NORTH AMERICAN PALLADIUM LTD Form 6-K February 26, 2010

QuickLinks -- Click here to rapidly navigate through this document

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Report of Foreign Issuer Pursuant to Rule 13a-16 or 15d-16 of The Securities Exchange Act of 1934

For the month of February, 2010 Commission File Number: 1-15142

NORTH AMERICAN PALLADIUM LTD.

(Name of Registrant)

130 Adelaide Street West
Suite 2116
Toronto, Ontario
Canada M5H 3P5
(Address of Principal Executive Offices)

Indicate by checkmark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:	
Form 20-F o Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted	Form 40-F ý by Regulation S-T Rule 101(b)(1): o
Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted	by Regulation S-T Rule 101(b)(7): o
Indicate by checkmark whether the registrant, by furnishing the information contained in this Form is also thereby furnishing the information to the SEC pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934:	
Yes o Assigned File No No ý If "Yes" is marked, indicate the file number assigned to the Registrant in connection with Rule 12g3-2(b).	

This report on Form 6-K is specifically incorporated by reference into North American Palladium's registration statement on Form S-8 (File No. 333-13766) and North American Palladium's registration statements on Form F-10 (File Nos. 333-158082 and 333-164512).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NORTH AMERICAN PALLADIUM LTD.

Date: February 25, 2010 By: /s/ TRENT MELL

Trent C. A. Mell

Vice President, Corporate Development, General Counsel & Corporate Secretary

EXHIBIT INDEX

Exhibit Description of Exhibit 2009 Audited Financial Statements 2 2009 MD&A 3 Press Release "North American Palladium Announces 2009 Fourth Quarter and Year-End Results"

QuickLinks

SIGNATURES EXHIBIT INDEX