Table 4. Compositions of PGE minerals from borehole **PH-175**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No. | Depth | Formula | As | Au | Bi | Fe | Ni | Cu | Pd | Pt | Rh | Sb | Sn | Pb | Te | Total |
| 1 | 624.60 | Pt0.65(Fe0.29Cu0.03Ni0.03)0.35 |  |  |  | 10.82 | 1.25 | 1.44 |  | 84.93 |  |  |  |  |  | 98.44 |
| 2 | 624.60 | Pt0.54(Fe0.31Cu0.08Ni0.07)0.46 |  |  |  | 12.89 | 2.99 | 3.74 |  | 78.69 |  |  |  |  |  | 98.31 |
| 3 | 626.00 | (Pt0.85Pd0.16Rh0.03)1.01(As1.92Sb0.04)1.96 | 42.91 |  |  |  |  |  | 4.98 | 49.42 | 0.82 | 1.49 |  |  |  | 99.62 |
| 4 | 628.00 | (Pt0.58Pd0.26Ni0.17)1.01(Te0.82Pb0.17)0.99 |  |  |  |  | 2.95 |  | 8.45 | 34.02 |  |  |  | 10.57 | 31.30 | 87.29\* |
| 5 | 630.00 | Pt0.64(Fe0.28Cu0.03Pd0.03Ni0.02)0.36 |  |  |  | 10.39 | 0.71 | 1.29 | 2.26 | 84.32 |  |  |  |  |  | 98.97 |
| 6 | 630.00 | (Pd2.78Pt0.18)2.96(Te0.34Bi0.35Pb0.26Sn0.09)1.04 |  |  | 12.51 |  |  |  | 50.69 | 5.95 |  |  | 1.84 | 9.09 | 7.52 | 87.60\* |
| 7 | 630.00 | (Pd3.03Pt0.02)3.05(As0.46Sb0.29Te0.12Sn0.07)0.94 | 8.06 |  |  |  |  |  | 75.22 | 0.96 |  | 8.27 | 2.04 |  | 3.66 | 98.21 |
| 8 | 632.20 | (Pd0.67Pt0.31)0.98(As0.69Te0.18Sn0.10Pb0.05)1.02 | 21.76 |  |  |  |  |  | 30.31 | 25.88 |  |  | 4.88 | 4.33 | 9.48 | 96.64\* |
| 9 | 632.20 | (Pd3.44Pt0.55)3.99(As1.62Te0.64Sn0.40Pb0.30Bi0.04)3.00 | 15.16 |  | 1.14 |  |  |  | 45.65 | 13.5 |  |  | 5.92 | 7.71 | 10.26 | 99.34 |
| 10 | 632.20 | Pd3.00(As0.54Te0.35Sn0.11)1.00 | 9.70 |  |  |  |  |  | 75.81 |  |  |  | 3.04 |  | 10.65 | 99.20 |
| 11 | 633.50 | Pt0.98As2.00 | 42.92 |  |  |  |  |  |  | 54.67 |  |  |  |  | 0.74 | 98.33 |
| 12 | 633.50 | Pd1.03(Bi0.60Te0.33Sb0.05)0.98 |  |  | 43.87 |  |  |  | 38.33 |  |  | 2.18 |  |  | 14.61 | 98.99 |
| 13 | 639.70 | Pt0.65(Fe0.28Ni0.03Cu0.02Pd0.02)0.35 |  |  |  | 10.71 | 1.04 | 0.94 | 1.53 | 85.37 |  |  |  |  |  | 99.59 |
| 14 | 639.70 | (Pt0.97Rh0.03)1.00(As1.99Pb0.01)2.00 | 42.85 |  |  |  |  |  |  | 54.42 | 0.99 |  |  | 0.79 |  | 99.05 |
| 15 | 639.70 | Pt1.01(Te1.36Bi0.62)1.98 |  |  | 25.61 |  |  |  |  | 39.03 |  |  |  |  | 34.33 | 98.97 |
| 16 | 639.70 | (Pd1.91Pt0.08Au0.02)2.01(Sn0.48Sb0.39As0.12)0.99 | 2.70 | 1.21 |  |  |  |  | 59.49 | 4.48 |  | 14.08 | 16.65 |  |  | 98.61 |
| 17 | 640.30 | (Pt0.75Pd0.24)0.99(Te1.36Bi0.62As0.04)2.02 | 0.56 |  | 24.25 |  |  |  | 4.78 | 27.37 |  |  |  |  | 32.46 | 89.42 |
| 18 | 641.40 | Pt0.68(Fe0.29Ni0.03)0.32 |  |  |  | 10.95 | 1.14 |  |  | 87.80 |  |  |  |  |  | 99.89 |
| 19 | 643.90 | Pt0.98(As1.99Te0.02)2.01 | 42.34 |  |  |  |  |  |  | 54.20 |  |  |  |  | 0.56 | 97.10 |
| 20 | 643.90 | Pd1.00(Te0.53Bi0.47)1.00 |  |  | 35.76 |  |  |  | 38.29 |  |  |  |  |  | 24.54 | 98.59 |
| 21 | 643.90 | Pt0.99(Te1.40Bi0.61)2.01 |  |  | 24.82 |  |  |  |  | 37.32 |  |  |  |  | 34.54 | 96.68 |
| 22 | 646.50 | (Pt1.01Rh0.02)1.03As1.97 | 41.72 |  |  |  |  |  |  | 55.83 | 0.44 |  |  |  |  | 97.99 |
| 23 | 646.50 | (Pd2.02Au0.01)2.03As0.98 | 25.11 | 0.46 |  |  |  |  | 73.48 |  |  |  |  |  |  | 99.05 |
| 24 | 646.50 | (Pd1.91Pt0.06Au0.05)2.02(As0.50Sn0.43Sb0.05)0.98 | 11.73 | 2.90 |  |  |  |  | 63.27 | 3.48 |  | 2.00 | 15.72 |  |  | 99.10 |
| 25 | 650.20 | (Pt0.96Pd0.10)1.06(As1.91Sb0.03)1.94 | 35.21 |  |  |  |  |  | 2.54 | 46.28 |  | 0.81 |  |  |  | 84.84 |
| 26 | 650.20 | (Pt0.88Rh0.10Pd0.01)0.99As2.00 | 33.87 |  |  |  |  |  | 0.32 | 38.75 | 2.36 |  |  |  |  | 75.30\* |

Note. 1-12 – picritic g-d, 13-26 – taxitic g-d;

No. 1,2,5,13, 18 – ferroan platinum; 3,11,14,19, 22,25,26 – Sperrylite PtAs2; 4 – Unidentified phase PtTe; 6 – Keithconnite Pd3Te; 7,10 – Vincentite Pd3(As,Sb,Te.Sn); 8,9 – Pd-Pt-As unnamed phases; 12 – Sobolevskite Pd(Bi,Te,Sb); 15,17, 21 – Moncheite Pt(Te,Bi)2; 16 – Paolovite Pd2(Sn,Sb,As); 20– Кotulskite Pd(Te,Bi); 23,24 – Palladoarsenide Pd2As.