.619	.216
70	70	43.000	38.042	4.958	.285	.115
71	71	73.000	55.063	17.937	1.030	.246
72	72	21.000	37.752	-16.752	-.962	-.798
73	73	42.000	51.232	-9.232	-.530	-.220
74	74	34.000	35.258	-1.258	-.072	-.037
75	75	28.000	30.614	-2.614	-.150	-.093
76	76	16.000	21.136	-5.136	-.295	-.321
77	77	41.000	37.489	3.511	.202	.086
78	78	24.000	39.778	-15.778	-.906	-.657
79	79	14.000	21.312	-7.312	-.420	-.522
80	80	24.000	20.878	3.122	.179	.130
81	81	20.000	15.779	4.221	.242	.211
82	82	45.000	33.699	11.301	.649	.251
83	83	17.000	17.496	-.496	-.028	-.029
84	84	22.000	17.460	4.540	.261	.206
85	85	11.000	14.802	-3.802	-.218	-.346
86	86	13.000	15.599	-2.599	-.149	-.200
87	87	53.000	33.699	19.301	1.108	.364
88	88	32.000	21.749	10.251	.589	.320
89	89	28.000	25.905	2.095	.120	.075
90	90	23.000	22.857	.143	.008	.006
91	91	44.000	27.871	16.129	.926	.367

92	92	13.000	19.584	-6.584	-.378	-.506
93	93	23.000	24.582	-1.582	-.091	-.069
94	94	18.000	28.280	-10.280	-.590	-.571
95	95	19.000	29.031	-10.031	-.576	-.528
96	96	28.000	25.558	2.442	.140	.087
97	97	34.000	29.310	4.690	.269	.138
98	98	44.000	36.534	7.466	.429	.170
99	99	54.000	37.249	16.751	.962	.310

R BAR SQUARED	.4952
STANDARD ERROR OF ESTIMATE	12.3726
MEAN ERROR	.0000
MEAN SQUARED ERROR	142.2566

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STATISTICS OF DATA

BASED ON 99 OBSERVATIONS

VARIABLE	AVERAGE	VARIANCE	STANDARD DEVIATION	
Pb	15.7071	85.6174	9.2530	
Ag	.5556	.0249	.1579	
Cd	1.6061	.7208	.8490	
Fe	15420.2000	76907160.0000	8769.6730	
Mn	244.9798	132975.3000	364.6578	
Hg	.1045	.0055	.0739	
Zn	30.5859	303.2451	17.4139	DEF.VARIABLE

SIMPLE CORRELATION COEFFICIENTS

VARIABLE	Pb	Ag	Cd	Fe	Mn	Hg	Zn
Pb	1.0000	.0000	.2618	.4435	.6859	.0000	.6014
Ag	.0000	1.0000	.0000	.0000	-.0643	.0000	.0000
Cd	.2618	.0000	1.0000	.7217	.6322	.2325	.4925
Fe	.4435	.0000	.7217	1.0000	.6951	.1303	.5644
Mn	.6859	-.0643	.6322	.6951	1.0000	.0000	.6407
Hg	.0000	.0000	.2325	.1303	.0000	1.0000	.1643
Zn	.6014	.0000	.4925	.5644	.6407	.1643	1.0000

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	.636807	.0894
Ag	2.393644	.0000
Cd	2.398899	.0000
Fe	.000280	.0045
Mn	.011596	.0200
Hg	30.543550	.0189

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
5.043853	.5261	.4952	12.3726

VARIABLE DELETED IS

Ag

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	.644306	.0931
Cd	2.395145	.0000
Fe	.000289	.0058
Mn	.011208	.0192
Hg	30.790270	.0195

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
6.203733	.5257	.5002	12.3117

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	LS 1	50.000	38.779	11.221	.644	.224
2	2	40.000	34.185	5.815	.334	.145
3	3	18.000	22.335	-4.335	-.249	-.241
4	4	25.000	29.251	-4.251	-.244	-.170
5	5	10.000	20.939	-10.939	-.628	-1.094
6	6	35.000	26.039	8.961	.515	.256
7	7	10.000	24.146	-14.146	-.812	-1.415
8	8	31.000	22.140	8.860	.509	.286
9	9	10.000	20.869	-10.869	-.624	-1.087
10	10	29.000	28.705	.295	.017	.010
11	11	33.000	46.008	-13.008	-.747	-.394
12	12	12.000	23.722	-11.722	-.673	-.977
13	13	8.000	24.321	-16.321	-.937	-2.040
14	14	7.000	19.706	-12.706	-.730	-1.815
15	15	9.000	27.372	-18.372	-1.055	-2.041
16	16	8.000	25.134	-17.134	-.984	-2.142
17	17	24.000	26.532	-2.532	-.145	-.105
18	18	14.000	20.418	-6.418	-.369	-.458
19	19	8.000	27.538	-19.538	-1.122	-2.442
20	20	20.000	33.016	-13.016	-.747	-.651
21	21	40.000	28.723	11.277	.648	.282
22	22	26.000	23.075	2.925	.168	.113

23	23	13.000	24.540	-11.540	-.663	-.888
24	24	45.000	33.699	11.301	.649	.251
25	25	10.000	16.727	-6.727	-.386	-.673
26	26	15.000	23.088	-8.088	-.464	-.539
27	27	24.000	16.396	7.604	.437	.317
28	28	37.000	24.192	12.808	.736	.346
29	29	20.000	20.416	-.416	-.024	-.021
30	30	65.000	39.498	25.502	1.464	.392
31	31	52.000	42.614	9.386	.539	.181
32	32	35.000	30.803	4.197	.241	.120
33	33	15.000	20.508	-5.508	-.316	-.367
34	34	66.000	41.276	24.724	1.420	.375
35	35	34.000	32.495	1.505	.086	.044
36	36	31.000	31.804	-.804	-.046	-.026
37	37	31.000	29.285	1.715	.098	.055
38	38	36.000	30.484	5.516	.317	.153
39	39	19.000	23.723	-4.723	-.271	-.249
40	40	27.000	24.298	2.702	.155	.100
41	41	35.000	41.129	-6.129	-.352	-.175
42	42	25.000	47.008	-22.008	-1.264	-.880
43	43	34.000	56.974	-22.974	-1.319	-.676
44	44	87.000	94.745	-7.745	-.445	-.089
45	45	89.000	68.530	20.470	1.176	.230
46	46	10.000	62.317	-52.317	-3.004	-5.232
47	47	46.000	33.386	12.614	.724	.274
48	48	33.000	24.884	8.116	.466	.246
49	49	94.000	70.647	23.353	1.341	.248
50	50	26.000	22.574	3.426	.197	.132
51	51	33.000	33.066	-.066	-.004	-.002
52	52	28.000	35.306	-7.306	-.420	-.261
53	53	27.000	26.933	.067	.004	.002
54	54	35.000	41.518	-6.518	-.374	-.186
55	55	28.000	28.287	-.287	-.017	-.010
56	56	42.000	26.441	15.559	.893	.370
57	57	20.000	14.805	5.195	.298	.260
58	58	34.000	27.778	6.222	.357	.183
59	59	25.000	30.303	-5.303	-.305	-.212
60	60	19.000	20.925	-1.925	-.111	-.101
61	61	26.000	27.659	-1.659	-.095	-.064
62	62	25.000	28.250	-3.250	-.187	-.130
63	63	26.000	24.111	1.889	.108	.073
64	64	40.000	22.986	17.014	.977	.425
65	65	47.000	36.743	10.257	.589	.218
66	66	39.000	26.981	12.019	.690	.308
67	67	14.000	19.730	-5.730	-.329	-.409
68	68	48.000	32.449	15.551	.893	.324
69	69	50.000	38.181	11.819	.679	.236
70	70	43.000	37.133	5.867	.337	.136

71	71	73.000	55.367	17.633	1.013	.242
72	72	21.000	38.039	-17.039	-.978	-.811
73	73	42.000	51.441	-9.441	-.542	-.225
74	74	34.000	35.381	-1.381	-.079	-.041
75	75	28.000	30.696	-2.696	-.155	-.096
76	76	16.000	21.285	-5.285	-.304	-.330
77	77	41.000	37.768	3.232	.186	.079
78	78	24.000	40.105	-16.105	-.925	-.671
79	79	14.000	21.420	-7.420	-.426	-.530
80	80	24.000	20.971	3.029	.174	.126
81	81	20.000	15.848	4.152	.238	.208
82	82	45.000	33.922	11.078	.636	.246
83	83	17.000	17.585	-.585	-.034	-.034
84	84	22.000	17.565	4.435	.255	.202
85	85	11.000	14.861	-3.861	-.222	-.351
86	86	13.000	15.680	-2.680	-.154	-.206
87	87	53.000	33.800	19.200	1.103	.362
88	88	32.000	21.809	10.191	.585	.318
89	89	28.000	24.834	3.166	.182	.113
90	90	23.000	23.011	-.011	-.001	.000
91	91	44.000	27.913	16.087	.924	.366
92	92	13.000	19.692	-6.692	-.384	-.515
93	93	23.000	24.722	-1.722	-.099	-.075
94	94	18.000	28.505	-10.505	-.603	-.584
95	95	19.000	29.258	-10.258	-.589	-.540
96	96	28.000	24.545	3.455	.198	.123
97	97	34.000	28.335	5.665	.325	.167
98	98	44.000	36.761	7.239	.416	.165
99	99	54.000	36.303	17.697	1.016	.328

	R BAR SQUARED	.5002
	STANDARD ERROR OF ESTIMATE	12.3117
	MEAN ERROR	.0000
	MEAN SQUARED ERROR	142.3904

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VARIABLE DELETED IS Cd

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	.579860	.0837
Fe	.000397	.0282
Mn	.014083	.0456
Hg	36.031480	.0336

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
8.143696	.5206	.5002	12.3105

DEPENDENT VARIABLE			Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO	
1	LS 1	50.000	40.021	9.979	.573	.200	
2	2	40.000	34.074	5.926	.340	.148	
3	3	18.000	23.693	-5.693	-.327	-.316	
4	4	25.000	28.531	-3.531	-.203	-.141	
5	5	10.000	21.380	-11.380	-.653	-1.138	
6	6	35.000	26.231	8.769	.504	.251	
7	7	10.000	23.949	-13.949	-.801	-1.395	
8	8	31.000	22.630	8.370	.481	.270	
9	9	10.000	20.674	-10.674	-.613	-1.067	
10	10	29.000	26.796	2.204	.127	.076	
11	11	33.000	45.395	-12.395	-.712	-.376	
12	12	12.000	23.995	-11.995	-.689	-1.000	
13	13	8.000	25.113	-17.113	-.983	-2.139	
14	14	7.000	20.740	-13.740	-.789	-1.963	
15	15	9.000	28.380	-19.380	-1.113	-2.153	
16	16	8.000	25.631	-17.631	-1.012	-2.204	
17	17	24.000	28.572	-4.572	-.263	-.190	
18	18	14.000	20.085	-6.085	-.349	-.435	
19	19	8.000	27.712	-19.712	-1.132	-2.464	
20	20	20.000	32.617	-12.617	-.725	-.631	
21	21	40.000	29.398	10.602	.609	.265	
22	22	26.000	22.738	3.262	.187	.125	
23	23	13.000	24.226	-11.226	-.645	-.864	
24	24	45.000	34.248	10.752	.617	.239	

25	25	10.000	16.530	-6.530	-.375	-.653
26	26	15.000	21.827	-6.827	-.392	-.455
27	27	24.000	16.813	7.187	.413	.299
28	28	37.000	23.782	13.218	.759	.357
29	29	20.000	18.805	1.195	.069	.060
30	30	65.000	37.574	27.426	1.575	.422
31	31	52.000	40.481	11.519	.661	.222
32	32	35.000	31.853	3.147	.181	.090
33	33	15.000	21.398	-6.398	-.367	-.427
34	34	66.000	39.675	26.325	1.512	.399
35	35	34.000	33.012	.988	.057	.029
36	36	31.000	33.510	-2.510	-.144	-.081
37	37	31.000	29.079	1.921	.110	.062
38	38	36.000	29.701	6.299	.362	.175
39	39	19.000	25.107	-6.107	-.351	-.321
40	40	27.000	25.271	1.729	.099	.064
41	41	35.000	39.482	-4.482	-.257	-.128
42	42	25.000	40.481	-15.481	-.889	-.619
43	43	34.000	55.292	-21.292	-1.223	-.626
44	44	87.000	97.811	-10.811	-.621	-.124
45	45	89.000	67.546	21.454	1.232	.241
46	46	10.000	61.744	-51.744	-2.971	-5.174
47	47	46.000	34.852	11.148	.640	.242
48	48	33.000	25.176	7.824	.449	.237
49	49	94.000	71.849	22.151	1.272	.236
50	50	26.000	22.879	3.121	.179	.120
51	51	33.000	32.313	.687	.039	.021
52	52	28.000	34.993	-6.993	-.402	-.250
53	53	27.000	28.016	-1.016	-.058	-.038
54	54	35.000	41.892	-6.892	-.396	-.197
55	55	28.000	29.115	-1.115	-.064	-.040
56	56	42.000	27.197	14.803	.850	.352
57	57	20.000	16.657	3.343	.192	.167
58	58	34.000	27.884	6.116	.351	.180
59	59	25.000	31.455	-6.455	-.371	-.258
60	60	19.000	21.292	-2.292	-.132	-.121
61	61	26.000	27.843	-1.843	-.106	-.071
62	62	25.000	28.949	-3.949	-.227	-.158
63	63	26.000	24.244	1.756	.101	.068
64	64	40.000	22.152	17.848	1.025	.446
65	65	47.000	35.264	11.736	.674	.250
66	66	39.000	27.213	11.787	.677	.302
67	67	14.000	18.242	-4.242	-.244	-.303
68	68	48.000	30.597	17.403	.999	.363
69	69	50.000	36.489	13.511	.776	.270
70	70	43.000	36.794	6.206	.356	.144
71	71	73.000	55.551	17.449	1.002	.239
72	72	21.000	41.491	-20.491	-1.177	-.976

73	73	42.000	52.185	-10.185	-.585	-.242
74	74	34.000	35.314	-1.314	-.075	-.039
75	75	28.000	29.300	-1.300	-.075	-.046
76	76	16.000	21.864	-5.864	-.337	-.366
77	77	41.000	37.587	3.413	.196	.083
78	78	24.000	38.785	-14.785	-.849	-.616
79	79	14.000	20.825	-6.825	-.392	-.488
80	80	24.000	21.631	2.369	.136	.099
81	81	20.000	16.244	3.756	.216	.188
82	82	45.000	33.634	11.366	.653	.253
83	83	17.000	18.320	-1.320	-.076	-.078
84	84	22.000	18.294	3.706	.213	.168
85	85	11.000	15.205	-4.205	-.242	-.382
86	86	13.000	16.330	-3.330	-.191	-.256
87	87	53.000	33.723	19.277	1.107	.364
88	88	32.000	21.229	10.771	.619	.337
89	89	28.000	25.938	2.062	.118	.074
90	90	23.000	22.727	.273	.016	.012
91	91	44.000	28.424	15.576	.894	.354
92	92	13.000	20.121	-7.121	-.409	-.548
93	93	23.000	23.534	-.534	-.031	-.023
94	94	18.000	28.434	-10.434	-.599	-.580
95	95	19.000	28.863	-9.863	-.566	-.519
96	96	28.000	24.808	3.192	.183	.114
97	97	34.000	29.059	4.941	.284	.145
98	98	44.000	36.592	7.408	.425	.168
99	99	54.000	35.027	18.973	1.090	.351

	R BAR SQUARED	.5002
	STANDARD ERROR OF ESTIMATE	12.3105
	MEAN ERROR	.0000
	MEAN SQUARED ERROR	143.8943

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VARIABLE DELETED IS Fe

INDEPENDENT VARIABLE REGRESSION COEFFICIENT PARTIAL DETERMINATION COEFFICIENT

Pb .553875 .0736
Mn .021224 .1629
Hg 44.252500 .0561

REGRESSION CONSTANT R SQUARE R BAR SQUARE STANDARD ERROR OF ESTIMATE

12.060310 .5015 .4858 12.4876

DEPENDENT VARIABLE			Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO	
1	LS 1	50.000	39.774	10.226	.587	.205	
2	2	40.000	32.160	7.840	.450	.196	
3	3	18.000	23.503	-5.503	-.316	-.306	
4	4	25.000	29.690	-4.690	-.269	-.188	
5	5	10.000	22.661	-12.661	-.727	-1.266	
6	6	35.000	26.835	8.165	.469	.233	
7	7	10.000	26.048	-16.048	-.922	-1.605	
8	8	31.000	23.212	7.788	.447	.251	
9	9	10.000	22.216	-12.216	-.702	-1.222	
10	10	29.000	26.575	2.425	.139	.084	
11	11	33.000	46.393	-13.393	-.769	-.406	
12	12	12.000	24.664	-12.664	-.727	-1.055	
13	13	8.000	27.322	-19.322	-1.110	-2.415	
14	14	7.000	21.898	-14.898	-.856	-2.128	
15	15	9.000	29.132	-20.132	-1.156	-2.237	
16	16	8.000	28.239	-20.239	-1.162	-2.530	
17	17	24.000	29.580	-5.580	-.320	-.232	
18	18	14.000	23.238	-9.238	-.531	-.660	
19	19	8.000	30.454	-22.454	-1.289	-2.807	
20	20	20.000	34.111	-14.111	-.810	-.706	
21	21	40.000	28.944	11.056	.635	.276	
22	22	26.000	21.248	4.752	.273	.183	
23	23	13.000	24.039	-11.039	-.634	-.849	
24	24	45.000	31.709	13.291	.763	.295	

25	25	10.000	20.617	-10.617	-.610	-1.062
26	26	15.000	26.142	-11.142	-.640	-.743
27	27	24.000	20.332	3.668	.211	.153
28	28	37.000	24.773	12.227	.702	.330
29	29	20.000	19.846	.154	.009	.008
30	30	65.000	37.738	27.262	1.566	.419
31	31	52.000	42.395	9.605	.552	.185
32	32	35.000	32.994	2.006	.115	.057
33	33	15.000	20.043	-5.043	-.290	-.336
34	34	66.000	42.120	23.880	1.371	.362
35	35	34.000	34.297	-.297	-.017	-.009
36	36	31.000	32.822	-1.822	-.105	-.059
37	37	31.000	30.963	.037	.002	.001
38	38	36.000	27.887	8.113	.466	.225
39	39	19.000	22.721	-3.721	-.214	-.196
40	40	27.000	24.063	2.937	.169	.109
41	41	35.000	35.696	-.696	-.040	-.020
42	42	25.000	39.125	-14.125	-.811	-.565
43	43	34.000	47.987	-13.987	-.803	-.411
44	44	87.000	94.550	-7.550	-.434	-.087
45	45	89.000	72.011	16.989	.976	.191
46	46	10.000	62.313	-52.313	-3.004	-5.231
47	47	46.000	31.616	14.384	.826	.313
48	48	33.000	25.470	7.530	.432	.228
49	49	94.000	80.723	13.277	.762	.141
50	50	26.000	25.955	.045	.003	.002
51	51	33.000	31.398	1.602	.092	.049
52	52	28.000	36.277	-8.277	-.475	-.296
53	53	27.000	25.088	1.912	.110	.071
54	54	35.000	40.829	-5.829	-.335	-.167
55	55	28.000	28.615	-.615	-.035	-.022
56	56	42.000	27.380	14.620	.840	.348
57	57	20.000	18.505	1.495	.086	.075
58	58	34.000	23.481	10.519	.604	.309
59	59	25.000	31.164	-6.164	-.354	-.247
60	60	19.000	22.233	-3.233	-.186	-.170
61	61	26.000	26.475	-.475	-.027	-.018
62	62	25.000	27.623	-2.623	-.151	-.105
63	63	26.000	22.974	3.026	.174	.116
64	64	40.000	24.349	15.651	.899	.391
65	65	47.000	32.755	14.245	.818	.303
66	66	39.000	25.590	13.410	.770	.344
67	67	14.000	19.614	-5.614	-.322	-.401
68	68	48.000	27.307	20.693	1.188	.431
69	69	50.000	33.071	16.929	.972	.339
70	70	43.000	31.789	11.211	.644	.261
71	71	73.000	53.313	19.687	1.131	.270
72	72	21.000	36.611	-15.611	-.896	-.743

73	73	42.000	51.197	-9.197	-.528	-.219
74	74	34.000	34.306	-.306	-.018	-.009
75	75	28.000	30.289	-2.289	-.131	-.082
76	76	16.000	21.002	-5.002	-.287	-.313
77	77	41.000	31.552	9.448	.543	.230
78	78	24.000	38.359	-14.359	-.825	-.598
79	79	14.000	23.239	-9.239	-.531	-.660
80	80	24.000	22.168	1.832	.105	.076
81	81	20.000	17.382	2.618	.150	.131
82	82	45.000	32.127	12.873	.739	.286
83	83	17.000	19.531	-2.531	-.145	-.149
84	84	22.000	17.999	4.001	.230	.182
85	85	11.000	16.616	-5.616	-.322	-.511
86	86	13.000	16.637	-3.637	-.209	-.280
87	87	53.000	32.134	20.866	1.198	.394
88	88	32.000	20.372	11.628	.668	.363
89	89	28.000	25.187	2.813	.162	.100
90	90	23.000	23.453	-.453	-.026	-.020
91	91	44.000	31.459	12.541	.720	.285
92	92	13.000	22.836	-9.836	-.565	-.757
93	93	23.000	26.477	-3.477	-.200	-.151
94	94	18.000	28.457	-10.457	-.600	-.581
95	95	19.000	29.479	-10.479	-.602	-.552
96	96	28.000	23.899	4.101	.236	.146
97	97	34.000	27.729	6.271	.360	.184
98	98	44.000	37.233	6.767	.389	.154
99	99	54.000	31.598	22.402	1.286	.415

R BAR SQUARED .4858
STANDARD ERROR OF ESTIMATE 12.4876
MEAN ERROR .0000
MEAN SQUARED ERROR 149.6388

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VARIABLE DELETED IS

Hg

INDEPENDENT
VARIABLE

REGRESSION
COEFFICIENT

PARTIAL
DETERMINATION
COEFFICIENT

Pb
Mn

.579907
.020670

.0758
.1466

REGRESSION
CONSTANT
16.413460

R
SQUARE
.4663

R BAR
SQUARE
.4552

STANDARD
ERROR OF
ESTIMATE
12.8532

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	LS 1	50.000	31.001	18.999	1.091	.380
2	2	40.000	32.327	7.673	.441	.192
3	3	18.000	25.767	-7.767	-.446	-.431
4	4	25.000	29.759	-4.759	-.273	-.190
5	5	10.000	22.833	-12.833	-.737	-1.283
6	6	35.000	27.181	7.819	.449	.223
7	7	10.000	26.374	-16.374	-.940	-1.637
8	8	31.000	25.605	5.395	.310	.174
9	9	10.000	24.676	-14.676	-.843	-1.468
10	10	29.000	29.083	-.083	-.005	-.003
11	11	33.000	33.704	-.704	-.040	-.021
12	12	12.000	24.946	-12.946	-.743	-1.079
13	13	8.000	23.102	-15.102	-.867	-1.888
14	14	7.000	24.366	-17.366	-.997	-2.481
15	15	9.000	24.987	-15.987	-.918	-1.776
16	16	8.000	24.076	-16.076	-.923	-2.010
17	17	24.000	25.463	-1.463	-.084	-.061
18	18	14.000	23.476	-9.476	-.544	-.677
19	19	8.000	26.396	-18.396	-1.056	-2.299
20	20	20.000	34.186	-14.186	-.815	-.709
21	21	40.000	24.439	15.561	.894	.389
22	22	26.000	21.214	4.786	.275	.184
23	23	13.000	19.622	-6.622	-.380	-.509
24	24	45.000	31.766	13.234	.760	.294
25	25	10.000	20.721	-10.721	-.616	-1.072

26	26	15.000	21.711	-6.711	-.385	-.447
27	27	24.000	22.517	1.483	.085	.062
28	28	37.000	24.687	12.313	.707	.333
29	29	20.000	22.084	-2.084	-.120	-.104
30	30	65.000	29.059	35.941	2.064	.553
31	31	52.000	33.756	18.244	1.048	.351
32	32	35.000	33.261	1.739	.100	.050
33	33	15.000	22.397	-7.397	-.425	-.493
34	34	66.000	42.553	23.447	1.346	.355
35	35	34.000	34.691	-.691	-.040	-.020
36	36	31.000	33.053	-2.053	-.118	-.066
37	37	31.000	31.404	-.404	-.023	-.013
38	38	36.000	30.280	5.720	.328	.159
39	39	19.000	25.087	-6.087	-.350	-.320
40	40	27.000	26.474	.526	.030	.019
41	41	35.000	31.501	3.499	.201	.100
42	42	25.000	41.427	-16.427	-.943	-.657
43	43	34.000	50.301	-16.301	-.936	-.479
44	44	87.000	90.075	-3.075	-.177	-.035
45	45	89.000	74.508	14.492	.832	.163
46	46	10.000	64.253	-54.253	-3.116	-5.425
47	47	46.000	34.194	11.806	.678	.257
48	48	33.000	27.966	5.034	.289	.153
49	49	94.000	83.195	10.805	.620	.115
50	50	26.000	26.121	-.121	-.007	-.005
51	51	33.000	31.625	1.375	.079	.042
52	52	28.000	38.572	-10.572	-.607	-.378
53	53	27.000	27.594	-.594	-.034	-.022
54	54	35.000	43.208	-8.208	-.471	-.235
55	55	28.000	31.110	-3.110	-.179	-.111
56	56	42.000	29.826	12.174	.699	.290
57	57	20.000	20.697	-.697	-.040	-.035
58	58	34.000	25.746	8.254	.474	.243
59	59	25.000	33.633	-8.633	-.496	-.345
60	60	19.000	24.611	-5.611	-.322	-.295
61	61	26.000	29.107	-3.107	-.178	-.120
62	62	25.000	27.989	-2.989	-.172	-.120
63	63	26.000	18.503	7.497	.430	.288
64	64	40.000	24.274	15.726	.903	.393
65	65	47.000	28.394	18.606	1.068	.396
66	66	39.000	21.173	17.827	1.024	.457
67	67	14.000	19.622	-5.622	-.323	-.402
68	68	48.000	27.317	20.683	1.188	.431
69	69	50.000	33.173	16.827	.966	.337
70	70	43.000	32.167	10.833	.622	.252
71	71	73.000	49.508	23.492	1.349	.322
72	72	21.000	32.433	-11.433	-.657	-.544
73	73	42.000	47.165	-5.165	-.297	-.123

74	74	34.000	34.457	-.457	-.026	-.013
75	75	28.000	32.700	-4.700	-.270	-.168
76	76	16.000	23.413	-7.413	-.426	-.463
77	77	41.000	34.132	6.868	.394	.168
78	78	24.000	41.491	-17.491	-1.004	-.729
79	79	14.000	25.753	-11.753	-.675	-.839
80	80	24.000	24.507	-.507	-.029	-.021
81	81	20.000	19.644	.356	.020	.018
82	82	45.000	27.944	17.056	.979	.379
83	83	17.000	19.582	-2.582	-.148	-.152
84	84	22.000	20.286	1.714	.098	.078
85	85	11.000	18.857	-7.857	-.451	-.714
86	86	13.000	18.878	-5.878	-.338	-.452
87	87	53.000	34.456	18.544	1.065	.350
88	88	32.000	22.516	9.484	.545	.296
89	89	28.000	27.570	.430	.025	.015
90	90	23.000	26.002	-3.002	-.172	-.131
91	91	44.000	33.880	10.120	.581	.230
92	92	13.000	25.360	-12.360	-.710	-.951
93	93	23.000	29.150	-6.150	-.353	-.267
94	94	18.000	28.922	-10.922	-.627	-.607
95	95	19.000	29.999	-10.999	-.632	-.579
96	96	28.000	26.436	1.564	.090	.056
97	97	34.000	28.092	5.908	.339	.174
98	98	44.000	28.648	15.352	.882	.349
99	99	54.000	34.259	19.741	1.134	.366

	R BAR SQUARED	.4552
	STANDARD ERROR OF ESTIMATE	12.8532
	MEAN ERROR	.0000
	MEAN SQUARED ERROR	160.1992

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VARIABLE DELETED IS Pb

INDEPENDENT VARIABLE REGRESSION COEFFICIENT PARTIAL DETERMINATION COEFFICIENT

Mn .030822 .4106

REGRESSION CONSTANT R SQUARE R BAR SQUARE STANDARD ERROR OF ESTIMATE

23.035210 .4166 .4106 13.3696

DEPENDENT VARIABLE			Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO	
1	LS 1	50.000	33.545	16.455	.945	.329	
2	2	40.000	32.929	7.071	.406	.177	
3	3	18.000	29.200	-11.200	-.643	-.622	
4	4	25.000	32.559	-7.559	-.434	-.302	
5	5	10.000	23.960	-13.960	-.802	-1.396	
6	6	35.000	24.391	10.609	.609	.303	
7	7	10.000	24.052	-14.052	-.807	-1.405	
8	8	31.000	26.364	4.636	.266	.150	
9	9	10.000	24.114	-14.114	-.810	-1.411	
10	10	29.000	27.227	1.773	.102	.061	
11	11	33.000	25.470	7.530	.432	.228	
12	12	12.000	23.652	-11.652	-.669	-.971	
13	13	8.000	23.498	-15.498	-.890	-1.937	
14	14	7.000	23.652	-16.652	-.956	-2.379	
15	15	9.000	23.713	-14.713	-.845	-1.635	
16	16	8.000	23.220	-15.220	-.874	-1.903	
17	17	24.000	23.559	.441	.025	.018	
18	18	14.000	23.189	-9.189	-.528	-.656	
19	19	8.000	23.220	-15.220	-.874	-1.903	
20	20	20.000	36.566	-16.566	-.951	-.828	
21	21	40.000	30.679	9.321	.535	.233	
22	22	26.000	26.734	-.734	-.042	-.028	
23	23	13.000	24.361	-11.361	-.652	-.874	
24	24	45.000	34.686	10.314	.592	.229	
25	25	10.000	23.405	-13.405	-.770	-1.341	
26	26	15.000	26.611	-11.611	-.667	-.774	

27	27	24.000	27.813	-3.813	-.219	-.159
28	28	37.000	31.049	5.951	.342	.161
29	29	20.000	26.302	-6.302	-.362	-.315
30	30	65.000	29.785	35.215	2.022	.542
31	31	52.000	33.330	18.670	1.072	.359
32	32	35.000	31.727	3.273	.188	.094
33	33	15.000	24.176	-9.176	-.527	-.612
34	34	66.000	36.936	29.064	1.669	.440
35	35	34.000	30.402	3.598	.207	.106
36	36	31.000	32.282	-1.282	-.074	-.041
37	37	31.000	26.364	4.636	.266	.150
38	38	36.000	30.741	5.259	.302	.146
39	39	19.000	26.456	-7.456	-.428	-.392
40	40	27.000	26.795	.205	.012	.008
41	41	35.000	30.833	4.167	.239	.119
42	42	25.000	43.038	-18.038	-1.036	-.722
43	43	34.000	51.083	-17.083	-.981	-.502
44	44	87.000	91.367	-4.367	-.251	-.050
45	45	89.000	69.884	19.116	1.098	.215
46	46	10.000	71.887	-61.887	-3.554	-6.189
47	47	46.000	30.525	15.475	.889	.336
48	48	33.000	26.426	6.574	.378	.199
49	49	94.000	78.514	15.486	.889	.165
50	50	26.000	27.134	-1.134	-.065	-.044
51	51	33.000	31.018	1.982	.114	.060
52	52	28.000	40.511	-12.511	-.718	-.447
53	53	27.000	25.871	1.129	.065	.042
54	54	35.000	43.100	-8.100	-.465	-.231
55	55	28.000	29.384	-1.384	-.080	-.049
56	56	42.000	29.200	12.800	.735	.305
57	57	20.000	25.963	-5.963	-.342	-.298
58	58	34.000	29.169	4.831	.277	.142
59	59	25.000	32.282	-7.282	-.418	-.291
60	60	19.000	25.748	-6.748	-.387	-.355
61	61	26.000	24.669	1.331	.076	.051
62	62	25.000	24.730	.270	.015	.011
63	63	26.000	24.422	1.578	.091	.061
64	64	40.000	30.432	9.568	.549	.239
65	65	47.000	31.388	15.612	.897	.332
66	66	39.000	25.809	13.191	.757	.338
67	67	14.000	24.361	-10.361	-.595	-.740
68	68	48.000	31.511	16.489	.947	.344
69	69	50.000	35.056	14.944	.858	.299
70	70	43.000	28.367	14.633	.840	.340
71	71	73.000	39.525	33.475	1.922	.459
72	72	21.000	31.357	-10.357	-.595	-.493
73	73	42.000	42.083	-.083	-.005	-.002
74	74	34.000	35.241	-1.241	-.071	-.036

75	75	28.000	32.621	-4.621	-.265	-.165
76	76	16.000	23.960	-7.960	-.457	-.497
77	77	41.000	30.432	10.568	.607	.258
78	78	24.000	25.840	-1.840	-.106	-.077
79	79	14.000	23.991	-9.991	-.574	-.714
80	80	24.000	26.456	-2.456	-.141	-.102
81	81	20.000	23.528	-3.528	-.203	-.176
82	82	45.000	27.258	17.742	1.019	.394
83	83	17.000	23.436	-6.436	-.370	-.379
84	84	22.000	23.621	-1.621	-.093	-.074
85	85	11.000	23.220	-12.220	-.702	-1.111
86	86	13.000	23.251	-10.251	-.589	-.789
87	87	53.000	36.104	16.896	.970	.319
88	88	32.000	28.676	3.324	.191	.104
89	89	28.000	28.429	-.429	-.025	-.015
90	90	23.000	23.498	-.498	-.029	-.022
91	91	44.000	33.515	10.485	.602	.238
92	92	13.000	23.405	-10.405	-.598	-.800
93	93	23.000	23.867	-.867	-.050	-.038
94	94	18.000	23.528	-5.528	-.317	-.307
95	95	19.000	23.405	-4.405	-.253	-.232
96	96	28.000	24.145	3.855	.221	.138
97	97	34.000	24.885	9.115	.523	.268
98	98	44.000	27.443	16.557	.951	.376
99	99	54.000	28.891	25.109	1.442	.465

R BAR SQUARED .4106
STANDARD ERROR OF ESTIMATE 13.3696
MEAN ERROR .0000
MEAN SQUARED ERROR 175.1361

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+ END OF RUN +
+ NORMAL STOP IN MLRP +
+++++

GEOQUIMICA SUELOS / CANTABRIA 1990

CALCULO DE ANOMALIAS

LA SECADA

7

	Pb	Zn	Ag	Cd	Fe	Mn	Hg
	2 1 1 1 1 1 1 1						6

LS	Pb	Zn	Ag	Cd	Fe	Mn	Hg
1	13	50	0.5	2	22000	341	0.3
2	16	40	0.5	2	21500	321	0.1
3	9	18	0.5	1	14400	200	0.05
4	12	25	0.5	2	13800	309	0.1
5	10	10	0.5	1	8600	30	0.1
6	17	35	0.5	1	10100	44	0.1
7	16	10	0.5	1	6200	33	0.1
8	12	31	0.5	1	10600	108	0.05
9	13	10	0.5	1	6800	35	0.05
10	17	29	0.5	2	12800	136	0.05
11	27	33	0.5	2	15300	79	0.4
12	14	12	0.5	1	9700	20	0.1
13	11	8	0.5	1	8000	15	0.2
14	13	7	0.5	0.5	7500	20	0.05
15	14	9	1	1	11600	22	0.2
16	13	8	0.5	1	6700	6	0.2
17	15	24	1	0.5	10800	17	0.2
18	12	14	1	1	3300	5	0.1
19	17	8	1	1	6100	6	0.2
20	15	20	0.5	2	15100	439	0.1
21	5	40	0.5	2	19300	248	0.2
22	4	26	0.5	2	17600	120	0.1
23	4	13	0.5	2	15000	43	0.2
24	13	45	0.5	2	24300	378	0.1
25	7	10	0.5	1	1400	12	0.1
26	5	15	0.5	2	4900	116	0.2
27	5	24	0.5	1	4500	155	0.05
28	5	37	0.5	2	13800	260	0.1
29	6	20	0.5	2	9800	106	0.05
30	14	65	0.5	3	18700	219	0.3
31	18	52	0.5	3	16100	334	0.3
32	19	35	0.5	1	12900	282	0.1
33	9	15	0.5	1	14400	37	0.05
34	29	66	0.5	2	12000	451	0.1
35	23	34	0.5	1	11500	239	0.1
36	18	31	0.5	1	17900	300	0.1
37	22	31	0.5	1	7700	108	0.1
38	15	36	0.5	2	19000	250	0.05
39	11	19	0.5	1	18200	111	0.05
40	13	27	0.5	1	15300	122	0.05
41	17	35	0.5	3	27000	253	0.2
42	20	25	0.5	5	24700	649	0.05
43	26	34	0.5	4	44000	910	0.05
44	48	87	0.5	4	59000	2217	0.2
45	46	89	0.5	3	24000	1520	0.05
46	26	10	0.5	4	36300	1585	0.05
47	22	46	0.5	1	22000	243	0.05
48	16	33	0.5	1	11100	110	0.05
49	51	94	0.5	2	17600	1800	0.05

50	12	26	0.5	1	5800	133	0.1
51	17	33	0.5	2	17800	259	0.1
52	18	28	0.5	2	16700	567	0.05
53	16	27	0.5	1	18900	92	0.05
54	23	35	0.5	2	23800	651	0.05
55	18	28	0.5	1	14700	206	0.05
56	16	42	0.5	1	13000	200	0.05
57	4	20	0.5	0.5	7700	95	0.05
58	9	34	0.5	2	25000	199	0.05
59	19	25	0.5	1	15800	300	0.05
60	11	19	0.5	1	9400	88	0.05
61	20	26	0.5	1	14000	53	0.05
62	18	25	0.5	1	15100	55	0.1
63	2	26	0.5	2	17900	45	0.2
64	5	40	0.5	2	10400	240	0.1
65	11	47	1	3	24500	271	0.2
66	5	39	0.5	2	19400	90	0.2
67	4	14	0.5	2	9000	43	0.1
68	9	48	0.5	3	24600	275	0.1
69	15	50	1	3	26600	390	0.1
70	21	43	1	2	26300	173	0.1
71	38	73	0.5	2	26800	535	0.2
72	18	21	0.5	1	30000	270	0.2
73	31	42	0.5	2	25600	618	0.2
74	17	34	0.5	2	20500	396	0.1
75	17	28	0.5	2	12900	311	0.05
76	11	16	0.5	1	12900	30	0.05
77	22	41	0.5	2	29000	240	0.05
78	40	24	0.5	1	11000	91	0.05
79	15	14	0.5	1	4400	31	0.05
80	10	24	0.5	1	10900	111	0.05
81	5	20	0.5	1	8000	16	0.05
82	15	45	0.5	2	19300	137	0.2
83	5	17	0.5	1	8800	13	0.1
84	6	22	0.5	1	11600	19	0.05
85	4	11	0.5	1	7200	6	0.05
86	4	13	0.5	1	10000	7	0.05
87	16	53	0.5	2	21500	424	0.05
88	4	32	0.5	2	16100	183	0.05
89	13	28	1	1	15100	175	0.05
90	16	23	0.5	1	8300	15	0.05
91	18	44	0.5	1	8200	340	0.05
92	15	13	0.5	0.5	3300	12	0.05
93	21	23	0.5	1	2600	27	0.05
94	21	18	0.5	1	10800	16	0.1
95	23	19	0.5	1	9100	12	0.1
96	16	28	1	1	12800	36	0.05
97	18	34	1	1	15200	60	0.1
98	16	44	0.5	2	16000	143	0.3
99	24	54	1	2	21400	190	0.05

MULTIPLE LINEAR REGRESSION

704-G1-L2020 JAN 1975
FORTRAN77 VERSION JUL 1986

GEOQUIMICA SUELOS / CANTABRIA 1990
CALCULO DE ANOMALIAS
LA SECADA

NVAL NCOMB IPRNT IFRMT IDELE DELTA
7 0 0 0 0 .0000

+ + + + ANALYSIS NO 1 + + + +

DEPENDENT VARIABLE -- Zn

IDEPTRANSFORMATION CODES..... NOBR IRES IFORC
2 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 6 0

VARIABLE	TRANSFORMATION
Pb	NONE
Zn	NONE
Ag	NONE
Cd	NONE
Fe	NONE
Mn	NONE
Hg	NONE

INPUT DATA

BS NO	OBG	ID	Pb	Zn	Ag	Cd	Fe	M
1	.300	1	13.000	50.000	.500	2.000	22000.000	341.00
2	.100	2	16.000	40.000	.500	2.000	21500.000	321.00
3	.050	3	9.000	18.000	.500	1.000	14400.000	200.00
4	.100	4	12.000	25.000	.500	2.000	13800.000	309.00
5	.100	5	10.000	10.000	.500	1.000	8600.000	30.00
6	.100	6	17.000	35.000	.500	1.000	10100.000	44.00
7	.100	7	16.000	10.000	.500	1.000	6200.000	33.00
8	.050	8	12.000	31.000	.500	1.000	10600.000	108.00
9	.050	9	13.000	10.000	.500	1.000	6800.000	35.00
10	.050	10	17.000	29.000	.500	2.000	12800.000	136.00
11	.400	11	27.000	33.000	.500	2.000	15300.000	79.00
12	.100	12	14.000	12.000	.500	1.000	9700.000	20.00
13	.200	13	11.000	8.000	.500	1.000	8000.000	15.00
14	.050	14	13.000	7.000	.500	.500	7500.000	20.00
15	.200	15	14.000	9.000	1.000	1.000	11600.000	22.00
16	.200	16	13.000	8.000	.500	1.000	6700.000	6.00

17	.200	17	15.000	24.000	1.000	.500	10800.000	17.00
18	.100	18	12.000	14.000	1.000	1.000	3300.000	5.00
19	.200	19	17.000	8.000	1.000	1.000	6100.000	6.00
20	.100	20	15.000	20.000	.500	2.000	15100.000	439.00
21	.200	21	5.000	40.000	.500	2.000	19300.000	248.00
22	.100	22	4.000	26.000	.500	2.000	17600.000	120.00
23	.200	23	4.000	13.000	.500	2.000	15000.000	43.00
24	.100	24	13.000	45.000	.500	2.000	24300.000	378.00
25	.100	25	7.000	10.000	.500	1.000	1400.000	12.00
26	.200	26	5.000	15.000	.500	2.000	4900.000	116.00
27	.050	27	5.000	24.000	.500	1.000	4500.000	155.00
28	.100	28	5.000	37.000	.500	2.000	13800.000	260.00
29	.050	29	6.000	20.000	.500	2.000	9800.000	106.00
30	.300	30	14.000	65.000	.500	3.000	18700.000	219.00
31	.300	31	18.000	52.000	.500	3.000	16100.000	334.00
32	.100	32	19.000	35.000	.500	1.000	12900.000	282.00
33	.050	33	9.000	15.000	.500	1.000	14400.000	37.00
34	.100	34	29.000	66.000	.500	2.000	12000.000	451.00
35	.100	35	23.000	34.000	.500	1.000	11500.000	239.00
36	.100	36	18.000	31.000	.500	1.000	17900.000	300.00
37	.100	37	22.000	31.000	.500	1.000	7700.000	108.00
38	.050	38	15.000	36.000	.500	2.000	19000.000	250.00
39	.050	39	11.000	19.000	.500	1.000	18200.000	111.00
40	.050	40	13.000	27.000	.500	1.000	15300.000	122.00
41	.200	41	17.000	35.000	.500	3.000	27000.000	253.00
42	.050	42	20.000	25.000	.500	5.000	24700.000	649.00
43	.050	43	26.000	34.000	.500	4.000	44000.000	910.00
44	.200	44	48.000	87.000	.500	4.000	59000.000	2217.00
45	.050	45	46.000	89.000	.500	3.000	24000.000	1520.00
46	.050	46	26.000	10.000	.500	4.000	36300.000	1585.00
47	.050	47	22.000	46.000	.500	1.000	22000.000	243.00
48	.050	48	16.000	33.000	.500	1.000	11100.000	110.00
49	.050	49	51.000	94.000	.500	2.000	17600.000	1800.00
50	.100	50	12.000	26.000	.500	1.000	5800.000	133.00
51	.100	51	17.000	33.000	.500	2.000	17800.000	259.00
52	.050	52	18.000	28.000	.500	2.000	16700.000	567.00
53	.050	53	16.000	27.000	.500	1.000	18900.000	92.00
54	.050	54	23.000	35.000	.500	2.000	23800.000	651.00
55	.050	55	18.000	28.000	.500	1.000	14700.000	206.00
56	.050	56	16.000	42.000	.500	1.000	13000.000	200.00
57	.050	57	4.000	20.000	.500	.500	7700.000	95.00
58	.050	58	9.000	34.000	.500	2.000	25000.000	199.00
59	.050	59	19.000	25.000	.500	1.000	15800.000	300.00
60	.050	60	11.000	19.000	.500	1.000	9400.000	88.00
61	.050	61	20.000	26.000	.500	1.000	14000.000	53.00
62	.100	62	18.000	25.000	.500	1.000	15100.000	55.00
63	.200	63	2.000	26.000	.500	2.000	17900.000	45.00
64	.100	64	5.000	40.000	.500	2.000	10400.000	240.00
65	.200	65	11.000	47.000	1.000	3.000	24500.000	271.00
66	.200	66	5.000	39.000	.500	2.000	19400.000	90.00
67	.100	67	4.000	14.000	.500	2.000	9000.000	43.00
68	.100	68	9.000	48.000	.500	3.000	24600.000	275.00
69	.100	69	15.000	50.000	1.000	3.000	26600.000	390.00
70	.100	70	21.000	43.000	1.000	2.000	26300.000	173.00
71	.200	71	38.000	73.000	.500	2.000	26800.000	535.00

72	.200	72	18.000	21.000	.500	1.000	30000.000	270.00
73	.200	73	31.000	42.000	.500	2.000	25600.000	618.00
74	.100	74	17.000	34.000	.500	2.000	20500.000	396.00
75	.050	75	17.000	28.000	.500	2.000	12900.000	311.00
76	.050	76	11.000	16.000	.500	1.000	12900.000	30.00
77	.050	77	22.000	41.000	.500	2.000	29000.000	240.00
78	.050	78	40.000	24.000	.500	1.000	11000.000	91.00
79	.050	79	15.000	14.000	.500	1.000	4400.000	31.00
80	.050	80	10.000	24.000	.500	1.000	10900.000	111.00
81	.050	81	5.000	20.000	.500	1.000	8000.000	16.00
82	.200	82	15.000	45.000	.500	2.000	19300.000	137.00
83	.100	83	5.000	17.000	.500	1.000	8800.000	13.00
84	.050	84	6.000	22.000	.500	1.000	11600.000	19.00
85	.050	85	4.000	11.000	.500	1.000	7200.000	6.00
86	.050	86	4.000	13.000	.500	1.000	10000.000	7.00
87	.050	87	16.000	53.000	.500	2.000	21500.000	424.00
88	.050	88	4.000	32.000	.500	2.000	16100.000	183.00
89	.050	89	13.000	28.000	1.000	1.000	15100.000	175.00
90	.050	90	16.000	23.000	.500	1.000	8300.000	15.00
91	.050	91	18.000	44.000	.500	1.000	8200.000	340.00
92	.050	92	15.000	13.000	.500	.500	3300.000	12.00
93	.050	93	21.000	23.000	.500	1.000	2600.000	27.00
94	.100	94	21.000	18.000	.500	1.000	10800.000	16.00
95	.100	95	23.000	19.000	.500	1.000	9100.000	12.00
96	.050	96	16.000	28.000	1.000	1.000	12800.000	36.00
97	.100	97	18.000	34.000	1.000	1.000	15200.000	60.00
98	.300	98	16.000	44.000	.500	2.000	16000.000	143.00
99	.050	99	24.000	54.000	1.000	2.000	21400.000	190.00

STATISTICS OF DATA

BASED ON 99 OBSERVATIONS

VARIABLE	AVERAGE	VARIANCE	STANDARD DEVIATION	DEPENDENT VARIABLE
Pb	15.7071	85.6174	9.2530	
Ag	.5556	.0249	.1579	
Cd	1.6061	.7208	.8490	
Fe	15420.2000	76907160.0000	8769.6730	
Mn	244.9798	132975.3000	364.6578	
Hg	.1045	.0055	.0739	
Zn	30.5859	303.2451	17.4139	

SIMPLE CORRELATION COEFFICIENTS

VARIABLE	Pb	Ag	Cd	Fe	Mn	Hg	Zn
Pb	1.0000	.0000	.2618	.4435	.6859	.0000	.6014
Ag	.0000	1.0000	.0000	.0000	-.0643	.0000	.0000
Cd	.2618	.0000	1.0000	.7217	.6322	.2325	.4925
Fe	.4435	.0000	.7217	1.0000	.6951	.1303	.5644
Mn	.6859	-.0643	.6322	.6951	1.0000	.0000	.6407
Hg	.0000	.0000	.2325	.1303	.0000	1.0000	.1643
Zn	.6014	.0000	.4925	.5644	.6407	.1643	1.0000

INDEPENDENT
VARIABLE

REGRESSION
COEFFICIENT

PARTIAL
DETERMINATION
COEFFICIENT

Pb	.636807	.0894
Ag	2.393644	.0000
Cd	2.398899	.0000
Fe	.000280	.0045
Mn	.011596	.0200
Hg	30.543550	.0189

REGRESSION
CONSTANT
5.043853

R
SQUARE
.5261

R BAR
SQUARE
.4952

STANDARD
ERROR OF
ESTIMATE
12.3726

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	LS 1	50.000	38.602	11.398	.655	.228
2	2	40.000	34.032	5.968	.343	.149
3	3	18.000	22.254	-4.254	-.244	-.236
4	4	25.000	29.187	-4.187	-.240	-.167
5	5	10.000	20.821	-10.821	-.621	-1.082
6	6	35.000	25.861	9.139	.525	.261
7	7	10.000	24.004	-14.004	-.804	-1.400
8	8	31.000	22.033	8.967	.515	.289
9	9	10.000	20.758	-10.758	-.618	-1.076
10	10	29.000	28.557	.443	.025	.015
11	11	33.000	45.655	-12.655	-.727	-.383
12	12	12.000	23.561	-11.561	-.664	-.963
13	13	8.000	24.170	-16.170	-.929	-2.021
14	14	7.000	19.580	-12.580	-.722	-1.797
15	15	9.000	28.368	-19.368	-1.112	-2.152
16	16	8.000	24.975	-16.975	-.975	-2.122
17	17	24.000	27.523	-3.523	-.202	-.147
18	18	14.000	21.516	-7.516	-.432	-.537
19	19	8.000	28.551	-20.551	-1.180	-2.569
20	20	20.000	32.969	-12.969	-.745	-.648
21	21	40.000	28.618	11.382	.654	.285
22	22	26.000	22.966	3.034	.174	.117
23	23	13.000	24.398	-11.398	-.655	-.877
24	24	45.000	33.567	11.433	.657	.254
25	25	10.000	16.683	-6.683	-.384	-.668
26	26	15.000	23.050	-8.050	-.462	-.537
27	27	24.000	16.410	7.590	.436	.316
28	28	37.000	24.161	12.839	.737	.347
29	29	20.000	20.363	-.363	-.021	-.018
30	30	65.000	39.298	25.702	1.476	.395
31	31	52.000	42.450	9.550	.548	.184
32	32	35.000	30.680	4.320	.248	.123

33	33	15.000	20.364	-5.364	-.308	-.358
34	34	66.000	41.154	24.846	1.427	.376
35	35	34.000	32.336	1.664	.096	.049
36	36	31.000	31.654	-.654	-.038	-.021
37	37	31.000	29.115	1.885	.108	.061
38	38	36.000	30.343	5.657	.325	.157
39	39	19.000	23.561	-4.561	-.262	-.240
40	40	27.000	24.149	2.851	.164	.106
41	41	35.000	40.875	-5.875	-.337	-.168
42	42	25.000	46.949	-21.949	-1.260	-.878
43	43	34.000	56.808	-22.808	-1.310	-.671
44	44	87.000	94.761	-7.761	-.446	-.089
45	45	89.000	68.612	20.388	1.171	.229
46	46	10.000	62.477	-52.477	-3.013	-5.248
47	47	46.000	33.162	12.838	.737	.279
48	48	33.000	24.743	8.257	.474	.250
49	49	94.000	70.850	23.150	1.329	.246
50	50	26.000	22.504	3.496	.201	.134
51	51	33.000	32.912	.088	.005	.003
52	52	28.000	35.285	-7.285	-.418	-.260
53	53	27.000	26.721	.279	.016	.010
54	54	35.000	41.434	-6.434	-.369	-.184
55	55	28.000	28.139	-.139	-.008	-.005
56	56	42.000	26.319	15.681	.900	.373
57	57	20.000	14.775	5.225	.300	.261
58	58	34.000	27.613	6.387	.367	.188
59	59	25.000	30.174	-5.174	-.297	-.207
60	60	19.000	20.827	-1.827	-.105	-.096
61	61	26.000	27.442	-1.442	-.083	-.055
62	62	25.000	28.028	-3.028	-.174	-.121
63	63	26.000	23.961	2.039	.117	.078
64	64	40.000	22.976	17.024	.978	.426
65	65	47.000	37.759	9.241	.531	.197
66	66	39.000	26.814	12.186	.700	.312
67	67	14.000	19.662	-5.662	-.325	-.404
68	68	48.000	32.309	15.691	.901	.327
69	69	50.000	39.220	10.780	.619	.216
70	70	43.000	38.042	4.958	.285	.115
71	71	73.000	55.063	17.937	1.030	.246
72	72	21.000	37.752	-16.752	-.962	-.798
73	73	42.000	51.232	-9.232	-.530	-.220
74	74	34.000	35.258	-1.258	-.072	-.037
75	75	28.000	30.614	-2.614	-.150	-.093
76	76	16.000	21.136	-5.136	-.295	-.321
77	77	41.000	37.489	3.511	.202	.086
78	78	24.000	39.778	-15.778	-.906	-.657
79	79	14.000	21.312	-7.312	-.420	-.522
80	80	24.000	20.878	3.122	.179	.130
81	81	20.000	15.779	4.221	.242	.211
82	82	45.000	33.699	11.301	.649	.251
83	83	17.000	17.496	-.496	-.028	-.029
84	84	22.000	17.460	4.540	.261	.206
85	85	11.000	14.802	-3.802	-.218	-.346
86	86	13.000	15.599	-2.599	-.149	-.200
87	87	53.000	33.699	19.301	1.108	.364

88	88	32.000	21.749	10.251	.589	.320
89	89	28.000	25.905	2.095	.120	.075
90	90	23.000	22.857	.143	.008	.006
91	91	44.000	27.871	16.129	.926	.367
92	92	13.000	19.584	-6.584	-.378	-.506
93	93	23.000	24.582	-1.582	-.091	-.069
94	94	18.000	28.280	-10.280	-.590	-.571
95	95	19.000	29.031	-10.031	-.576	-.528
96	96	28.000	25.558	2.442	.140	.087
97	97	34.000	29.310	4.690	.269	.138
98	98	44.000	36.534	7.466	.429	.170
99	99	54.000	37.249	16.751	.962	.310

R BAR SQUARED .4952
STANDARD ERROR OF ESTIMATE 12.3726
MEAN ERROR .0000
MEAN SQUARED ERROR 142.2566

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VARIABLE DELETED IS Ag

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Fb	.644306	.0931
Cd	2.395145	.0000
Fe	.000289	.0058
Mn	.011208	.0192
Hg	30.790270	.0195

REGRESSION CONSTANT 6.203733
R SQUARE .5257
R BAR SQUARE .5002
STANDARD ERROR OF ESTIMATE 12.3117

DEPENDENT VARIABLE		Zn	ERROR AS			
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	LS 1	50.000	38.779	11.221	.644	.224
2	2	40.000	34.185	5.815	.334	.145
3	3	18.000	22.335	-4.335	-.249	-.241
4	4	25.000	29.251	-4.251	-.244	-.170
5	5	10.000	20.939	-10.939	-.628	-1.094
6	6	35.000	26.039	8.961	.515	.256
7	7	10.000	24.146	-14.146	-.812	-1.415
8	8	31.000	22.140	8.860	.509	.286
9	9	10.000	20.869	-10.869	-.624	-1.087
10	10	29.000	28.705	.295	.017	.010
11	11	33.000	46.008	-13.008	-.747	-.394

12	12	12.000	23.722	-11.722	-.673	-.977
13	13	8.000	24.321	-16.321	-.937	-2.040
14	14	7.000	19.706	-12.706	-.730	-1.815
15	15	9.000	27.372	-18.372	-1.055	-2.041
16	16	8.000	25.134	-17.134	-.984	-2.142
17	17	24.000	26.532	-2.532	-.145	-.105
18	18	14.000	20.418	-6.418	-.369	-.458
19	19	8.000	27.538	-19.538	-1.122	-2.442
20	20	20.000	33.016	-13.016	-.747	-.651
21	21	40.000	28.723	11.277	.648	.282
22	22	26.000	23.075	2.925	.168	.113
23	23	13.000	24.540	-11.540	-.663	-.888
24	24	45.000	33.699	11.301	.649	.251
25	25	10.000	16.727	-6.727	-.386	-.673
26	26	15.000	23.088	-8.088	-.464	-.539
27	27	24.000	16.396	7.604	.437	.317
28	28	37.000	24.192	12.808	.736	.346
29	29	20.000	20.416	-.416	-.024	-.021
30	30	65.000	39.498	25.502	1.464	.392
31	31	52.000	42.614	9.386	.539	.181
32	32	35.000	30.803	4.197	.241	.120
33	33	15.000	20.508	-5.508	-.316	-.367
34	34	66.000	41.276	24.724	1.420	.375
35	35	34.000	32.495	1.505	.086	.044
36	36	31.000	31.804	-.804	-.046	-.026
37	37	31.000	29.285	1.715	.098	.055
38	38	36.000	30.484	5.516	.317	.153
39	39	19.000	23.723	-4.723	-.271	-.249
40	40	27.000	24.298	2.702	.155	.100
41	41	35.000	41.129	-6.129	-.352	-.175
42	42	25.000	47.008	-22.008	-1.264	-.880
43	43	34.000	56.974	-22.974	-1.319	-.676
44	44	87.000	94.745	-7.745	-.445	-.089
45	45	89.000	68.530	20.470	1.176	.230
46	46	10.000	62.317	-52.317	-3.004	-5.232
47	47	46.000	33.386	12.614	.724	.274
48	48	33.000	24.884	8.116	.466	.246
49	49	94.000	70.647	23.353	1.341	.248
50	50	26.000	22.574	3.426	.197	.132
51	51	33.000	33.066	-.066	-.004	-.002
52	52	28.000	35.306	-7.306	-.420	-.261
53	53	27.000	26.933	.067	.004	.002
54	54	35.000	41.518	-6.518	-.374	-.186
55	55	28.000	28.287	-.287	-.017	-.010
56	56	42.000	26.441	15.559	.893	.370
57	57	20.000	14.805	5.195	.298	.260
58	58	34.000	27.778	6.222	.357	.183
59	59	25.000	30.303	-5.303	-.305	-.212
60	60	19.000	20.925	-1.925	-.111	-.101
61	61	26.000	27.659	-1.659	-.095	-.064
62	62	25.000	28.250	-3.250	-.187	-.130
63	63	26.000	24.111	1.889	.108	.073
64	64	40.000	22.986	17.014	.977	.425
65	65	47.000	36.743	10.257	.589	.218
66	66	39.000	26.981	12.019	.690	.308
67	67	14.000	19.730	-5.730	-.329	-.409

68	68	48.000	32.449	15.551	.893	.324
69	69	50.000	38.181	11.819	.679	.236
70	70	43.000	37.133	5.867	.337	.136
71	71	73.000	55.367	17.633	1.013	.242
72	72	21.000	38.039	-17.039	-.978	-.811
73	73	42.000	51.441	-9.441	-.542	-.225
74	74	34.000	35.381	-1.381	-.079	-.041
75	75	28.000	30.696	-2.696	-.155	-.096
76	76	16.000	21.285	-5.285	-.304	-.330
77	77	41.000	37.768	3.232	.186	.079
78	78	24.000	40.105	-16.105	-.925	-.671
79	79	14.000	21.420	-7.420	-.426	-.530
80	80	24.000	20.971	3.029	.174	.126
81	81	20.000	15.848	4.152	.238	.208
82	82	45.000	33.922	11.078	.636	.246
83	83	17.000	17.585	-.585	-.034	-.034
84	84	22.000	17.565	4.435	.255	.202
85	85	11.000	14.861	-3.861	-.222	-.351
86	86	13.000	15.680	-2.680	-.154	-.206
87	87	53.000	33.800	19.200	1.103	.362
88	88	32.000	21.809	10.191	.585	.318
89	89	28.000	24.834	3.166	.182	.113
90	90	23.000	23.011	-.011	-.001	.000
91	91	44.000	27.913	16.087	.924	.366
92	92	13.000	19.692	-6.692	-.384	-.515
93	93	23.000	24.722	-1.722	-.099	-.075
94	94	18.000	28.505	-10.505	-.603	-.584
95	95	19.000	29.258	-10.258	-.589	-.540
96	96	28.000	24.545	3.455	.198	.123
97	97	34.000	28.335	5.665	.325	.167
98	98	44.000	36.761	7.239	.416	.165
99	99	54.000	36.303	17.697	1.016	.328

R BAR SQUARED .5002
STANDARD ERROR OF ESTIMATE 12.3117
MEAN ERROR .0000
MEAN SQUARED ERROR 142.3904

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VARIABLE DELETED IS Cd

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	.579860	.0837
Fe	.000397	.0282
Mn	.014083	.0456
Hg	36.031480	.0336

REGRESSION R R BAR STANDARD ERROR OF

CONSTANT
8.143696

SQUARE
.5206

SQUARE
.5002

ESTIMATE
12.3105

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	LS 1	50.000	40.021	9.979	.573	.200
2	2	40.000	34.074	5.926	.340	.148
3	3	18.000	23.693	-5.693	-.327	-.316
4	4	25.000	28.531	-3.531	-.203	-.141
5	5	10.000	21.380	-11.380	-.653	-1.138
6	6	35.000	26.231	8.769	.504	.251
7	7	10.000	23.949	-13.949	-.801	-1.395
8	8	31.000	22.630	8.370	.481	.270
9	9	10.000	20.674	-10.674	-.613	-1.067
10	10	29.000	26.796	2.204	.127	.076
11	11	33.000	45.395	-12.395	-.712	-.376
12	12	12.000	23.995	-11.995	-.689	-1.000
13	13	8.000	25.113	-17.113	-.983	-2.139
14	14	7.000	20.740	-13.740	-.789	-1.963
15	15	9.000	28.380	-19.380	-1.113	-2.153
16	16	8.000	25.631	-17.631	-1.012	-2.204
17	17	24.000	28.572	-4.572	-.263	-.190
18	18	14.000	20.085	-6.085	-.349	-.435
19	19	8.000	27.712	-19.712	-1.132	-2.464
20	20	20.000	32.617	-12.617	-.725	-.631
21	21	40.000	29.398	10.602	.609	.265
22	22	26.000	22.738	3.262	.187	.125
23	23	13.000	24.226	-11.226	-.645	-.864
24	24	45.000	34.248	10.752	.617	.239
25	25	10.000	16.530	-6.530	-.375	-.653
26	26	15.000	21.827	-6.827	-.392	-.455
27	27	24.000	16.813	7.187	.413	.299
28	28	37.000	23.782	13.218	.759	.357
29	29	20.000	18.805	1.195	.069	.060
30	30	65.000	37.574	27.426	1.575	.422
31	31	52.000	40.481	11.519	.661	.222
32	32	35.000	31.853	3.147	.181	.090
33	33	15.000	21.398	-6.398	-.367	-.427
34	34	66.000	39.675	26.325	1.512	.399
35	35	34.000	33.012	.988	.057	.029
36	36	31.000	33.510	-2.510	-.144	-.081
37	37	31.000	29.079	1.921	.110	.062
38	38	36.000	29.701	6.299	.362	.175
39	39	19.000	25.107	-6.107	-.351	-.321
40	40	27.000	25.271	1.729	.099	.064
41	41	35.000	39.482	-4.482	-.257	-.128
42	42	25.000	40.481	-15.481	-.889	-.619
43	43	34.000	55.292	-21.292	-1.223	-.626
44	44	87.000	97.811	-10.811	-.621	-.124
45	45	89.000	67.546	21.454	1.232	.241
46	46	10.000	61.744	-51.744	-2.971	-5.174
47	47	46.000	34.852	11.148	.640	.242

48	48	33.000	25.176	7.824	.449	.237
49	49	94.000	71.849	22.151	1.272	.236
50	50	26.000	22.879	3.121	.179	.120
51	51	33.000	32.313	.687	.039	.021
52	52	28.000	34.993	-6.993	-.402	-.250
53	53	27.000	28.016	-1.016	-.058	-.038
54	54	35.000	41.892	-6.892	-.396	-.197
55	55	28.000	29.115	-1.115	-.064	-.040
56	56	42.000	27.197	14.803	.850	.352
57	57	20.000	16.657	3.343	.192	.167
58	58	34.000	27.884	6.116	.351	.180
59	59	25.000	31.455	-6.455	-.371	-.258
60	60	19.000	21.292	-2.292	-.132	-.121
61	61	26.000	27.843	-1.843	-.106	-.071
62	62	25.000	28.949	-3.949	-.227	-.158
63	63	26.000	24.244	1.756	.101	.068
64	64	40.000	22.152	17.848	1.025	.446
65	65	47.000	35.264	11.736	.674	.250
66	66	39.000	27.213	11.787	.677	.302
67	67	14.000	18.242	-4.242	-.244	-.303
68	68	48.000	30.597	17.403	.999	.363
69	69	50.000	36.489	13.511	.776	.270
70	70	43.000	36.794	6.206	.356	.144
71	71	73.000	55.551	17.449	1.002	.239
72	72	21.000	41.491	-20.491	-1.177	-.976
73	73	42.000	52.185	-10.185	-.585	-.242
74	74	34.000	35.314	-1.314	-.075	-.039
75	75	28.000	29.300	-1.300	-.075	-.046
76	76	16.000	21.864	-5.864	-.337	-.366
77	77	41.000	37.587	3.413	.196	.083
78	78	24.000	38.785	-14.785	-.849	-.616
79	79	14.000	20.825	-6.825	-.392	-.488
80	80	24.000	21.631	2.369	.136	.099
81	81	20.000	16.244	3.756	.216	.188
82	82	45.000	33.634	11.366	.653	.253
83	83	17.000	18.320	-1.320	-.076	-.078
84	84	22.000	18.294	3.706	.213	.168
85	85	11.000	15.205	-4.205	-.242	-.382
86	86	13.000	16.330	-3.330	-.191	-.256
87	87	53.000	33.723	19.277	1.107	.364
88	88	32.000	21.229	10.771	.619	.337
89	89	28.000	25.938	2.062	.118	.074
90	90	23.000	22.727	.273	.016	.012
91	91	44.000	28.424	15.576	.894	.354
92	92	13.000	20.121	-7.121	-.409	-.548
93	93	23.000	23.534	-.534	-.031	-.023
94	94	18.000	28.434	-10.434	-.599	-.580
95	95	19.000	28.863	-9.863	-.566	-.519
96	96	28.000	24.808	3.192	.183	.114
97	97	34.000	29.059	4.941	.284	.145
98	98	44.000	36.592	7.408	.425	.168
99	99	54.000	35.027	18.973	1.090	.351

R BAR SQUARED .5002

STANDARD ERROR OF ESTIMATE 12.3105

MEAN ERROR .0000
 MEAN SQUARED ERROR 143.8943

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VARIABLE DELETED IS Fe

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	.553875	.0736
Mn	.021224	.1629
Hg	44.252500	.0561

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
12.060310	.5015	.4858	12.4876

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	LS 1	50.000	39.774	10.226	.587	.205
2	2	40.000	32.160	7.840	.450	.196
3	3	18.000	23.503	-5.503	-.316	-.306
4	4	25.000	29.690	-4.690	-.269	-.188
5	5	10.000	22.661	-12.661	-.727	-1.266
6	6	35.000	26.835	8.165	.469	.233
7	7	10.000	26.048	-16.048	-.922	-1.605
8	8	31.000	23.212	7.788	.447	.251
9	9	10.000	22.216	-12.216	-.702	-1.222
10	10	29.000	26.575	2.425	.139	.084
11	11	33.000	46.393	-13.393	-.769	-.406
12	12	12.000	24.664	-12.664	-.727	-1.055
13	13	8.000	27.322	-19.322	-1.110	-2.415
14	14	7.000	21.898	-14.898	-.856	-2.128
15	15	9.000	29.132	-20.132	-1.156	-2.237
16	16	8.000	28.239	-20.239	-1.162	-2.530
17	17	24.000	29.580	-5.580	-.320	-.232
18	18	14.000	23.238	-9.238	-.531	-.660
19	19	8.000	30.454	-22.454	-1.289	-2.807
20	20	20.000	34.111	-14.111	-.810	-.706
21	21	40.000	28.944	11.056	.635	.276
22	22	26.000	21.248	4.752	.273	.183
23	23	13.000	24.039	-11.039	-.634	-.849
24	24	45.000	31.709	13.291	.763	.295
25	25	10.000	20.617	-10.617	-.610	-1.062
26	26	15.000	26.142	-11.142	-.640	-.743
27	27	24.000	20.332	3.668	.211	.153
28	28	37.000	24.773	12.227	.702	.330

29	29	20.000	19.846	.154	.009	.008
30	30	65.000	37.738	27.262	1.566	.419
31	31	52.000	42.395	9.605	.552	.185
32	32	35.000	32.994	2.006	.115	.057
33	33	15.000	20.043	-5.043	-.290	-.336
34	34	66.000	42.120	23.880	1.371	.362
35	35	34.000	34.297	-.297	-.017	-.009
36	36	31.000	32.822	-1.822	-.105	-.059
37	37	31.000	30.963	.037	.002	.001
38	38	36.000	27.887	8.113	.466	.225
39	39	19.000	22.721	-3.721	-.214	-.196
40	40	27.000	24.063	2.937	.169	.109
41	41	35.000	35.696	-.696	-.040	-.020
42	42	25.000	39.125	-14.125	-.811	-.565
43	43	34.000	47.987	-13.987	-.803	-.411
44	44	87.000	94.550	-7.550	-.434	-.087
45	45	89.000	72.011	16.989	.976	.191
46	46	10.000	62.313	-52.313	-3.004	-5.231
47	47	46.000	31.616	14.384	.826	.313
48	48	33.000	25.470	7.530	.432	.228
49	49	94.000	80.723	13.277	.762	.141
50	50	26.000	25.955	.045	.003	.002
51	51	33.000	31.398	1.602	.092	.049
52	52	28.000	36.277	-8.277	-.475	-.296
53	53	27.000	25.088	1.912	.110	.071
54	54	35.000	40.829	-5.829	-.335	-.167
55	55	28.000	28.615	-.615	-.035	-.022
56	56	42.000	27.380	14.620	.840	.348
57	57	20.000	18.505	1.495	.086	.075
58	58	34.000	23.481	10.519	.604	.309
59	59	25.000	31.164	-6.164	-.354	-.247
60	60	19.000	22.233	-3.233	-.186	-.170
61	61	26.000	26.475	-.475	-.027	-.018
62	62	25.000	27.623	-2.623	-.151	-.105
63	63	26.000	22.974	3.026	.174	.116
64	64	40.000	24.349	15.651	.899	.391
65	65	47.000	32.755	14.245	.818	.303
66	66	39.000	25.590	13.410	.770	.344
67	67	14.000	19.614	-5.614	-.322	-.401
68	68	48.000	27.307	20.693	1.188	.431
69	69	50.000	33.071	16.929	.972	.339
70	70	43.000	31.789	11.211	.644	.261
71	71	73.000	53.313	19.687	1.131	.270
72	72	21.000	36.611	-15.611	-.896	-.743
73	73	42.000	51.197	-9.197	-.528	-.219
74	74	34.000	34.306	-.306	-.018	-.009
75	75	28.000	30.289	-2.289	-.131	-.082
76	76	16.000	21.002	-5.002	-.287	-.313
77	77	41.000	31.552	9.448	.543	.230
78	78	24.000	38.359	-14.359	-.825	-.598
79	79	14.000	23.239	-9.239	-.531	-.660
80	80	24.000	22.168	1.832	.105	.076
81	81	20.000	17.382	2.618	.150	.131
82	82	45.000	32.127	12.873	.739	.286

83	83	17.000	19.531	-2.531	-.145	-.149
84	84	22.000	17.999	4.001	.230	.182
85	85	11.000	16.616	-5.616	-.322	-.511
86	86	13.000	16.637	-3.637	-.209	-.280
87	87	53.000	32.134	20.866	1.198	.394
88	88	32.000	20.372	11.628	.668	.363
89	89	28.000	25.187	2.813	.162	.100
90	90	23.000	23.453	-.453	-.026	-.020
91	91	44.000	31.459	12.541	.720	.285
92	92	13.000	22.836	-9.836	-.565	-.757
93	93	23.000	26.477	-3.477	-.200	-.151
94	94	18.000	28.457	-10.457	-.600	-.581
95	95	19.000	29.479	-10.479	-.602	-.552
96	96	28.000	23.899	4.101	.236	.146
97	97	34.000	27.729	6.271	.360	.184
98	98	44.000	37.233	6.767	.389	.154
99	99	54.000	31.598	22.402	1.286	.415

R BAR SQUARED .4858
STANDARD ERROR OF ESTIMATE 12.4876
MEAN ERROR .0000
MEAN SQUARED ERROR 149.6388

VARIABLE DELETED IS Hg

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	.579907	.0758
Mn	.020670	.1466

REGRESSION CONSTANT 16.413460
R SQUARE .4663
R BAR SQUARE .4552
STANDARD ERROR OF ESTIMATE 12.8532

DEPENDENT VARIABLE			Zn	ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	LS 1	50.000	31.001	18.999	1.091	.380
2	2	40.000	32.327	7.673	.441	.192
3	3	18.000	25.767	-7.767	-.446	-.431
4	4	25.000	29.759	-4.759	-.273	-.190
5	5	10.000	22.833	-12.833	-.737	-1.283
6	6	35.000	27.181	7.819	.449	.223
7	7	10.000	26.374	-16.374	-.940	-1.637
8	8	31.000	25.605	5.395	.310	.174

9	9	10.000	24.676	-14.676	-.843	-1.468
10	10	29.000	29.083	-.083	-.005	-.003
11	11	33.000	33.704	-.704	-.040	-.021
12	12	12.000	24.946	-12.946	-.743	-1.079
13	13	8.000	23.102	-15.102	-.867	-1.888
14	14	7.000	24.366	-17.366	-.997	-2.481
15	15	9.000	24.987	-15.987	-.918	-1.776
16	16	8.000	24.076	-16.076	-.923	-2.010
17	17	24.000	25.463	-1.463	-.084	-.061
18	18	14.000	23.476	-9.476	-.544	-.677
19	19	8.000	26.396	-18.396	-1.056	-2.299
20	20	20.000	34.186	-14.186	-.815	-.709
21	21	40.000	24.439	15.561	.894	.389
22	22	26.000	21.214	4.786	.275	.184
23	23	13.000	19.622	-6.622	-.380	-.509
24	24	45.000	31.766	13.234	.760	.294
25	25	10.000	20.721	-10.721	-.616	-1.072
26	26	15.000	21.711	-6.711	-.385	-.447
27	27	24.000	22.517	1.483	.085	.062
28	28	37.000	24.687	12.313	.707	.333
29	29	20.000	22.084	-2.084	-.120	-.104
30	30	65.000	29.059	35.941	2.064	.553
31	31	52.000	33.756	18.244	1.048	.351
32	32	35.000	33.261	1.739	.100	.050
33	33	15.000	22.397	-7.397	-.425	-.493
34	34	66.000	42.553	23.447	1.346	.355
35	35	34.000	34.691	-.691	-.040	-.020
36	36	31.000	33.053	-2.053	-.118	-.066
37	37	31.000	31.404	-.404	-.023	-.013
38	38	36.000	30.280	5.720	.328	.159
39	39	19.000	25.087	-6.087	-.350	-.320
40	40	27.000	26.474	.526	.030	.019
41	41	35.000	31.501	3.499	.201	.100
42	42	25.000	41.427	-16.427	-.943	-.657
43	43	34.000	50.301	-16.301	-.936	-.479
44	44	87.000	90.075	-3.075	-.177	-.035
45	45	89.000	74.508	14.492	.832	.163
46	46	10.000	64.253	-54.253	-3.116	-5.425
47	47	46.000	34.194	11.806	.678	.257
48	48	33.000	27.966	5.034	.289	.153
49	49	94.000	83.195	10.805	.620	.115
50	50	26.000	26.121	-.121	-.007	-.005
51	51	33.000	31.625	1.375	.079	.042
52	52	28.000	38.572	-10.572	-.607	-.378
53	53	27.000	27.594	-.594	-.034	-.022
54	54	35.000	43.208	-8.208	-.471	-.235
55	55	28.000	31.110	-3.110	-.179	-.111
56	56	42.000	29.826	12.174	.699	.290
57	57	20.000	20.697	-.697	-.040	-.035
58	58	34.000	25.746	8.254	.474	.243
59	59	25.000	33.633	-8.633	-.496	-.345
60	60	19.000	24.611	-5.611	-.322	-.295
61	61	26.000	29.107	-3.107	-.178	-.120
62	62	25.000	27.989	-2.989	-.172	-.120

63	63	26.000	18.503	7.497	.430	.288
64	64	40.000	24.274	15.726	.903	.393
65	65	47.000	28.394	18.606	1.068	.396
66	66	39.000	21.173	17.827	1.024	.457
67	67	14.000	19.622	-5.622	-.323	-.402
68	68	48.000	27.317	20.683	1.188	.431
69	69	50.000	33.173	16.827	.966	.337
70	70	43.000	32.167	10.833	.622	.252
71	71	73.000	49.508	23.492	1.349	.322
72	72	21.000	32.433	-11.433	-.657	-.544
73	73	42.000	47.165	-5.165	-.297	-.123
74	74	34.000	34.457	-.457	-.026	-.013
75	75	28.000	32.700	-4.700	-.270	-.168
76	76	16.000	23.413	-7.413	-.426	-.463
77	77	41.000	34.132	6.868	.394	.168
78	78	24.000	41.491	-17.491	-1.004	-.729
79	79	14.000	25.753	-11.753	-.675	-.839
80	80	24.000	24.507	-.507	-.029	-.021
81	81	20.000	19.644	.356	.020	.018
82	82	45.000	27.944	17.056	.979	.379
83	83	17.000	19.582	-2.582	-.148	-.152
84	84	22.000	20.286	1.714	.098	.078
85	85	11.000	18.857	-7.857	-.451	-.714
86	86	13.000	18.878	-5.878	-.338	-.452
87	87	53.000	34.456	18.544	1.065	.350
88	88	32.000	22.516	9.484	.545	.296
89	89	28.000	27.570	.430	.025	.015
90	90	23.000	26.002	-3.002	-.172	-.131
91	91	44.000	33.880	10.120	.581	.230
92	92	13.000	25.360	-12.360	-.710	-.951
93	93	23.000	29.150	-6.150	-.353	-.267
94	94	18.000	28.922	-10.922	-.627	-.607
95	95	19.000	29.999	-10.999	-.632	-.579
96	96	28.000	26.436	1.564	.090	.056
97	97	34.000	28.092	5.908	.339	.174
98	98	44.000	28.648	15.352	.882	.349
99	99	54.000	34.259	19.741	1.134	.366

R BAR SQUARED .4552
STANDARD ERROR OF ESTIMATE 12.8532
MEAN ERROR .0000
MEAN SQUARED ERROR 160.1992

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INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT	VARIABLE DELETED IS	Pb
Mn	.030822	.4106		

REGRESSION
CONSTANT
23.035210

R
SQUARE
.4166

R BAR
SQUARE
.4106

STANDARD
ERROR OF
ESTIMATE
13.3696

DEPENDENT VARIABLE

Zn

ERROR AS
DEVIATE

RATIO

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	LS 1	50.000	33.545	16.455	.945	.329
2	2	40.000	32.929	7.071	.406	.177
3	3	18.000	29.200	-11.200	-.643	-.622
4	4	25.000	32.559	-7.559	-.434	-.302
5	5	10.000	23.960	-13.960	-.802	-1.396
6	6	35.000	24.391	10.609	.609	.303
7	7	10.000	24.052	-14.052	-.807	-1.405
8	8	31.000	26.364	4.636	.266	.150
9	9	10.000	24.114	-14.114	-.810	-1.411
10	10	29.000	27.227	1.773	.102	.061
11	11	33.000	25.470	7.530	.432	.228
12	12	12.000	23.652	-11.652	-.669	-.971
13	13	8.000	23.498	-15.498	-.890	-1.937
14	14	7.000	23.652	-16.652	-.956	-2.379
15	15	9.000	23.713	-14.713	-.845	-1.635
16	16	8.000	23.220	-15.220	-.874	-1.903
17	17	24.000	23.559	.441	.025	.018
18	18	14.000	23.189	-9.189	-.528	-.656
19	19	8.000	23.220	-15.220	-.874	-1.903
20	20	20.000	36.566	-16.566	-.951	-.828
21	21	40.000	30.679	9.321	.535	.233
22	22	26.000	26.734	-.734	-.042	-.028
23	23	13.000	24.361	-11.361	-.652	-.874
24	24	45.000	34.686	10.314	.592	.229
25	25	10.000	23.405	-13.405	-.770	-1.341
26	26	15.000	26.611	-11.611	-.667	-.774
27	27	24.000	27.813	-3.813	-.219	-.159
28	28	37.000	31.049	5.951	.342	.161
29	29	20.000	26.302	-6.302	-.362	-.315
30	30	65.000	29.785	35.215	2.022	.542
31	31	52.000	33.330	18.670	1.072	.359
32	32	35.000	31.727	3.273	.188	.094
33	33	15.000	24.176	-9.176	-.527	-.612
34	34	66.000	36.936	29.064	1.669	.440
35	35	34.000	30.402	3.598	.207	.106
36	36	31.000	32.282	-1.282	-.074	-.041
37	37	31.000	26.364	4.636	.266	.150
38	38	36.000	30.741	5.259	.302	.146
39	39	19.000	26.456	-7.456	-.428	-.392
40	40	27.000	26.795	.205	.012	.008
41	41	35.000	30.833	4.167	.239	.119
42	42	25.000	43.038	-18.038	-1.036	-.722
43	43	34.000	51.083	-17.083	-.981	-.502

44	44	87.000	91.367	-4.367	-.251	-.050
45	45	89.000	69.884	19.116	1.098	.215
46	46	10.000	71.887	-61.887	-3.554	-6.189
47	47	46.000	30.525	15.475	.889	.336
48	48	33.000	26.426	6.574	.378	.199
49	49	94.000	78.514	15.486	.889	.165
50	50	26.000	27.134	-1.134	-.065	-.044
51	51	33.000	31.018	1.982	.114	.060
52	52	28.000	40.511	-12.511	-.718	-.447
53	53	27.000	25.871	1.129	.065	.042
54	54	35.000	43.100	-8.100	-.465	-.231
55	55	28.000	29.384	-1.384	-.080	-.049
56	56	42.000	29.200	12.800	.735	.305
57	57	20.000	25.963	-5.963	-.342	-.298
58	58	34.000	29.169	4.831	.277	.142
59	59	25.000	32.282	-7.282	-.418	-.291
60	60	19.000	25.748	-6.748	-.387	-.355
61	61	26.000	24.669	1.331	.076	.051
62	62	25.000	24.730	.270	.015	.011
63	63	26.000	24.422	1.578	.091	.061
64	64	40.000	30.432	9.568	.549	.239
65	65	47.000	31.388	15.612	.897	.332
66	66	39.000	25.809	13.191	.757	.338
67	67	14.000	24.361	-10.361	-.595	-.740
68	68	48.000	31.511	16.489	.947	.344
69	69	50.000	35.056	14.944	.858	.299
70	70	43.000	28.367	14.633	.840	.340
71	71	73.000	39.525	33.475	1.922	.459
72	72	21.000	31.357	-10.357	-.595	-.493
73	73	42.000	42.083	-.083	-.005	-.002
74	74	34.000	35.241	-1.241	-.071	-.036
75	75	28.000	32.621	-4.621	-.265	-.165
76	76	16.000	23.960	-7.960	-.457	-.497
77	77	41.000	30.432	10.568	.607	.258
78	78	24.000	25.840	-1.840	-.106	-.077
79	79	14.000	23.991	-9.991	-.574	-.714
80	80	24.000	26.456	-2.456	-.141	-.102
81	81	20.000	23.528	-3.528	-.203	-.176
82	82	45.000	27.258	17.742	1.019	.394
83	83	17.000	23.436	-6.436	-.370	-.379
84	84	22.000	23.621	-1.621	-.093	-.074
85	85	11.000	23.220	-12.220	-.702	-1.111
86	86	13.000	23.251	-10.251	-.589	-.789
87	87	53.000	36.104	16.896	.970	.319
88	88	32.000	28.676	3.324	.191	.104
89	89	28.000	28.429	-.429	-.025	-.015
90	90	23.000	23.498	-.498	-.029	-.022
91	91	44.000	33.515	10.485	.602	.238
92	92	13.000	23.405	-10.405	-.598	-.800
93	93	23.000	23.867	-.867	-.050	-.038
94	94	18.000	23.528	-5.528	-.317	-.307
95	95	19.000	23.405	-4.405	-.253	-.232
96	96	28.000	24.145	3.855	.221	.138

97	97	34.000	24.885	9.115	.523	.268
98	98	44.000	27.443	16.557	.951	.376
99	99	54.000	28.891	25.109	1.442	.465

R BAR SQUARED	.4106
STANDARD ERROR OF ESTIMATE	13.3696
MEAN ERROR	.0000
MEAN SQUARED ERROR	175.1361

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END OF RUN +
NORMAL STOP IN MLRP +
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PROSPECCION GEOQUIMICA DE ROCAS
(Zonas de Prollezo, Medio Cudeyo y
Matienzo) (Pb, Zn, Cd, Mn, Fe, Mg, Hg)

MULTIPLE LINEAR REGRESSION

704-G1-L2020 JAN 1975
FORTRAN77 VERSION JUL 1986

GEOQUIMICA DE ROCAS / CANTABRIA 1990
CALCULO DE ANOMALIAS
PRELLEZO Y MEDIO CUDEYO

NVAL NCOMB IPRNT IFRMT IDELE DELTA
 7 0 0 0 0 .0000

+ + + + ANALYSIS NO 1 + + + +
DEPENDENT VARIABLE -- Zn

IDEF TRANSFORMATION CODES..... NOBR IRES IFORC
 2 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 6 0

VARIABLE	TRANSFORMATION
Pb	NONE
Zn	NONE
Cd	NONE
Fe	NONE
Mn	NONE
Mg	NONE
Hg	NONE

INPUT DATA (p.p.m.) (en Pb y Cd los valores .500 corresponden a contenidos inferiores a 1 p.p.m. y en Hg los valores .050 corresponden a contenidos inferiores a .1 p.p.m.)

OBS NO	OBS	ID	Pb	Zn	Cd	Fe	Mn	Mg	Hg
1	P	501	32.000	285	.500	1700	79	122100	1.100
2		502	12.000	17	.500	1500	86	106000	.050
3		503	14.000	9	.500	900	33	4470	.050
4		504	5.000	12	2.000	2100	57	136800	.050
5		505	3.000	8	1.000	2200	37	4130	.050
6	MC	506	4.000	5	1.000	600	16	4360	.050
7		507	2.000	7	1.000	2200	97	128300	.050
8		508	3.000	4	1.000	1100	35	154200	.050
9		509	2.000	5	.500	900	35	124100	.050
10		510	1.000	5	.500	900	33	130900	.100
11		511	2.000	6	.500	2400	89	133200	.050
12	A	512	1.000	9	.500	1100	29	4610	.100
13	MC	513	1.000	9	.500	5900	280	137500	.100
14		514	2.000	10	.500	800	16	3900	.100
15		515	.500	14	.500	18000	782	46000	.100
16		516	2.000	8	.500	1100	17	4400	.100
17		517	.500	5	.500	2500	123	101900	.100
18		518	1.000	11	.500	10700	381	31000	.300
19		519	.500	6	1.000	8700	502	133700	.200
20		520	1.000	5	.500	700	17	4320	.300

STATISTICS OF DATA

BASED ON 20 OBSERVATIONS

VARIABLE	AVERAGE	VARIANCE	STANDARD DEVIATION	
Pb	4.4750	55.1704	7.4277	
Cd	.7000	.1421	.3770	
Fe	3300.0000	19472630.0000	4412.7800	
Mn	137.2000	40415.0100	201.0349	
Mg	80794.5000	3757530000.0000	61298.6900	
Hg	.1525	.0557	.2359	
Zn	22.0000	3843.5790	61.9966	DEP. VARIABLE

SIMPLE CORRELATION COEFFICIENTS

VARIABLE	Pb	Cd	Fe	Mn	Mg	Hg	Zn
Pb	1.0000	.0000	.0000	.0000	.0000	.0000	.7476
Cd	.0000	1.0000	.0000	.0000	.0000	.0000	.0000
Fe	.0000	.0000	1.0000	.9796	.0000	.0000	.0000
Mn	.0000	.0000	.9796	1.0000	.0000	.0000	.0000
Mg	.0000	.0000	.0000	.0000	1.0000	.0000	.0000
Hg	.7476	.0000	.0000	.0000	.0000	1.0000	.9398
Zn	.8754	.0000	.0000	.0000	.0000	.9398	1.0000

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	3.242993	.5062
Cd	4.306106	.0000
Fe	.000546	.0000
Mn	-.013103	.0000
Mg	.000039	.0000
Hg	170.038100	.7487

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-24.606990	.9553	.9347	15.8458

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	P 501	285.000	273.009	11.991	.193	.042
2	502	17.000	28.782	-11.782	-.190	-.693
3	503	9.000	31.683	-22.683	-.366	-2.520
4	504	12.000	14.447	-2.447	-.039	-.204
5	505	8.000	-1.192	9.192	.148	1.149
6	MC506	5.000	1.461	3.539	.057	.708
7	507	7.000	-.389	7.389	.119	1.056
8	508	4.000	4.074	-.074	-.001	-.018
9	509	5.000	-2.603	7.603	.123	1.521
10	510	5.000	2.947	2.053	.033	.411
11	511	6.000	-2.137	8.137	.131	1.356
12	512	9.000	-1.807	10.807	.174	1.201
13	513	9.000	2.699	6.301	.102	.700
14	514	10.000	1.415	8.585	.138	.858
15	515	14.000	-2.451	16.451	.265	1.175
16	516	8.000	1.585	6.415	.103	.802
17	517	5.000	-.109	5.109	.082	1.022
18	518	11.000	37.752	-26.752	-.432	-2.432
19	519	6.000	18.707	-12.707	-.205	-2.118
20	520	5.000	32.128	-27.128	-.438	-5.426

R BAR SQUARED .9347
STANDARD ERROR OF ESTIMATE 15.8457
MEAN ERROR .0000
MEAN SQUARED ERROR 163.2065

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VARIABLE DELETED IS Fe

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
Pb	3.226905	.5123	15.2785
Cd	4.378553	.0000	
Mn	-.001356	.0000	
Mg	.000037	.0000	
Hg	170.420700	.7533	
REGRESSION CONSTANT		R BAR SQUARE	
-24.303320		.9393	

DEPENDENT VARIABLE		Zn		ERROR AS RATIO		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	P 501	285.000	273.028	11.972	.193	.042
2	502	17.000	28.942	-11.942	-.193	-.702
3	503	9.000	31.705	-22.705	-.366	-2.523
4	504	12.000	14.103	-2.103	-.034	-.175
5	505	8.000	-1.620	9.620	.155	1.203
6	MC506	5.000	1.644	3.356	.054	.671
7	507	7.000	-.326	7.326	.118	1.047
8	508	4.000	3.945	.055	.001	.014
9	509	5.000	-2.587	7.587	.122	1.517
10	510	5.000	2.962	2.038	.033	.408
11	511	6.000	-2.322	8.322	.134	1.387
12	512	9.000	-1.714	10.714	.173	1.190
13	513	9.000	2.872	6.128	.099	.681
14	514	10.000	1.505	8.495	.137	.850
15	515	14.000	-2.814	16.814	.271	1.201
16	516	8.000	1.522	6.478	.104	.810
17	517	5.000	.152	4.848	.078	.970
18	518	11.000	36.578	-25.578	-.413	-2.325
19	519	6.000	20.048	-14.048	-.227	-2.341
20	520	5.000	32.376	-27.376	-.442	-5.475
R BAR SQUARED				.9393		
STANDARD ERROR OF ESTIMATE				15.2785		
MEAN ERROR				.0000		
MEAN SQUARED ERROR				163.4018		

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VARIABLE DELETED IS Mn

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
Pb	3.246344	.5515	14.7630
Cd	4.441768	.0000	
Mg	.000036	.0000	
Hg	169.953700	.7668	
REGRESSION CONSTANT		R BAR SQUARE	
-24.477570		.9433	
	R SQUARE		
	.9552		

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	P 501	285.000	272.993	12.007	.194	.042
2	502	17.000	29.032	-12.032	-.194	-.708
3	503	9.000	31.852	-22.852	-.369	-2.539
4	504	12.000	14.085	-2.085	-.034	-.174
5	505	8.000	-1.650	9.650	.156	1.206
6	MC506	5.000	1.605	3.395	.055	.679
7	507	7.000	-.404	7.404	.119	1.058
8	508	4.000	3.780	.220	.004	.055
9	509	5.000	-2.777	7.777	.125	1.555
10	510	5.000	2.721	2.279	.037	.456
11	511	6.000	-2.447	8.447	.136	1.408
12	512	9.000	-1.848	10.848	.175	1.205
13	513	9.000	2.960	6.040	.097	.671
14	514	10.000	1.372	8.628	.139	.863
15	515	14.000	-1.974	15.974	.258	1.141
16	516	8.000	1.391	6.609	.107	.826
17	517	5.000	.048	4.952	.080	.990
18	518	11.000	36.715	-25.715	-.415	-2.338
19	519	6.000	20.415	-14.415	-.233	-2.403
20	520	5.000	32.132	-27.132	-.438	-5.426
R BAR SQUARED				.9433		
STANDARD ERROR OF ESTIMATE				14.7630		
MEAN ERROR				.0000		
MEAN SQUARED ERROR				163.4601		

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VARIABLE DELETED IS Cd

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	3.292051	.5618
Mg	.000043	.0000
Hg	167.197400	.7715

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-21.718070	.9546	.9461	14.3968

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	P 501	285.000	272.817	12.183	.197	.043
2	502	17.000	30.723	-13.723	-.221	-.807
3	503	9.000	32.924	-23.924	-.386	-2.658
4	504	12.000	9.009	2.991	.048	.249
5	505	8.000	-3.304	11.304	.182	1.413
6	MC506	5.000	-.002	5.002	.081	1.000
7	507	7.000	-1.234	8.234	.133	1.176
8	508	4.000	3.176	.824	.013	.206
9	509	5.000	-1.416	6.416	.103	1.283
10	510	5.000	3.946	1.054	.017	.211
11	511	6.000	-1.023	7.023	.113	1.170
12	512	9.000	-1.507	10.507	.169	1.167
13	513	9.000	4.231	4.769	.077	.530
14	514	10.000	1.754	8.246	.133	.825
15	515	14.000	-1.366	15.366	.248	1.098
16	516	8.000	1.776	6.224	.100	.778
17	517	5.000	1.048	3.952	.064	.790
18	518	11.000	37.390	-26.390	-.426	-2.399
19	519	6.000	19.140	-13.140	-.212	-2.190
20	520	5.000	31.920	-26.920	-.434	-5.384

R BAR SQUARED	.9461
STANDARD ERROR OF ESTIMATE	14.3968
MEAN ERROR	.0000
MEAN SQUARED ERROR	165.8140

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VARIABLE DELETED IS Mg

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
Pb	3.253908	.5486
Hg	169.662200	.7743

REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-18.434720	.9528	.9473	14.2379

DEPENDENT VARIABLE		Zn		ERROR AS		
OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	DEVIATE	RATIO
1	P 501	285.000	272.319	12.681	.205	.044
2	502	17.000	29.095	-12.095	-.195	-.711
3	503	9.000	35.603	-26.603	-.429	-2.956
4	504	12.000	6.318	5.682	.092	.474
5	505	8.000	-.190	8.190	.132	1.024
6	MC506	5.000	3.064	1.936	.031	.387
7	507	7.000	-3.444	10.444	.168	1.492
8	508	4.000	-.190	4.190	.068	1.047
9	509	5.000	-3.444	8.444	.136	1.689
10	510	5.000	1.785	3.215	.052	.643
11	511	6.000	-3.444	9.444	.152	1.574
12	512	9.000	1.785	7.215	.116	.802
13	513	9.000	1.785	7.215	.116	.802
14	514	10.000	5.039	4.961	.080	.496
15	515	14.000	.158	13.842	.223	.989
16	516	8.000	5.039	2.961	.048	.370
17	517	5.000	.158	4.842	.078	.968
18	518	11.000	35.718	-24.718	-.399	-2.247
19	519	6.000	17.125	-11.125	-.179	-1.854
20	520	5.000	35.718	-30.718	-.495	-6.144

R BAR SQUARED	.9473
STANDARD ERROR OF ESTIMATE	14.2379
MEAN ERROR	.0000
MEAN SQUARED ERROR	172.3104

+++++

VARIABLE DELETED IS

Pb

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	PARTIAL DETERMINATION COEFFICIENT
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Hg	247.830600	.8832
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REGRESSION CONSTANT	R SQUARE	R BAR SQUARE	STANDARD ERROR OF ESTIMATE
-15.794160	.8893	.8832	21.1922

DEPENDENT VARIABLE

Zn

OBS NO	OBS ID	OBSERVED	CALCULATED	RESIDUAL	ERROR AS DEVIATE	RATIO
1	P 501	285.000	256.819	28.181	.455	.099
2	502	17.000	-3.403	20.403	.329	1.200
3	503	9.000	-3.403	12.403	.200	1.378
4	504	12.000	-3.403	15.403	.248	1.284
5	505	8.000	-3.403	11.403	.184	1.425
6	MC506	5.000	-3.403	8.403	.136	1.681
7	507	7.000	-3.403	10.403	.168	1.486
8	508	4.000	-3.403	7.403	.119	1.851
9	509	5.000	-3.403	8.403	.136	1.681
10	510	5.000	8.989	-3.989	-.064	-.798
11	511	6.000	-3.403	9.403	.152	1.567
12	512	9.000	8.989	.011	.000	.001
13	513	9.000	8.989	.011	.000	.001
14	514	10.000	8.989	1.011	.016	.101
15	515	14.000	8.989	5.011	.081	.358
16	516	8.000	8.989	-.989	-.016	-.124
17	517	5.000	8.989	-3.989	-.064	-.798
18	518	11.000	58.555	-47.555	-.767	-4.323
19	519	6.000	33.772	-27.772	-.448	-4.629
20	520	5.000	58.555	-53.555	-.864	-10.711

R BAR SQUARED	.8832
STANDARD ERROR OF ESTIMATE	21.1922
MEAN ERROR	.0000
MEAN SQUARED ERROR	404.1981

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+++++  
+ END OF RUN +  
+ NORMAL STOP IN MLRP +  
+++++
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CORRELACION DE PARES DE ELEMENTOS

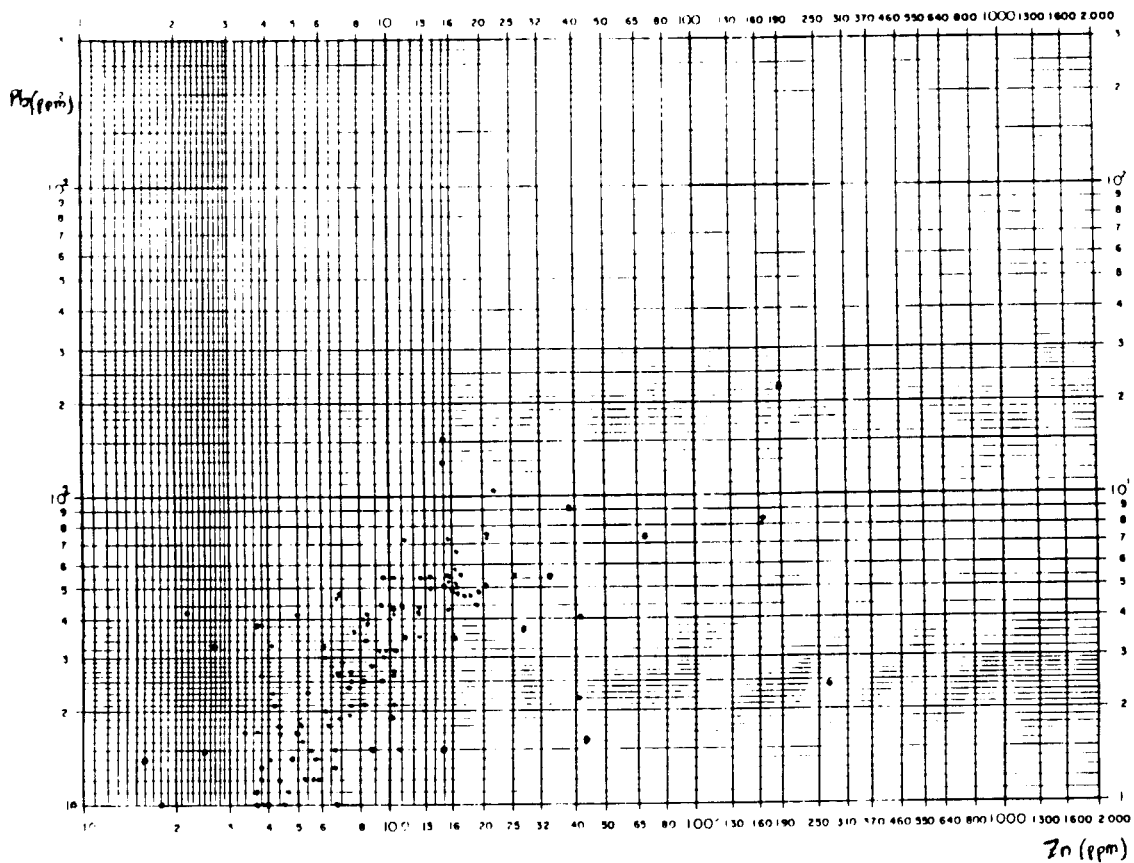
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(Pb, Zn, Ba, Cd)

(Zona de Medio Cudeyo)

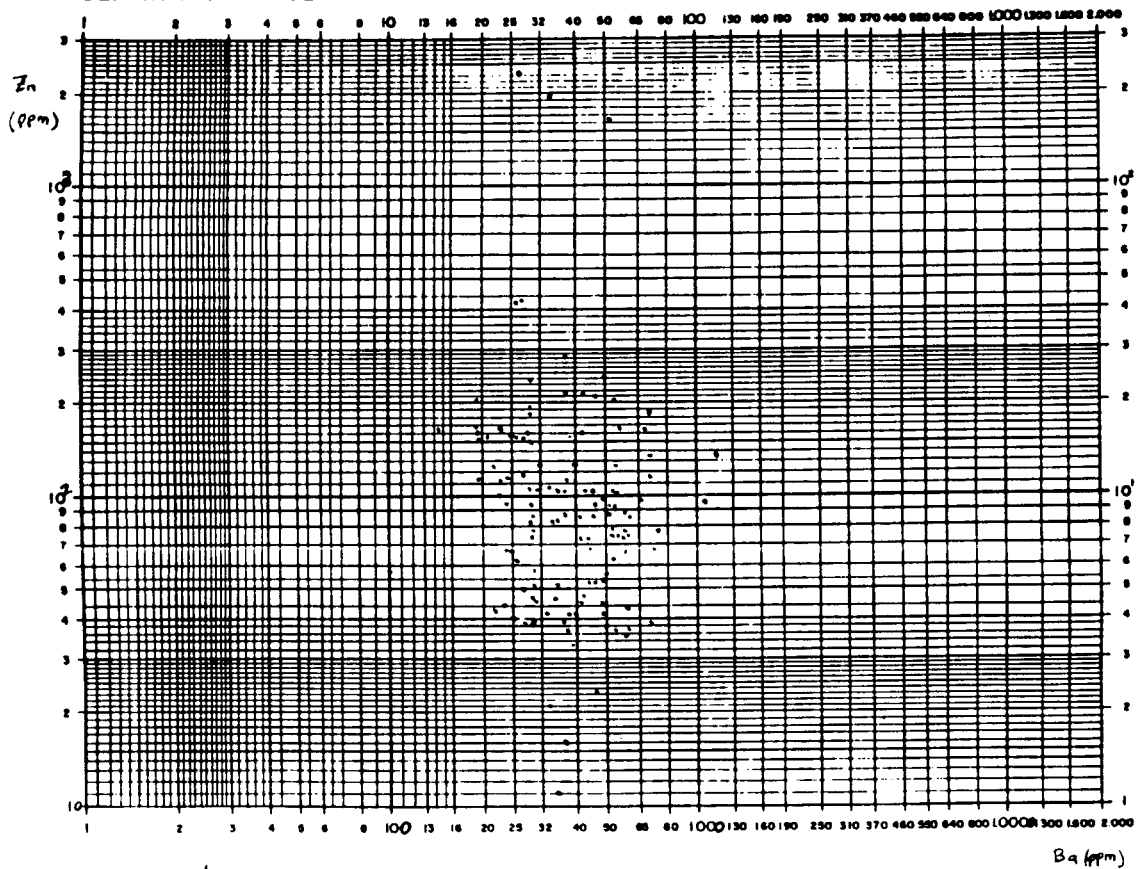
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DEPARTAMENTO DE GEOLOGIA Y GEOTECNIA



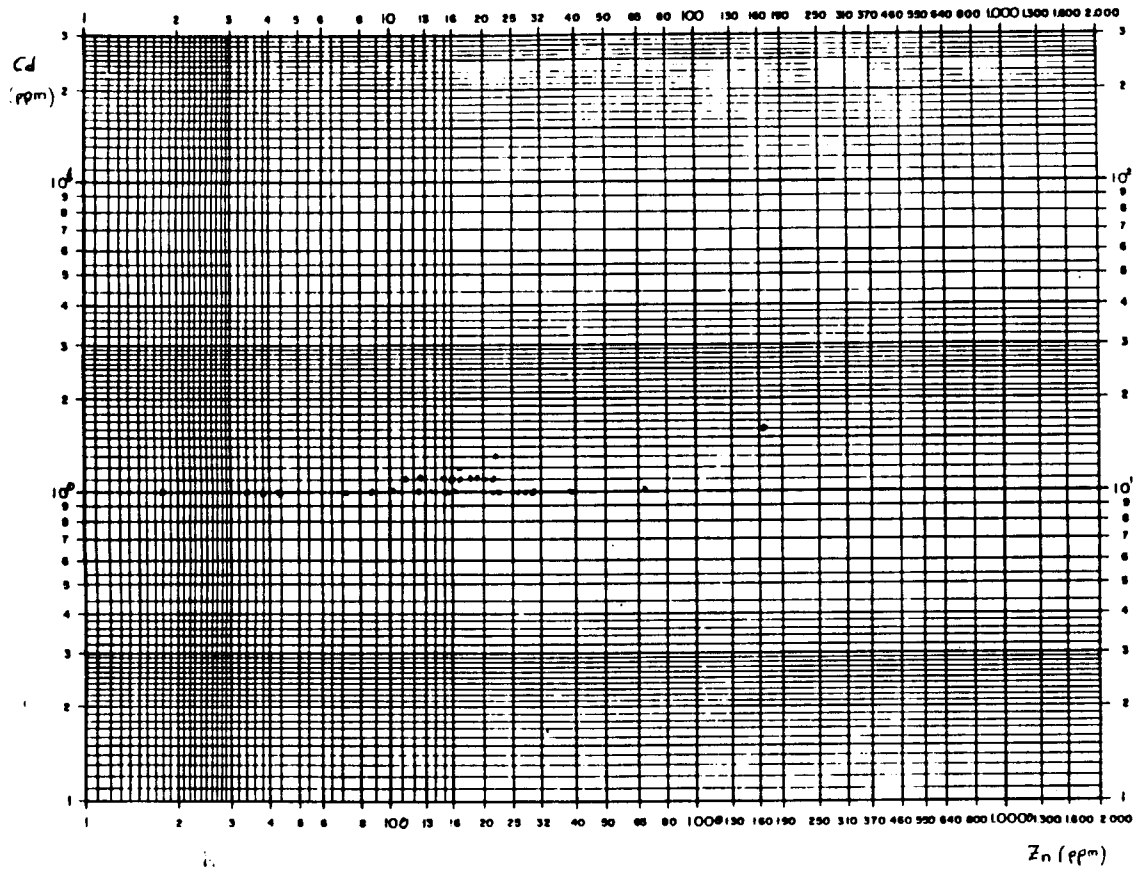
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DEPARTAMENTO DE GEOLOGIA Y GEOTECNIA



INFORMES Y PROYECTOS S.A. (INYPESA)

DEPARTAMENTO DE GEOLOGIA Y GEOTECNIA



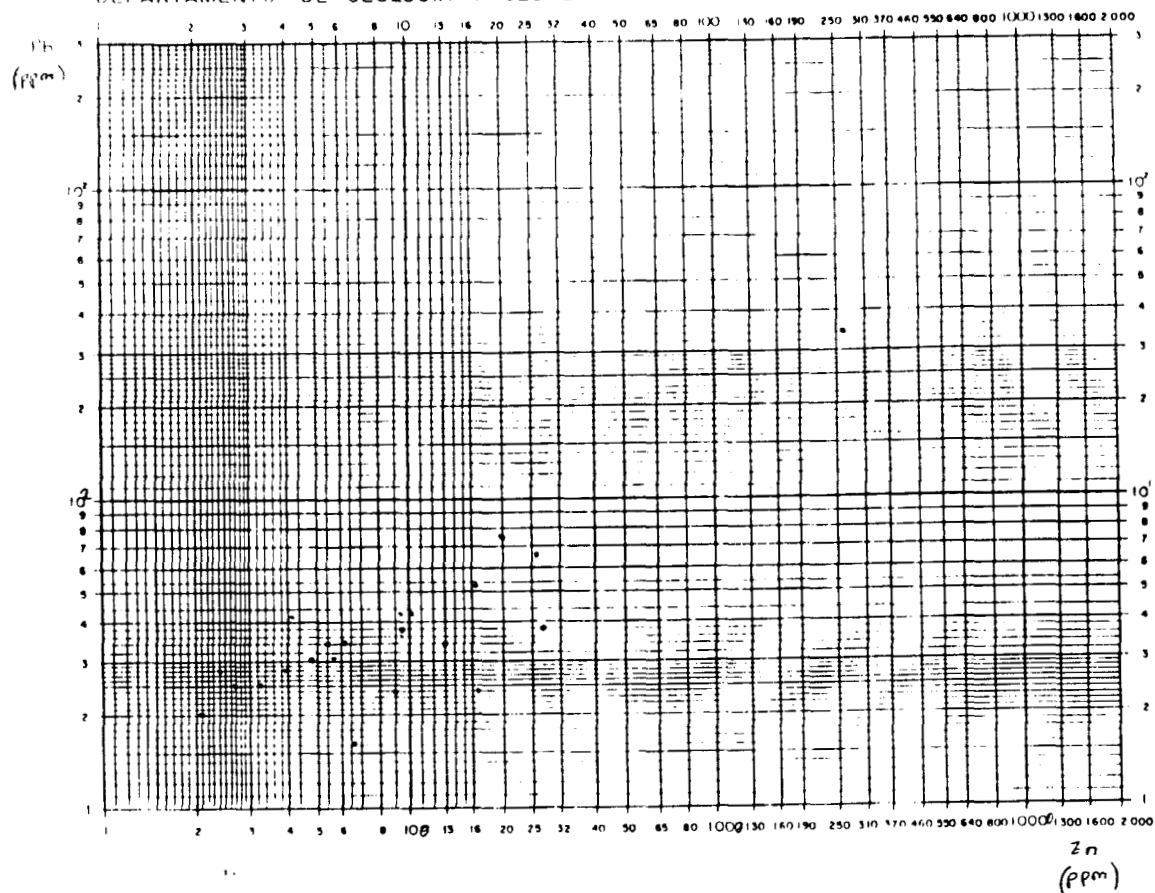
CORRELACION DE PARES DE ELEMENTOS

(Pb, Zn, Ba)

(Zona de Comillas)

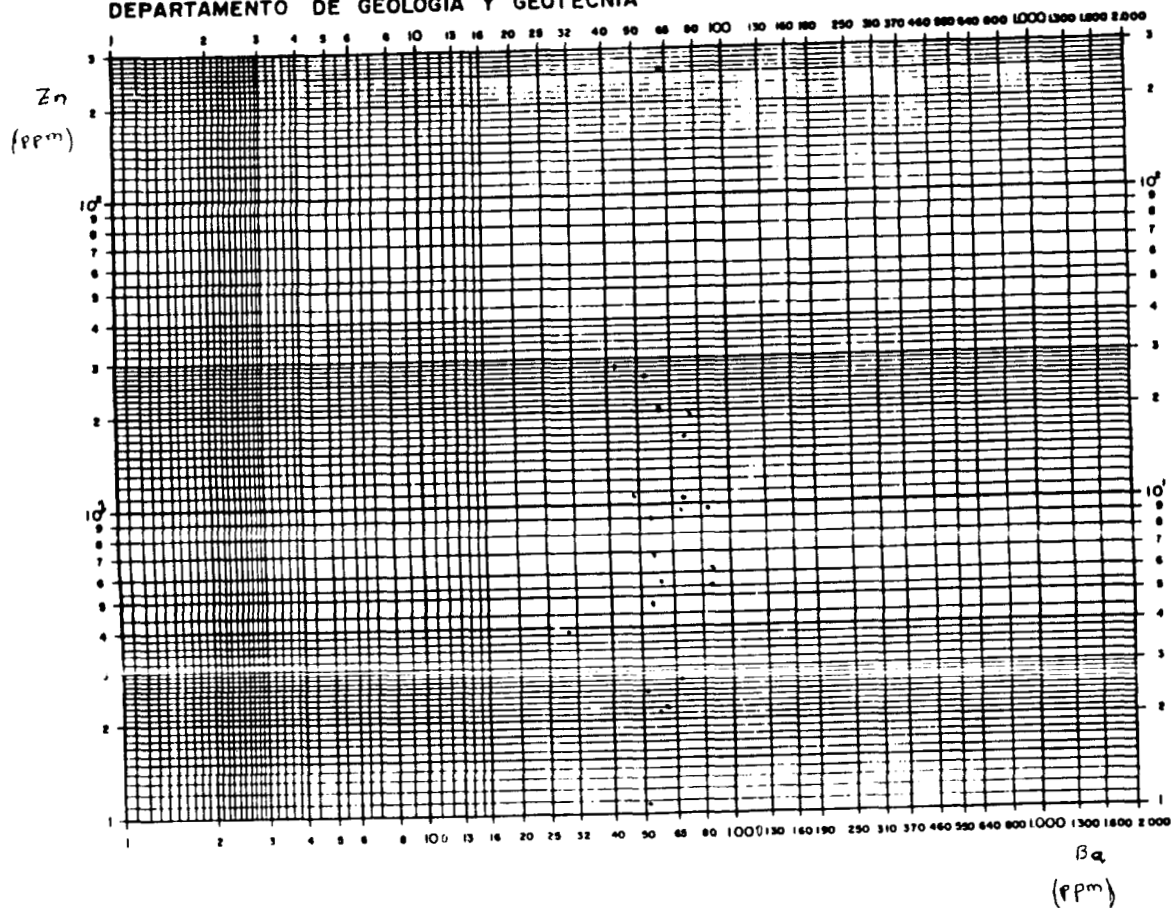
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DEPARTAMENTO DE GEOLOGIA Y GEOTECNIA



INFORMES Y PROYECTOS S.A. (INYP SA)

DEPARTAMENTO DE GEOLOGIA Y GEOTECNIA



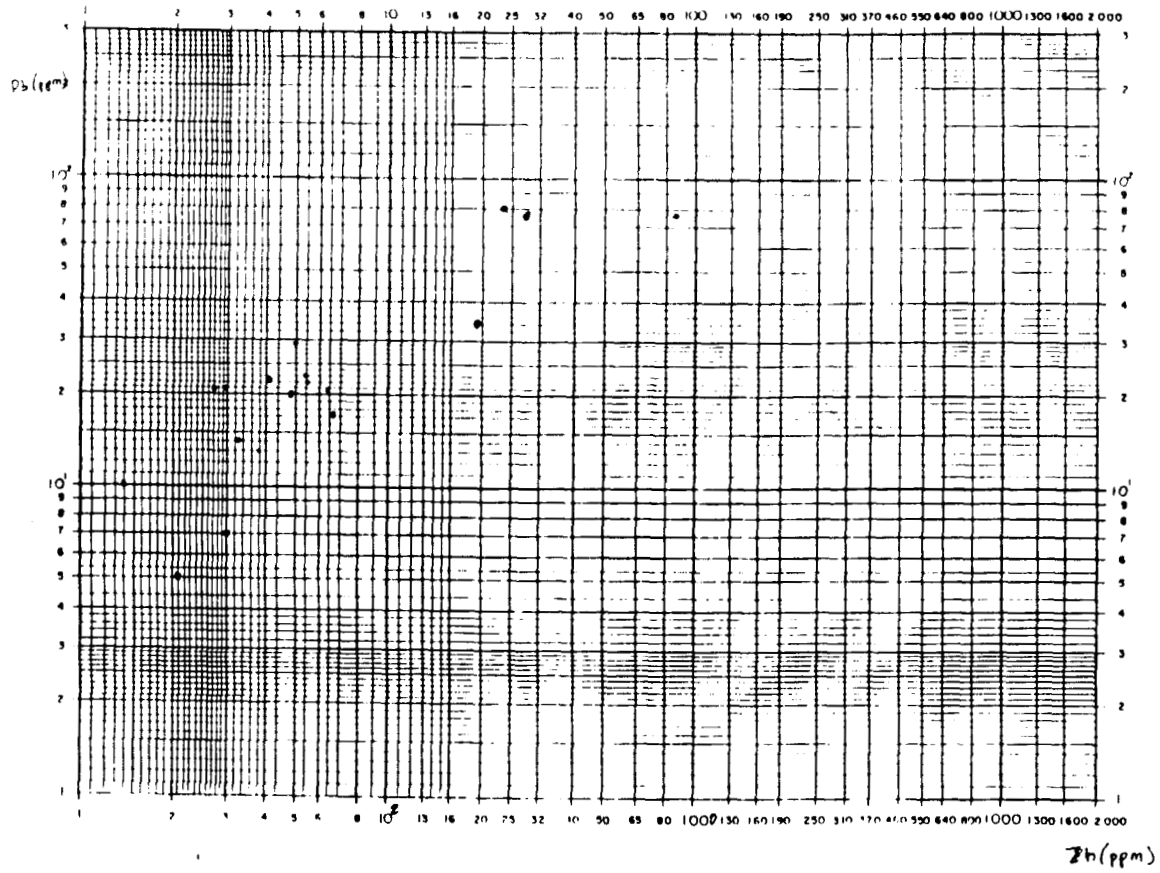
CORRELACION DE PARES DE ELEMENTOS

(Pb, Zn, Ba)

(Zona de Prolifera)

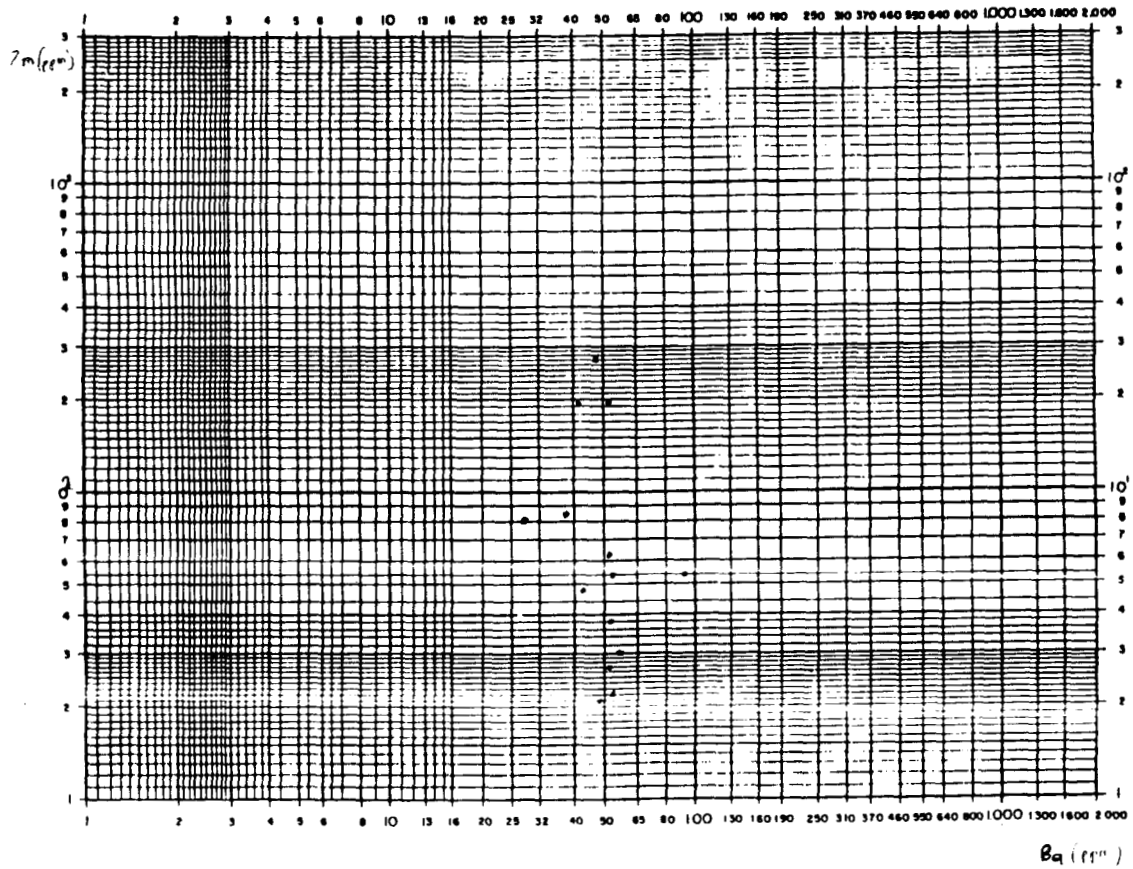
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INFORMES Y PROYECTOS S.A. (INYPESA)

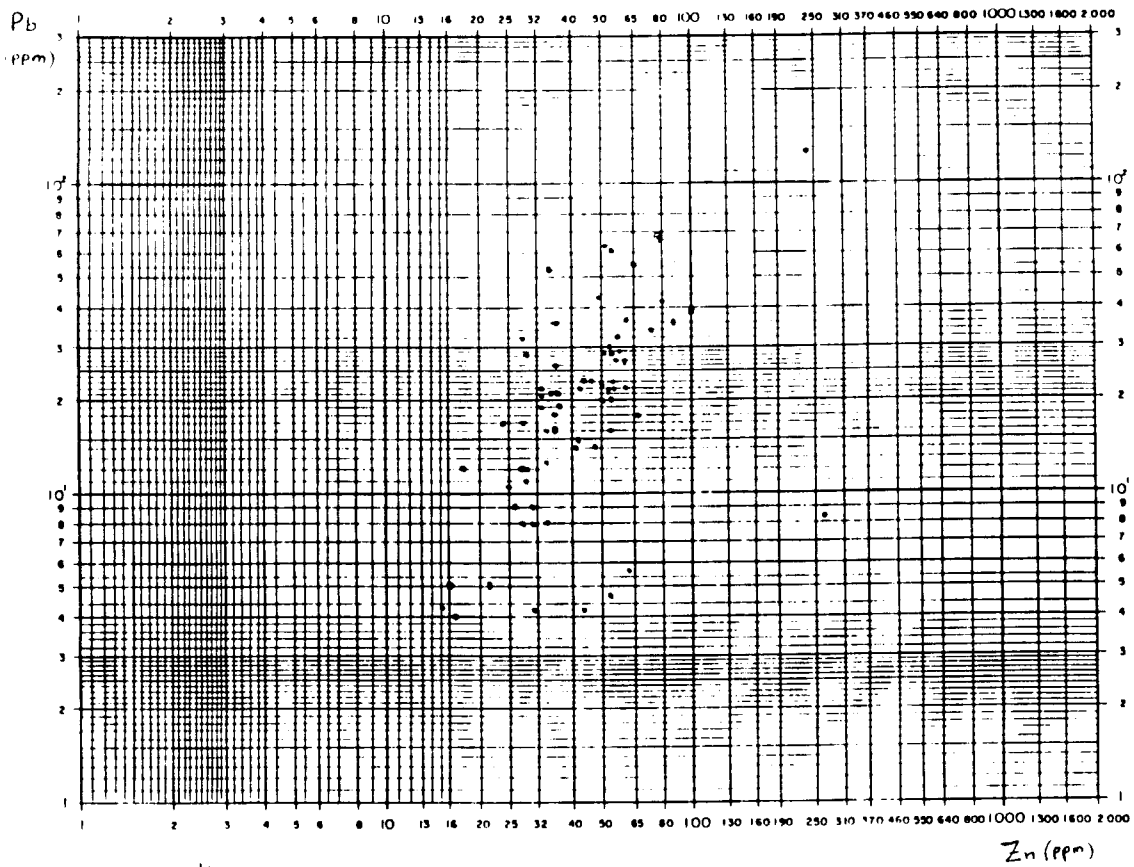
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CORRELACION DE PARES DE ELEMENTOS
(Pb, Zn, Ba)
(Zona de La Secada - Matienzo)

INFORMES Y PROYECTOS S.A. (INYP SA)

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