

## Exploration OREX Exploration inc.

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### OREX UPDATES PROGRAM AT GOLDBORO, NOVA SCOTIA

**December 16, 2004 - OREX EXPLORATION INC. (TSX Venture Exchange Symbol: OX)** announces that the upcoming Phase 1 - 2,500 metre drill program will investigate gold grades for several of the “new belt” zones discovered beneath and along strike of the historic workings of the Boston-Richardson Mine at the 100% owned Goldboro Property. Drill holes will twin a mix of previous high and low gold grade drill intercepts, where coarse free gold is known to occur, and applying a sampling and assaying protocol that should improve gold grade determinations with the eventual goal of determining the realistic gold grade of the Goldboro Deposit.

The drill program will consist of some 30 shallow holes, 50 to 200 metres in length, drilled along a series of sections spaced at 25 metre intervals. The drilling will cover 150 metres of strike length of the vertically stacked mineralized “new belt” zones previously identified from surface and underground drilling. The gold distribution throughout the Goldboro Deposit is subject to a severe “nugget effect” making it extremely difficult to evaluate the true grade of the deposit. By using large diameter core drilling, mineralized intersections will be grouped together as composites and total extraction metallurgical testing used to determine the grade.

Protocols will include initial logging of drill core on site. The drill core will then be photographed and sealed with in the original core boxes and sent Val-d’Or, Quebec. Under well controlled conditions at the Val-d’Or facilities, the core will be detail logged, diamond sawed and sampled for conventional sample preparation and fire-assaying at one of several commercial laboratories available in the area. Results from the initial fire assays will be reconciled with the detailed logging to define extents of the mineralized intersections in each hole. The 1 to 2 kilogram coarse crushed sample rejects from each of the initial samples will be composited into larger samples ranging in weight from 10 to 85 kilograms for total gold extraction metallurgical testing at a commercial metallurgical laboratory.

The exploration team, under the supervision of Jean Lafleur, P. Geol., will consist of Martin Bourgoïn, P. Geo., of MRB & Associates, Alex Horvath, P. Eng., Quality Control Consultant, and Alain Carrier, P. Geo., of InnovExplo Inc., all Qualified Persons under NI 43-101 standards. Mr. Lafleur will be responsible for the 2005 exploration and development programs at Goldboro. The Company previously announced that it was initiating the drill program in February 2005 (refer to the Press Release dated December 8, 2004), in follow up to the recommendations outlined by Martin Bourgoïn, P. Geol., in a 43-101 technical report titled “Technical Report, Goldboro Property” dated August 31, 2004.

On-going work at this time consists of building a sectional and 3-D geological model of the Goldboro Deposit. The model will eventually serve for resource delineation and block modelling purposes once the Phase 1 program is completed. This work is being carried out by Alain Carrier, P. Geo., of InnovExplo Inc., and should be completed by February 2005.

#### **Goldboro Property – History, Gold Grades and the Australian Approach**

All of the gold production at Goldboro occurred prior to 1910 with **55,000 ounces of gold extracted from 377,000 tonnes of ore at an average grade of 6.8 g/t Au** at the Boston-Richardson Mine. Activity did not pick up again until Orex initiated a major surface exploration program in 1988, which eventually led to the discovery of 26 “new gold belts” under, and west of, the Boston-Richardson Mine. Subsequent underground exploration confirmed the interpretation of the surface drilling and consequently substantiated the gold potential of the new “belts”. Follow up work concluded that the **gold distribution was subject to a severe “nugget effect”, and that conventional fire assaying apparently yielded lower gold grades than metallurgical balance from mill tests.** Grade determination of Goldboro mineralized samples using conventional sampling in the 1 or 2 kilogram size range combine with fire assaying of 30 grams sub-samples has yielded results with poor precision due to this nugget effect. However, a more recent evaluation in 2004 demonstrated that due to very coarse gold grain size and irregular distribution of the gold, minimal sample size for assaying requirements should be 10 kilograms to ensure precise determinations of gold grades.

At first glance, Goldboro appears to show similarities with the **Bendigo-Ballarat Goldfields** (“BBG”) of Australia. BBG gold mineralization is coarse grained with erratic distribution, and suffers from the same issue of imprecise gold grade determinations. Work at BBG concluded that gold grade determinations made by conventional sampling and analytical methods were imprecise and could only be used for delineation of potential ore zones. **Metallurgical testing of larger samples was, and still is, the only method of obtaining precise gold grade determinations for resource and reserve estimation and mine planning.** In addition, BBG’s “ribbon” model for locating ore shoots based on their regular repetitive occurrences within favourable “gold belt” rock units that cluster along the hinge lines of anticlinal folds was successful in discovery and delineation of new ore shoots at Bendigo. **Orex successfully applied the Bendigo “ribbon” model at Goldboro in the late 1980’s identifying 26 new “gold belts” beneath existing development and known resources.**

BBG examples have shown that saddle reef type gold deposits, similar to those at Goldboro, can also be mined profitably. The gold grades of the five main “gold belts” at BBG range from 14 to 22 g/t Au. **At Bendigo and Ballarat, 34 million ounces of gold has been produced from continued operations since 1850.** This comparison indicates that a potential for larger deposits could exist at Goldboro.

### **Orex Exploration Inc. – The Future is Golden**

Orex Exploration Inc. (TSX-V: OX) is a junior gold exploration company focused on outlining and developing a viable gold project at its 600 hectares Goldboro Property in eastern Nova Scotia, located 185 kilometres by road from Halifax. The NI 43-101 Technical Report on the Goldboro Property outlines Mineral Resources in the Measured, Indicated and Inferred categories. **The current Measured and Indicated Resources total 13.3 million tonnes grading 0.78 g/t Au; whereas the Inferred Resources total 15.6 million tonnes grading 0.63 g/t Au.** The prime objective of the 2004-2005 exploration program is to determine the realistic gold grade of the Goldboro Deposit, and whether gold resource grades can approach the historic mining grade of 6.8 g/t Au by completing a more appropriate sampling and analytical process used elsewhere for coarse free gold deposits. An increase in the gold grade could potentially have a major impact on the gold resource. Further information is available on the Company’s web site at [www.orexexploration.ca](http://www.orexexploration.ca).

This Press Release has been prepared and revised under the supervision of Jean Lafleur, M.Sc., P. Geo., a Qualified Person under the NI 43-101 guidelines.

### **For additional information, please contact :**

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