**Geversite**

\[ \text{Pt(Sb, Bi)}_2 \]

\( \odot 2001-2005 \) Mineral Data Publishing, version 1

**Crystal Data:** Cubic.  \( \text{Point Group: } 2/m \bar{3} \).  As tiny grains.

**Physical Properties:** Hardness = 4.5–5  \( \text{VHN} = 726–766 \) (50 g load).  \( \text{D(meas.)} = \text{n.d.} \).

\( \text{D(calc.)} = 10.97 \)

**Optical Properties:** Opaque.  \( \text{Color: } \) In polished section, pale gray.  \( \text{Luster: } \) Metallic.

R: (400) 58.9, (420) 59.1, (440) 59.3, (460) 59.4, (480) 59.4, (500) 59.4, (520) 59.2, (540) 58.9, (560) 58.4, (580) 57.8, (600) 57.4, (620) 57.3, (640) 57.2, (660) 57.2, (680) 57.4, (700) 57.8

**Cell Data:**  \( \text{Space Group: } \text{Pa}3. \)  \( a = 6.428 \quad Z = 4 \)

**X-ray Powder Pattern:** Synthetic.  (ICDD 14-141).

1.240 (100), 1.940 (83), 1.140 (83), 1.194 (58), 1.720 (50), 1.310 (50), 1.174 (50)

**Chemistry:**

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pt</td>
<td>45.0</td>
<td>41.8</td>
<td>44.48</td>
</tr>
<tr>
<td>As</td>
<td>0.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sb</td>
<td>51.5</td>
<td>43.1</td>
<td>55.52</td>
</tr>
<tr>
<td>Bi</td>
<td>12.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>96.5</td>
<td>98.4</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Driekop mine, South Africa; by electron microprobe, corresponds to \( \text{Pt}_{1.000}\text{Sb}_{1.84}. \)
(2) Onverwacht mine, South Africa; by electron microprobe, corresponds to \( \text{Pt}_{1.00}(\text{Sb}_{1.66} \text{Bi}_{0.29} \text{As}_{0.04})\Sigma = 1.99 \)
(3) \( \text{PtSb}_2 \)

**Mineral Group:** Pyrite group.

**Occurrence:** In concentrates of platinum minerals derived from Pt–Fe–Ni–Cu deposits in ultramafic rocks (Driekop mine, South Africa).

**Association:** Platinum, gold, hollingworthite, sperrylite, stibiopalladinite, chalcopyrite, pyrrhotite (Driekop mine, South Africa); vozhminite, heazlewoodite, tučekite, magnetite, copper (Vozhmin massif, Russia).

**Distribution:** In South Africa, in the Merensky Reef, Bushveld complex, Transvaal, in the Driekop [TL] and Onverwacht mines. In Russia, from the Morozova and Oktjabr mines, Tahanh area, Noril’sk region, western Siberia, and in the Vozhmin massif, Segezha district, central Karelia. At the Kelvon Grove prospect, near Fifield, New South Wales, Australia. From the Baula complex, Orissa, India. At Fox Gulch, Goodnews Bay, Alaska, USA. In the Wellgreen Ni–Cu–PGM deposit, Yukon Territory, Canada.

**Name:** In honor of Professor Traugott Wilhelm Gevers (1900–1991), University of the Witswatersrand, Johannesburg, South Africa, eminent South African geologist.

**Type Material:** National School of Mines, Paris, France.

**References:**  
(3) (1961) Amer. Mineral., 46, 1518 (abs. ref. 2).  

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of Mineral Data Publishing.