

NORTHERN DYNASTY MINERALS LTD  
Form 6-K  
September 22, 2005

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, DC 20549

**FORM 6-K**

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

CIK # 1164771

As at September 21, 2005

**NORTHERN DYNASTY MINERALS LTD.**  
**800 West Pender Street, Suite 1020**  
**Vancouver, British Columbia**  
**Canada V6C 2V6**

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F...X.... Form 40-F.....

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): \_\_\_\_

Note: Regulation S-T Rule 101(b)(1) only permits the submission in paper of a Form 6-K if submitted solely to provide an attached annual report to security holders.

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): \_\_\_\_

Indicate by check mark whether by furnishing the information contained in this Form, the registrant is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.  
Yes ..... No .....

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): 82- \_\_\_\_\_

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.

By: /s/ Jeffrey R. Mason  
Director and Chief Financial Officer

Date: September 21, 2005

Print the name and title of the signing officer under his signature.

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**MAJOR NEW PORPHYRY SYSTEM DISCOVERED AT PEBBLE  
2619 FOOT INTERSECTION GRADES 1.45% COPPER EQUIVALENT**

**September 21, 2005, Vancouver, BC** - Ronald W. Thiessen, President and CEO of Northern Dynasty Minerals Ltd. (TSXV: NDM; AMEX:NAK) announces that core Hole 5327 has discovered a significant new porphyry copper-gold system at the Pebble Project in Alaska, with an intersection of 2619 feet grading 1.45% copper equivalent ("CuEQ") (Note 1) and specifically 0.87% Cu, 0.70 g Au/t, 0.028% Mo. Included in this intersection are intervals of 605 feet grading 1.60% CuEQ (0.90% Cu, 1.06 g Au/t, 0.013% Mo) and 290 feet grading 2.00% CuEQ (1.08% Cu, 1.30 g Au/t, 0.029% Mo). Hole 5327 was drilled towards the east at a dip of 65 degrees and entered the new mineralized system at a vertical depth of 1500 feet below surface. The mid-point of this intercept is located 2000 feet east of the Pebble deposit (3.1 billion tonnes of measured and indicated resources, plus 1.1 billion tonnes of inferred resources). This discovery has the potential to significantly enhance the size and overall grade of the Pebble deposit.

Recent drilling on the east flank of the Pebble deposit has encountered the western edge of a large granodiorite stock (the "East Stock"). Most of the holes on the east are completely in the granodiorite stock below a cover of post-mineral Tertiary volcanic and sedimentary rocks. This intrusive centre is the heat and metal source for a major new porphyry mineralized system which appears to have excellent copper, gold and molybdenum grades. The hydrothermal system extends to a much greater depth than has been drilled to the west and is continuous in most drill holes over their entire lengths below the Tertiary cover. The geology of these eastern holes is typical of the centre of a major porphyry system, with strong potassic alteration, abundant quartz and quartz-sulphide veins of several ages, a high chalcopyrite to pyrite ratio (1:1) and abundant disseminated and vein gold, copper and molybdenum mineralization. Composite assay results for all completed exploration holes drilled so far in 2005 on the east side of the Pebble deposit are listed in Table 1. A location map of the new drill holes and an east-west cross section through the entire Pebble deposit are posted on Northern Dynasty's website at [www.northerndynasty.com](http://www.northerndynasty.com).

**TABLE 1  
TABLE OF EAST ZONE ASSAY RESULTS**

| Drill Hole | Vertical Depth to Cretaceous | Hole Dip  | Hole Direction |  | From   | To     | Intercept | Cu   | Au <sup>2</sup> | Mo    | CuEQ <sup>1</sup> |
|------------|------------------------------|-----------|----------------|--|--------|--------|-----------|------|-----------------|-------|-------------------|
| Number     | (feet)                       | (degrees) | (degrees)      |  | (feet) | (feet) | (feet)    | %    | g/t             | %     | %                 |
| 5311       | 1060                         | -90       | 0              |  | 1068   | 1378   | 310       | 0.37 | 0.32            | 0.015 | 0.64              |
| 5311       |                              |           |                |  | 1618   | 2188   | 570       | 0.46 | 0.41            | 0.019 | 0.81              |
| 5316       | 1958+                        | -90       | 0              | Hole stopped in Tertiary rocks - not completed - no assays |        |        |           |      |                 |       |                   |
| 5318       | 574                          | -90       | 0              |  | 574    | 2078   | 1504      | 0.40 | 0.41            | 0.030 | 0.82              |
| 5318       |                              |           |                | incl.  | 708    | 1218   | 510       | 0.59 | 0.62            | 0.026 | 1.10              |
| 5321       | 730                          | -65       | 92             |  | 804    | 1868   | 1065      | 0.42 | 0.47            | 0.019 | 0.81              |
| 5321       |                              |           |                | incl.  | 804    | 1123   | 320       | 0.58 | 0.66            | 0.023 | 1.10              |
| 5324       | 1300                         | -60       | 109            |  | 1937   | 4017   | 2080      | 0.54 | 0.26            | 0.026 | 0.85              |
| 5324       |                              |           |                | incl.  | 2447   | 4017   | 1570      | 0.59 | 0.30            | 0.031 | 0.95              |
| 5324       |                              |           |                | and  | 2717   | 3847   | 1130      | 0.65 | 0.38            | 0.033 | 1.06              |
| 5324       |                              |           |                | and  | 3017   | 3847   | 830       | 0.66 | 0.43            | 0.039 | 1.14              |

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|      |      |     |     |             |      |      |      |      |      |       |      |
|------|------|-----|-----|-------------|------|------|------|------|------|-------|------|
| 5325 | 780  | -65 | 90  |             | 872  | 1528 | 656  | 0.37 | 0.55 | 0.009 | 0.75 |
| 5325 |      |     |     | incl.       | 1158 | 1378 | 220  | 0.44 | 0.67 | 0.009 | 0.89 |
| 5326 | 1760 | -65 | 125 |             | 2003 | 4258 | 2255 | 0.45 | 0.50 | 0.030 | 0.92 |
| 5326 |      |     |     | incl.       | 2008 | 3008 | 1000 | 0.64 | 0.83 | 0.029 | 1.30 |
| 5326 |      |     |     | and         | 2008 | 2348 | 340  | 0.77 | 1.07 | 0.039 | 1.63 |
| 5326 |      |     |     | and         | 2488 | 2998 | 510  | 0.61 | 0.81 | 0.021 | 1.21 |
| 5327 | 1500 | -65 | 90  |             | 1719 | 4338 | 2619 | 0.87 | 0.70 | 0.028 | 1.45 |
| 5327 |      |     |     | incl.       | 1732 | 2337 | 605  | 0.90 | 1.06 | 0.013 | 1.60 |
| 5327 |      |     |     | incl.       | 2457 | 3977 | 1520 | 0.95 | 0.70 | 0.034 | 1.56 |
| 5327 |      |     |     | and         | 2897 | 3187 | 290  | 1.08 | 1.30 | 0.029 | 2.00 |
| 5330 | 1530 | -60 | 60  | In Progress |      |      |      |      |      |       |      |
| 5331 | TBD  | -60 | 90  | In Progress |      |      |      |      |      |       |      |

**Note 1** Copper equivalent calculations use metal prices of US\$1.00/lb for copper, US\$400/oz for gold, and US\$6.00/lb for molybdenum. Copper equivalent has not been adjusted for metallurgical recoveries. Adjustment factors to account for differences in relative metallurgical recoveries for gold, copper and molybdenum will depend upon the completion of definitive metallurgical testing.

$$\text{CuEQ} = \text{Cu \%} + (\text{Au g/t} \times 12.86/22.06) + (\text{Mo\%} \times 132.28/22.06)$$

**Note 2** Au values > 5.0 g/t capped at 5.0 g/t

The first hole to discover the East Stock (Hole 5311) in 2005 was drilled vertically and is unusual in that much of it passed through a major, subvertical quartz vein system. Intervals of over 90% quartz-vein material are common over lengths of several hundred feet. Dilution by so much late stage quartz decreased the metal values in this hole compared to those in the surrounding rocks. Local, high to very high values of gold (5-64 g/t over 10 foot intervals) surrounded by broad zones depleted in gold are interpreted as having been formed by local remobilization and re-precipitation of original gold in the porphyry system during the introduction of the quartz veins. Most holes drilled after Hole 5311 have been drilled at minus 60-65 degrees to avoid the problem of following sub-vertical vein structures. These include 5318, 5321, 5324, 5325, 5326, 5327, 5330, and 5331. Many of these holes have drilled lengths of between 3500 and 4300 feet. In all cases, assay intervals begin at the base of the overlying Tertiary cover and have continuous gold-copper-molybdenum mineralization over the entire length of the intersection (up to 2619 feet) below the Tertiary rocks. Of the drill holes for which assays are available, Hole 5327 (the completed hole furthest to the east) has the highest grade over its entire length and at depth, indicating that it is nearest to the hydrothermal centre, which may be still further to the east. This hole was terminated while still in higher-grade mineralization (>1% CuEQ) because of the depth limitations of the drill.

In the western portion of the Pebble deposit, the best mineralization occurs in the upper parts of granodiorite stocks and in the wall rocks above and around them. If this model is applied to the East Zone, then a large volume having high grades of copper, gold, and molybdenum may be expected in the upper parts of the East Stock and in the wall rocks adjacent to it. The boundaries of the East Stock to the east, south, and north and at depth are unknown. Based on alteration and mineralization patterns, the minimum expected diameter of the East Stock could be twice the known size, i.e., at least 5000 feet across. Also, significant gold and copper mineralization has been encountered to the bottom of the holes furthest to the east, suggesting that the zone of economic potential may extend deeper than the present drilled depth.

Mark Rebagliati, P.Eng., and Dr. Morris Beattie, P.Eng., are the Qualified Persons for the Pebble Project and are supervising the quality control and quality assurance program. Core logging and sampling are completed in Northern Dynasty's secure facility at Iliamna, Alaska. The NQ-size core is sawn and samples are transported to the ALS Chemex laboratory in Fairbanks for drying, weighing and crushing. Samples are shipped by airfreight to the main ALS Chemex laboratory, North Vancouver, Canada (an ISO 9002 certified laboratory) for final preparation and analysis. Gold is determined by 30 g Fire Assay (FA) fusion with an Atomic Absorption Spectroscopy (AAS) finish. Copper and molybdenum assays are by four acid digestion with an Inductively Coupled Plasma-Emission Spectroscopy (ICP-ES) finish. All samples are also analyzed for 23 additional elements by four acid digestion ICP-ES. Northern Dynasty includes standards, duplicates and blanks in addition to the laboratory's internal quality control work. Duplicate samples are analyzed by Acme Analytical Laboratories of Vancouver, Canada.

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This year, the Pebble Project is the focus of a comprehensive C\$44.7 million program consisting of drilling, engineering and environmental/socioeconomic work designed to complete a feasibility study in December 2005 and prepare environmental permit applications for submission during 2006 for a major gold, copper and molybdenum mining operation.

Northern Dynasty currently has 72.6 million shares outstanding and on a fully diluted basis 84.0 million shares. For further details on Northern Dynasty and the Pebble Project please visit the Company's website at [www.northerndynasty.com](http://www.northerndynasty.com) or contact Investor Services at (604) 684-6365 or within North America at 1-800-667-2114. Review Northern Dynasty's Canadian public filings at [www.sedar.com](http://www.sedar.com) and US public filings at [www.sec.gov](http://www.sec.gov).

### **Comments on Forward Looking Information, Estimates and other Cautionary Factors**

Neither the TSX Venture Exchange nor any other regulatory authority accepts responsibility for the adequacy or accuracy of this release.

This release includes certain statements that may be deemed "forward-looking statements". All statements in this release, other than statements of historical facts, especially those that address estimated resource quantities, grades and contained metals, are forward-looking statements because they are generally made on the basis of estimation and extrapolation from a limited number of drill holes and metallurgical studies. While diamond drill hole core provides valuable information about the size, shape and geology of an exploration project, there will always remain a significant degree of uncertainty in connection with these valuation factors until a deposit has been extensively drilled on closely spaced centers which has occurred only in specific areas on the Pebble Project. Although the Company believes the expectations expressed in its forward-looking statements are based on reasonable assumptions, such statements should not be in any way construed as guarantees of the ultimate size, quality or commercial feasibility of the Pebble Project or of the Company's future performance. Subsequent results and developments may differ materially from those postulated in the estimates and forward-looking statements. Other factors that could cause the Company's actual results and performance to differ materially from those in forward-looking statements include adverse market prices for metals, the conclusions of detailed feasibility and technical analyses, lower than expected grades and quantities of resources, mining rates and metal recovery rates and the fact that necessary capital may not be available to the Company on terms acceptable to it or at all. The need for compliance with extensive environmental and socio-economic rules and practices and the requirement for the Company to obtain government permitting can cause a delay or even abandonment of a mineral project. The Company is subject to the specific risks inherent in the mining business as well as general economic and business conditions. For more information on the Company, Investors should review the Company's annual Form 20-F filing with the United States Securities Commission and its home jurisdiction filings that are available at [www.sedar.com](http://www.sedar.com).

### **Information for US Persons Concerning Estimates of Measured, Indicated and Inferred Resources and Information about CuEQ**

This news release also uses the terms "measured resources", "indicated resources" and "inferred resources". Northern Dynasty Minerals Ltd. advises investors that although these terms are recognized and required by Canadian regulations (under National Instrument 43-101 Standards of Disclosure for Mineral Projects), the U.S. Securities and Exchange Commission does not recognize them. Investors are cautioned not to assume that any part or all of the mineral deposits in these categories will ever be converted into reserves. In addition, "inferred resources" have a great amount of uncertainty as to their existence and economic and legal feasibility. It cannot be assumed that all or any part of an Inferred Mineral Resource will ever be upgraded to a higher category. Under Canadian rules, estimates of Inferred Mineral Resources may not form the basis of feasibility or pre-feasibility studies, or economic studies except for Preliminary Assessment as defined under 43-101. Investors are cautioned not to assume that part or all of an inferred resource exists, or is economically or legally mineable. Copper equivalency or "CuEQ" is a manner of expressing poly-metallic deposits as a grade of the principal mineralization (by value). As used herein, gold and molybdenum values have been expressed as part of the copper grade. CuEQ as calculated herein is based on assumed metal prices of US\$1.00/lb for copper, US\$400/oz for gold, and US\$6.00/lb for molybdenum. Copper equivalent has not been adjusted for metallurgical recoveries. Adjustment factors to account for differences in relative metallurgical recoveries for gold, copper and molybdenum depend upon the completion of definitive metallurgical testing. Significant shifts in the relative values of these metals can significantly change the CuEQ. CuEQ is provided for illustrative purposes only.