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U.S. SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

FORM 40-F

[Check One]

☐ REGISTRATION STATEMENT PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934  
OR

☒ ANNUAL REPORT PURSUANT TO SECTION 13(a) OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended **December 31, 2006** Commission File Number **001-31927**

**NORTHERN ORION RESOURCES INC.**

(Exact name of Registrant as specified in its charter)

**British Columbia, Canada**

(Province or other jurisdiction of incorporation or organization)

**1040**

(Primary Standard Industrial Classification Code Number (if applicable))

**250-1075 West Georgia Street**

**Vancouver, British Columbia**

**Canada V6E 3C9**

**(604) 689-9663**

(Address and telephone number of Registrant's principal executive offices)

**CT Corporation System**

**111 Eighth Avenue, 13<sup>th</sup> Floor**

**New York, New York 10011**

**(212)894-8940**

(Name, address (including zip code) and telephone number (including area code)  
of agent for service in the United States)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of Each Class

Name of each exchange  
on which registered

**Common Shares (no par value)**

**American Stock Exchange**

Securities registered or to be registered pursuant to Section 12(g) of the Act:

**None**

(Title of Class)

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Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None  
(Title of Class)

For annual reports, indicate by check mark the information filed with this Form:

☒ Annual information form ☒ Audited annual financial statements

At December 31, 2006, the Registrant had outstanding 152,531,086 Common Shares (no par value).

Indicate by check mark whether the Registrant by filing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). If "Yes" is marked, indicate the filing number assigned to the Registrant in connection with such Rule.

YES ☐ NO ☒

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days.

YES ☒ NO ☐

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## EXPLANATORY NOTE

Northern Orion Resources Inc. (the "Company") is a Canadian issuer eligible to file its annual report pursuant to Section 13(a) of the Exchange Act, on Form 40-F. The Company is a "foreign private issuer" as defined in Rule 3b-4 under the Exchange Act and Rule 405 under the Securities Act of 1933, as amended (the "Securities Act"). Equity securities of the Company are accordingly exempt from Sections 14(a), 14(b), 14(c), 14(f) and 16 of the Exchange Act pursuant to Rule 3a12-3.

The Company prepares its consolidated financial statements in accordance with Canadian generally accepted accounting principles ("GAAP") and reconciles such statements to U.S. GAAP. Unless otherwise indicated, all dollar amounts in this report are in United States dollars. The exchange rate of Canadian dollars into United States dollars, on December 29, 2006, based upon the noon buying rate in New York City for cable transfers payable in Canadian dollars as certified for customs purposes by the Federal Reserve Bank of New York, was U.S.\$1.00 = CDN\$1.1652.

## FORWARD-LOOKING STATEMENTS

This annual report and the exhibits attached hereto contain forward-looking statements concerning the Company's plans at its properties, plans related to its business and other matters. These statements relate to analyses and other information that are based on forecasts of future results, estimates of amounts not yet determinable and assumptions of management.

Statements concerning reserves and mineral resource estimates may also be deemed to constitute forward-looking statements to the extent that they involve estimates of the mineralization that will be encountered if the property is developed, and in the case of mineral reserves, such statements reflect the conclusion based on certain assumptions that the mineral deposit can be economically exploited. Any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance (often, but not always, using words or phrases such as "expects" "anticipates," "plans," "estimates" or "intends," or the negative or other variations of these words or other comparable words or phrases or stating that certain actions, events or results "may," "could," "would," "might" or "will" be taken, occur or be achieved) are not statements of historical fact and may be "forward-looking statements." Forward-looking statements are subject to a variety of risks and uncertainties which could cause actual events or results to differ from those reflected in the forward-looking statements, including, without limitation:

- . risks and uncertainties relating to the exploration, development and production of copper and gold mines;
  - . mining and development risks, including risks related to accidents, equipment breakdowns, labor disputes or other unanticipated difficulties with or interruptions in productions, which may or may not be insured;
  - . uncertainties in the estimation of ore reserves and mineral reserves;
  - . need for additional reserves and additional capital to fund the processing, development and exploration of certain mining operations;
  - . commodity prices, commodity hedging and exchange rate fluctuations;
  - . risks related to environmental regulation and liability;
  - . foreign political, economic and regulatory risks associated with mining and exploration;
  - . risks associated with inadequate infrastructure to support sustainable mining operations;
  - . business interruption risks at the Alumbrera Mine;
  - . uncertainty of title;
  - . risks associated with foreign operations;
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- economic and political instability in Argentina and Argentina's anti-trust laws;
- risks associated with conducting operations through foreign subsidiaries;
- risks associated with joint ventures entered into by the Company, in particular with the Alumbreira Mine;
- risks associated with labor relations and other employment matters;
- competition;
- the Company's acquisition strategy and integration of new acquisitions into the Company's operations;
- the volatility of the market price of the Company's common shares;
- management's limited experience placing projects into production;
- risks associated with certain legal proceedings;
- laws in the United States imposed to regulate commerce and relations with Cuba; and
- other risks and uncertainties related to the Company's prospects, properties and business strategy.

Some of the important risks and uncertainties that could affect the Company's forward-looking statements are described further in the Company's Annual Information Form for the year ended December 31, 2006, a copy of which is filed as an exhibit hereto under the heading "Risk Factors". Should one or more of these risks and uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in forward-looking statements. Forward-looking statements are made based on management's beliefs, estimates and opinions on the date the statements are made and the Company undertakes no obligation to update forward-looking statements if these beliefs, estimates and opinions or other circumstances should change. Investors are cautioned against attributing undue certainty to forward-looking statements.

#### **PASSIVE FOREIGN INVESTMENT COMPANY ("PFIC")**

The Company has not determined whether it meets the definition of PFIC, within the meaning of Sections 1291 through 1298 of the U.S. Internal Revenue Code for the current tax year and any prior tax years. The Company may or may not qualify as a PFIC in subsequent years due to changes in its assets and business operations. A U.S. shareholder who holds stock in a foreign corporation during any year in which such corporation qualifies as a PFIC is subject to numerous special U.S. federal income taxation rules and may elect to be taxed under two alternative tax regimes. A U.S. shareholder should consult their own U.S. tax advisor with respect to an investment in the Company's shares, and to ascertain which of the alternative tax regimes, if any, might be beneficial to the U.S. shareholder's own facts and circumstances.

#### **NOTE TO UNITED STATES READERS - DIFFERENCES IN UNITED STATES AND CANADIAN REPORTING PRACTICES**

The Company is permitted, under a multijurisdictional disclosure system adopted by the United States, to prepare this annual report in accordance with Canadian disclosure requirements, which are different from those of the United States. The Company prepares its financial statements, which are filed with this report on Form 40-F, in accordance with Canadian GAAP, and they may be subject to Canadian auditing and auditor independence standards. They may not be comparable to financial statements of United States companies. Significant differences between Canadian GAAP and United States GAAP are described in Note 16 of the audited consolidated financial statements of the Company.

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## RESOURCE AND RESERVE ESTIMATES

The terms “mineral reserve,” “proven mineral reserve” and “probable mineral reserve” used in the Company’s disclosure are Canadian mining terms that are defined in accordance with National Instrument 43-101 - Standards of Disclosure for Mineral Projects (“NI 43-101”) under the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum (the “CIM”) Standards on Mineral Resource and Mineral Reserves (the “CIM Standards”), adopted by the CIM Council on August 20, 2000. These definitions differ from the definitions in the United States Securities and Exchange Commission (the “Commission”) Industry Guide 7 under the Securities Act. In the United States, a “mineral reserve” is defined as that part of a mineral deposit which could be economically and legally extracted or produced at the time of the mineral reserve determination.

The terms “mineral resource,” “measured mineral resource,” “indicated mineral resource” and “inferred mineral resource” used in the Company’s disclosure are Canadian mining terms that are defined in accordance with NI 43-101 under the guidelines set out in the CIM Standards. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Please see the Supplement to the Glossary of Terms for a summary of the differences between CIM and U.S. standards, which is filed as Document 1 and incorporated by reference in this annual report on Form 40-F.

## ANNUAL INFORMATION FORM

The Company’s Annual Information Form for the year ended December 31, 2006 is filed as Document 2 and incorporated by reference in this annual report on Form 40-F.

## AUDITED ANNUAL FINANCIAL STATEMENTS AND MANAGEMENT’S DISCUSSION AND ANALYSIS

### *Audited Annual Financial Statements*

The audited consolidated financial statements of the Company for the years ended December 31, 2006, 2005 and 2004, including the report of the Independent Registered Chartered Accountants with respect thereto, are filed as Document 3 and incorporated by reference in this annual report on Form 40-F. For a reconciliation of important differences between Canadian and United States GAAP, see Note 16 of the Company’s audited consolidated financial statements.

### *Management’s Discussion and Analysis*

Management’s Discussion and Analysis of Financial Condition and Results of Operations is filed as Document 4 and incorporated by reference in this annual report on Form 40-F.

## CONTROLS AND PROCEDURES

### *Disclosure Controls and Procedures*

At the end of the period covered by this report, an evaluation of the effectiveness of the design and operations of the Company’s “disclosure controls and procedures” (as such term is defined in Rules 13a-15(e) of the Exchange Act) was carried out by the Company’s principal executive officer and principal financial officer. Based upon that evaluation, the Company’s principal executive officer and principal financial officer have concluded as of the end of the period covered by this report that the design and operation of the Company’s disclosure controls and procedures are effective to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Commission rules and forms, and is accumulated and communicated to management, including the Company’s principal executive officer and principal financial and accounting officer, to allow timely decisions regarding required disclosures.

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### *Management Report on Internal Control Over Financial Reporting*

Management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended). Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2006. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control-Integrated Framework.

Management, including our Chief Executive Officer and Chief Financial Officer, does not expect that the Company's disclosure controls and procedures or the Company's internal controls will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected.

A material weakness is a control deficiency, or combination of control deficiencies, that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected. Management has concluded that, as of December 31, 2006, our internal control over financial reporting is effective based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control Integrated Framework, except in the areas described below.

The following weaknesses have been identified in management's assessment: (a) deficiency in the identification and appropriate treatment of Canadian taxation matters; and (b) absence of appropriate review of complex accounting matters, the related accounting entries and appropriate documentation, disclosure and application of U.S. Generally Accepted Accounting Principles ("US GAAP") for those matters.

These weaknesses and their related risks are not uncommon in a company of Northern Orion's size. Management plans to utilize external advisors and take such other action as it considers appropriate to minimize these risks. This includes engaging independent consultants to ensure that Canadian taxation issues are identified and appropriately accounted for and to ensure that there is an appropriate review of complex accounting matters, and that these matters are appropriately disclosed and accounted for in accordance with US GAAP.

During the year ended December 31, 2006, there were no changes in the Company's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

As the Company is not a "large accelerated filer," as such term is defined in Rule 12b-2 under the Exchange Act, management's evaluation of internal control over financial reporting has not been audited by the Company's auditors for the year ended December 31, 2006.

### **NOTICES PURSUANT TO REGULATION BTR**

There were no notices required by Rule 104 of Regulation BTR that the Company sent during the year ended December 31, 2006 concerning any equity security subject to a blackout period under Rule 101 of Regulation BTR.

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## AUDIT COMMITTEE FINANCIAL EXPERTS

The Company's Board of Directors has determined that the Company has more than one "audit committee financial expert," as defined in Form 40-F. The Company's Board of Directors has determined that its audit committee financial experts, Robert Gayton, John K. Burns, and Michael Beckett, are "independent" within the meaning of corporate governance standards of the American Stock Exchange ("AMEX") applicable to the Company.

The Company's Audit Committee complies with the audit committee requirements as prescribed by Multilateral Instrument 52-110 - *Audit Committees* of the Canadian Securities Administration ("MI 52-110"). MI 52-110 requires that the Audit Committee be composed only of directors who are "independent" as defined in MI 52-110, being directors who are free of any material relationship with the Company. The Company's Board of Directors has determined that all of the members of the Company's Audit Committee are independent pursuant to MI 52-110.

## CODE OF ETHICS

The Company has adopted a written "code of ethics" (as that term is defined in Form 40-F) entitled "Code of Ethics for Directors, Officers and Employees" (the "Code"). The Code includes, among other things, written standards for the Company's principal executive officer, principal financial officer and principal accounting officer or controller, or persons performing similar functions that are required by the Commission for a code of ethics applicable to such officers. A copy of the Code is posted on the Company's website at [www.northernorion.com](http://www.northernorion.com).

No amendments to the Code were adopted during the year ended December 31, 2006. No "waiver" or "implicit waiver," as such terms are defined in the Form 40-F, were granted relating to any provision of the Code during the year ended December 31, 2006.

## PRINCIPAL ACCOUNTANT FEES AND SERVICES

Deloitte & Touche LLP has served as the Company's auditing firm since May 2003. Aggregate fees billed to the Company for professional services rendered by Deloitte & Touche LLP and its affiliates during the fiscal years ended December 31, 2006 and 2005 are detailed below (stated in U.S. dollars):

	<b>Fiscal 2006</b>	<b>Fiscal 2005</b>
Audit Fees	\$ 118,300	\$ 157,115
Audit-Related Fees	\$ Nil	\$ Nil
Tax Fees	\$ 355,047	\$ 98,609
All Other Fees	\$ Nil	\$ Nil
<b>Total Fees</b>	<b>\$ 473,347</b>	<b>\$ 255,724</b>

The nature of each category of fees is as follows:

### Audit Fees:

Audit fees were paid for professional services rendered by the auditors for the audit of the Company's annual consolidated financial statements, reviews of the Company's interim financial statements and attestation services provided in connection with statutory and regulatory filings or engagements, including the Company's filing of a short-form prospectus offering of units in February 2005.

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Audit-Related Fees:

Audit-related fees were paid for assurance and related services that are reasonably related to the performance of the audit or review of the Company's financial statements and are not reported under the Audit Fees item above. During the fiscal years ended December 31, 2006 and 2005, there were no audit-related fees.

Tax Fees:

Tax fees were paid for tax compliance, tax advice and tax planning professional services. During the fiscal years ended December 31, 2006 and 2005, the services provided in this category included the tax structuring of acquisitions and tax compliance, including the review of original and amended tax returns, assistance with questions regarding tax audits, assistance in completing routine tax schedules and calculations, and tax planning and advisory services relating to common forms of domestic and international taxation.

All Other Fees:

Other fees refer to for accounting, advisory and consulting services. There were no other fees in the fiscal years ended December 31, 2006 and 2005.

Pre-Approval Policies and Procedures:

All services to be performed by the Company's auditor must be approved in advance by the Audit Committee. The Audit Committee has considered whether the provision of services other than audit services is compatible with maintaining the auditors' independence and has adopted a policy governing the provision of these services. This policy requires the pre-approval by the Audit Committee of all audit and non-audit services provided by the external auditor, other than any *de minimis* non-audit services allowed by applicable law or regulation.

Pre-approval from the Audit Committee can be sought for planned engagements based on budgeted or committed fees. No further approval is required to pay pre-approved fees. Additional pre-approval is required for any increase in scope or in final fees.

Of the total aggregate fees paid by the Company to its accountants during the fiscal years ended December 31, 2006 and 2005, \$nil, or 0% of the aggregate fees, were approved by the Audit Committee pursuant to the *de minimis* exception provided by Section (c)(7)(i)(C) of Rule 2-01 of Regulation S-X.

**OFF-BALANCE SHEET ARRANGEMENTS**

The Company does not have any off-balance sheet arrangements.

**TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS**

Contractual obligations of the Company are filed as Document 5 and incorporated by reference in this annual report on Form 40-F.

**IDENTIFICATION OF THE AUDIT COMMITTEE**

The Company's Board of Directors has a separately-designated standing Audit Committee for the purpose of overseeing the accounting and financial reporting processes of the Company and audits of the Company's annual financial statements. As of the date of this annual report on Form 40-F, the members of the Audit Committee are Messrs. Burns, Gayton and Beckett.

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## AMEX CORPORATE GOVERNANCE

The Company's common shares are listed on AMEX. Section 110 of the AMEX company guide permits AMEX to consider the laws, customs and practices of the foreign issuer's country of domicile in relaxing certain AMEX listing criteria, and to grant exemptions from AMEX listing criteria based on these considerations. A company seeking relief under these provisions is required to provide written certification from independent local counsel that the non-complying practice is not prohibited by home country law. A description of the significant ways in which the Company's governance practices differ from those followed by domestic companies pursuant to AMEX standards is as follows:

- *Shareholder Meeting Quorum Requirement:* The AMEX minimum quorum requirement for a shareholder meeting is one-third of the outstanding shares of common stock. In addition, a company listed on AMEX is required to state its quorum requirement in its bylaws. The Company's quorum requirement is set forth in its Articles. A quorum for a meeting of members of the Company is two members or proxyholders representing two members, or one member and a proxyholder representing another member.
- *Proxy Delivery Requirement:* AMEX requires the solicitation of proxies and delivery of proxy statements for all shareholder meetings, and requires that these proxies shall be solicited pursuant to a proxy statement that conforms to Commission proxy rules. The Company is a "foreign private issuer" as defined in Rule 3b-4 under the Exchange Act and Rule 405 under the Securities Act, and the equity securities of the Company are accordingly exempt from the proxy rules set forth in Sections 14(a), 14(b), 14(c) and 14(f) of the Exchange Act. The Company solicits proxies in accordance with applicable rules and regulations in Canada.

The foregoing are consistent with the laws, customs and practices in Canada.

## UNDERTAKING

The Company undertakes to make available, in person or by telephone, representatives to respond to inquiries made by the Commission staff, and to furnish promptly, when requested to do so by Commission staff, information relating to: the securities registered pursuant to Form 40-F; the securities in relation to which the obligation to file an annual report on Form 40-F arises; or transactions in said securities.

## CONSENT TO SERVICE OF PROCESS

The Company filed an Appointment of Agent for Service of Process and Undertaking on Form F-X on December 10, 2003, which was subsequently amended on December 22, 2004 (the "Amended Form F-X"), with respect to the class of securities in relation to which the obligation to file this annual report on Form 40-F arises. The Amended Form F-X is incorporated herein by reference.

Any further change to the name or address of the agent for service of process of the Company shall be communicated promptly to the Commission by an amendment to the Form F-X referencing the file number of the Company.

## DOCUMENTS FILED AS PART OF THIS ANNUAL REPORT

1. [Supplement to the Glossary of Terms Included in the Annual Information Form of the Company for the year ended December 31, 2006.](#)
  2. [Annual Information Form of the Company for the year ended December 31, 2006.](#)
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3. The following [audited consolidated financial statements of the Company](#), are exhibits to and form a part of this annual report:
- Report of Independent Registered Chartered Accountants;
- Consolidated Balance Sheets as of December 31, 2006 and 2005;
- Consolidated Statements of Operations and Deficit for the years ended December 31, 2006, 2005 and 2004;
- Consolidated Statements of Cash Flows for the years ended December 31, 2006, 2005 and 2004;
- Notes to Consolidated Financial Statements (which include reconciliation with United States generally accepted accounting principles).
4. [Management Discussion and Analysis of Financial Conditions and Results of Operations.](#)
5. [Contractual Obligations of the Company.](#)

#### EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Title of Exhibit</u>
99.1	Appointment of Agent for Service of Process and Undertaking on Form F-X (previously filed on December 10, 2003, and subsequently amended on December 22, 2004, and hereby incorporated by reference herein)
99.2	<a href="#">Certification of the Chief Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the United States Securities Exchange Act of 1934</a>
99.3	<a href="#">Certification of the Chief Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the United States Securities Exchange Act of 1934</a>
99.4	<a href="#">Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the United States Sarbanes Oxley Act of 2002</a>
99.5	<a href="#">Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the United States Sarbanes Oxley Act of 2002</a>
99.6	<a href="#">Consent of Deloitte &amp; Touche LLP</a>
99.7	<a href="#">Consents of Hatch Ltd. and AMEC Americas Limited.</a>
99.8	<a href="#">Consents of Micon International Limited</a>
99.9	<a href="#">Consents of Minera Alumbra Ltd.</a>

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## SIGNATURES

Pursuant to the requirements of the Exchange Act, the Registrant certifies that it meets all of the requirements for filing on Form 40-F and has duly caused this annual report on Form 40-F to be signed on its behalf by the undersigned, thereunto duly authorized.

NORTHERN ORION RESOURCES INC.

Registrant

By: /s/ David W. Cohen

Name: David W. Cohen

Title: President and Chief  
Executive Officer

By: /s/ Horng Dih Lee

Name: Horng Dih Lee

Title: Chief Financial Officer

Date: March 30, 2007

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