


A-20







| MJBC-29 100 m-20 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{\|c\|c\|c} \hline \frac{0}{6} & \text { 要 } & \text { MOMBRE } \end{array}$ | OESCRIPCION | VEta |  |  |  |  |  | resultado del analisis |  |  |  |  |  |
| $\begin{array}{\|c\|c\|c} 3 & 3 & 0 \\ 5 & 3 & 0 \\ \hline & 0 & 0 \\ \alpha & 0 & 0 \\ \hline \end{array}$ |  |  |  |  | $\begin{aligned} & \mathrm{Sn} \\ & \% \end{aligned}$ |  |  | $\mathrm{Zn}$ $(\%)$ | $\begin{aligned} & \mathrm{Pb} \\ & (\%) \end{aligned}$ | Ag <br> (9,1) | Au (Q 0 (1) |  |
| $10 \times 0$ ments |  <br>  treinamite ot la metyecte sevial |  |  | 1 |  |  |  |  |  |  |  |  |  |  |
|  |  |  | + | 1 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
|  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
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|  |  |  |  | + |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 1 <br>  <br>  <br>  <br>  <br>  <br>  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | cantaxa tous pe patca |  |  |  |  |  |  |  | $\begin{aligned} & \text { in } \\ & 0.8 \\ & 0.8 \end{aligned}$ |  | $\begin{gathered} \text { 等 } \\ \substack{\text { a } \\ \hline \\ \hline} \end{gathered}$ |  | - $\times$ m |
|  |  <br>  |  | 1 <br> 1 <br> 1 <br> 1 | + |  |  |  |  |  |  |  |  |  |
|  |  |  | $\bigcirc$ | 1 |  |  |  |  |  |  |  |  |  |
|  |  |  | 1 | 1 |  |  |  |  |  |  | , |  |  |
|  |  |  | 1 <br>  <br>  <br>  | 1 |  |  |  |  |  |  |  |  |  |
|  |  |  | 1 | 1 |  |  |  |  |  |  |  |  |  |










A--37






MJBC-34




$$
\begin{aligned}
& \text { Qz: quarzo } \\
& \text { Kf: felspoto potasico } \\
& \text { Pl: plagioclasa } \\
& \text { Bi: biotita } \\
& \text { Ho: hornblenda } \\
& \text { To: turranina } \\
& \text { Ma: magnetita } \\
& \text { Zn: circon } \\
& \text { Sh: esfen } \\
& \text { Ap: apatita } \\
& \text { Mu: muscovita } \\
& \mathrm{Ch}: \text { clorita } \\
& \text { Se: sericita } \\
& \mathrm{Ca}: \text { carbonita } \\
& \text { (): abundante } \\
& \mathrm{O}: \text { mediano } \\
& \triangle: \text { poco } \\
& \text { © : raro }
\end{aligned}
$$

A-2 Resultado de observacion microscopia de rocas

| No. | Numero <br> de <br> muestra | Ubicacion | $\begin{gathered} \text { Numero } \\ \text { de } \\ \text { roca } \end{gathered}$ | Minerales |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Qz | Kf | P1 | Bi | Ho | To | Ma | Zn | Sh | Ap | Mu | Ch | Se | Ca |
|  | S-12 | MJBC-25, 34 m | $\mathrm{Fi}-\mathrm{Ss}$ | (0) | $\triangle$ | $\triangle$ | $\triangle$ |  |  |  | - |  |  | $\triangle$ |  |  |  |
| 2 | S-13 |  | Ss | (0) |  |  |  |  | - | - | - |  |  | $\triangle$ |  |  |  |
| 3 | S-14 | " ${ }^{\prime \prime}$-25. 109 m | Fi-Ss | (0) | $\triangle$ | $\triangle$ | - |  |  | - | - |  | - | $\triangle$ | - |  | - |
| 4 | S-15 | "/ -26, 56 m | Fi-Ss | $\bigcirc$ | - | - |  |  | - | - | - | - | - |  | - |  |  |
| 5 | S-16 | " | Fi-Ss | $\bigcirc$ |  |  |  |  |  |  |  |  |  | $\bigcirc$ |  |  |  |
| 6 | S-17 | " $-23,3 \mathrm{~m}$ | Fi-Ss | ( | $\triangle$ | $\triangle$ |  | - | - |  | * |  |  | $\triangle$ | - |  |  |
| 7 | S-18 | contera | Fi-Ss | (0) | $\triangle$ | $\triangle$ |  | $\triangle$ | - |  | - | - |  | $\triangle$ | - |  |  |
| 8 | S-19 | WJBC-34 150m | Silt | (0) |  |  |  |  | - |  | - |  | - | $\bigcirc$ | $\triangle$ |  |  |
| 9 | S-20 | " ${ }^{\prime \prime}-32$ 209m | Silt | $\bigcirc$ |  |  |  |  | - |  | - |  | - |  | $\triangle$ |  |  |
| 10 | S-21 | " | Silt | $\bigcirc$ |  |  |  |  | - |  |  |  | - | $\bigcirc$ |  |  |  |

Sp：esfalerita
Ga：galena
PO：pirrotina
Ap：arsenpirita
Mc：चarcasita
Cs：casiterita
Es：estanina
Fr：frankeita
Cp：calcopirita
Mg：magnetita
Ag：mineral－plata
Si：silicato
Sd：siderita
Ca：carbonita

|  | 3 | $\checkmark$ | （0） | O |  | $\bigcirc$ | （0） | （0） | ＜ |  | 4 | O | 10 | 0 |  |  | $\triangle 1$ | O | $\bigcirc$ | $\checkmark$ | $<$ | $\triangleleft$ | $\checkmark$ | $\checkmark$ | ＜ | © | $\checkmark$ | $\triangleleft$ | ＜ | $\triangleleft$ | （0） | － |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{\|c} 10 \\ 0 \\ 0 \\ 0 \end{array}$ | \％ |  | （0） | O |  | O |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $\ddot{\sim}$ | （0） | （o） | O |  | O | $\checkmark$ | $\checkmark$ | O | ） | $\checkmark$ | $\checkmark$ | $\triangleleft$ | $\checkmark$ | O |  | 4 | O |  | － | － | － | － | く | $<$ | $<$ | － | － | － | － | $<$ | － |  |
|  | 8 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | － | － | － | － |  |  |  |  |
|  | ${ }^{\circ}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | － |  |  |  |  |  |  |
|  | $\mathcal{O}$ | － |  | － |  |  | － | － |  |  |  | － | $\triangle$ | － | ＜ |  | － | O | $\checkmark$ | － |  | $\checkmark$ |  | － |  | － | － | － | － |  | － | － |  |
|  | 品 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\stackrel{\circ}{4}$ | 㷩 |  |  | － |  |  | － |  |  |  | － | － | － |  |  |  |  |  | － | － |  | － |  |  |  | － | － |  | － |  |  | － |  |
| $E$ | 3 |  |  |  |  |  |  |  |  |  |  |  |  | － | － |  |  |  | － | ． |  |  |  | － |  |  |  |  |  |  |  | － |  |
| $\begin{array}{\|} \stackrel{\otimes}{\otimes} \\ \stackrel{\otimes}{\otimes} \end{array}$ | $\cdots$ | － |  | く |  | $\checkmark$ |  | $\checkmark$ | $\checkmark$ |  |  | － | $\checkmark$ |  |  |  |  |  | － | － | － |  |  | $<$ | － | － | － | $\checkmark$ | － | － | － | － |  |
| $\stackrel{\rightharpoonup}{\mathbf{N}}$ | 8 |  | 4 |  |  | $\checkmark$ | － | － |  |  |  | － | － | － | 4 | ＜ | $\checkmark$ |  | － |  | － | 4 | $\checkmark$ | － | － | － | $\checkmark$ |  | － | 4 | － | － |  |
| 品 | O |  |  | － |  |  |  |  |  |  |  | － |  | － | （0） | （0） | （） | （） | （o） | （0） | （0） | （0） | （2） | － |  | － |  |  |  |  | － | O |  |
|  | 号 | $\checkmark$ | 4 | （0） | （0） | （o） | $\triangleleft 1$ | 0 | （0） | （0） | O | （o） | © | O |  | $<$ |  |  | $\bigcirc$ | O | O |  |  | 0 | 0 | 0 | （o） | 4 | － | （1） | － | O |  |
|  | $\mathfrak{G}$ | － |  | － |  | $\checkmark$ | － | $\checkmark$ | ＜ | $1<$ | $\checkmark$ | $\checkmark$ | － | － |  |  |  |  |  |  | － |  |  |  | － | － | － | （0） | － | － | － | － |  |
|  | ¢ | $\checkmark$ | － | 0 |  | $\bigcirc$ | $\triangle$ | － | O | $\bigcirc$ | （） |  | － | （0） |  | O | O |  | 0 | $\checkmark$ |  | （0） | $\checkmark$ | （） | $\checkmark$ | $<$ | $\checkmark$ | $\checkmark$ | （o） | － | － | （） |  |
|  |  |  | $\left\lvert\, \begin{gathered} \text { 日 } \\ \underset{\sim}{3} \\ \underset{~}{\text { a }} \end{gathered}\right.$ |  |  |  | $\left\lvert\, \begin{gathered} \text { 呙 } \\ \stackrel{y}{c} \\ \stackrel{7}{1} \\ \stackrel{1}{2} \end{gathered}\right.$ |  |  |  |  |  |  |  | $\begin{gathered} \text { 㫛 } \\ \stackrel{\rightharpoonup}{9} \\ \vdots \end{gathered}$ | $\stackrel{y}{8}$ |  |  |  | $\begin{gathered} 9 \\ a \\ N \\ \text { a } \\ i \\ i \end{gathered}$ |  |  | 界 |  | $\begin{array}{\|c} 0 \\ \Delta \\ 0 \\ \vdots \\ \vdots \\ 0 \end{array}$ |  |  | $\left\|\begin{array}{l} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{array}\right\|$ | 0 <br>  <br> 0 <br> 0 <br> S | $\dot{0}$ 0 0 0 $\vdots$ 0 | $\stackrel{\infty}{\underset{\sim}{\underset{\sim}{c}}}$ |  |  |
|  |  | $\begin{array}{\|c} c o \\ 1 \\ 1 \\ \hline \end{array}$ | $\begin{aligned} & \underset{\sim}{N} \\ & \vdots \\ & \end{aligned}$ | $\left\lvert\,\right.$ |  | $\begin{aligned} & \underset{\sim}{2} \\ & \vdots \\ & \hline \end{aligned}$ | $\left\lvert\, \begin{aligned} & 0 \\ & 1 \\ & 2 \end{aligned}\right.$ | $\left.\begin{gathered} \overrightarrow{3} \\ \vdots \\ a \end{gathered} \right\rvert\,$ | $\begin{gathered} \infty \\ \infty \\ 1 \\ \hline \end{gathered}$ | $\begin{array}{ll} 2 & m \\ c & m \\ 2 \end{array}$ |  | $\infty$ |  | $\left\|\begin{array}{c} \infty \\ 0 \\ \vdots \\ a \end{array}\right\|$ | $\begin{gathered} c \\ 1 \\ a \end{gathered}$ | $\infty$ $n$ $n$ $n$ |  | $\begin{aligned} & \infty \\ & \infty \\ & 1 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { 穴 } \\ & 0 \\ & 0 \end{aligned}$ | $\left\lvert\, \begin{gathered} -7 \\ \dot{1} \\ \hline \end{gathered}\right.$ | $\begin{aligned} & \text { y } \\ & \text { y } \\ & \hline 1 \end{aligned}$ | $\begin{gathered} m \\ \dot{1} \\ \hline \end{gathered}$ | $\left\lvert\, \begin{aligned} & \text { zy } \\ & \text { á } \end{aligned}\right.$ | $\left\lvert\, \begin{aligned} & \text { or } \\ & \dot{1} \\ & \dot{\alpha} \end{aligned}\right.$ | $\left\lvert\, \begin{gathered} \infty \\ \dot{\alpha} \\ \dot{\alpha} \end{gathered}\right.$ | $\underset{\substack{2}}{\stackrel{\rightharpoonup}{2}}$ | $\frac{\infty}{\hat{1}}$ | $\left\|\begin{array}{l} \infty \\ \dot{1} \\ \dot{a} \end{array}\right\|$ | $\begin{aligned} & 8 \\ & 0 \\ & 0 \end{aligned}$ | $\begin{gathered} -r \\ 0 \\ 0 \\ 2 \end{gathered}$ | $\begin{aligned} & \text { u } \\ & \dot{1} \\ & 0 \end{aligned}$ | com |  |
| 9 |  | $\cdots$ | $\sim$ | $\infty$ |  | － | irs | $\cdots$ | ${ }^{1-}$ | $\infty$ | $\infty$ | on | － | F | $\sim$ | 2 |  | － | $\xrightarrow{-1}$ | $\bigcirc$ | $\cdots$ | $\cdots$ | $\stackrel{-1}{-1}$ | 요 | $\cdots$ | N | \％ | N | \％ | $\stackrel{1}{\circ}$ | － | $\stackrel{\infty}{\sim}$ |  |

A-4(2) Fotografias de microscopia de seccion delgada de minerales


P-46
$-46$
Sp: Esfarelita
CS: Casiterita
Py: Pirita

Abreviaciones

Mt : Magnetita St: Estannita
C: Uarcasita Aps: Arsenopirita Gg : Mineral ganga
0 : Pirotina

Qz: Cuarzo

$\mathrm{P}-49$


P-49


P-50

P-53


A-4(2) Fotografias de microscopia de seccion delgada de minerales


A-4(1) Fotografias de microscopia de seccion delgada de minerales
Abreviaciones
Sp : Esfarelita
Cs : Casiterita
Py : Pirita

$$
\begin{array}{ll}
\text { Mt : Magnetita } & \text { St: Estannita } \\
\text { Aps: Arsenopirita } & \text { Cg: Mineral ganga }
\end{array}
$$



A-4(1) Fotografias de microscopia de seccion delgada de minerales


A-5 (1) Resultado de analisis de minerales


A-5 (2) Ressultado de analisis quimico de minerales

| No | Numero. de <br> Muestra | Numero de taladro | Profud. <br> ( m ) | Ancho analizado (cm) | Sn <br> (\%) | Zn <br> (\%) | $\begin{aligned} & \mathrm{Pb} \\ & (\%) \end{aligned}$ | $\begin{aligned} & \mathrm{Ag} \\ & (\mathrm{~g} / \mathrm{t}) \end{aligned}$ | Nota |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 32 | Q-32 | \#JBC-26 | 188.00- | 50 | 0.07 | 0.05 | 0.00 | 1 | caja |
| 33 | Q-33 | " " | 188.50- | 50 | 0.05 | 0.08 | 0.00 | 4 | " |
| 34 | Q-34 | " " | 189.00- | 50 | 0.10 | 0.06 | 0.00 | 3 | " |
| 35 | Q-35 | " " | $189.50-$ | 50 | 0.05 | 0.07 | 0.09 | 26 | " |
| 36 | Q-36 | " " | 190.00- | 50 | 0.07 | 0.07 | 0.09 | 2 | " |
| 37 | Q-37 | " | $190.50-$ | 50 | 0.07 | 0.06 | 0.09 | 2 | " |
| 38 | Q-38 | " | 191.00- | 50 | 0.05 | 0.06 | 0.00 | 0 | " |
| 39 | Q-39 | " " | 191.50 | 50 | 0.25 | 0.08 | 0.00 | 1 | " |
| 40 | Q-40 | " " | $192.00-$ | 50 | 0.12 | 0.11 | 0.09 | 6 | " |
| 41 | Q-41 | " " | $192.50-$ | 50 | 0.12 | 0.12 | 0.00 | 20 | " |
| 42 | Q-42 | " " | 204.00- | 60 | 0.07 | 0.14 | 0.00 | 0 | falla |
| 43 | Q-43 | WJBC-25 | 130.22- | 100 | 0.05 | 0.13 | 0.00 | 0 | falla |
| 44 | Q-44 | UJBC-24 | 342.90- | 60 | 0.19 | 0.39 | 0.14 | 35 | falla |
| 45 | Q-45 | " " | $395.40-$ | 20 | 0.05 | 0.21 | 0.01 | 6 | veta |
| 46 | Q-46 | MJBC-22 | 131.00- | 80 | 0.02 | 0.60 | 0.09 | 3 | veta |
| 47 | Q-47 | " | 123.50- | 100 | 0.05 | 0.57 | 0.01 | 12 | caja |
| 48 | Q-48 | " | 124.50- | 100 | 0.03 | 0.26 | 0.09 | 10 | falla |
| 49 | Q-49 | " " | 125.50- | 100 | 0.07 | 0.48 | 0.01 | 20 | " |
| 50 | Q-50 | " " | 126.50- | 100 | 0.20 | 0.64 | 0.00 | 6 | " |
| 51 | Q-51 | " | 127.50- | 100 | 0.07 | 0.45 | 0.00 | 13 | " |
| 52 | Q-52 | " " | 128.50 | 100 | 0.05 | 1.02 | 0.00 | 20 | " |
| 53 | Q-53 | " | 129.50 | 100 | 0.05 | 0.90 | 0.00 | 14 | " |
| 54 | Q-54 |  | 130.50 | 100 | 0.05 | 0.55 | 0.09 | 8 | " |
| 55 | Q-55 | \#JBC-22 | $76.30-$ | 100 | 0.05 | 1.02 | 0.15 | 40 | " |
| 56 | Q-56 |  | $77.30-$ | 100 | 0.05 | 0.19 | 0.00 | 6 | " |
| 57 | Q-57 | " " | $78.30-$ | 100 | 0.02 | 1.76 | 0.19 | 20 | " |
| 58 | Q-58 | " | 79.30 | 100 | 0.10 | 3.84 | 0.06 | 24 | " |
| 59 | Q-59 | " | 80.30- | 100 | 0.17 | 0.12 | 0.02 | 10 | " |
| 60 | Q-60 |  | 81.30- | 100 | 0.07 | 0.30 | 0.03 | 14 | " |
| 61 | Q-61 | \% JBC-23 | 134.00- | 40 | 0.19 | 10.44 | 0.03 | 76 | veta |
| 62 | Q-62 | M JBC-27 | 231.60 - | 50 | 0.05 | 0.50 | 0.09 | 12 | veta |

A-5 (3) Resultado de analisis quimico de minerales

| No |  | Numero de taladro | Profud. <br> (ii) | Anchó analizado (cm) | Sn <br> (\%) | $\begin{aligned} & \mathrm{Zn} \\ & (\mathbb{X}) \end{aligned}$ | $\begin{aligned} & \mathrm{Pb} \\ & (\mathbb{X}) \end{aligned}$ | $\begin{gathered} \mathrm{Ag} \\ (\mathrm{~g} / \mathrm{t}) \end{gathered}$ | Nota |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 63 | Q-63 | MJBC-27 | 232.10- | 50 | 0.05 | 1.15 | 0.01 | 10 | veta |
| 64 | Q-64 | " " | $232.60{ }^{-}$ | 50 | 0.03 | 1.64 | 0.27 | 101 | " |
| 65 | Q-65 | " | $233.10-$ | 50 | 0.04 | 0.48 | 0.05 | 26 | " |
| 66 | Q-66 | " | 233.60- | 50 | 0.05 | 12.36 | 0.17 | 104 | " |
| 67 | Q-67 | " " | 234. $10-$ | 50 | 0.05 | 11.92 | 0.28 | 82 | " |
| 68 | Q-68 | " | 234.60- | 60 | 0.05 | 19.44 | 0.24 | 130 | veta |
| 69 | Q-69 | " " | $236.80-$ | 100 | 0.05 | 0.74 | 0.16 | 26 | caja |
| 70 | Q-70 | " " | 303.90- | 50 | 0.02 | 3.72 | 0.14 | 148 | veta |
| 71 | Q-71 | WJBC-23 | 91.50- | 50 | 0.05 | 1.71 | 0.35 | 126 | veta |
| 72 | Q-72 | " " | 92.00- | 50 | 0.13 | 0.20 | 0.01 | 4 | " |
| 73 | Q-73 | " " | 92.50- | 50 | 0.07 | 0.23 | 0.09 | 46 | " |
| 74 | Q-74 |  | 93.00- | 50 | 0.05 | 0.06 | 0.02 | 4 | " |
| 75 | Q-75 | HJBC-29 | 170.20- | 50 | 0.05 | 6.44 | 0.28 | 162 | veta |
| 76 | Q-76 | " " | 170.70- | 50 | 0.05 | 1.09 | 0.47 | 102 | " |
| 77 | Q-78 | " " | 171.20- | 50 | 0.05 | 1.37 | 0.40 | 164 | " |
| 178 | Q-78 | " " | 171.70- | 50 | 0.02 | 0.62 | 0.36 | 126 | " |
| 79 | Q-79 | " " | 172.20- | 50 | 0.12 | 0.52 | 0.21 | 18 | " |
| 80 | Q-80 | " " | 172. $70-$ | 50 | 0.07 | 0.88 | 0.10 | 20 | " |
| 81 | Q-81 | " " | 203. 20- | 30 | 0.03 | 0.96 | 0.05 | 24 | " |
| 82 | Q-82 | WJBC-29 | 331. 35- | 45 | 0.07 | 10.36 | 0.06 | 240 | " |
| 83 | Q-83 | " " | 333.50- | 50 | 0.07 | 2.94 | 0.02 | 45 | " |
| 84 | Q-84 | " " | 334.00- | 50 | 0.25 | 4. 65 | 0.05 | 45 | " |
| 85 | Q-85 | " " | 334. 50- | 75 | 1.08 | 6.72 | 0.23 | 45 | " |
| 86 | Q-86 | WJBC-34 | $56.00-$ | 8 | 1.19 | 5.07 | 0.01 | 45 | veta |
| 87 | Q-87 | " " | 63.90- | 53 | 0.78 | 7.28 | 0.01 | 16 | " |
| 88 | Q-88 | " " | 64.70 | 62 | 0.71 | 8.64 | 0.02 | 15 | " |
| 89 | Q-89 | " " | 108.00- | 35 | 0.07 | 6. 33 | 0.00 | 1 | " |
| 90 | Q-90 | " " | $116.40-$ | 80 | 0.04 | 1.68 | 0.02 | 16 | " |
| 91 | Q-91 | " " | 117.50- | 72 | 0.11 | 5.14 | 0.00 | 1 | " |
| 92 | Q-92 | " " | 122.60- | 30 | 0.11 | 10.32 | 0.00 | 1 | " |
| 93 | Q-93 | " " | 124.90- | 32 | 0.14 | 5.56 | 0.01 | 16 | " |

A-5 (4) Resultado de analisis quimico de minerales

| No | Numero de Muestra | Numero de taladro | Profud. <br> (m) | Ancho analizado (cm) | Sn <br> (\%) | Zn <br> (\%) | $\begin{aligned} & \mathrm{Pb} \\ & (\not) \end{aligned}$ | $\begin{gathered} \mathrm{Ag} \\ (\mathrm{~g} / \mathrm{t}) \end{gathered}$ | Nota |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 94 | Q-94 | HJBC-34 | 123.40- | 46 | 0.05 | 9.55 | 0.00 | 16 | veta |
| 95 | Q-95 | " " | 139.60 | 105 | 0.48 | 7.28 | 0.00 | 1 | " |
| 96 | Q-96 | " | $145.70-$ | 28 | 0.66 | 1.57 | 0.00 | 308 | " |
| 97 | Q-97 | " | 147.00- | 65 | 0.32 | 11.72 | 0.00 | 16 | " |
| 98 | Q-98 | " | $148.30-$ | 65 | 0.09 | 2.48 | 0.00 | 16 | " |
| 99 | Q-99 | " " | 154.00 | 30 | 0.11 | 2.66 | 0.00 | 1 | " |
| 100 | Q-100 | " " | 163.20- | 25 | 0.34 | 13.12 | 0.00 | 15 | " |
| 101 | Q-101 | " | 166.30- | 40 | 0.06 | 1.33 | 0.00 | 45 | " |
| 102 | Q-102 | " " | 169.60- | 67 | 0.09 | 0.60 | 0.01 | 16 | " |
| 103 | Q-103 | " " | 230.30- | 20 | 0.04 | 3.36 | 0.00 | 30 | " |
| 104 | Q-104 | " | 288.30- | 20 | 0.25 | 14.63 | 0.00 | 45 | " |
| 105 | Q-105 | " " | 298.30- | 35 | 0.02 | 5.81 | 0.00 | 45 | " |
| 106 | Q-106 | MJBC-32 | 8.70 | 70 | 0.92 | 3.92 | 0.01 | 16 | " |
| 107 | Q-107 |  | $53.00-$ | 8 | 0.82 | 6.16 | 0.13 | 75 | " |
| 108 | Q-108 | ". " | 125.40- | 5 | 0.41 | 18.62 | 0.00 | 135 | " |
| 109 | Q-109 | " " | 128.70- | 5 | 0.06 | 0.60 | 0.00 | 120 | " |
| 110 | Q-110 | " | 151.95- | 20 | 0.09 | 4.69 | 0.00 | 60 | " |
| 111 | Q-111 | " " | 176.45- | 30 | 0.46 | 21.63 | 0.00 | 103 | " |
| 112 | Q-112 | " " | 180.70- | 20 | 0.09 | 6.23 | 0.00 | 30 | " |
| 113 | Q-113 | " " | 191.60- | 35 | 0.09 | 7.21 | 0.00 | 16 | " |
| 114 | Q-114 | " " | $201.80-$ | 20 | 0.11 | 14.28 | 0.00 | 44 | " |
| 115 | Q-115 | " " | $204.80-$ | 60 | 0.02 | 9.13 | 0.00 | 74 | " |
| 116 | Q-116 | " | 208.45- | 65 | 0.09 | 14.14 | 0.00 | 74 | " |
| 117 | Q-117 | " | $210.30-$ | 100 | 0.36 | 14.63 | 0.00 | 89 | " |
| 118 | Q-118 | " | 212.30- | 100 | 0.27 | 13.44 | 0.08 | 60 | " |
| 119 | Q-119 | " " | 213.90- | 45 | 0.36 | 5.39 | 0.01 | 88 | " |
| 120 | Q-120 | VJBC-28 | $113.00-$ | 85 | 0.15 | 6.55 | 0.71 | 99 | veta |
| 121 | Q-121 | " | 116.30- | 100 | 0.07 | 1.86 | 0.78 | 248 | caja |
| 122 | Q-122 | " | 182.75- | 80 | 0.06 | 0.37 | 0.05 | 20 | veta |
| 123 | Q-123 | " | $232.10{ }^{-}$ | 40 | 0.12 | 11.31 | 0.57 | 98 | " |
| 124 | Q-124 | " " | 233.25- | 100 | 0.10 | 1.36 | 0.17 | 50 | net work |

A-5 (5) Resultado de analisis quimico de minerales

| No | Numero de Muestra | Numero de taladro | Profud. <br> (n) |  | Sn <br> (*) | $\begin{aligned} & \mathrm{Zn} \\ & (\%) \end{aligned}$ | Pb <br> (\%) | $\begin{gathered} \mathrm{Ag} \\ (\mathrm{~g} / \mathrm{t}) \end{gathered}$ | Nota |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 125 | Q-125 | " " | 234. 25- | 100 | 0.08 | 1.37 | 0.43 | 98 | net work |
| 126 | Q-126 | " | 235. 25- | 100 | 0.12 | 1.62 | 0.08 | 50 | " |
| 127 | Q-127 | " " | 236.25- | 95 | 0.06 | 1.31 | 1.11 | 48 | " |
| 128 | Q-128 | " " | 244.65- | 60 | 0.19 | 1.61 | 1.49 | 99 | veta |
| 129 | Q-129 | " " | 260.80- | 90 | 0.07 | 2.73 | 0.72 | 148 | " |
| 130 | Q-130 | " " | 261.80- | 90 | 0.15 | 1.59 | 0.10 | 43 | " |
| 131 | Q-131 | HJBC-32 | 243, 40- | 80 | 0.47 | 0.34 | 0.01 | 30 | veta |
| 132 | Q-132 | " " | 250.85- | 50 | 4.05 | 2.58 | 0.01 | 36 | " |
| 133 | Q-133 | " | $266.00-$ | 70 | 0.65 | 25.66 | 0.01 | 129 | " |
| 134 | Q-134 | " " | 278.70 - | 60 | 0.52 | 0.46 | 0.02 | 40 | " |
| 135 | Q-135 | " | $313.00-$ | 80 | 0.77 | 28.34 | 0.01 | 62 | " |
| 136 | Q-136 | " " | $313.80-$ | 80 | 0.81 | 28.90 | 0.01 | 70 | " |
| 137 | Q-137 | " " | $314.60-$ | 80 | 0.52 | 15.37 | 0.01 | 51 | " |
| 138 | Q-138 | " " | 339.30- | 40 | 0.46 | 19.25 | 0.01 | 50 | " |
| 139 | Q-139 | " | 342. 45- | 30 | 0.20 | 6.07 | 0.01 | 47 | " |
| 140 | Q-140 | MJBC-30 | 203.60- | 40 | 0.12 | 6.22 | 0.15 | 100 | veta |
| 141 | Q-141 | " | 209.15- | 25 | 0.08 | 6.83 | 0.76 | 149 | " |
| 142 | Q-142 | " " | 236.75- | 40 | 0.06 | 0.12 | 0.01 | 74 | " |
| 143 | Q-143 | KJBC-33 | 125.30- | 100 | 0.10 | 0.87 | 0.03 | 23 | ramo |
| 144 | Q-144 | " | 126.30- | 100 | 1.02 | 7.00 | 0.06 | 84 | " |
| 145 | Q-145 | " " | 129.80- | 40 | 0.30 | 11.16 | 0.08 | 47 | " |
| 146 | Q-146 | " " | 148.50- | 25 | 0.44 | 12.64 | 0.05 | 49 | " |
| 147 | Q-147 | " | 307.10- | 50 | 0.53 | 13.44 | 0.03 | 20 | veta |
| 148 | Q-148 | " " | 307.60- | 50 | 0.44 | 9.24 | 0.03 | 19 | " |
| 149 | Q-149 | " " | 308.10- | 50 | 0.47 | 14.02 | 0.03 | 21 | " |
| 150 | Q-150 | " | 308.60- | 60 | 0.63 | 14.99 | 0.03 | 20 | " |

A-6(1) Los Resultados de Analisis Quimico, \%

| No. | Muestra | 2 n | Pb | Sn | Fe | $\mathrm{Ag}(\mathrm{g} / \mathrm{t})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Cabeza (A) | 2.32 | 0.67 | 0.04 |  | 265 |
| 2 | Cabeza (B) | 2.08 | 0.69 | 0.03 |  | 224 |
| 3 | Cabeza (C) | 2.45 | 0.66 | 0.04 |  | 250 |
| 4 | Holienda (1) +200 | 2.12 | 0.51 | 0.01 |  | 342 |
| 5 | Nolienda (1) -200 | 2.04 | 0.90 | 0.06 |  | 294 |
| 6 | Holienda(2) +200 | 1.68 | 0.32 | 0.03 |  | 194 |
| 7 | molienda (2) -200 | 2.04 | 0.70 | 0.08 |  | 245 |
| 8 | Nolienda (3) +200 | 2.04 | 0.34 | 0.01 |  | 195 |
| 9 | Holienda (3) -200 | 1.96 | 0.85 | 0.04 |  | 295 |
| 10 | Molienda (4) +200 | 1.80 | 0.31 | 0.02 |  | 194 |
| 11 | Holienda (4) -200 | 1.76 | 0.80 | 0.02 |  | 290 |
| 12 | Granza (A) | 1.32 | 0.78 | 0.02 |  | 291 |
| 13 | (B) | 1.40 | 0.70 | 0.02 |  | 272 |
| 14 | Flot. bulk, Espuna 1 | 1.20 | 2.65 | 0.03 |  | 664 |
| 15 | 2 | 9.05 | 0.70 | 0.04 |  | 649 |
| 16 | 3 | 7.20 | 0.55 | 0.10 |  | 286 |
| 17 | 4 | 4.00 | 0.20 | 0.10 |  | 175 |
| 18 | Cola | 1.72 | 0.10 | 0.02 |  | 85 |
| 19 | Bulk(2), Espuma 1 | 1.36 | 2. 62 | 0.04 |  | 638 |
| 20 | 2 | 8.99 | 0.89 | 0.04 |  | 695 |
| 21 | 3 | 9.83 | 0.62 | 0.16 |  | 550 |
| 22 | 4 | 9.95 | 0.50 | 0.10 |  | 506 |
| 23 | Cola | 1.44 | 0.07 | 0.02 |  | 61 |
| 24 | Bulk(3). Espura 1 | 2.13 | 2.54 | 0.01 |  | 572 |
| 25 | 2 | 3.25 | 1.65 | 0.02 |  | 790 |
| 26 | 3 | 3.30 | 0.70 | 0.02 |  | 485 |
| 27 | 4 | 3.45 | 0.30 | 0.10 |  | 483 |
| 28 | Cola | 1.64 | 0.06 | 0.04 |  | 90 |
| 29 | Bulk (4), Espuma 1 | 0.85 | 3.25 | 0.02 |  | 682 |
| 30 | 2 | 9.97 | 1.33 | 0.03 |  | 651 |
| 31 | 3 | 9.41 | 0.32 | 0.04 |  | 530 |
| 32 | 4 | 9.50 | 0.20 | 0.08 |  | 524 |
| 33 | Cola | 1.70 | 0.16 | 0.04 |  | 92 |
| 34 | Bulk(5), Espuma 1 | 2.23 | 4.27 | 0.05 |  | 999 |
| 35 | 2 | 3.22 | 0.65 | 0.04 |  | 344 |
| 36 | 3 | 3.40 | 0.50 | 0.03 |  | 295 |
| 37 | 4 | 3.60 | 0.20 | 0.05 |  | 279 |
| 38 | Cola | 1.50 | 0.08 | 0.05 |  | 72 |
| 39 | Bulk(6), Espuma 1 | 1.00 | 2. 62 | 0.02 |  | 640 |
| 40 | 2 | 5.70 | 0.86 | 0.10 |  | 605 |
| 41 | 3 | 6.30 | 0.48 | 0.04 |  | 365 |
| 42 | 4 | 6.80 | 0.25 | 0.04 |  | 277 |
| 43 | Cola | 1.70 | 0.08 | 0.04 |  | 99 |
| 44 | Bu1k(7), Espuma 1 | 0.90 | 2.82 | 0.02 |  | 645 |
| 15 | 2 | 5.20 | 1.10 | 0.04 |  | 740 |
| 46 | 3 | 6.20 | 0.55 | 0.07 |  | 475 |
| 47 | 4 | 6.50 | 0.30 | 0.08 |  | 410 |
| 48 | Cola | 1.80 | 0.08 | 0.04 |  | 85 |
| 49 | Bulk (8), Espuma 1 | 3.82 | 4.63 | 0.04 |  | 1290 |
| 50 | 2 | 3.90 | 0.65 | 0.03 |  | 390 |

A-6(2) Los Resultados de Analisis Quinico

| No. | \%uestra | 2 n | Pb | Sn | Fe | $\mathrm{Ag}(\mathrm{g} / \mathrm{t})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51 | Bulk(8), Espuma 3 | 3.55 | 0.36 | 0.02 |  | 285 |
| 52 | 4 | 3.50 | 0.20 | 0.04 |  | 148 |
| 53 | Cola | 1.50 | 0.08 | 0.04 |  | 82 |
| 54 | Bulk(10), Espuma 1 | 1.00 | 3.00 | 0.02 |  | 670 |
| 55 | 2 | 5.20 | 1.15 | 0.02 |  | 695 |
| 56 | 3 | 5.95 | 0.40 | 0.02 |  | 550 |
| 57 | 4 | 6.40 | 0.30 | 0.04 |  | 368 |
| 58 | Cola | 1.74 | 0.10 | 0.04 |  | 81 |
| 59 | Planta, Cola de jig | 0.86 |  |  |  | 98 |
| 60 | Conc, Mag. | 3.07 |  |  |  | 148 |
| 61 | Cabeza, Flot. bulk | 16.63 |  |  |  | 123 |
| 62 | Espuma, Flot. bulk | 26.61 |  |  |  | 198 |
| 63 | Cola Flot. bulk | 6.74 |  |  |  | 99 |
| 64 | Cola Limp.bulk | 12.85 |  |  |  | 108 |
| 65 | Conc. Mag. | 18.96 |  |  |  | 124 |
| 66 | In Concentrado | 46.47 |  |  |  | 198 |
| 67 | Cola de Zn Flot. | 12.83 |  |  |  | 197 |
| 68 | Cola de Zn limp. | 29.32 |  |  |  | 141 |
| 69 | Espuma, bulk (A) +200 | 2.45 |  |  |  | 589 |
| 70 | +325 | 2.12 |  |  |  | 548 |
| 71 | -325 | 2.09 |  |  |  | 634 |
| 72 | Espuna, bulk (B) +200 | 2.82 |  |  |  | 490 |
| 73 | +325 | 2.20 |  |  |  | 686 |
| 74 | -325 | 2.46 |  |  |  | 689 |
| 75 | Cola, bulk +100 | 2.07 |  |  |  | 97 |
| 76 | $+200$ | 2.85 |  |  |  | 99 |
| 77 | +325 | 2.98 |  |  |  | 124 |
| 78 | -325 | 2.20 |  |  |  | 97 |
| 79 | Zn Flot. Espumabulk | 5.50 |  |  |  | 558 |
| 80 | Cola (A) | 0.30 |  |  |  | 94 |
| 81 | (B) | 0.30 |  |  |  | 99 |
| 82 | Espuma, primaria | 6.82 |  |  |  | 650 |
| 83 | Cola | 0.70 |  |  |  | 223 |
| 84 | Espuma, 1ra limp | 11.96 |  |  |  | 1470 |
| 85 | Cola | 3.50 |  |  |  | 123 |
| 86 | Espuma, 2da 1 imp | 17.27 |  |  |  | 1965 |
| 87 | 2 | 7.80 |  |  |  | 1250 |
| 88 | Cola | 8.10 |  |  |  | 950 |
| 89 | Zn(2) Espuma, bulk | 5.34 |  |  |  | 532 |
| 90 | Cola (A) | 0.30 |  |  |  | 52 |
| 91 | (B) | 0.32 |  |  |  | 56 |
| 92 | Espuma, primaria | 9.06 |  |  |  | 825 |
| 93 | Cola | 0.52 |  |  |  | 155 |
| 94 | Espuma, lra 1imp | 13.34 |  |  |  | 1470 |
| 95 | Cola | 5.90 |  |  |  | 348 |
| 96 | Espuma, 2da limp | 13.93 |  |  |  | 1889 |
| 97 | 2 | 24.20 |  |  |  | 1274 |
| 98 | Cola | 5.70 |  |  |  | 480 |
| 99 | 2n(3) Espuma, bulk | 9.86 |  |  |  | 812 |
| 100 | Cola (A) | 0.16 |  |  |  | 99 |

A-6(3) Los Resultados de Análisis Qufmico

| No. | muestra | 2 n | Pb | Sn | Fe | $\mathrm{Ag}(\mathrm{g} / \mathrm{t})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 101 | Zn(3) Cola (B) | 0.16 | 0.10 |  | 30.24 | 64 |
| 102 | Espuma, primaria | 25.47 | 8.50 |  | 24.20 | 1812 |
| 103 | Cola | 0.94 | 0.25 |  | 36.45 | 241 |
| 104 | Espuma, 1ra limp | 27.82 |  |  |  | 1911 |
| 105 | Cola | 15.53 |  |  |  | 1391 |
| 106 | Espuma, 2da 1imp | 24.62 | 16.15 |  | 22.96 | 1984 |
| 107 | Cola | 35.64 | 9.20 |  | 28.30 | 1735 |
| 108 | Espuma, 3ra limp | 28.81 | 17.88 |  | 21.55 | 2354 |
| 109 | 2 | 24.90 | 10.33 |  | 25.72 | 2030 |
| 110 | Cola | 17. 13 | 2.38 |  | 28.30 | 1322 |
| 111 | Zn(4) Espuma, bulk | 5.88 |  |  |  | 568 |
| 112 | Cola 1 | 0.30 |  |  |  | 80 |
| 113 | 2 | 0.28 |  |  |  | 61 |
| 114 | Espuma, primaria | 18.34 |  |  |  | 1460 |
| 115 | Cola | 0.40 |  |  |  | 177 |
| 116 | Espuma, Ira limp | 21.04 |  |  |  | 2328 |
| 117 | Cola | 14.50 |  |  |  | 260 |
| 118 | Espuma, 2da 1 imp | 22.10 |  |  |  | 2915 |
| 119 | 2 | 11.75 |  |  |  | 2044 |
| 120 | Cola | 9.35 |  |  |  | 1330 |
| 121 | Zn(5) Espuma, bulk | 6.62 |  |  |  | 569 |
| 122 | Cola A | 0.21 |  |  |  | 73 |
| 123 | B | 0.24 |  |  |  | 51 |
| 124 | Espuma, primaria | 23.80 |  |  |  | 1750 |
| 125 | Cola | 0.56 |  |  |  | 166 |
| 126 | Espuma, 1ra limp | 27.20 |  |  |  | 2667 |
| 127 | Cola | 20.05 |  |  |  | 738 |
| 128 | Espuma, 2da limp | 30.50 |  |  |  | 3050 |
| 129 | 2 | 19.61 |  |  |  | 2588 |
| 130 | Cola | 17.37 |  |  |  | 928 |
| 131 | Py Flot. Conc. 1 | 0.49 | 0.26 |  | 10.03 | 153 |
| 132 | 2 | 1.11 | 0.62 |  | 36.04 | 307 |
| 133 | 3 | 0.80 | 0.70 |  | 33.10 | 242 |
| 134 | Cola | 0.44 | 0.42 |  | 29.07 | 155 |
| 135 | Bulk(10) Espuma 1 | 5.30 |  |  |  | 392 |
| 136 | 2 | 7.34 |  |  |  | 1223 |
| 137 | 3 | 5.20 |  |  |  | 1075 |
| 138 | 4 | 3.95 |  |  |  | 880 |
| 139 | Cola | 0.25 |  |  |  | 75 |
| 140 | Bu1k(11) Espuma 1 | 6.00 |  |  |  | 491 |
| 141 | 2 | 9.20 |  |  |  | 995 |
| 142 | 3 | 8.82 |  |  |  | 1085 |
| 143 | 4 | 5.34 |  |  |  | 1213 |
| 144 | Cola | 0.35 |  |  |  | 82 |
| 145 | Bulk(12) Espuma 1 | 3.35 |  |  |  | 536 |
| 146 | 2 | 14.55 |  |  |  | 1164 |
| 147 | 3 | 12.88 |  |  |  | 1225 |
| 148 | 4 | 9.95 |  |  |  | 1030 |
| 149 | Cola | 0.32 |  |  |  | 90 |
| 150 | Bulk(13) Espuma 1 | 10.30 |  |  |  | 688 |

A-6 (4) Los Resultados de Análisis Quimico

| No. | Muestra | 2 n | Pb | Sn | Fe | $\mathrm{Ag}(\mathrm{g} / \mathrm{t})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 151 | Bulk(13), Espuma 2 | 1.96 |  |  |  | 540 |
| 152 | 3 | 5.80 |  |  |  | 490 |
| 153 | 4 | 2.95 |  |  |  | 395 |
| 154 | Cola | 0.31 |  |  |  | 75 |
| 155 | Bulk (14), Espuma 1 | 9.00 |  |  |  | 641 |
| 156 | - 2 | 2.90 |  |  |  | 677 |
| 157 | 3 | 1.82 |  |  |  | 446 |
| 158 | 4 | 1.96 |  |  |  | 350 |
| 159 | Cola | 0.24 |  |  |  | 49 |
| 160 | Espuma bulk (Lab.) | 8.53 |  |  |  | 634 |
| 161 | Espuma bulk(plant) | 28.79 |  |  |  | 99 |
| 162 | Hezcla | 17.55 |  |  |  | 335 |
| 163 | Cola (Lab) | 0.35 |  |  |  | 75 |
| 164 | Cola (planta) | 2.10 |  |  |  | 38 |
| 165 | 2n Cola, primaria | 4.47 |  |  |  | 228 |
| 166 | Cola, 1ra limp | 24.61 |  |  |  | 398 |
| 167 | Cola, 2da 1imp | 35.10 |  |  |  | 492 |
| 168 | Cola, 3ra limp | 19.76 |  |  |  | 766 |
| 169 | Zn Concentrado 1 | 50.74 |  |  |  | 725 |
| 170 | 2 | 49.32 |  |  |  | 1025 |
| 171 | Completiva, Esp. Pb | 2.40 | 18.42 |  | 17.30 | 1645 |
| 172 | Cola | 2.28 | 0.20 |  | 29.53 | 143 |
| 173 | Pb Espuma, Ira limp | 4.05 | 40.48 |  | 11.80 | 4168 |
| 174 | Cola | 1.10 | 0.98 |  | 27.30 | 155 |
| 175 | Pb Concentrado | 4.23 | 53.71 |  | 9.68 | 5443 |
| 176 | Cola, 2da limp | 3.62 | 10.89 |  | 21.72 | 1110 |
| 177 | 2n Cola, primaria | 1.94 | 0.32 |  | 38.45 | 202 |
| 178 | Cola, Ira limp | 21.64 | 0.38 |  | 28.85 | 577 |
| 179 | Cola, 2da limp | 25.40 | 1.63 |  | 22.92 | 933 |
| 180 | Zn Concentrado 1 | 48.98 | 2.49 |  | 16.20 | 2150 |
| 181 | - 2 | 38.97 | 1.43 |  | 18.59 | 1247 |
| 182 | Py Concentrado 1 | 0.20 | 0.18 |  | 41.07 | 46 |
| 183 | 2 | 0.41 | 0.27 |  | 37.02 | 148 |
| 184 | Cola, final | 0.15 | 0.06 |  | 26.41 | 49 |
| 185 | Completiva Granza | 1.58 | 0.45 |  | 32.46 | 243 |
| 186 | Pb Espuma, primaria | 2.18 | 17.93 |  | 20.50 | 1856 |
| 187 | Cola | 2.15 | 0.19 |  | 28.64 | 139 |
| 188 | Cola, Ira limp | 2.32 | 1.53 |  | 24.68 | 424 |
| 189 | Cola, 2da limp | 2.47 | 4.98 |  | 24.42 | 721 |
| 190 | Cola, 3ra limp | 3.95 | 17.77 |  | 21.72 | 2506 |
| 191 | Pb Concentrado | 4.75 | 47.47 |  | 13.03 | 4397 |
| 192 | Zn Espuma, primaria | 26.05 | 0.88 |  | 26.65 | 1190 |
| 193 | Cola | 0.81 | 0.20 |  | 43.55 | 135 |
| 194 | Cola, Ira limp | 10.87 | 0.21 |  | 35.78 | 283 |
| 195 | Cola, 2da limp | 11.31 | 0.57 |  | 32.60 | 538 |
| 196 | 2 C Concentrado 1 | 48.64 | 2.05 |  | 13.72 | 2641 |
| 197 | 2 | 45.22 | 0.62 |  | 15.60 | 1774 |
| 198 | Py Concentrado 1 | 0.29 | 0.15 |  | 34.48 | 49 |
| 199 | - 2 | 0.47 | 0.22 |  | 32.15 | 198 |
| 200 | Cola, final | 0.17 | 0.67 |  | 26.10 | 44 |

$$
\mathrm{A}-61
$$

A $\rightarrow 6$ (5) los Resultados de Analisis Quimico

| No, | Nuesta | $A u(g / t)$ | $\mathrm{Cu}(\%)$ | $\mathrm{Sb}(\%)$ | $A S(\%)$ | $\mathrm{S}(\%)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Cabeza Inicial | 0.24 | 0.02 | 0.03 | 0.09 | 14.19 |
| 2 | Pb Concentrado | 0.60 | 0.09 | 0.23 | 0.37 | 18.68 |
| 3 | 2 n Concentrado | 0.60 | 0.42 | 0.07 | 0.25 | 32.39 |
| 4 | Py Concentrado | 0.05 | 0.01 | 0.06 | 0.29 | 39.42 |
| 5 | Cola Final | 0.12 | 0.005 | 0.06 | 0.06 | 1.70 |

## A-7 Lista del Equipo Usado en Las Pruebas

| Nombre | Tipo | Hechura |
| :--- | :--- | :--- |
| Trituradora | Tipo de BLAKE | DENYER, USA |
| Chancadora |  | BICO, USA |
| Holino de Bola | 65mm(dia.) $\times 300 \mathrm{ma}$ (largo) | DENYER, USA |
| Celda de Flotacion | Tipo D-2, 2kg(capacidad) | DENYER, USA |
| Hedida de pll | Tipo HY-10P | TOADEXPA, JAPON |
| Filtro | FP-10 | DENYER, USA |
| Secador | Electrotermico |  |

A-8(1) Resultado de analisis de EPMA

| No. | 1 |  |  | 2 |  |  | 3 |  |  | 4 |  |  | 5 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Muestra | P-47 |  |  | P-49 |  |  | P-49 |  |  | P-49 |  |  | P-49 |  |  |
| Mineral | Piragilita |  |  | Canfildita |  |  | Fraibergita |  |  | Piragilita |  |  | Stefanita |  |  |
| Cu wt.\% | - | - | - | 0.00 | 0.00 | 0.00 | 14.45 | 13.91 | 14.81 | - | - | - | - | - | - |
| Ag | 58.92 | 59.49 | 59.36 | 72.76 | 72.73 | 73.44 | 32.22 | 32.56 | 30.15 | 59.54 | 59.95 | 61.18 | 69.32 | 69.82 | 70.02 |
| Fe | - | - | - | 0.03 | 0.03 | 0.08 | 4.81 | 5.03 | 5.58 | - | - | - | - | - | - |
| Zn | - | - | - | 0.48 | 0.40 | 1.04 | 0.85 | 0.82 | 0.76 | - | - | - | - | - | - |
| Pb | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Sb | 20.88 | 22.25 | 22.17 | 0.00 | 0.00 | 0.00 | 25.55 | 25.37 | 25.45 | 22.38 | 22.16 | 21.00 | 11.43 | 11.39 | 11.41 |
| Sn | - | - | - | 9.84 | 9.75 | 9.68 | 0.18 | 0.23 | 0.11 | - | - | - | - | - | - |
| S | 17.76 | 17.11 | 16.56 | 16.75 | 16.95 | 16.96 | 20.30 | 20.44 | 20.76 | 15.81 | 16.95 | 15.50 | 18.80 | 17.13 | 17.72 |
| W03 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Sn02 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Si02 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ti02 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| A1203 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Fe0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| MnO | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Mg0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ca0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| F | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total | 97.56 | 98.84 | 98.10 | 99.86 | 99.85 | 101.20 | 98.36 | 98.36 | 97.60 | 97.73 | 99.06 | 97.69 | 99.54 | 98.34 | 99.15 |

Whad әp s!s!iteur әp opeztnsวy (2)8-甘

| No. | 6 |  | 7 |  |  | 8 |  |  | 9 |  |  | 10 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Muestra | P-49 |  | P-50 |  |  | P-53 |  |  | P-39 |  |  | P-39 |  |  |
| Mineral | Stefanita |  | Miragirita |  |  | Estanita |  |  | Rutila |  |  | Estanita |  |  |
| Cu wt.\% | - | - | - | - | - | 26.93 | 26.42 | 26.70 | - | - | - | 27.24 | 26.60 | 27.42 |
| Ag | 67.34 | 65.54 | 41.58 | 42.08 | 40.51 | 0.00 | 0.00 | 0.00 | - | - | - | 0.00 | 0.00 | 0.00 |
| Fe | - | - | - | - | - | 13.58 | 13.06 | 13.06 | - | - | - | 13.91 | 14.12 | 14.11 |
| Zn | - | - | - | - | - | 1.04 | 2.08 | 1.06 | - | - | - | 1.86 | 1.76 | 1.65 |
| Pb | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Sb | 17.12 | 17.11 | 37.33 | 37.14 | 39.29 | 0.00 | 0.00 | 0.00 | - | - | - | 0.00 | 0.00 | 0.00 |
| Sn | - | - | - | - | - | 27.54 | 27.16 | 27.26 | - | - | - | 25.10 | 24.95 | 25.25 |
| S | 13.88 | 13.98 | 18.97 | 18.64 | 19.45 | 29.69 | 30.05 | 28.42 | - | - | - | 30.47 | 29.94 | 30.50 |
| W03 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Sn02 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Si02 | - | - | - | - | - | - | - | - | 2.08 | 0.00 | 1.55 | - | - | - |
| Ti02 | - | - | - | - | - | - | - | - | 95.88 | 99.10 | 92.88 | - | - | - |
| Al203 | - | - | - | - | - | - | - | - | 1.65 | 0.05 | 1.36 | - | - | - |
| Fe 0 | - | - | - | - | - | - | - | - | 0.62 | 1.05 | 1.53 | - | - | - |
| MnO | - | - | - | - | - | - | - | - | 0.00 | 0.00 | 0.01 | - | - | - |
| Mgo | - | - | - | - | - | - | - | - | 0.12 | 0.01 | 0.04 | - | - | - |
| Ca0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| F | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total | 98.33 | 96.62 | 97.89 | 97.85 | 99.25 | 98.77 | 98.76 | 96.51 | 100.35 | 100.21 | 97.37 | 98.58 | 97.37 | 98.93 |

A-8(3) Resultado de analisis de EPMA

| No. | 11 |  |  | 12 |  |  | 13 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Muestra | P-39 |  |  | P-40 |  |  | P-26 |  |  |
| Mineral | Fluorida* |  |  | Oxida de Fe |  |  | Wolframita |  |  |
| Cu wt.\% | - | - | - | - | - | - | - | - | - |
| Ag | - | - | - | - | - | - | - | - | - |
| Fe | - | - | - | - | - | - | - | - | - |
| Zn | - | - | - | - | - | - | - | - | - |
| Pb | - | - | - | - | - | - | - | - | - |
| Sb | - | - | - | - | - | - | - | - | - |
| Sn | - | - | - | - | - | - | - | - | - |
| S | - | - | - | - | - | - | - | - | - |
| W03 | - | - | - | - | - | - | 75.55 | 74.45 | 75.49 |
| Sn02 | - | - | - | 0.13 | 0.07 | 0.05 | - | - | - |
| Si02 | 33.37 | 32.41 | 32.61 | - | - | - | - | - | - |
| Ti02 | 0.04 | 0.04 | 0.03 | - | - | - | - | - | - |
| Al203 | 53.44 | 54.89 | 55.41 | - | - | - | - | - | - |
| Fe 0 | 0.22 | 0.39 | 0.57 | 94.54 | 92.91 | 83.40 | 17.02 | 18.89 | 17.26 |
| MnO | - | - | - | 0.18 | 2.02 | 4.60 | 8.03 | 6.55 | 7.66 |
| MgO | 0.12 | 0.18 | 0.27 | 0.10 | 3.99 | 2.98 | - | - | - |
| CaO | 0.01 | 0.02 | 0.02 | 0.29 | 1.90 | 2.72 | - | - | - |
| F | 12.91 | 13.02 | 13.41 | - | - | - | - | - | - |
| Total | 100.10 | 100.94 | 102.32 | 95.34 | 100.88 | 93.74 | 100.59 | 99.90 | 100.41 |

*:AlSi02(F, OH)3

