

MEMORANDUM N°103-96-DGG/DL

*AL* : *Ing. Manuel Paz Maidana*  
*Director de Prospección Minera*

*ASUNTO* : *REPORTE DE ANALISIS CORREGIDOS*

*FECHA* : *Lima, 10 de Abril de 1996*

*Adjunto al presente los resultados de los análisis químicos de las muestras procedentes del Cuadrángulo de MACUSANI, con las correcciones de los valores de Estaño (Sn) al límite de detección de 10 ppm.*

*Atentamente,*

  
Ing° **ELPO PAREDES PACHECO**  
Director de Laboratorio  
**INGEMMET**

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*Atentamente,*

  
Ing° **ELPO PAREDES PACHECO**  
Director de Laboratorio  
**INGEMMET**

**DIRECCION DE LABORATORIOS**  
(LABORATORIO DE QUIMICA ANALITICA)

ORDEN DE TRABAJO : Memo. N° 242-95-DPM  
 SOLICITADO POR : Ing. Manuel Paz Maidana  
 PROYECTO : CUADRANGULO MACUSANI  
 ANALISIS POR : Cu, Pb, Zn, Ag, Sb, As, Mo, W, Sn, Au  
 FECHA : Lima, 20 de Octubre de 1995

CODIGO	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sb ppm	As ppm	Mo ppm	W ppm	Sn ppm	Au ppm
1. MAV 29001	5.0	30.2	78.0	< 0.5	< 10	30	11.0	4	36.0	< 0.01
2. MAV 29003	2.5	47.5	55.0	< 0.5	< 10	< 10	< 10	14	100	< 0.01
3. MAV 29005	5.0	22.0	92.5	< 0.5	< 10	< 10	13.7	8	12.0	< 0.01
4. MAV 29006	7.5	12.0	70.0	< 0.5	< 10	< 10	< 10	8	11.5	< 0.01
5. MAV 29007	5.0	6.3	42.5	< 0.5	< 10	< 10	< 10	6	<10	< 0.01
6. MAV 29008	5.0	12.9	65.0	< 0.5	< 10	< 10	< 10	3	≤10	< 0.01
7. MAV 29009	42.5	44.6	410.0	< 0.5	< 10	30	11.0	6	<10	< 0.01
8. MAV 29010	5.0	58.2	87.5	< 0.5	15	< 10	< 10	4	<10	< 0.01
9. MAV 29011	5.0	15.0	77.5	< 0.5	< 10	< 10	< 10	< 2	11.0	< 0.01
10. MAV 29013	7.5	20.1	127.5	< 0.5	< 10	< 10	< 10	3	<10	< 0.01
11. MAV 29014	5.0	43.7	102.5	< 0.5	< 10	< 10	< 10	4	67.0	< 0.01
12. MAV 29015	15.0	35.4	152.5	< 0.5	< 10	< 10	< 10	4	33.0	< 0.01
13. MAV 29016	25.0	29.6	170.0	< 0.5	< 10	< 10	< 10	2	24.5	< 0.01
14. MAV 29017	15.0	11.3	95.0	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
15. MAV 29019	10.0	14.0	32.0	< 0.5	< 10	<10	< 10	4	<10	< 0.01
16. MAV 29020	15.0	17.8	70.0	< 0.5	< 10	< 10	< 10	< 2	10.0	< 0.01
17. MAV 29021	17.5	18.4	67.5	< 0.5	< 10	< 10	< 10	6	10.0	< 0.01
18. MAV 29022	20.0	18.5	95.0	< 0.5	< 10	< 10	< 10	4	<10	< 0.01
19. MAV 29023	15.0	19.1	67.5	< 0.5	< 10	< 10	< 10	4	≤10	< 0.01



CODIGO	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sb ppm	As ppm	Mo ppm	V ppm	Sn ppm	Au ppm
20. MAV 29025	45.0	10.2	77.5	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
21. MAV 29026	20.0	14.5	105.0	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
22. MAV 29027	22.5	18.5	105.0	< 0.5	< 10	< 10	< 10	4	<10	< 0.01
23. MAV 29028	12.5	11.8	72.5	< 0.5	< 10	< 10	< 10	4	<10	< 0.01
24. MAV 29029	15.0	16.2	55.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
25. MAV 29030	10.0	17.3	70.0	< 0.5	38	< 10	< 10	4	36.0	< 0.01
26. MAV 29031	15.0	32.9	80.0	< 0.5	12	< 10	< 10	3	<10	< 0.01
27. MAV 29032	27.5	96.5	337.5	< 0.5	< 10	< 10	< 10	6	20.0	< 0.01
28. MAV 29033	27.5	54.0	475.0	< 0.5	< 10	12	< 10	4	132.5	< 0.01
29. MAV 29035	12.5	26.2	97.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
30. MAV 29036	10.0	19.4	70.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
31. MAV 29037	10.0	16.3	62.5	< 0.5	< 10	< 10	< 10	3	17.0	< 0.01
32. MAV 29038	10.0	9.7	27.5	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
33. MAV 29039	10.0	12.5	37.5	< 0.5	< 10	< 10	< 10	6	<10	< 0.01
34. MAV 29040	7.5	9.0	77.5	< 0.5	< 10	< 10	< 10	5	11.5	< 0.01
35. MAV 29041	6.0	14.0	60.0	< 0.5	< 10	< 10	< 10	6	<10	< 0.01
36. MAV 29042	12.5	23.6	70.0	< 0.5	< 10	< 10	< 10	4	10.0	< 0.01
37. MAV 29043	12.5	13.5	45.0	< 0.5	35	< 10	< 10	6	<10	< 0.01
38. MAV 29044	7.5	17.2	67.5	< 0.5	< 10	< 10	138	8	<10	< 0.01
39. MAV 29045	7.5	11.4	92.5	< 0.5	< 10	< 10	< 10	8	11.5	< 0.01
40. MAV 29046	10.0	16.2	70.0	< 0.5	< 10	< 10	< 10	4	<10	< 0.01
41. MAV 29047	7.5	16.3	77.5	< 0.5	< 10	< 10	138	9	<10	< 0.01
42. MAV 29048	5.0	11.4	40.0	< 0.5	< 10	< 10	< 10	3	<10	< 0.01
43. MAV 29049	5.0	15.3	77.5	< 0.5	< 10	< 10	< 10	10	25.0	< 0.01
44. MAV 29050	12.5	17.0	90.0	< 0.5	< 10	< 10	< 10	6	16.0	< 0.01
45. MAV 29051	15.0	18.6	65.0	< 0.5	< 10	< 10	< 10	3	<10	< 0.01
46. MAV 29052	22.5	11.3	37.5	< 0.5	< 10	30	< 10	< 2	<10	< 0.01
47. MAV 29053	20.0	17.3	127.5	< 0.5	< 10	< 10	< 10	3	45.0	< 0.01
48. MAV 29054	7.5	6.5	35.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
49. MAV 29055	5.0	12.8	25	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
50. MAV 29056	5.0	7.3	45.0	< 0.5	< 10	< 10	< 10	4	<10	< 0.01



CODIGO	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sb ppm	As ppm	Mo ppm	W ppm	Sn ppm	Au ppm
51. MAV 29057	125	129	85.0	< 0.5	< 10	30	< 10	3	16.0	< 0.01
52. MAV 29058	225	135	27.5	< 0.5	< 10	< 10	< 10	4	<10	< 0.01
53. MAV 29059	10.0	129	17.5	< 0.5	< 10	< 10	< 10	2	15.0	< 0.01
54. MAV 29060	2050.0	2137.0	2950.0	28.0	30	1280	< 10	100	7,000.0	0.025
55. MAV 29061	7.5	23.3	65.0	< 0.5	< 10	< 10	< 10	< 2	19.0	< 0.01
56. MAV 29062	7.5	10.5	30.0	< 0.5	< 10	< 10	< 10	3	<10	< 0.01
57. MAV 29063	125	42.0	776.3	< 0.5	13.5	< 10	< 10	3	56.0	< 0.01
58. MAV 29064	25	42.9	55.0	< 0.5	< 10	< 10	< 10	18	92	< 0.01
59. MAV 29065	5.0	33.0	107.5	< 0.5	< 10	< 10	< 10	4	42.0	< 0.01
60. MAV 29066	10.0	137	95.0	< 0.5	< 10	< 10	< 10	4	39.5	< 0.01
61. MAV 29067	10.0	50.6	145.0	< 0.5	< 10	< 10	< 10	< 2	16.0	< 0.01
62. MAV 29068	7.5	11.7	125.0	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
63. MAV 29069	7.5	17.1	92.5	< 0.5	< 10	< 10	< 10	6	13.0	< 0.01
64. MAV 29070	7.5	11.3	92.5	< 0.5	< 10	< 10	< 10	8	10.5	< 0.01
65. MAV 29071	5.0	14.6	55.0	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
66. MAV 29072	5.0	15.2	80.0	< 0.5	< 10	< 10	< 10	2	12.0	< 0.01
67. MAV 29073	30.0	13.5	57.5	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
68. MAV 29074	10.0	10.2	37.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
69. MAV 29075	10.0	5.5	25.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
70. MAV 29076	7.5	8.7	27.5	< 0.5	< 10	< 10	< 10	3	10.5	< 0.01
71. MAV 29077	7.5	19.1	62.5	< 0.5	< 10	31	< 10	< 2	33.0	< 0.01
72. MAV 29078	15.0	14.5	50.0	< 0.5	< 10	< 10	< 10	3	<10	< 0.01
73. MAV 29079	10.0	12.5	30.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
74. MAV 29080	10.0	21.2	42.5	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
75. MAV 29082	25.0	0.47	32.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
76. MAV 29083	22.5	15.6	65.0	< 0.5	< 10	< 10	< 10	3	10.5	< 0.01
77. MAV 29084	17.5	21.9	42.5	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
78. MAV 29085	152.5	157.5	150.0	< 0.5	21.5	133	< 10	9	700.0	< 0.01
79. MAV 29086	17.5	41.7	287.5	< 0.5	< 10	< 10	< 10	3	30.0	< 0.01
80. MAV 29087	17.5	32.6	65.0	< 0.5	< 10	< 10	< 10	3	<10	< 0.01
81. MAV 29088	12.5	15.5	35.0	< 0.5	< 10	< 10	< 10	4	10.5	< 0.01



CODIGO	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sb ppm	As ppm	Mo ppm	W ppm	Sn ppm	Au ppm
82 MAV 29089	45.0	22.0	47.5	< 0.5	< 10	< 10	< 10	4	395.0	< 0.01
83 MAV 29090	12.5	14.4	37.5	< 0.5	< 10	< 10	< 10	5	<10	< 0.01
84 MAV 29091	12.5	17.7	35.0	< 0.5	< 10	< 10	< 10	8	16.0	< 0.01
85 MAV 29092	10.0	18.7	35.0	< 0.5	< 10	< 10	< 10	10	11.5	< 0.01
86 MAV 29093	12.5	9.0	22.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
87 MAV 29094	17.5	58.9	122.5	< 0.5	< 10	48	< 10	2	26.0	< 0.01
88 MAV 29095	10.0	26.4	95.0	< 0.5	< 10	< 17	< 10	2	36.0	< 0.01
89 MAV 29096	1262.5	112.3	362.5	20	24	349	< 10	40	12,600.0	< 0.01
90 MAV 29097	15.0	27.6	72.5	< 0.5	< 10	< 10	< 10	< 2	35.0	< 0.01
91 MAV 29098	12.5	22.4	75.0	< 0.5	< 10	< 10	< 10	< 2	11.5	< 0.01
92 MAV 29099	12.5	12.4	30.0	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
93 MAV 29100	12.5	19.9	57.5	< 0.5	< 10	< 10	< 10	< 2	19.0	< 0.01
94 MAV 29101	12.5	11.8	35.0	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
95 MAV 29102	12.5	12.3	37.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
96 MAV 29103	62.5	26.1	160.0	< 0.5	< 10	< 10	< 10	5	67.5	< 0.01
97 MAV 29104	12.5	10.2	32.5	< 0.5	< 10	< 10	< 10	4	<10	< 0.01
98 MAV 29105	7.5	12.4	45.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
99 MAV 29106	10.0	12.1	40.0	< 0.5	< 10	< 10	< 10	< 2	<10	0.02
100 MAV 29107	10.0	14.2	27.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
101 MAV 29108	15.0	10.1	30.0	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
102 MAV 29109	10.0	8.5	20.0	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
103 MAV 29110	10.0	6.2	27.5	< 0.5	< 10	< 10	< 10	4	<10	< 0.01
104 MAV 29111	17.5	20.6	42.5	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
105 MAV 29112	7.5	4.8	17.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
106 MAV 29113	10.0	15.2	32.5	< 0.5	< 10	30	< 10	< 2	<10	< 0.01
107 MAV 29114	5.0	9.8	22.5	< 0.5	< 10	30	< 10	3	<10	< 0.01
108 MAV 29115	5.0	7.9	10.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
109 MAV 29116	5.0	7.3	17.5	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
110 MAV 29117	15.0	15.7	32.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
111 MAV 29118	7.5	10.5	25.0	< 0.5	< 10	36	< 10	< 2	17.0	< 0.01
112 MAV 29119	10.0	7.5	20.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01



CODIGO	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sb ppm	As ppm	Mo ppm	V ppm	Sn ppm	Au ppm
113.MAV.19120	15.0	15.2	37.5	< 0.5	< 10	< 10	< 10	4	17.0	< 0.01
114.MAV.19121	10.0	7.6	15.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
115.MAV.19122	15.0	31.2	37.5	< 0.5	< 10	13	< 10	< 2	18.0	< 0.01
116.MAV.19123	12.5	12.1	67.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
117.MAV.19124	7.5	9.4	12.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
118.MAV.19125	12.5	11.0	55.0	< 0.5	< 10	30	< 10	< 2	<10	< 0.01
119.MAV.19126	17.5	9.4	25.0	< 0.5	< 10	< 10	< 10	< 2	16.0	< 0.01
120.MAV.19127	7.5	6.5	12.5	< 0.5	< 10	< 10	< 10	3	<10	< 0.01
121.MAV.19128	5.0	4.2	7.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
122.MAV.19129	10.0	9.0	25.0	< 0.5	< 10	30	< 10	< 2	<10	< 0.01
123.MAV.19130	10.0	9.8	35.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
124.MAV.19131	7.5	13.5	17.5	< 0.5	< 10	< 10	< 10	< 2	21.0	< 0.01
125.MAV.19132	12.5	41.5	122.5	< 0.5	< 10	60	< 10	< 2	14.0	< 0.01
126.MAV.19133	15.0	15.3	82.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
127.MAV.19134	30.0	33.9	77.5	< 0.5	< 10	27	< 10	< 2	<10	< 0.01
128.MAV.19135	15.0	19.5	42.5	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
129.MAV.19136	15.0	35.0	57.5	< 0.5	< 10	< 10	< 10	< 2	11.0	< 0.01
130.MAV.19137	12.5	17.4	42.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
131.MAV.19138	12.5	11.4	30.0	< 0.5	< 10	< 10	< 10	< 2	42.0	< 0.01
132.MAV.19139	10.0	9.0	45.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
133.MAV.19140	12.5	8.0	17.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
134.MAV.19141	35.0	11.1	25.0	< 0.5	< 10	< 10	< 10	< 2	10.5	< 0.01
135.MAV.19142	25.0	8.0	20.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
136.MAV.19143	12.5	9.6	75.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
137.MAV.19144	15.0	9.4	17.5	< 0.5	< 10	< 10	< 10	< 2	24.0	< 0.01
138.MAV.19145	12.5	6.0	17.5	< 0.5	< 10	< 10	< 10	4	<10	< 0.01
139.MAV.19146	10.0	14.3	60.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
140.MAV.19147	7.5	7.9	15.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
141.MAV.19148	12.5	4.6	10.0	< 0.5	< 10	< 10	< 10	3	<10	< 0.01
142.MAV.19149	7.5	6.2	7.5	< 0.5	< 10	< 10	< 10	3	<10	< 0.01
143.MAV.19150	10.0	7.4	15.0	< 0.5	< 10	< 10	< 10	2	<10	< 0.01

CODIGO	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sb ppm	As ppm	Mo ppm	W ppm	Sn ppm	Au ppm
144 MAV 19151	5.0	9.7	42.5	< 0.5	< 10	< 10	< 10	4	<10	< 0.01
145 MAV 19152	12.5	13.4	37.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
146 MAV 19153	10.0	7.9	20.0	< 0.5	< 10	< 10	< 10	4	16.0	< 0.01
147 MAV 19154	7.5	6.9	20.0	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
148 MAV 19155	10.0	10.3	32.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
149 MAV 19156	12.5	11.2	40.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
150 MAV 19157	17.5	12.9	45.0	< 0.5	< 10	< 10	< 10	4	<10	< 0.01
151 MAV 19158	10.0	13.5	32.5	< 0.5	< 10	< 10	< 10	3	<10	< 0.01
152 MAV 19159	7.5	7.9	27.5	< 0.5	< 10	< 10	< 10	3	<10	< 0.01
153 MAV 19160	7.5	8.2	10.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
154 MAV 19161	15.0	8.9	20.0	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
155 MAV 19162	10.0	8.2	22.5	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
156 MAV 19163	7.5	18.0	17.5	< 0.5	< 10	33	< 10	< 2	15.0	< 0.01
157 MAV 19164	17.5	50.2	55.0	< 0.5	< 10	40	< 10	3	13.0	< 0.01
158 MAV 19165	7.5	14.4	42.5	< 0.5	< 10	≤ 10	< 10	3	12.0	< 0.01
159 MAV 19166	7.5	13.3	22.5	< 0.5	< 10	< 10	< 10	2	≤10	< 0.01
160 MAV 19167	12.5	16.5	30.0	< 0.5	< 10	< 10	< 10	2	<10	< 0.01
161 MAV 19168	10.0	6.1	20.0	< 0.5	< 10	< 10	< 10	< 2	<10	< 0.01
162 MAV 19169	15.0	39.0	77.5	< 0.5	< 10	< 10	< 10	4	<10	< 0.01

  
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