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Granada. 7 de Febrero de 1994

Estimado amigo:

En cumplimiento del contrato que tenemos firmado, te envío todos los datos generados en el mismo, que son los siguientes:

- 1.- Tabla (Tabla 1) con los valores isotópicos de tres isocronas Rb-Sr
- 2.- Tres figuras con dichas isocronas y los cálculos de edad y relaciones isotópicas iniciales.
- 3.- Tabla (Tabla 2) con 50 datos de elementos mayores de muestras de la hoja de Navatalgordo
- 4.- Tablas (Tablas 3 y 4) con datos de elementos traza de las mismas muestras de Navatalgordo.
- X.- Tabla (Tabla 5) con 26 datos de elementos mayores de muestras de la hoja de Piedrahita
- X.- Tablas (Tablas 6 y 7) con datos de elementos traza de las mismas muestras de Piedrahita.
- 7.- Tabla (Tabla 8) con 373 análisis de minerales por microsonda electrónica de muestras de Navatalgordo
- X.- Tabla (Tabla 9) con 321 análisis de minerales por microsonda electrónica de muestras de Piedrahita
- 10.- Un disquete en formato PC, conteniendo ficheros de texto (ASCII) de todas las tablas, y ficheros EPS de los dibujos.

Como te dije por fax, a mi vuelta de Alemania finalizaré el informe con la interpretación geoquímica y petrogenética de este conjunto de datos.

Un cordial saludo

Fernando Bea

| C.G.S.-C.E.S.-MADRID |     |
|----------------------|-----|
| Dirección            |     |
| Financiero-Activo    |     |
| Medio Ambiente       |     |
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| Nº Registro:         | 368 |

10. II. 94

Tabla 2.- Composición de elementos mayores de muestras de la hoja de Navatalgordo. Cuando no figura el valor de Fe<sub>2</sub>O<sub>3</sub>, el hierro total se expresa como FeO.

| Ref.    | SiO <sub>2</sub> | TiO <sub>2</sub> | Al <sub>2</sub> O <sub>3</sub> | Fe <sub>2</sub> O <sub>3</sub> | FeO  | MgO  | MnO  | CaO  | Na <sub>2</sub> O | K <sub>2</sub> O | P <sub>2</sub> O <sub>5</sub> | LOI  | Total  |
|---------|------------------|------------------|--------------------------------|--------------------------------|------|------|------|------|-------------------|------------------|-------------------------------|------|--------|
| HV-9305 | 69.93            | 0.50             | 14.40                          |                                | 3.18 | 0.83 | 0.05 | 1.89 | 3.29              | 4.53             | 0.18                          | 0.87 | 99.65  |
| HV-9310 | 69.66            | 0.40             | 15.12                          |                                | 2.74 | 0.71 | 0.05 | 2.24 | 3.83              | 4.11             | 0.11                          | 0.68 | 99.65  |
| HV-9328 | 68.77            | 0.49             | 15.56                          |                                | 2.82 | 0.93 | 0.04 | 2.03 | 3.93              | 4.29             | 0.26                          | 0.56 | 99.68  |
| HV-9330 | 74.23            | 0.04             | 14.57                          |                                | 0.87 | 0.01 | 0.03 | 0.57 | 4.74              | 3.18             | 0.37                          | 1.28 | 99.89  |
| HV-9340 | 70.00            | 0.43             | 14.66                          |                                | 2.90 | 0.77 | 0.07 | 1.73 | 3.77              | 4.54             | 0.16                          | 0.63 | 99.66  |
| HV-9371 | 67.75            | 0.57             | 15.26                          |                                | 3.60 | 1.12 | 0.06 | 2.19 | 3.53              | 4.30             | 0.19                          | 1.00 | 99.57  |
| HV-9382 | 68.18            | 0.53             | 15.21                          |                                | 3.50 | 1.10 | 0.07 | 2.36 | 3.65              | 4.21             | 0.18                          | 0.62 | 99.61  |
| HV-9383 | 67.51            | 0.57             | 15.42                          |                                | 3.68 | 1.21 | 0.06 | 2.52 | 3.63              | 4.05             | 0.20                          | 0.70 | 99.55  |
| HV-9384 | 67.45            | 0.56             | 15.46                          |                                | 3.57 | 1.20 | 0.06 | 2.33 | 3.38              | 4.81             | 0.19                          | 0.60 | 99.61  |
| HV-9389 | 66.33            | 0.62             | 15.90                          |                                | 3.95 | 1.34 | 0.06 | 2.47 | 3.64              | 4.14             | 0.21                          | 0.90 | 99.56  |
| HV-9392 | 73.85            | 0.17             | 13.72                          |                                | 1.17 | 0.23 | 0.02 | 0.77 | 2.85              | 5.57             | 0.11                          | 1.40 | 99.86  |
| HV-9401 | 65.71            | 0.67             | 15.86                          |                                | 4.16 | 1.47 | 0.06 | 2.77 | 3.80              | 4.13             | 0.23                          | 0.60 | 99.46  |
| HV-9402 | 74.08            | 0.14             | 13.90                          |                                | 1.34 | 0.22 | 0.03 | 0.84 | 3.42              | 5.18             | 0.13                          | 0.56 | 99.84  |
| HV-9405 | 61.21            | 0.94             | 15.96                          |                                | 5.84 | 3.70 | 0.09 | 4.14 | 3.18              | 2.79             | 0.24                          | 1.25 | 99.34  |
| HV-9406 | 65.70            | 0.67             | 15.95                          |                                | 4.16 | 1.53 | 0.07 | 2.79 | 3.65              | 3.95             | 0.27                          | 0.80 | 99.54  |
| HV-9409 | 68.01            | 0.52             | 15.23                          |                                | 3.43 | 1.17 | 0.06 | 2.41 | 3.72              | 4.30             | 0.19                          | 0.58 | 99.62  |
| HV-9410 | 68.03            | 0.54             | 15.20                          |                                | 3.53 | 1.22 | 0.06 | 2.45 | 3.71              | 4.05             | 0.19                          | 0.62 | 99.60  |
| HV-9412 | 73.79            | 0.04             | 14.87                          |                                | 0.83 | 0.09 | 0.02 | 0.52 | 4.23              | 3.97             | 0.43                          | 1.09 | 99.88  |
| HV-9413 | 68.25            | 0.50             | 15.15                          |                                | 3.34 | 1.14 | 0.06 | 2.18 | 3.64              | 4.50             | 0.17                          | 0.69 | 99.62  |
| HV-9450 | 70.51            | 0.49             | 14.12                          |                                | 2.96 | 0.77 | 0.06 | 1.82 | 3.10              | 4.56             | 0.19                          | 0.49 | 99.07  |
| HV-9451 | 70.45            | 0.47             | 14.84                          |                                | 2.79 | 0.80 | 0.06 | 2.07 | 3.35              | 4.30             | 0.18                          | 0.49 | 99.80  |
| HV-9452 | 69.64            | 0.34             | 15.56                          |                                | 2.16 | 0.59 | 0.05 | 1.79 | 3.39              | 5.36             | 0.14                          | 0.48 | 99.50  |
| HV-9453 | 71.83            | 0.51             | 13.66                          |                                | 3.05 | 0.81 | 0.06 | 1.76 | 3.05              | 4.03             | 0.19                          | 0.37 | 99.32  |
| HV-9454 | 71.29            | 0.44             | 14.66                          |                                | 2.68 | 0.80 | 0.07 | 1.84 | 3.24              | 4.62             | 0.17                          | 0.47 | 100.28 |
| HV-9455 | 73.45            | 0.21             | 14.44                          |                                | 1.63 | 0.32 | 0.05 | 0.82 | 3.04              | 5.30             | 0.18                          | 0.53 | 99.97  |
| HV-9456 | 69.04            | 0.47             | 15.15                          |                                | 2.93 | 0.97 | 0.06 | 2.05 | 3.21              | 4.71             | 0.17                          | 0.00 | 98.76  |
| HV-9457 | 75.21            | 0.09             | 14.51                          |                                | 1.02 | 0.08 | 0.05 | 0.32 | 3.57              | 4.20             | 0.23                          | 0.93 | 100.21 |
| HV-9458 | 69.84            | 0.39             | 15.11                          |                                | 2.41 | 0.63 | 0.05 | 1.89 | 3.27              | 5.07             | 0.17                          | 0.36 | 99.19  |
| HV-9459 | 74.13            | 0.20             | 14.34                          |                                | 1.56 | 0.31 | 0.04 | 0.66 | 3.01              | 5.15             | 0.19                          | 0.62 | 100.21 |
| HV-9460 | 65.89            | 0.71             | 15.97                          |                                | 4.17 | 1.45 | 0.09 | 2.66 | 3.43              | 4.00             | 0.30                          | 0.57 | 99.24  |
| HV-9461 | 70.01            | 0.38             | 14.83                          |                                | 2.27 | 0.62 | 0.05 | 1.62 | 3.24              | 4.98             | 0.15                          | 0.65 | 98.80  |
| HV-9462 | 73.43            | 0.18             | 14.36                          |                                | 1.41 | 0.30 | 0.04 | 0.77 | 3.01              | 5.27             | 0.24                          | 0.62 | 99.63  |
| HV-9463 | 67.48            | 0.56             | 15.56                          |                                | 3.34 | 1.13 | 0.06 | 2.32 | 3.36              | 4.53             | 0.20                          | 0.58 | 99.12  |
| HV-9464 | 68.16            | 0.62             | 15.08                          |                                | 3.56 | 1.08 | 0.06 | 2.44 | 3.23              | 4.37             | 0.21                          | 0.54 | 99.35  |
| HV-9465 | 66.03            | 0.73             | 15.97                          |                                | 4.02 | 1.18 | 0.07 | 2.56 | 3.78              | 4.07             | 0.21                          | 0.44 | 99.06  |
| HV-9466 | 74.24            | 0.21             | 14.28                          |                                | 1.56 | 0.30 | 0.03 | 0.46 | 2.70              | 5.23             | 0.19                          | 1.00 | 100.20 |
| HV-9467 | 55.59            | 0.84             | 17.15                          |                                | 6.97 | 4.52 | 0.14 | 7.23 | 2.27              | 2.31             | 0.19                          | 1.45 | 98.66  |
| HV-9468 | 67.30            | 0.56             | 15.98                          |                                | 3.42 | 1.15 | 0.06 | 2.78 | 3.56              | 3.66             | 0.29                          | 0.55 | 99.31  |
| HV-9469 | 66.93            | 0.65             | 15.52                          | 0.03                           | 4.02 | 1.46 | 0.06 | 2.42 | 2.82              | 3.67             | 0.27                          | 1.74 | 99.59  |
| HV-9470 | 65.01            | 0.87             | 18.60                          | 0.73                           | 5.03 | 2.40 | 0.09 | 1.07 | 2.37              | 3.49             | 0.18                          | 0.00 | 99.84  |
| JF-9007 | 71.39            | 0.34             | 14.45                          |                                | 2.24 | 0.47 | 0.04 | 1.42 | 3.42              | 5.13             | 0.15                          | 0.68 | 99.73  |
| JF-9009 | 65.90            | 0.71             | 16.03                          |                                | 4.27 | 1.31 | 0.07 | 2.80 | 3.36              | 4.03             | 0.26                          | 0.53 | 99.27  |
| JF-9021 | 65.92            | 0.71             | 15.72                          |                                | 4.03 | 1.40 | 0.06 | 2.91 | 3.29              | 4.03             | 0.27                          | 0.47 | 98.81  |
| JF-9022 | 74.15            | 0.17             | 14.50                          |                                | 1.10 | 0.22 | 0.04 | 0.79 | 3.28              | 5.11             | 0.22                          | 0.63 | 100.21 |
| JF-9023 | 62.61            | 0.91             | 16.86                          |                                | 5.05 | 1.86 | 0.08 | 3.74 | 3.47              | 3.60             | 0.30                          | 0.63 | 99.11  |
| JF-9039 | 72.65            | 0.19             | 15.00                          |                                | 1.58 | 0.28 | 0.02 | 0.48 | 3.11              | 5.02             | 0.41                          | 0.95 | 99.69  |
| JF-9040 | 69.97            | 0.45             | 14.01                          |                                | 2.73 | 0.74 | 0.06 | 1.78 | 3.14              | 4.18             | 0.16                          | 0.91 | 98.13  |
| JF-9041 | 73.65            | 0.15             | 14.77                          |                                | 1.31 | 0.27 | 0.03 | 0.57 | 3.38              | 4.87             | 0.41                          | 0.63 | 100.04 |
| JF-9042 | 65.13            | 0.77             | 16.12                          |                                | 4.50 | 1.55 | 0.08 | 3.04 | 3.33              | 3.94             | 0.27                          | 0.40 | 99.13  |
| JF-9079 | 72.67            | 0.36             | 13.45                          |                                | 2.73 | 0.60 | 0.05 | 1.55 | 3.34              | 4.13             | 0.11                          | 0.70 | 99.69  |



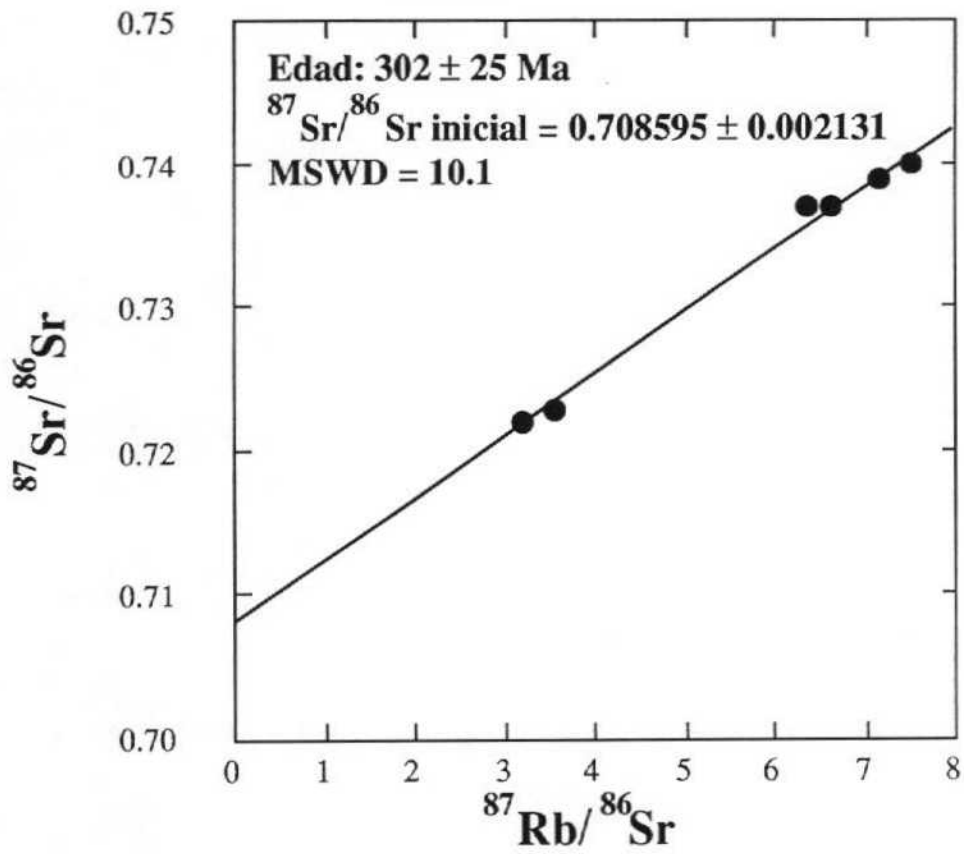
Tabla 4.- Contenidos de U, Th y REE en las muestras de la hoja de Navatalgordo

| Ref.    | U   | Th   | La    | Ce     | Pr    | Nd    | Sm    | Eu   | Gd    | Tb   | Dy   | Ho   | Tm   | Yb   | Lu   |      |
|---------|-----|------|-------|--------|-------|-------|-------|------|-------|------|------|------|------|------|------|------|
| HV-9450 | 4.5 | 34.4 | 34.71 | 84.56  | 11.00 | 42.60 | 8.63  | 0.63 | 6.52  | 1.02 | 5.41 | 1.11 | 2.95 | 0.50 | 2.90 | 0.42 |
| HV-9451 | 7.3 | 29.6 | 32.47 | 77.54  | 10.01 | 38.21 | 7.75  | 0.74 | 5.89  | 0.90 | 4.81 | 0.95 | 2.61 | 0.42 | 2.35 | 0.36 |
| HV-9452 | 3.9 | 18.9 | 16.51 | 47.27  | 5.76  | 22.69 | 4.68  | 0.53 | 3.41  | 0.56 | 2.90 | 0.58 | 1.62 | 0.27 | 1.57 | 0.23 |
| HV-9453 | 6.9 | 25.6 | 23.90 | 60.39  | 7.90  | 30.55 | 6.40  | 0.58 | 4.88  | 0.79 | 4.14 | 0.87 | 2.36 | 0.39 | 2.23 | 0.34 |
| HV-9454 | 4.0 | 28.4 | 35.96 | 87.22  | 10.44 | 39.31 | 8.68  | 0.66 | 6.45  | 1.01 | 5.21 | 1.05 | 2.82 | 0.48 | 2.72 | 0.41 |
| HV-9455 | 3.2 | 17.7 | 24.47 | 58.11  | 6.91  | 25.27 | 5.73  | 0.41 | 4.50  | 0.67 | 3.16 | 0.55 | 1.41 | 0.22 | 1.43 | 0.22 |
| HV-9456 | 4.1 | 16.8 | 28.00 | 63.05  | 7.51  | 28.40 | 5.80  | 1.09 | 4.66  | 0.78 | 4.18 | 0.84 | 2.26 | 0.36 | 2.18 | 0.32 |
| HV-9457 | 3.0 | 2.8  | 2.10  | 6.65   | 0.81  | 2.96  | 1.00  | 0.02 | 0.73  | 0.16 | 0.86 | 0.16 | 0.44 | 0.10 | 0.66 | 0.07 |
| HV-9458 | 2.7 | 23.2 | 32.41 | 75.10  | 9.10  | 34.99 | 7.21  | 0.79 | 5.55  | 0.78 | 3.95 | 0.79 | 2.04 | 0.32 | 1.89 | 0.28 |
| HV-9459 | 4.5 | 28.4 | 33.86 | 82.47  | 9.90  | 37.71 | 8.07  | 0.63 | 7.77  | 0.97 | 5.42 | 0.99 | 2.99 | 0.38 | 2.81 | 0.38 |
| HV-9460 | 3.7 | 10.9 | 26.07 | 59.35  | 7.06  | 27.17 | 5.64  | 1.04 | 4.84  | 0.79 | 4.35 | 0.86 | 2.26 | 0.37 | 2.03 | 0.30 |
| HV-9461 | 3.5 | 21.7 | 20.92 | 52.53  | 6.82  | 26.72 | 5.59  | 0.64 | 4.19  | 0.67 | 3.80 | 0.75 | 2.01 | 0.33 | 1.99 | 0.28 |
| HV-9462 | 3.9 | 14.6 | 22.66 | 52.54  | 5.79  | 21.47 | 4.85  | 0.45 | 3.83  | 0.63 | 3.03 | 0.56 | 1.46 | 0.24 | 1.45 | 0.23 |
| HV-9463 | 4.7 | 21.6 | 40.56 | 87.60  | 10.45 | 40.62 | 8.36  | 1.36 | 6.68  | 1.07 | 5.81 | 1.15 | 3.00 | 0.48 | 2.65 | 0.40 |
| HV-9464 | 3.1 | 19.8 | 35.79 | 84.37  | 10.15 | 38.11 | 7.37  | 1.15 | 6.19  | 0.95 | 5.08 | 1.02 | 2.75 | 0.42 | 2.39 | 0.33 |
| HV-9465 | 4.6 | 26.6 | 60.21 | 128.74 | 15.66 | 60.57 | 12.24 | 1.07 | 10.38 | 1.65 | 8.78 | 1.77 | 4.51 | 0.67 | 3.87 | 0.51 |
| HV-9466 | 4.8 | 20.9 | 21.20 | 52.16  | 5.86  | 21.44 | 4.62  | 0.42 | 3.84  | 0.62 | 3.16 | 0.60 | 1.55 | 0.27 | 1.74 | 0.27 |
| HV-9467 | 2.2 | 5.2  | 16.93 | 42.63  | 6.16  | 26.86 | 6.29  | 1.65 | 5.79  | 1.03 | 6.05 | 1.34 | 3.45 | 0.58 | 3.54 | 0.52 |
| HV-9468 | 5.2 | 17.9 | 34.06 | 75.90  | 8.89  | 33.70 | 6.91  | 1.35 | 5.72  | 0.93 | 4.69 | 0.96 | 2.35 | 0.37 | 1.71 | 0.22 |
| HV-9469 | 4.7 | 17.0 | 31.42 | 72.26  | 8.50  | 34.21 | 6.91  | 1.27 | 5.78  | 0.92 | 4.71 | 0.93 | 2.24 | 0.36 | 2.04 | 0.26 |
| HV-9470 | 7.5 | 30.0 | 58.72 | 115.16 | 14.65 | 44.71 | 9.78  | 1.83 | 6.33  | 0.89 | 4.05 | 0.72 | 1.86 | 0.26 | 1.59 | 0.23 |
| JF-9009 | 3.9 | 12.7 | 33.10 | 70.46  | 8.16  | 31.01 | 5.97  | 1.19 | 5.08  | 0.73 | 3.70 | 0.71 | 1.79 | 0.26 | 1.30 | 0.19 |
| JF-9021 | 3.4 | 12.2 | 39.28 | 88.42  | 10.38 | 38.63 | 7.34  | 1.18 | 6.08  | 0.89 | 4.44 | 0.85 | 2.24 | 0.34 | 1.91 | 0.29 |
| JF-9022 | 5.7 | 24.9 | 31.34 | 79.28  | 9.16  | 34.91 | 7.25  | 0.57 | 5.52  | 0.85 | 4.63 | 0.94 | 2.54 | 0.44 | 2.60 | 0.39 |
| JF-9023 | 1.9 | 8.7  | 23.31 | 56.02  | 6.88  | 27.29 | 5.91  | 1.21 | 4.86  | 0.73 | 3.77 | 0.74 | 1.86 | 0.28 | 1.58 | 0.23 |
| JF-9040 | 9.3 | 4.4  | 9.93  | 22.82  | 2.76  | 10.57 | 2.75  | 0.28 | 3.33  | 0.46 | 1.86 | 0.32 | 0.68 | 0.09 | 0.48 | 0.07 |
| JF-9041 | 9.7 | 2.6  | 5.98  | 14.25  | 1.60  | 6.17  | 1.66  | 0.25 | 1.99  | 0.21 | 1.11 | 0.21 | 0.44 | 0.06 | 0.30 | 0.03 |
| JF-9042 | 3.4 | 11.8 | 33.34 | 72.73  | 8.56  | 32.65 | 6.71  | 1.24 | 5.59  | 0.83 | 4.32 | 0.85 | 2.24 | 0.35 | 1.98 | 0.29 |

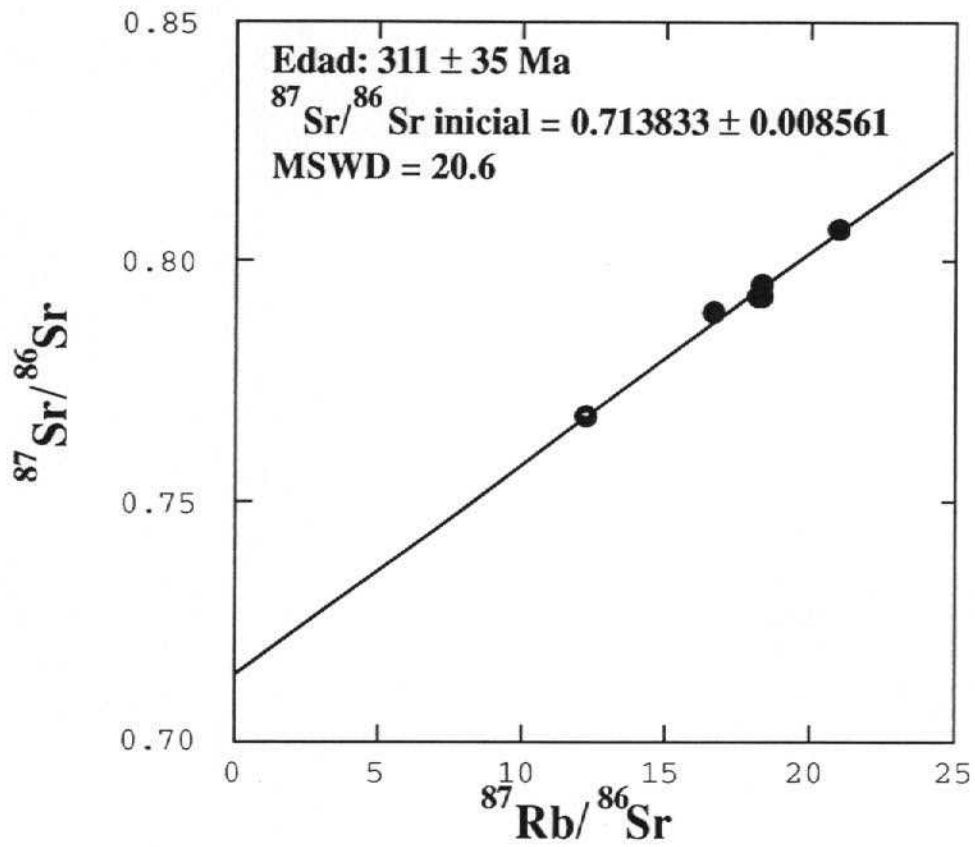
Tabla 1.- Contenidos absolutos de Rb y Sr, junto con las relaciones isotópicas  $^{87}\text{Rb}/^{86}\text{Sr}$  y  $^{87}\text{Sr}/^{86}\text{Sr}$  de las muestras estudiadas. Rb, Sr y  $^{87}\text{Rb}/^{86}\text{Sr}$  se han determinado mediante ICP-MS en la Universidad de Granada.  $^{87}\text{Sr}/^{86}\text{Sr}$  se determinó mediante TIMS en el Institute of Precambrian Geochronology and Geology de St Petersburg (Rusia).

| Ref.              | Rb (ppm) | Sr (ppm) | $^{87}\text{Rb}/^{86}\text{Sr}$ | $^{87}\text{Sr}/^{86}\text{Sr}$ |
|-------------------|----------|----------|---------------------------------|---------------------------------|
| <i>Boquerones</i> |          |          |                                 |                                 |
| B-6               | 270.3    | 43.5     | 18.128                          | 0.792826                        |
| B-24              | 256.8    | 61.3     | 12.192                          | 0.767767                        |
| B-25              | 270.6    | 43.2     | 18.277                          | 0.794820                        |
| B-27              | 263.7    | 42.2     | 18.234                          | 0.792990                        |
| B-31              | 270.9    | 37.8     | 20.937                          | 0.807241                        |
| B-46              | 265.5    | 46.3     | 16.723                          | 0.789279                        |
| <i>Hoyos</i>      |          |          |                                 |                                 |
| B-20              | 185.6    | 156.0    | 3.448                           | 0.724241                        |
| B-23              | 148.9    | 152.9    | 2.822                           | 0.722404                        |
| B-62              | 222.3    | 142.5    | 4.523                           | 0.728485                        |
| B-178             | 240.4    | 160.4    | 4.345                           | 0.727598                        |
| B-709             | 209.4    | 176.4    | 3.440                           | 0.723534                        |
| B-710             | 221.9    | 76.0     | 8.480                           | 0.747307                        |
| B-711             | 230.4    | 133.8    | 4.993                           | 0.730623                        |
| <i>Menga</i>      |          |          |                                 |                                 |
| HV-9450           | 213.1    | 86.4     | 7.158                           | 0.738856                        |
| HV-9451           | 198.0    | 86.7     | 6.626                           | 0.736932                        |
| HV-9452           | 209.3    | 95.6     | 6.352                           | 0.737052                        |
| HV-9453           | 221.8    | 85.9     | 7.494                           | 0.740367                        |
| HV-9461           | 183.8    | 74.8     | 7.131                           | 0.739291                        |
| HV-9463           | 177.4    | 144.7    | 3.553                           | 0.723484                        |
| HV-9464           | 143.7    | 131.3    | 3.171                           | 0.722328                        |

### Pluton "MENGA"

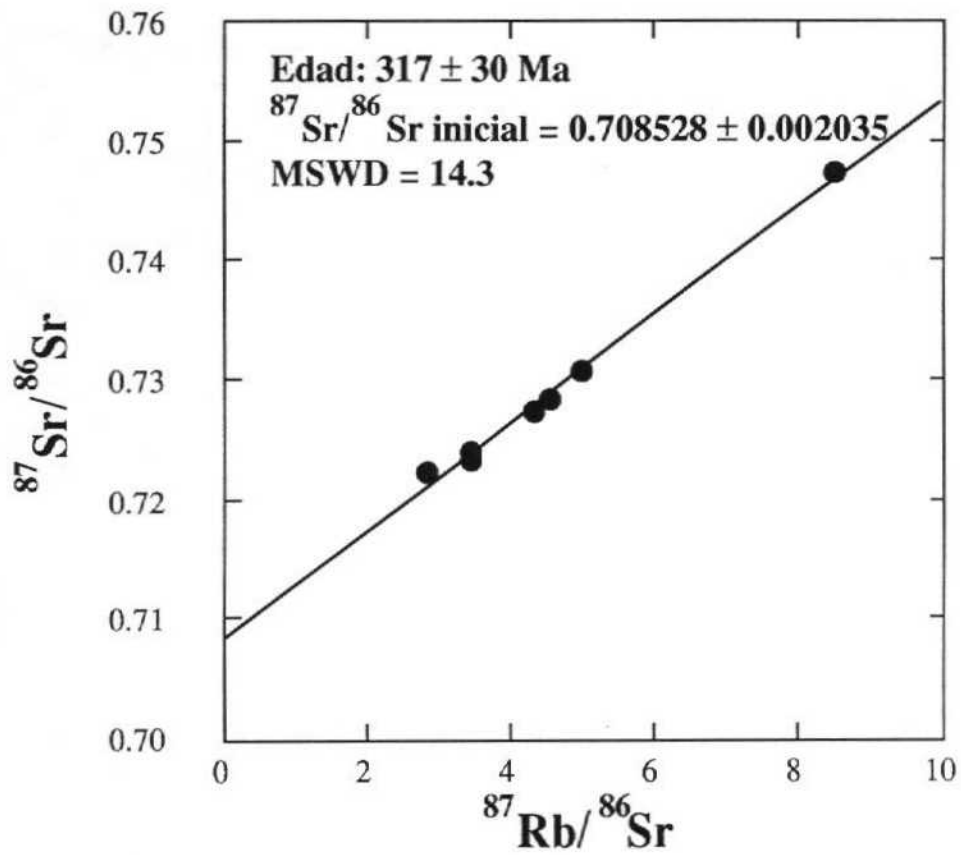


### Pluton "BOQUERONES"





### Pluton "HOYOS DEL ESPINO"





**TABLA 8**  
**Análisis por Microsonda electrónica de**  
**Minerales de la Hoja de Navatalgordo**

| Ref.       | SiO2  | TiO2 | Al2O3 | FeO   | MgO  | MnO  | CaO  | Na2O  | K2O   | Min                         |
|------------|-------|------|-------|-------|------|------|------|-------|-------|-----------------------------|
| HV-555-335 | 35.42 | 4.22 | 14.73 | 23.53 | 7.65 | 0.36 | 0.01 | 0.03  | 9.29  | biotite                     |
| HV-555-335 | 35.79 | 4.04 | 14.83 | 23.62 | 7.65 | 0.38 | 0.00 | 0.13  | 9.28  | biotite                     |
| HV-555-335 | 35.61 | 3.20 | 15.03 | 22.91 | 7.67 | 0.25 | 0.00 | 0.06  | 9.29  | biotite                     |
| HV-555-335 | 35.20 | 3.94 | 14.08 | 23.47 | 7.53 | 0.33 | 0.00 | 0.09  | 9.08  | biotite                     |
| HV-555-335 | 35.30 | 4.20 | 14.42 | 24.15 | 7.25 | 0.30 | 0.00 | 0.13  | 9.12  | biotite                     |
| HV-555-335 | 36.06 | 3.99 | 14.79 | 23.70 | 7.51 | 0.27 | 0.00 | 0.06  | 9.41  | biotite                     |
| HV-555-335 | 35.94 | 3.63 | 14.80 | 23.33 | 7.58 | 0.34 | 0.00 | 0.11  | 9.18  | biotite                     |
| HV-555-335 | 35.37 | 3.79 | 15.15 | 23.47 | 7.29 | 0.24 | 0.00 | 0.08  | 9.20  | biotite                     |
| HV-555-335 | 65.78 | 0.00 | 18.30 | 0.09  | 0.02 | 0.00 | 0.00 | 0.73  | 15.29 | K-feldspar                  |
| HV-555-335 | 65.41 | 0.00 | 18.44 | 0.04  | 0.00 | 0.01 | 0.00 | 0.65  | 15.56 | K-feldspar                  |
| HV-555-335 | 65.81 | 0.04 | 18.19 | 0.04  | 0.00 | 0.02 | 0.00 | 1.13  | 14.83 | K-feldspar                  |
| HV-555-335 | 35.57 | 4.02 | 14.57 | 23.90 | 7.15 | 0.29 | 0.02 | 0.08  | 9.42  | K-feldspar <i>z biotite</i> |
| HV-555-335 | 65.90 | 0.00 | 18.45 | 0.00  | 0.00 | 0.00 | 0.05 | 0.80  | 15.34 | K-feldspar                  |
| HV-555-335 | 64.51 | 0.00 | 22.30 | 0.03  | 0.00 | 0.02 | 3.92 | 9.66  | 0.10  | plagioclase                 |
| HV-555-335 | 60.91 | 0.07 | 24.75 | 0.02  | 0.00 | 0.04 | 6.86 | 7.47  | 0.51  | plagioclase                 |
| HV-555-335 | 61.70 | 0.03 | 24.18 | 0.00  | 0.01 | 0.00 | 6.32 | 7.87  | 0.39  | plagioclase                 |
| HV-555-335 | 63.66 | 0.00 | 23.02 | 0.05  | 0.00 | 0.00 | 4.66 | 9.05  | 0.24  | plagioclase                 |
| HV-555-335 | 61.61 | 0.01 | 24.16 | 0.01  | 0.02 | 0.05 | 6.20 | 8.21  | 0.30  | plagioclase                 |
| HV-555-335 | 61.61 | 0.00 | 24.33 | 0.04  | 0.00 | 0.00 | 6.51 | 8.06  | 0.34  | plagioclase                 |
| HV-9450    | 35.72 | 2.31 | 16.79 | 22.17 | 8.07 | 0.41 | 0.03 | 0.00  | 9.33  | biotite                     |
| HV-9450    | 35.19 | 4.02 | 15.73 | 23.41 | 6.89 | 0.40 | 0.03 | 0.10  | 9.18  | biotite                     |
| HV-9450    | 35.32 | 4.43 | 15.86 | 22.58 | 6.88 | 0.50 | 0.00 | 0.08  | 9.28  | biotite                     |
| HV-9450    | 35.22 | 4.02 | 15.88 | 22.19 | 7.03 | 0.38 | 0.00 | 0.09  | 9.20  | biotite                     |
| HV-9450    | 34.94 | 3.75 | 15.90 | 23.11 | 6.84 | 0.33 | 0.01 | 0.09  | 9.26  | biotite                     |
| HV-9450    | 35.54 | 4.12 | 15.64 | 23.26 | 6.87 | 0.36 | 0.00 | 0.03  | 9.30  | biotite                     |
| HV-9450    | 35.70 | 3.13 | 16.07 | 22.96 | 7.27 | 0.39 | 0.00 | 0.11  | 9.31  | biotite                     |
| HV-9450    | 35.77 | 4.16 | 15.95 | 22.41 | 7.08 | 0.38 | 0.00 | 0.03  | 9.32  | biotite                     |
| HV-9450    | 35.83 | 3.54 | 16.06 | 22.64 | 6.95 | 0.40 | 0.00 | 0.09  | 9.31  | biotite                     |
| HV-9450    | 35.75 | 3.85 | 15.61 | 23.10 | 6.87 | 0.43 | 0.00 | 0.07  | 9.11  | biotite                     |
| HV-9450    | 35.30 | 4.07 | 15.83 | 23.08 | 6.68 | 0.36 | 0.00 | 0.08  | 8.92  | biotite                     |
| HV-9450    | 35.26 | 2.87 | 16.37 | 23.80 | 7.50 | 0.46 | 0.03 | 0.06  | 9.01  | biotite                     |
| HV-9450    | 65.75 | 0.00 | 18.34 | 0.08  | 0.03 | 0.01 | 0.03 | 0.75  | 15.14 | K-feldspar                  |
| HV-9450    | 65.85 | 0.05 | 18.38 | 0.08  | 0.01 | 0.00 | 0.00 | 0.92  | 15.04 | K-feldspar                  |
| HV-9450    | 68.79 | 0.02 | 19.88 | 0.05  | 0.00 | 0.05 | 0.91 | 11.35 | 0.11  | plagioclase                 |
| HV-9450    | 64.20 | 0.00 | 22.25 | 0.02  | 0.00 | 0.00 | 4.02 | 9.37  | 0.28  | plagioclase                 |
| HV-9450    | 63.23 | 0.02 | 23.41 | 0.08  | 0.01 | 0.04 | 5.05 | 8.72  | 0.38  | plagioclase                 |
| HV-9450    | 59.28 | 0.01 | 26.01 | 0.12  | 0.01 | 0.05 | 8.44 | 6.99  | 0.14  | plagioclase                 |
| HV-9450    | 60.97 | 0.03 | 24.65 | 0.00  | 0.00 | 0.01 | 6.70 | 7.61  | 0.42  | plagioclase                 |
| HV-9450    | 60.64 | 0.00 | 24.31 | 0.00  | 0.00 | 0.01 | 6.53 | 7.91  | 0.26  | plagioclase                 |
| HV-9450    | 60.69 | 0.00 | 24.63 | 0.08  | 0.00 | 0.00 | 6.64 | 7.73  | 0.48  | plagioclase                 |
| HV-9450    | 63.32 | 0.00 | 23.38 | 0.00  | 0.00 | 0.01 | 4.90 | 9.05  | 0.14  | plagioclase                 |
| HV-9450    | 62.15 | 0.00 | 23.52 | 0.00  | 0.00 | 0.00 | 5.39 | 8.21  | 0.27  | plagioclase                 |
| HV-9451    | 65.62 | 0.02 | 18.54 | 0.00  | 0.01 | 0.02 | 0.03 | 0.78  | 15.48 | K-feldspar                  |
| HV-9451    | 46.30 | 0.54 | 34.19 | 1.47  | 0.68 | 0.03 | 0.00 | 0.06  | 9.99  | muscovite                   |
| HV-9452    | 35.00 | 4.24 | 16.05 | 23.76 | 6.57 | 0.27 | 0.01 | 0.01  | 9.11  | biotite                     |
| HV-9452    | 36.07 | 3.48 | 16.17 | 22.91 | 7.14 | 0.40 | 0.00 | 0.08  | 9.40  | biotite                     |
| HV-9452    | 35.21 | 3.47 | 16.20 | 23.57 | 6.94 | 0.32 | 0.00 | 0.08  | 9.44  | biotite                     |
| HV-9452    | 35.33 | 2.75 | 16.63 | 23.11 | 6.93 | 0.35 | 0.00 | 0.14  | 9.48  | biotite                     |
| HV-9452    | 35.81 | 3.19 | 16.51 | 23.19 | 6.84 | 0.37 | 0.00 | 0.15  | 9.52  | biotite                     |
| HV-9452    | 35.90 | 3.77 | 15.84 | 24.05 | 6.86 | 0.39 | 0.00 | 0.05  | 9.42  | biotite                     |
| HV-9452    | 35.66 | 3.17 | 16.10 | 23.04 | 7.07 | 0.52 | 0.01 | 0.04  | 9.44  | biotite                     |
| HV-9452    | 36.20 | 3.85 | 15.69 | 22.41 | 7.15 | 0.29 | 0.00 | 0.12  | 9.23  | biotite                     |
| HV-9452    | 36.56 | 3.85 | 16.19 | 22.19 | 6.80 | 0.34 | 0.00 | 0.07  | 9.54  | biotite                     |
| HV-9452    | 35.33 | 3.67 | 15.89 | 23.68 | 6.94 | 0.30 | 0.04 | 0.02  | 9.35  | biotite                     |

| Ref.    | SiO2  | TiO2  | Al2O3 | FeO   | MgO  | MnO  | CaO  | Na2O  | K2O   | Min         |
|---------|-------|-------|-------|-------|------|------|------|-------|-------|-------------|
| HV-9452 | 35.24 | 3.81  | 15.84 | 23.20 | 6.78 | 0.36 | 0.00 | 0.09  | 9.50  | biotite     |
| HV-9452 | 35.30 | 3.42  | 16.18 | 22.46 | 7.09 | 0.35 | 0.00 | 0.10  | 9.19  | biotite     |
| HV-9452 | 66.14 | 0.03  | 18.42 | 0.09  | 0.02 | 0.00 | 0.03 | 1.18  | 14.93 | K-feldspar  |
| HV-9452 | 66.00 | 0.02  | 18.17 | 0.00  | 0.00 | 0.00 | 0.03 | 0.70  | 15.27 | K-feldspar  |
| HV-9452 | 65.99 | 0.04  | 18.44 | 0.00  | 0.00 | 0.00 | 0.01 | 0.94  | 15.10 | K-feldspar  |
| HV-9452 | 64.79 | 0.00  | 17.79 | 0.68  | 0.03 | 0.00 | 0.07 | 0.98  | 14.23 | K-feldspar  |
| HV-9452 | 64.24 | 0.02  | 23.00 | 0.01  | 0.02 | 0.01 | 4.36 | 9.05  | 0.21  | plagioclase |
| HV-9452 | 63.29 | 0.00  | 23.28 | 0.04  | 0.00 | 0.00 | 4.69 | 8.74  | 0.20  | plagioclase |
| HV-9452 | 61.64 | 0.01  | 24.34 | 0.05  | 0.00 | 0.07 | 6.27 | 7.80  | 0.36  | plagioclase |
| HV-9452 | 68.78 | 0.00  | 20.31 | 0.00  | 0.01 | 0.00 | 1.27 | 10.76 | 0.10  | plagioclase |
| HV-9452 | 65.01 | 0.00  | 22.29 | 0.00  | 0.00 | 0.04 | 3.71 | 9.61  | 0.14  | plagioclase |
| HV-9452 | 68.10 | 0.00  | 20.48 | 0.01  | 0.00 | 0.02 | 1.53 | 10.75 | 0.14  | plagioclase |
| HV-9452 | 64.02 | 0.03  | 22.99 | 0.00  | 0.01 | 0.00 | 4.40 | 9.25  | 0.14  | plagioclase |
| HV-9452 | 64.12 | 0.00  | 23.00 | 0.00  | 0.01 | 0.02 | 4.41 | 9.25  | 0.14  | plagioclase |
| HV-9452 | 60.78 | 0.00  | 24.79 | 0.00  | 0.00 | 0.03 | 6.51 | 7.86  | 0.14  | plagioclase |
| HV-9454 | 34.98 | 3.92  | 15.88 | 22.88 | 6.77 | 0.39 | 0.01 | 0.02  | 9.08  | biotite     |
| HV-9454 | 36.22 | 3.64  | 15.71 | 23.86 | 7.07 | 0.47 | 0.01 | 0.05  | 8.98  | biotite     |
| HV-9454 | 34.96 | 3.12  | 16.25 | 24.15 | 6.81 | 0.48 | 0.00 | 0.02  | 9.07  | biotite     |
| HV-9454 | 35.89 | 3.62  | 16.36 | 22.67 | 6.80 | 0.32 | 0.00 | 0.06  | 8.80  | biotite     |
| HV-9454 | 35.12 | 3.42  | 16.03 | 23.91 | 6.79 | 0.35 | 0.00 | 0.01  | 8.73  | biotite     |
| HV-9454 | 40.83 | 8.31  | 27.57 | 6.69  | 1.22 | 0.76 | 0.18 | 0.17  | 8.59  | dolorita    |
| HV-9454 | 26.45 | 28.24 | 9.41  | 20.61 | 0.00 | 5.84 | 2.06 | 5.35  | 0.06  | dolorita    |
| HV-9454 | 64.77 | 0.00  | 18.23 | 0.03  | 0.00 | 0.00 | 0.02 | 0.29  | 15.45 | K-feldspar  |
| HV-9454 | 63.74 | 0.00  | 22.98 | 0.03  | 0.00 | 0.00 | 4.56 | 8.76  | 0.11  | plagioclase |
| HV-9454 | 62.21 | 0.01  | 24.10 | 0.03  | 0.01 | 0.00 | 6.14 | 7.60  | 0.09  | plagioclase |
| HV-9454 | 62.99 | 0.08  | 22.94 | 0.24  | 0.00 | 0.02 | 4.76 | 8.56  | 0.14  | plagioclase |
| HV-9454 | 65.00 | 0.01  | 22.35 | 0.09  | 0.01 | 0.00 | 3.93 | 9.10  | 0.10  | plagioclase |
| HV-9454 | 60.98 | 0.01  | 24.51 | 0.01  | 0.01 | 0.02 | 6.32 | 7.55  | 0.07  | plagioclase |
| HV-9454 | 61.19 | 0.03  | 24.02 | 0.03  | 0.04 | 0.00 | 6.28 | 7.73  | 0.06  | plagioclase |
| HV-9455 | 34.86 | 3.36  | 17.84 | 24.88 | 5.16 | 0.44 | 0.00 | 0.02  | 8.98  | biotite     |
| HV-9455 | 35.03 | 3.19  | 17.89 | 24.58 | 5.21 | 0.42 | 0.03 | 0.03  | 8.78  | biotite     |
| HV-9455 | 34.45 | 2.66  | 18.33 | 24.19 | 5.49 | 0.51 | 0.00 | 0.09  | 9.13  | biotite     |
| HV-9455 | 34.61 | 2.77  | 17.90 | 24.42 | 5.57 | 0.42 | 0.00 | 0.01  | 8.50  | biotite     |
| HV-9455 | 34.05 | 3.82  | 17.59 | 25.48 | 4.92 | 0.46 | 0.00 | 0.04  | 8.55  | biotite     |
| HV-9455 | 36.60 | 1.30  | 18.91 | 23.02 | 5.07 | 0.39 | 0.26 | 0.06  | 5.30  | biotite     |
| HV-9455 | 34.90 | 1.43  | 18.38 | 23.48 | 6.28 | 0.53 | 0.00 | 0.09  | 8.90  | biotite     |
| HV-9455 | 65.56 | 0.02  | 18.48 | 0.00  | 0.01 | 0.03 | 0.00 | 1.00  | 14.15 | K-feldspar  |
| HV-9455 | 64.75 | 0.04  | 18.32 | 0.00  | 0.00 | 0.01 | 0.00 | 0.71  | 15.10 | K-feldspar  |
| HV-9455 | 65.66 | 0.02  | 18.57 | 0.00  | 0.00 | 0.00 | 0.01 | 0.85  | 14.77 | K-feldspar  |
| HV-9455 | 66.12 | 0.00  | 18.48 | 0.03  | 0.02 | 0.00 | 0.00 | 0.56  | 14.82 | K-feldspar  |
| HV-9455 | 47.20 | 0.41  | 34.95 | 1.48  | 0.57 | 0.07 | 0.00 | 0.44  | 9.66  | muscovite   |
| HV-9455 | 46.95 | 0.66  | 34.47 | 1.52  | 0.56 | 0.05 | 0.00 | 0.35  | 10.25 | muscovite   |
| HV-9455 | 47.20 | 0.38  | 35.00 | 1.61  | 0.69 | 0.00 | 0.00 | 0.61  | 9.67  | muscovite   |
| HV-9455 | 46.53 | 0.75  | 34.98 | 1.38  | 0.57 | 0.05 | 0.00 | 0.49  | 9.84  | muscovite   |
| HV-9455 | 63.56 | 0.03  | 22.91 | 0.00  | 0.00 | 0.01 | 4.58 | 8.70  | 0.15  | plagioclase |
| HV-9455 | 62.73 | 0.01  | 23.18 | 0.02  | 0.00 | 0.03 | 4.76 | 8.55  | 0.14  | plagioclase |
| HV-9455 | 65.58 | 0.01  | 21.12 | 0.02  | 0.02 | 0.01 | 1.99 | 10.25 | 0.17  | plagioclase |
| HV-9455 | 62.01 | 0.00  | 23.92 | 0.00  | 0.00 | 0.02 | 5.35 | 8.48  | 0.16  | plagioclase |
| HV-9455 | 64.28 | 0.04  | 22.73 | 0.04  | 0.00 | 0.02 | 4.02 | 8.67  | 0.12  | plagioclase |
| HV-9455 | 62.70 | 0.01  | 23.51 | 0.03  | 0.00 | 0.02 | 4.86 | 8.25  | 0.24  | plagioclase |
| HV-9455 | 63.22 | 0.00  | 23.17 | 0.00  | 0.00 | 0.00 | 4.55 | 8.32  | 0.32  | plagioclase |
| HV-9456 | 68.28 | 0.06  | 19.07 | 0.00  | 0.02 | 0.00 | 0.07 | 11.15 | 0.12  | albite      |
| HV-9456 | 35.53 | 3.86  | 15.99 | 20.77 | 7.63 | 0.37 | 0.00 | 0.09  | 9.17  | biotite     |
| HV-9456 | 37.71 | 3.91  | 17.00 | 18.99 | 6.76 | 0.34 | 0.04 | 0.13  | 8.40  | biotite     |

| Ref.    | SiO2   | TiO2 | Al2O3 | FeO   | MgO  | MnO  | CaO  | Na2O | K2O   | Min         |
|---------|--------|------|-------|-------|------|------|------|------|-------|-------------|
| HV-9456 | 35.03  | 3.65 | 16.19 | 21.41 | 7.78 | 0.34 | 0.01 | 0.08 | 9.69  | biotite     |
| HV-9456 | 35.18  | 3.92 | 16.24 | 21.69 | 7.53 | 0.32 | 0.00 | 0.06 | 9.37  | biotite     |
| HV-9456 | 35.89  | 3.86 | 15.71 | 22.11 | 7.91 | 0.44 | 0.00 | 0.03 | 9.51  | biotite     |
| HV-9456 | 34.64  | 3.75 | 15.86 | 21.82 | 7.58 | 0.39 | 0.02 | 0.07 | 9.24  | biotite     |
| HV-9456 | 34.78  | 3.66 | 15.79 | 22.24 | 7.70 | 0.41 | 0.02 | 0.18 | 9.23  | biotite     |
| HV-9456 | 34.85  | 3.66 | 16.09 | 21.58 | 7.93 | 0.32 | 0.00 | 0.08 | 9.20  | biotite     |
| HV-9456 | 35.47  | 3.59 | 16.13 | 22.19 | 7.30 | 0.44 | 0.01 | 0.05 | 9.23  | biotite     |
| HV-9456 | 34.93  | 3.81 | 16.04 | 22.13 | 7.92 | 0.30 | 0.06 | 0.06 | 9.23  | biotite     |
| HV-9456 | 64.32  | 0.00 | 17.64 | 0.00  | 0.00 | 0.00 | 0.02 | 0.47 | 15.68 | K-feldspar  |
| HV-9456 | 64.39  | 0.00 | 17.89 | 0.00  | 0.00 | 0.00 | 0.02 | 0.32 | 15.54 | K-feldspar  |
| HV-9456 | 64.31  | 0.02 | 17.90 | 0.05  | 0.00 | 0.00 | 0.00 | 0.38 | 15.72 | K-feldspar  |
| HV-9456 | 66.04  | 0.00 | 17.07 | 1.06  | 0.00 | 0.05 | 0.00 | 0.47 | 15.62 | K-feldspar  |
| HV-9456 | 64.20  | 0.00 | 22.52 | 0.02  | 0.00 | 0.00 | 4.09 | 9.29 | 0.13  | plagioclase |
| HV-9456 | 61.41  |      | 23.24 |       |      |      | 4.70 | 8.23 | 0.09  | plagioclase |
| HV-9456 | 62.37  |      | 23.27 |       |      |      | 5.42 | 8.57 | 0.09  | plagioclase |
| HV-9456 | 64.27  |      | 22.48 |       |      |      | 4.23 | 9.51 | 0.14  | plagioclase |
| HV-9456 | 62.38  |      | 23.17 |       |      |      | 5.40 | 8.36 | 0.27  | plagioclase |
| HV-9456 | 61.12  |      | 24.20 |       |      |      | 6.16 | 8.13 | 0.27  | plagioclase |
| HV-9456 | 62.56  |      | 24.88 |       |      |      | 6.36 | 7.86 | 0.37  | plagioclase |
| HV-9456 | 59.70  |      | 25.28 |       |      |      | 7.29 | 7.34 | 0.25  | plagioclase |
| HV-9456 | 57.57  |      | 25.99 |       |      |      | 8.79 | 6.64 | 0.15  | plagioclase |
| HV-9456 | 60.61  |      | 24.74 |       |      |      | 6.74 | 7.99 | 0.27  | plagioclase |
| HV-9456 | 58.86  |      | 25.49 |       |      |      | 7.81 | 7.32 | 0.14  | plagioclase |
| HV-9456 | 57.42  |      | 26.40 |       |      |      | 9.25 | 6.34 | 0.10  | plagioclase |
| HV-9456 | 61.06  |      | 24.24 |       |      |      | 6.49 | 7.85 | 0.10  | plagioclase |
| HV-9456 | 58.82  |      | 24.36 |       |      |      | 6.94 | 7.61 | 0.08  | plagioclase |
| HV-9456 | 58.82  |      | 25.60 |       |      |      | 7.61 | 7.30 | 0.09  | plagioclase |
| HV-9456 | 58.11  |      | 25.71 |       |      |      | 8.33 | 6.81 | 0.21  | plagioclase |
| HV-9456 | 58.39  |      | 25.35 |       |      |      | 7.80 | 7.10 | 0.23  | plagioclase |
| HV-9456 | 59.35  |      | 24.53 |       |      |      | 7.36 | 7.60 | 0.15  | plagioclase |
| HV-9456 | 60.23  |      | 24.34 |       |      |      | 6.44 | 8.00 | 0.09  | plagioclase |
| HV-9456 | 59.91  |      | 24.47 |       |      |      | 6.72 | 7.90 | 0.09  | plagioclase |
| HV-9456 | 60.01  |      | 25.23 |       |      |      | 7.56 | 7.48 | 0.12  | plagioclase |
| HV-9456 | 60.50  |      | 24.79 |       |      |      | 7.08 | 7.69 | 0.11  | plagioclase |
| HV-9456 | 60.17  |      | 24.10 |       |      |      | 6.66 | 7.81 | 0.07  | plagioclase |
| HV-9456 | 61.28  |      | 24.31 |       |      |      | 6.30 | 7.98 | 0.11  | plagioclase |
| HV-9456 | 61.38  |      | 24.52 |       |      |      | 6.67 | 7.94 | 0.07  | plagioclase |
| HV-9456 | 61.52  |      | 24.68 |       |      |      | 6.56 | 7.93 | 0.09  | plagioclase |
| HV-9456 | 61.31  |      | 24.56 |       |      |      | 6.50 | 8.08 | 0.13  | plagioclase |
| HV-9456 | 60.72  |      | 24.64 |       |      |      | 6.50 | 7.95 | 0.08  | plagioclase |
| HV-9456 | 62.71  |      | 23.23 |       |      |      | 5.08 | 8.73 | 0.07  | plagioclase |
| HV-9456 | 60.75  |      | 24.83 |       |      |      | 6.72 | 7.87 | 0.07  | plagioclase |
| HV-9456 | 65.83  |      | 22.05 |       |      |      | 3.32 | 9.74 | 0.10  | plagioclase |
| HV-9456 | 34.91  |      | 15.94 |       |      |      | 0.03 | 0.01 | 8.94  | plagioclase |
| HV-9456 | 101.81 |      | 0.00  |       |      |      | 0.03 | 0.00 | 0.01  | plagioclase |
| HV-9456 | 101.71 |      | 0.01  |       |      |      | 0.02 | 0.01 | 0.00  | plagioclase |
| HV-9456 | 102.58 |      | 0.01  |       |      |      | 0.02 | 0.01 | 0.02  | plagioclase |
| HV-9456 | 64.34  |      | 22.39 |       |      |      | 3.60 | 9.71 | 0.21  | plagioclase |
| HV-9456 | 64.37  |      | 22.98 |       |      |      | 4.56 | 9.00 | 0.27  | plagioclase |
| HV-9456 | 62.83  |      | 23.56 |       |      |      | 5.52 | 8.43 | 0.24  | plagioclase |
| HV-9456 | 59.98  |      | 24.41 |       |      |      | 6.70 | 8.07 | 0.16  | plagioclase |
| HV-9456 | 61.21  |      | 24.48 |       |      |      | 6.46 | 7.96 | 0.23  | plagioclase |
| HV-9456 | 60.66  |      | 25.53 |       |      |      | 6.65 | 7.27 | 0.68  | plagioclase |
| HV-9456 | 60.44  |      | 24.68 |       |      |      | 6.90 | 7.76 | 0.19  | plagioclase |



| Ref.    | SiO2  | TiO2 | Al2O3 | FeO   | MgO  | MnO   | CaO   | Na2O  | K2O   | Min         |
|---------|-------|------|-------|-------|------|-------|-------|-------|-------|-------------|
| HV-9456 | 60.95 |      | 24.98 |       |      |       | 7.05  | 7.66  | 0.14  | plagioclase |
| HV-9456 | 60.59 |      | 25.06 |       |      |       | 6.85  | 7.80  | 0.14  | plagioclase |
| HV-9456 | 59.63 |      | 25.57 |       |      |       | 7.53  | 7.35  | 0.13  | plagioclase |
| HV-9456 | 57.23 |      | 26.30 |       |      |       | 8.61  | 6.65  | 0.13  | plagioclase |
| HV-9456 | 58.09 |      | 26.54 |       |      |       | 9.10  | 6.40  | 0.19  | plagioclase |
| HV-9456 | 58.32 |      | 26.16 |       |      |       | 8.51  | 6.87  | 0.26  | plagioclase |
| HV-9456 | 56.81 |      | 26.71 |       |      |       | 8.85  | 6.34  | 0.22  | plagioclase |
| HV-9456 | 56.59 |      | 27.35 |       |      |       | 9.81  | 5.83  | 0.17  | plagioclase |
| HV-9456 | 55.59 |      | 27.72 |       |      |       | 10.38 | 5.89  | 0.14  | plagioclase |
| HV-9456 | 56.19 |      | 27.09 |       |      |       | 9.29  | 5.95  | 0.27  | plagioclase |
| HV-9456 | 55.78 |      | 28.34 |       |      |       | 10.97 | 5.64  | 0.11  | plagioclase |
| HV-9456 | 53.92 |      | 28.71 |       |      |       | 11.67 | 4.97  | 0.10  | plagioclase |
| HV-9456 | 55.47 |      | 28.11 |       |      |       | 11.13 | 5.59  | 0.15  | plagioclase |
| HV-9456 | 55.06 |      | 28.20 |       |      |       | 10.86 | 5.45  | 0.14  | plagioclase |
| HV-9456 | 55.09 |      | 27.53 |       |      |       | 11.05 | 5.29  | 0.09  | plagioclase |
| HV-9456 | 54.99 |      | 27.89 |       |      |       | 10.60 | 5.52  | 0.13  | plagioclase |
| HV-9456 | 54.75 |      | 28.14 |       |      |       | 10.78 | 5.46  | 0.11  | plagioclase |
| HV-9456 | 54.74 |      | 27.51 |       |      |       | 10.62 | 5.61  | 0.09  | plagioclase |
| HV-9456 | 54.63 |      | 27.77 |       |      |       | 10.82 | 5.38  | 0.16  | plagioclase |
| HV-9456 | 57.25 |      | 26.73 |       |      |       | 8.90  | 6.49  | 0.22  | plagioclase |
| HV-9456 | 57.72 |      | 26.16 |       |      |       | 8.73  | 6.64  | 0.22  | plagioclase |
| HV-9456 | 60.93 |      | 24.29 |       |      |       | 6.16  | 7.67  | 0.25  | plagioclase |
| HV-9456 | 57.86 |      | 25.89 |       |      |       | 8.79  | 6.57  | 0.13  | plagioclase |
| HV-9456 | 58.65 |      | 25.72 |       |      |       | 7.99  | 6.97  | 0.14  | plagioclase |
| HV-9456 | 59.98 |      | 25.06 |       |      |       | 7.42  | 7.42  | 0.09  | plagioclase |
| HV-9456 | 60.88 |      | 24.46 |       |      |       | 6.49  | 7.90  | 0.07  | plagioclase |
| HV-9456 | 60.54 |      | 24.55 |       |      |       | 6.83  | 7.68  | 0.20  | plagioclase |
| HV-9456 | 59.56 |      | 24.56 |       |      |       | 7.09  | 7.59  | 0.22  | plagioclase |
| HV-9456 | 59.98 |      | 24.16 |       |      |       | 6.77  | 7.47  | 0.21  | plagioclase |
| HV-9457 | 33.51 | 2.06 | 20.10 | 27.37 | 0.97 | 1.13  | 0.02  | 0.04  | 7.93  | biotite     |
| HV-9457 | 33.12 | 1.75 | 20.61 | 27.19 | 0.90 | 1.29  | 0.00  | 0.15  | 7.92  | biotite     |
| HV-9457 | 33.50 | 2.22 | 20.49 | 27.03 | 0.82 | 1.16  | 0.00  | 0.09  | 8.64  | biotite     |
| HV-9457 | 33.38 | 1.76 | 20.58 | 26.32 | 0.90 | 1.12  | 0.00  | 0.03  | 8.26  | biotite     |
| HV-9457 | 33.14 | 1.79 | 20.77 | 26.56 | 0.84 | 1.16  | 0.00  | 0.10  | 8.28  | biotite     |
| HV-9457 | 33.21 | 1.81 | 20.76 | 27.26 | 0.85 | 1.10  | 0.00  | 0.11  | 7.85  | biotite     |
| HV-9457 | 2.08  | 0.11 | 8.19  | 48.58 | 0.50 | 3.62  | 0.86  | 0.16  | 0.09  | Fe-ore      |
| HV-9457 | 3.83  | 0.06 | 17.89 | 13.49 | 0.50 | 26.72 | 1.46  | 0.25  | 0.27  | Fe-ore      |
| HV-9457 | 65.51 | 0.00 | 18.51 | 0.07  | 0.00 | 0.02  | 0.07  | 0.58  | 14.51 | K-feldspar  |
| HV-9457 | 48.31 | 0.50 | 30.19 | 3.07  | 1.50 | 0.30  | 0.01  | 0.21  | 9.13  | muscovite   |
| HV-9457 | 45.94 | 0.10 | 34.46 | 2.25  | 0.17 | 0.00  | 0.00  | 1.00  | 9.04  | muscovite   |
| HV-9457 | 45.76 | 0.05 | 34.33 | 2.31  | 0.24 | 0.00  | 0.00  | 0.6   | 9.14  | muscovite   |
| HV-9457 | 46.64 | 0.21 | 33.80 | 2.86  | 0.18 | 0.00  | 0.00  | 0.94  | 8.88  | muscovite   |
| HV-9457 | 46.38 | 0.18 | 34.88 | 2.06  | 0.24 | 0.00  | 0.02  | 0.99  | 8.66  | muscovite   |
| HV-9457 | 47.07 | 0.04 | 34.95 | 1.95  | 0.28 | 0.04  | 0.02  | 0.80  | 8.61  | muscovite   |
| HV-9457 | 45.52 | 0.06 | 34.78 | 2.56  | 0.20 | 0.02  | 0.00  | 1.01  | 9.01  | muscovite   |
| HV-9457 | 46.16 | 0.13 | 34.10 | 2.41  | 0.25 | 0.06  | 0.00  | 0.79  | 8.86  | muscovite   |
| HV-9457 | 67.95 | 0.00 | 20.09 | 0.00  | 0.01 | 0.00  | 0.38  | 11.70 | 0.11  | plagioclase |
| HV-9457 | 67.53 | 0.03 | 19.54 | 0.04  | 0.01 | 0.00  | 0.56  | 11.43 | 0.09  | plagioclase |
| HV-9457 | 69.79 | 0.01 | 19.47 | 0.04  | 0.00 | 0.00  | 0.03  | 11.73 | 0.07  | plagioclase |
| HV-9457 | 69.00 | 0.01 | 19.66 | 0.00  | 0.00 | 0.02  | 0.02  | 11.85 | 0.08  | plagioclase |
| HV-9458 | 36.45 | 3.41 | 16.15 | 22.55 | 7.16 | 0.39  | 0.00  | 0.08  | 9.25  | biotite     |
| HV-9458 | 35.27 | 4.01 | 16.09 | 22.90 | 6.94 | 0.35  | 0.00  | 0.11  | 9.31  | biotite     |
| HV-9458 | 35.82 | 3.54 | 15.96 | 22.08 | 7.39 | 0.22  | 0.00  | 0.14  | 9.18  | biotite     |
| HV-9458 | 35.58 | 3.58 | 16.24 | 21.99 | 7.03 | 0.38  | 0.01  | 0.07  | 9.12  | biotite     |

| Ref.    | SiO2  | TiO2 | Al2O3 | FeO   | MgO  | MnO  | CaO   | Na2O  | K2O   | Min         |
|---------|-------|------|-------|-------|------|------|-------|-------|-------|-------------|
| HV-9458 | 35.39 | 3.47 | 16.74 | 23.26 | 6.68 | 0.34 | 0.04  | 0.10  | 9.32  | biotite     |
| HV-9458 | 35.45 | 4.00 | 15.17 | 21.55 | 7.27 | 0.42 | 0.00  | 0.04  | 9.23  | biotite     |
| HV-9458 | 35.80 | 3.19 | 16.79 | 22.20 | 7.00 | 0.35 | 0.00  | 0.08  | 9.33  | biotite     |
| HV-9458 | 34.88 | 3.10 | 17.11 | 23.24 | 6.89 | 0.44 | 0.00  | 0.10  | 9.04  | biotite     |
| HV-9458 | 35.60 | 3.25 | 16.60 | 22.48 | 6.96 | 0.35 | 0.00  | 0.07  | 9.45  | biotite     |
| HV-9458 | 35.50 | 3.22 | 16.61 | 22.16 | 7.27 | 0.39 | 0.04  | 0.09  | 9.09  | biotite     |
| HV-9458 | 35.30 | 3.40 | 16.45 | 22.42 | 6.90 | 0.39 | 0.03  | 0.00  | 9.24  | biotite     |
| HV-9458 | 35.37 | 3.33 | 16.36 | 22.83 | 6.99 | 0.57 | 0.00  | 0.04  | 9.21  | biotite     |
| HV-9458 | 65.57 | 0.00 | 18.08 | 0.00  | 0.00 | 0.00 | 0.01  | 0.87  | 15.21 | K-feldspar  |
| HV-9458 | 65.73 | 0.04 | 17.84 | 0.01  | 0.02 | 0.02 | 0.00  | 0.67  | 15.36 | K-feldspar  |
| HV-9458 | 66.06 | 0.00 | 18.34 | 0.04  | 0.06 | 0.02 | 0.00  | 0.81  | 14.62 | K-feldspar  |
| HV-9458 | 65.38 | 0.00 | 22.02 | 0.19  | 0.00 | 0.00 | 3.25  | 9.92  | 0.18  | plagioclase |
| HV-9458 | 62.13 | 0.05 | 24.15 | 0.03  | 0.02 | 0.00 | 5.96  | 7.97  | 0.14  | plagioclase |
| HV-9458 | 61.36 | 0.00 | 24.48 | 0.03  | 0.00 | 0.04 | 6.22  | 7.82  | 0.22  | plagioclase |
| HV-9458 | 59.52 | 0.01 | 25.52 | 0.09  | 0.03 | 0.03 | 7.58  | 7.13  | 0.13  | plagioclase |
| HV-9458 | 60.12 | 0.04 | 25.13 | 0.07  | 0.00 | 0.01 | 7.22  | 7.48  | 0.10  | plagioclase |
| HV-9458 | 61.30 | 0.01 | 24.38 | 0.00  | 0.01 | 0.00 | 6.41  | 8.03  | 0.15  | plagioclase |
| HV-9458 | 61.17 | 0.03 | 24.46 | 0.03  | 0.00 | 0.05 | 6.43  | 7.79  | 0.20  | plagioclase |
| HV-9458 | 60.80 | 0.02 | 24.73 | 0.03  | 0.01 | 0.00 | 6.84  | 7.83  | 0.13  | plagioclase |
| HV-9458 | 60.28 | 0.02 | 24.83 | 0.02  | 0.01 | 0.00 | 6.87  | 7.54  | 0.12  | plagioclase |
| HV-9458 | 61.44 | 0.00 | 23.92 | 0.07  | 0.01 | 0.00 | 5.94  | 7.98  | 0.13  | plagioclase |
| HV-9459 | 34.86 | 2.51 | 17.85 | 23.65 | 5.42 | 0.44 | 0.00  | 0.03  | 8.53  | biotite     |
| HV-9459 | 34.90 | 2.90 | 17.94 | 24.30 | 5.00 | 0.45 | 0.03  | 0.07  | 8.80  | biotite     |
| HV-9459 | 34.78 | 3.06 | 18.11 | 24.70 | 5.07 | 0.48 | 0.00  | 0.06  | 8.77  | biotite     |
| HV-9459 | 34.97 | 2.61 | 18.25 | 24.42 | 5.23 | 0.48 | 0.02  | 0.04  | 8.46  | biotite     |
| HV-9459 | 34.37 | 2.98 | 17.75 | 24.70 | 5.21 | 0.47 | 0.02  | 0.05  | 8.63  | biotite     |
| HV-9459 | 34.65 | 3.22 | 17.53 | 24.43 | 5.00 | 0.46 | 0.04  | 0.05  | 8.47  | biotite     |
| HV-9459 | 34.67 | 3.05 | 18.40 | 23.39 | 4.91 | 0.42 | 0.01  | 0.07  | 9.07  | biotite     |
| HV-9459 | 38.45 | 2.46 | 22.73 | 13.26 | 5.13 | 0.23 | 0.30  | 0.11  | 1.50  | dolorita    |
| HV-9459 | 43.74 | 1.21 | 27.38 | 3.07  | 1.36 | 0.00 | 0.24  | 0.15  | 4.48  | dolorita    |
| HV-9459 | 64.35 | 0.03 | 18.22 | 0.00  | 0.00 | 0.04 | 0.02  | 0.65  | 15.39 | K-feldspar  |
| HV-9459 | 65.53 | 0.00 | 18.70 | 0.00  | 0.03 | 0.00 | 0.03  | 1.10  | 14.73 | K-feldspar  |
| HV-9459 | 65.87 | 0.00 | 18.20 | 0.00  | 0.01 | 0.01 | 0.01  | 0.77  | 15.13 | K-feldspar  |
| HV-9459 | 47.64 | 1.99 | 31.90 | 1.98  | 1.11 | 0.01 | 0.00  | 0.25  | 9.80  | muscovite   |
| HV-9459 | 47.05 | 1.16 | 33.92 | 1.40  | 0.67 | 0.03 | 0.00  | 0.66  | 9.61  | muscovite   |
| HV-9459 | 46.05 | 0.89 | 33.82 | 1.55  | 0.67 | 0.01 | 0.02  | 0.61  | 9.82  | muscovite   |
| HV-9459 | 46.51 | 0.87 | 33.96 | 1.52  | 0.73 | 0.01 | 0.00  | 0.84  | 9.19  | muscovite   |
| HV-9459 | 46.35 | 0.48 | 34.10 | 1.70  | 0.75 | 0.06 | 0.00  | 0.72  | 9.35  | muscovite   |
| HV-9459 | 64.70 | 0.02 | 21.90 | 0.02  | 0.04 | 0.00 | 3.27  | 9.92  | 0.30  | plagioclase |
| HV-9459 | 64.10 | 0.01 | 22.66 | 0.05  | 0.00 | 0.03 | 3.93  | 9.31  | 0.35  | plagioclase |
| HV-9459 | 62.44 | 0.00 | 23.58 | 0.01  | 0.03 | 0.02 | 5.00  | 8.75  | 0.29  | plagioclase |
| HV-9459 | 67.10 | 0.01 | 20.80 | 0.07  | 0.00 | 0.00 | 1.59  | 10.95 | 0.09  | plagioclase |
| HV-9459 | 65.65 | 0.03 | 21.29 | 0.01  | 0.00 | 0.00 | 1.85  | 10.66 | 0.21  | plagioclase |
| HV-9460 | 0.17  | 0.04 | 0.00  | 0.31  | 0.00 | 0.58 | 54.55 | 0.15  | 0.01  | apatite     |
| HV-9460 | 35.40 | 3.59 | 17.59 | 20.94 | 7.29 | 0.39 | 0.03  | 0.08  | 9.27  | biotite     |
| HV-9460 | 34.69 | 3.38 | 17.54 | 20.08 | 7.60 | 0.43 | 0.00  | 0.13  | 9.43  | biotite     |
| HV-9460 | 35.12 | 3.48 | 17.72 | 21.02 | 7.40 | 0.38 | 0.00  | 0.12  | 9.36  | biotite     |
| HV-9460 | 34.79 | 3.22 | 17.76 | 20.11 | 7.69 | 0.39 | 0.00  | 0.12  | 9.47  | biotite     |
| HV-9460 | 35.63 | 3.17 | 17.78 | 21.10 | 7.91 | 0.35 | 0.01  | 0.04  | 9.41  | biotite     |
| HV-9460 | 35.01 | 3.20 | 17.68 | 20.97 | 7.71 | 0.41 | 0.00  | 0.04  | 9.09  | biotite     |
| HV-9460 | 35.60 | 3.60 | 17.43 | 20.53 | 7.47 | 0.34 | 0.00  | 0.13  | 9.21  | biotite     |
| HV-9460 | 35.41 | 3.51 | 17.51 | 20.23 | 7.88 | 0.32 | 0.03  | 0.15  | 9.30  | biotite     |
| HV-9460 | 34.98 | 3.55 | 17.60 | 21.03 | 7.82 | 0.30 | 0.00  | 0.12  | 9.14  | biotite     |
| HV-9460 | 35.30 | 3.97 | 17.77 | 20.87 | 7.21 | 0.29 | 0.00  | 0.04  | 9.26  | biotite     |

| Ref.    | SiO2  | TiO2  | Al2O3 | FeO   | MgO   | MnO  | CaO   | Na2O | K2O   | Min         |
|---------|-------|-------|-------|-------|-------|------|-------|------|-------|-------------|
| HV-9460 | 65.57 | 0.00  | 18.23 | 0.00  | 0.02  | 0.01 | 0.03  | 0.32 | 15.49 | K-feldspar  |
| HV-9460 | 64.94 | 0.00  | 18.06 | 0.00  | 0.00  | 0.01 | 0.04  | 0.71 | 15.04 | K-feldspar  |
| HV-9460 | 64.59 | 0.05  | 22.14 | 0.00  | 0.00  | 0.00 | 3.46  | 9.52 | 0.24  | plagioclase |
| HV-9460 | 60.84 | 0.03  | 24.64 | 0.02  | 0.00  | 0.06 | 6.52  | 7.73 | 0.24  | plagioclase |
| HV-9460 | 61.24 | 0.00  | 24.72 | 0.05  | 0.00  | 0.01 | 6.66  | 7.85 | 0.22  | plagioclase |
| HV-9460 | 59.57 | 0.05  | 25.67 | 0.00  | 0.00  | 0.05 | 7.66  | 7.29 | 0.18  | plagioclase |
| HV-9460 | 62.32 | 0.05  | 23.72 | 0.12  | 0.00  | 0.05 | 5.66  | 8.52 | 0.09  | plagioclase |
| HV-9460 | 61.34 | 0.00  | 24.42 | 0.00  | 0.00  | 0.05 | 6.40  | 7.99 | 0.20  | plagioclase |
| HV-9460 | 64.64 | 0.00  | 22.74 | 0.09  | 0.02  | 0.03 | 3.99  | 9.47 | 0.26  | plagioclase |
| HV-9460 | 63.11 | 0.00  | 23.17 | 0.03  | 0.01  | 0.05 | 4.87  | 8.81 | 0.35  | plagioclase |
| HV-9460 | 61.52 | 0.02  | 24.36 | 0.00  | 0.00  | 0.01 | 6.03  | 8.23 | 0.25  | plagioclase |
| HV-9463 | 0.42  | 0.03  | 0.00  | 0.28  | 0.00  | 0.00 | 55.17 | 0.09 | 0.04  | apatite     |
| HV-9463 | 0.33  | 0.05  | 0.00  | 0.25  | 0.00  | 0.17 | 54.55 | 0.10 | 0.02  | apatite     |
| HV-9463 | 36.43 | 3.65  | 14.68 | 22.77 | 7.80  | 0.25 | 0.00  | 0.09 | 9.17  | biotite     |
| HV-9463 | 35.57 | 3.60  | 14.69 | 23.44 | 7.56  | 0.34 | 0.00  | 0.08 | 9.06  | biotite     |
| HV-9463 | 35.17 | 3.73  | 14.58 | 23.22 | 8.09  | 0.33 | 0.01  | 0.04 | 8.95  | biotite     |
| HV-9463 | 35.47 | 3.16  | 14.71 | 23.50 | 8.38  | 0.32 | 0.00  | 0.08 | 9.19  | biotite     |
| HV-9463 | 35.83 | 3.38  | 14.93 | 23.20 | 7.80  | 0.39 | 0.02  | 0.06 | 9.14  | biotite     |
| HV-9463 | 35.53 | 3.51  | 14.50 | 23.51 | 7.48  | 0.33 | 0.00  | 0.07 | 9.00  | biotite     |
| HV-9463 | 35.67 | 3.15  | 14.93 | 23.86 | 7.93  | 0.36 | 0.02  | 0.08 | 9.27  | biotite     |
| HV-9463 | 35.71 | 2.92  | 14.93 | 23.61 | 8.03  | 0.34 | 0.00  | 0.02 | 8.93  | biotite     |
| HV-9463 | 35.32 | 3.80  | 14.35 | 23.73 | 8.00  | 0.32 | 0.02  | 0.08 | 8.93  | biotite     |
| HV-9463 | 35.78 | 3.42  | 14.78 | 23.25 | 8.24  | 0.21 | 0.00  | 0.06 | 9.25  | biotite     |
| HV-9463 | 36.03 | 3.90  | 13.95 | 23.69 | 8.01  | 0.27 | 0.01  | 0.06 | 9.04  | biotite     |
| HV-9463 | 35.82 | 3.77  | 14.82 | 23.05 | 7.87  | 0.32 | 0.02  | 0.16 | 9.13  | biotite     |
| HV-9463 | 35.72 | 3.59  | 14.39 | 23.80 | 7.56  | 0.30 | 0.01  | 0.14 | 8.87  | biotite     |
| HV-9463 | 35.70 | 3.30  | 14.84 | 23.80 | 7.89  | 0.42 | 0.00  | 0.10 | 9.10  | biotite     |
| HV-9463 | 34.71 | 0.05  | 18.40 | 23.48 | 8.18  | 0.30 | 0.00  | 0.06 | 9.13  | biotite     |
| HV-9463 | 33.80 | 0.79  | 18.35 | 23.89 | 7.66  | 0.38 | 0.00  | 0.03 | 9.14  | biotite     |
| HV-9463 | 36.50 | 0.91  | 15.57 | 22.88 | 9.22  | 0.38 | 0.00  | 0.02 | 9.41  | biotite     |
| HV-9463 | 34.72 | 0.66  | 17.42 | 23.15 | 8.44  | 0.38 | 0.03  | 0.07 | 9.16  | biotite     |
| HV-9463 | 36.14 | 3.35  | 14.83 | 23.39 | 7.86  | 0.33 | 0.01  | 0.06 | 8.86  | biotite     |
| HV-9463 | 35.84 | 3.40  | 14.90 | 23.64 | 7.83  | 0.34 | 0.02  | 0.10 | 9.12  | biotite     |
| HV-9463 | 35.86 | 3.50  | 14.49 | 23.82 | 8.28  | 0.26 | 0.01  | 0.05 | 8.81  | biotite     |
| HV-9463 | 36.19 | 3.61  | 14.61 | 24.05 | 8.13  | 0.31 | 0.00  | 0.11 | 9.08  | biotite     |
| HV-9463 | 36.22 | 3.72  | 14.46 | 24.10 | 8.01  | 0.31 | 0.00  | 0.06 | 9.04  | biotite     |
| HV-9463 | 35.82 | 3.78  | 14.35 | 24.06 | 7.78  | 0.32 | 0.00  | 0.09 | 9.15  | biotite     |
| HV-9463 | 35.67 | 3.76  | 14.71 | 24.20 | 7.83  | 0.29 | 0.01  | 0.06 | 9.01  | biotite     |
| HV-9463 | 36.15 | 3.85  | 14.61 | 24.14 | 8.23  | 0.24 | 0.00  | 0.07 | 9.17  | biotite     |
| HV-9463 | 35.04 | 3.43  | 14.53 | 24.13 | 8.21  | 0.34 | 0.01  | 0.00 | 8.28  | biotite     |
| HV-9463 | 34.37 | 3.08  | 15.12 | 24.71 | 9.05  | 0.31 | 0.23  | 0.02 | 6.94  | biotite     |
| HV-9463 | 34.69 | 9.07  | 12.82 | 15.80 | 10.54 | 0.15 | 7.85  | 0.05 | 1.54  | biotite     |
| HV-9463 | 0.05  | 51.19 | 0.00  | 42.07 | 0.08  | 4.81 | 0.02  | 0.01 | 0.02  | ilmenite    |
| HV-9463 | 0.04  | 50.07 | 0.00  | 40.91 | 0.05  | 6.20 | 0.02  | 0.00 | 0.03  | ilmenite    |
| HV-9463 | 0.03  | 50.21 | 0.00  | 41.59 | 0.03  | 4.79 | 0.07  | 0.03 | 0.02  | ilmenite    |
| HV-9463 | 66.06 | 0.01  | 18.42 | 0.00  | 0.00  | 0.01 | 0.03  | 2.37 | 13.02 | K-feldspar  |
| HV-9463 | 63.64 | 0.00  | 17.86 | 0.06  | 0.00  | 0.01 | 0.03  | 0.76 | 15.26 | K-feldspar  |
| HV-9463 | 65.33 | 0.01  | 18.08 | 0.05  | 0.00  | 0.03 | 0.03  | 0.77 | 15.24 | K-feldspar  |
| HV-9463 | 64.72 | 0.05  | 22.37 | 0.00  | 0.00  | 0.00 | 3.70  | 9.27 | 0.11  | plagioclase |
| HV-9463 | 60.84 | 0.02  | 24.49 | 0.03  | 0.01  | 0.01 | 6.08  | 7.77 | 0.30  | plagioclase |
| HV-9463 | 60.61 | 0.03  | 24.62 | 0.07  | 0.03  | 0.04 | 6.21  | 7.93 | 0.16  | plagioclase |
| HV-9463 | 61.73 | 0.00  | 21.64 | 0.13  | 0.00  | 0.05 | 6.46  | 8.99 | 0.07  | plagioclase |
| HV-9463 | 61.76 | 0.02  | 25.50 | 0.05  | 0.02  | 0.09 | 1.17  | 7.51 | 3.03  | plagioclase |
| HV-9463 | 62.01 | 0.00  | 23.46 | 0.03  | 0.26  | 0.02 | 3.86  | 7.89 | 0.52  | plagioclase |



| Ref.    | SiO2  | TiO2  | Al2O3 | FeO   | MgO  | MnO  | CaO   | Na2O  | K2O   | Min         |
|---------|-------|-------|-------|-------|------|------|-------|-------|-------|-------------|
| HV-9463 | 61.62 | 0.00  | 24.17 | 0.03  | 0.02 | 0.05 | 5.92  | 8.15  | 0.20  | plagioclase |
| HV-9463 | 61.91 | 0.03  | 23.73 | 0.00  | 0.02 | 0.02 | 5.33  | 8.49  | 0.13  | plagioclase |
| HV-9463 | 61.33 | 0.01  | 24.05 | 0.07  | 0.00 | 0.00 | 5.57  | 8.50  | 0.31  | plagioclase |
| HV-9463 | 61.29 | 0.00  | 23.86 | 0.08  | 0.00 | 0.04 | 5.40  | 8.25  | 0.10  | plagioclase |
| HV-9463 | 63.30 | 0.02  | 23.50 | 0.03  | 0.00 | 0.00 | 5.12  | 8.59  | 0.10  | plagioclase |
| HV-9463 | 60.78 | 0.01  | 24.74 | 0.02  | 0.00 | 0.03 | 6.68  | 7.60  | 0.18  | plagioclase |
| HV-9463 | 62.18 | 0.00  | 24.31 | 0.03  | 0.01 | 0.01 | 5.84  | 8.11  | 0.22  | plagioclase |
| HV-9463 | 61.43 | 0.00  | 24.30 | 0.03  | 0.00 | 0.04 | 6.20  | 7.74  | 0.11  | plagioclase |
| HV-9463 | 62.69 | 0.00  | 23.67 | 0.06  | 0.00 | 0.03 | 5.28  | 8.43  | 0.07  | plagioclase |
| HV-9463 | 64.32 | 0.00  | 23.35 | 0.08  | 0.02 | 0.05 | 4.45  | 8.84  | 0.24  | plagioclase |
| HV-9463 | 65.20 | 0.03  | 22.19 | 0.08  | 0.00 | 0.00 | 3.29  | 9.75  | 0.07  | plagioclase |
| HV-9463 | 65.05 | 0.03  | 22.01 | 0.14  | 0.01 | 0.02 | 3.16  | 9.71  | 0.07  | plagioclase |
| HV-9463 | 62.85 | 0.00  | 23.80 | 0.02  | 0.00 | 0.00 | 5.08  | 8.84  | 0.12  | plagioclase |
| HV-9463 | 60.36 | 0.05  | 24.99 | 0.00  | 0.00 | 0.06 | 6.83  | 7.76  | 0.09  | plagioclase |
| HV-9463 | 64.75 | 0.00  | 22.54 | 0.00  | 0.00 | 0.00 | 3.71  | 9.30  | 0.12  | plagioclase |
| HV-9463 | 64.55 | 0.02  | 21.95 | 0.01  | 0.00 | 0.01 | 3.14  | 9.21  | 0.78  | plagioclase |
| HV-9463 | 63.48 | 0.07  | 22.79 | 0.04  | 0.02 | 0.01 | 4.20  | 8.98  | 0.22  | plagioclase |
| HV-9463 | 62.38 | 0.04  | 23.97 | 0.00  | 0.00 | 0.08 | 5.24  | 8.77  | 0.11  | plagioclase |
| HV-9463 | 31.26 | 29.35 | 5.98  | 0.24  | 0.06 | 0.00 | 28.43 | 0.02  | 0.01  | sphene      |
| HV-9463 | 31.10 | 29.22 | 6.87  | 0.21  | 0.00 | 0.07 | 29.73 | 0.00  | 0.00  | sphene      |
| HV-9463 | 31.21 | 29.74 | 5.90  | 0.26  | 0.00 | 0.01 | 29.41 | 0.00  | 0.01  | sphene      |
| HV-9463 | 31.65 | 27.41 | 7.95  | 0.27  | 0.02 | 0.05 | 29.67 | 0.03  | 0.03  | sphene      |
| HV-9463 | 31.01 | 31.20 | 5.32  | 0.24  | 0.02 | 0.02 | 29.57 | 0.00  | 0.03  | sphene      |
| HV-9464 | 0.21  | 0.07  | 0.01  | 0.58  | 0.00 | 0.10 | 54.36 | 0.06  | 0.06  | apatite     |
| HV-9464 | 0.20  | 0.00  | 0.00  | 0.17  | 0.00 | 0.12 | 53.79 | 0.07  | 0.03  | apatite     |
| HV-9464 | 36.29 | 3.59  | 14.68 | 23.71 | 8.02 | 0.42 | 0.00  | 0.07  | 9.15  | biotite     |
| HV-9464 | 35.66 | 2.46  | 14.91 | 24.56 | 8.68 | 0.42 | 0.00  | 0.08  | 8.12  | biotite     |
| HV-9464 | 35.98 | 4.00  | 14.28 | 22.29 | 8.19 | 0.29 | 0.01  | 0.08  | 8.85  | biotite     |
| HV-9464 | 36.11 | 3.84  | 14.34 | 23.48 | 8.22 | 0.36 | 0.03  | 0.08  | 9.08  | biotite     |
| HV-9464 | 36.06 | 3.72  | 14.09 | 22.59 | 8.37 | 0.28 | 0.00  | 0.04  | 8.94  | biotite     |
| HV-9464 | 36.34 | 3.90  | 14.52 | 22.90 | 8.33 | 0.36 | 0.04  | 0.09  | 8.98  | biotite     |
| HV-9464 | 36.16 | 3.65  | 14.53 | 23.89 | 7.84 | 0.29 | 0.00  | 0.06  | 9.05  | biotite     |
| HV-9464 | 36.20 | 3.34  | 14.86 | 23.13 | 7.73 | 0.40 | 0.03  | 0.10  | 8.86  | biotite     |
| HV-9464 | 35.47 | 2.67  | 15.09 | 22.37 | 8.20 | 0.38 | 0.01  | 0.02  | 8.17  | biotite     |
| HV-9464 | 36.38 | 2.67  | 15.54 | 21.78 | 7.80 | 0.39 | 0.03  | 0.05  | 8.89  | biotite     |
| HV-9464 | 36.13 | 2.22  | 15.45 | 22.85 | 8.26 | 0.30 | 0.01  | 0.07  | 8.92  | biotite     |
| HV-9464 | 36.55 | 2.70  | 14.91 | 22.89 | 7.97 | 0.34 | 0.00  | 0.11  | 8.93  | biotite     |
| HV-9464 | 0.80  | 50.65 | 0.05  | 38.80 | 0.02 | 6.42 | 0.79  | 0.04  | 0.10  | ilmenite    |
| HV-9464 | 0.02  | 52.56 | 0.00  | 42.17 | 0.04 | 4.83 | 0.02  | 0.00  | 0.02  | ilmenite    |
| HV-9464 | 65.77 | 0.00  | 18.12 | 0.08  | 0.01 | 0.02 | 0.01  | 0.48  | 15.49 | K-feldspar  |
| HV-9464 | 65.64 | 0.02  | 18.22 | 0.02  | 0.00 | 0.00 | 0.00  | 0.77  | 14.91 | K-feldspar  |
| HV-9464 | 68.43 | 0.00  | 21.32 | 0.00  | 0.00 | 0.00 | 2.10  | 10.00 | 0.09  | plagioclase |
| HV-9464 | 65.90 | 0.00  | 21.98 | 0.00  | 0.02 | 0.00 | 3.24  | 9.23  | 0.06  | plagioclase |
| HV-9464 | 65.28 | 0.00  | 21.38 | 0.10  | 0.00 | 0.00 | 2.64  | 9.47  | 0.28  | plagioclase |
| HV-9464 | 62.10 | 0.02  | 24.75 | 0.17  | 0.00 | 0.00 | 6.70  | 7.16  | 0.11  | plagioclase |
| HV-9464 | 62.54 | 0.00  | 24.30 | 0.07  | 0.00 | 0.00 | 6.15  | 8.04  | 0.11  | plagioclase |
| HV-9464 | 60.85 | 0.00  | 25.04 | 0.03  | 0.00 | 0.01 | 6.95  | 7.50  | 0.13  | plagioclase |
| HV-9464 | 63.12 | 0.02  | 23.72 | 0.06  | 0.00 | 0.00 | 5.22  | 8.04  | 0.18  | plagioclase |
| HV-9464 | 65.23 | 0.00  | 21.91 | 0.06  | 0.00 | 0.05 | 3.34  | 9.25  | 0.14  | plagioclase |