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Press Release 008 – 2009

## **Nayarit Gold achieves recoveries of 92% for gold and 85.2% for silver from initial bottle roll testing at Orion**

**Nayarit Gold Inc (TSXV: NYG)** is pleased to announce positive metallurgical results from its Orion District. SGS Mineral Services (“SGS”) of Durango, Mexico was retained by the Company to complete a preliminary metallurgical investigation on the Del Norte Deposit to determine the amenability of the ore to direct cyanidation, gravity concentration and flotation. The Company has been working with SRK Consulting from Denver, Colorado who are in the process of finalizing the NI 43-101 resource calculation with an estimated release date scheduled for next week.

### **Highlights:**

- Recoveries obtained by bottle roll leaching ranged between 96.4% and 85.3% for gold (average 92%) and between 87.6% and 81.5% and for silver (average 85.2%).
- Recoveries obtained by flotation and subsequent leaching of the flotation concentrate and tails returned overall recoveries between 88.7% and 88.2% and for gold (average 88.5%) and between 82.1% and 71.1% and for silver (average 76%).

Colin Sutherland, Nayarit Gold President and CEO states, “The ore at Orion responded very well to straight bottle roll leaching. Leaching of the flotation products also recorded high recoveries. The company is examining optimization of these processes to determine the best economics including increasing recoveries and reducing reagent consumption. The recoveries obtained in the bottle roll test for the low-grade sample were higher than anticipated allowing the company to evaluate more of the open-pit potential at Orion.”

### **Bottle Roll Test Results**

SGS completed a series of bottle roll tests on assay reject material to determine recoveries of gold and silver by direct leaching and to determine reagent consumption. The bottle roll tests were carried out on five samples, varying the grain size, cyanide concentration and use of oxidizers. The results show that all five samples responded to direct leaching with gold recoveries ranging 96.4% and 85.3% for gold (average 92%) and silver recoveries from 87.6% to 81.5% (average 85.2%). Sample 339396, a low-

grade sample which assayed 0.48 g/t gold and 63 g/t silver, recorded excellent recoveries of 85.3% for gold and 83.3% for silver. Results from the bottle roll leach tests are illustrated in Table 1 below:

**Table 1 - Bottle roll leach test results**

Sample	Calculated Head Grade		Recovery (%)	
	Au (g/t)	Ag (g/t)	Au (%)	Ag (%)
673854	37.49	4632	96.4	81.5
674229	3.27	517	91.9	86.9
674228	2.66	245	93.0	86.7
672592	1.15	586	93.2	87.6
339396	0.48	63	85.3	83.3

Extractions for both gold and silver were maximized between 72 and 96 hours. SGS also carried out several additional tests with oxidizers and although the leach kinetics was higher, overall extraction levels were similar to direct leach tests. Reagent consumption was moderate with the exception of sample 673854, which was most likely due to the high-grade nature of the sample.

**Flotation and Leaching of Flotation Products**

SGS carried out flotation tests on three drill core samples to determine how the ore produced a gold and silver concentrate. Tests using promoters and cleaners in the flotation process were also carried out to assess potential recovery enhancements. Results from the flotation tests showed the ore produced a high-grade concentrate with gold recoveries ranging between 85.2% and 81.7% (average 84.0%) and silver recoveries ranging between 91.0% and 75.0% (average 82.3%). The ore concentrated well, with the mass of the concentrate varying between 3.1% and 5.5% of the original mass and having a grade 20 to 30 times the head grade. Results from the flotation tests are listed in Table 2 below:

**Table 2 - Flotation test results from three drill core samples**

Sample	Calculated Head Grade		Recovery (%)		Grade of Concentrate		Mass % of original sample
	Au (g/t)	Ag (g/t)	Au	Ag	Au (g/t)	Ag (g/t)	
OR-09-183	2.03	175	85.1	91.0	55.9	5160	3.1%
OR-09-184	2.71	471	85.2	82.4	41.7	7010	5.5%
OR-09-186	2.61	186	81.7	75.0	68.5	4480	3.1%

Subsequent to the flotation tests, SGS completed a series of leach tests on the flotation concentrate and tails to determine the overall recoveries when both products are leached separately and then summed. Overall recoveries were recorded at 88.7% to 88.2%

(average 88.5%) for gold and 82.1% and 71.1% (average 76%) for silver. The overall recoveries are listed in Table 3 below:

**Table 3 - Overall recoveries for the leaching of the flotation concentrate and tails**

Sample	Calculated Head Grade		Recovery	
	Au (g/t)	Ag (g/t)	Au (%)	Ag (%)
OR-09-183	2.03	175	88.2	82.1
OR-09-184	2.71	471	88.5	74.7
OR-09-186	2.61	186	88.7	71.1

SGS also carried out gravity tests using the Knelson Concentrator. The results from these tests showed about two times increase in grade of the concentrate over the head ore, generally in about 30% of the feed mass. The results did indicate the ore does not have a nugget issue.

Mr. Hall Stewart, Vice President, Exploration is a Qualified Person (QP) as defined in NI 43-101 and has reviewed this release. Gold equivalent values are calculated using a 65:1 ratio.

#### **ABOUT NAYARIT GOLD INC.**

Nayarit Gold Inc. is a junior resource company dedicated to gold exploration in the proven precious metal districts of Mexico. Management's goal is to build a profitable resource company and maximize shareholder value through successful exploration programs and continued development.

For further information on Nayarit Gold please visit the company's website at [www.nayaritgold.com](http://www.nayaritgold.com) or contact:

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materially from Nayarit's expectations are exploration risks detailed herein and from time to time in the filings made by Nayarit with securities regulators.