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## ALMADEN PROVIDES IXTACA METALLURGICAL PROGRAM UPDATE: CONFIRMS HIGH GRAVITY/FLOTATION RECOVERIES FOR GOLD AND SILVER

Almaden Minerals Ltd. ("Almaden" or "the Company"; AMM: TSX; AAU: NYSE MKT) is pleased to report on the Company's 100% owned Ixtaca gold-silver deposit located in Puebla State, Mexico and the progress of its on-going Pre-Feasibility ("PFS") level metallurgical test work program. The first stage of the current metallurgical test work program is focussed on creating preliminary gold and silver gravity and flotation concentrates suitable for leaching, using drill hole samples representing the grade ranges and geologic units anticipated in the mine plan.

Key results of combined gravity and flotation test work received to date include the following:

- All geologic domains were tested across a range of gold and silver grades;
- The results are consistent with past results for limestone and blackshale with >90% combined gravity and flotation recoveries to a concentrate for both gold and silver;
- Improved flotation and gravity recoveries have been achieved for volcanic ash material with flotation recoveries ranging from 81.5 to 91.6% for gold and 82.1 to 95.9% for silver;
- There is little variation in both gold and silver recoveries with grade.

The ongoing test work program now involves the collection of additional sample material for the limestone unit, followed by the concentrate optimisation and leaching portion of the flow sheet. By way of background, of the gold-equivalent ounces in the Measured and Indicated categories and within the base case September 2014 PEA pit, 74% are hosted by limestone, 12% by volcanic ash material and 14% by blackshale. The initial capital payback period of the PEA mine plan is made up of limestone and volcanic ash-hosted mineralization. Subsequent to preparation of the metallurgical test composites, it was discovered that material from a minor rock lithology in the deposit, basal conglomerate, was mistakenly included in each of the limestone composites (these composites are referred to below as Limestone-conglomerate). As a consequence, the results reported today for limestone-conglomerate are not considered to be final as they are not representative of the major limestone unit. Nevertheless, the gravity and flotation test results for the limestone-conglomerate samples are consistent with previous test work using limestone. New limestone material has now been collected from specially tasked drillholes which will be tested to validate the positive results reported today and used for subsequent representative leaching studies. Overall gravity and flotation recoveries are summarised in the following table.

| Composite Name                 | Head Grade |          | Overall Recovery To Concentrate |        |  |
|--------------------------------|------------|----------|---------------------------------|--------|--|
| Composite Name                 | Au (g/t)   | Ag (g/t) | Au (%)                          | Ag (%) |  |
| Limestone Conglomerate 01      | 1.55       | 126.0    | 97.3                            | 94.9   |  |
| Limestone Conglomerate 02      | 0.65       | 45.0     | 98.7                            | 93.0   |  |
| Limestone Conglomerate 03      | 0.37       | 61.0     | 97.4                            | 93.4   |  |
| Blackshale 01                  | 0.73       | 221.0    | 97.0                            | 93.4   |  |
| Blackshale 02                  | 0.20       | 52.0     | 95.7                            | 95.3   |  |
| Blackshale 03 (Flotation Only) | 0.14       | 26.0     | 93.5                            | 93.7   |  |
| Volcanic 01 (Flotation Only)   | 1.30       | 41.0     | 91.6                            | 93.0   |  |
| Volcanic 02 (Flotation Only)   | 0.30       | 52.0     | 81.5                            | 82.1   |  |
| Volcanic 03 (Flotation Only)   | 0.62       | 54.8     | 86.6                            | 95.9   |  |

As part of the test program, head screen analyses were carried out to determine the size distribution of both gold and silver. This work showed a significant distribution of the gold and silver in coarse size fractions as summarised in the table below.

| Composite Name            | Head Grade        |      | Size Fraction         | Distribution |        | <b>Cumulative Distribution</b> |        |
|---------------------------|-------------------|------|-----------------------|--------------|--------|--------------------------------|--------|
| Composite Name            | Au (g/t) Ag (g/t) |      | Size Fraction         | Au (%)       | Ag (%) | Au (%)                         | Ag (%) |
| Limestone Conglomerate 02 | 0.65              | 45.0 | + 1.7mm               | 63.0         | 62.6   | 63.0                           | 62.6   |
|                           |                   |      | - 1.7 mm + 0.425 mm   | 19.9         | 19.1   | 82.9                           | 81.7   |
|                           |                   |      | - 0.425 mm + 0.150 mm | 7.1          | 5.9    | 90.0                           | 87.6   |
| Blackshale 02             | 0.20              | 52.0 | + 1.7mm               | 39.9         | 46.2   | 39.9                           | 46.2   |
|                           |                   |      | - 1.7 mm + 0.425 mm   | 19.4         | 23.1   | 59.3                           | 69.3   |
|                           |                   |      | - 0.425 mm + 0.150 mm | 9.1          | 10.4   | 68.4                           | 79.7   |
| Volcanic 02               | 0.3               | 52   | + 1.7mm               | 46.8         | 47.6   | 46.8                           | 47.6   |
|                           |                   |      | - 1.7 mm + 0.425 mm   | 23.5         | 24.2   | 70.3                           | 71.8   |
|                           |                   |      | - 0.425 mm + 0.150 mm | 9.8          | 7.9    | 80.1                           | 79.7   |

The combined gravity and flotation test work involved only a single gravity pass prior to flotation and is not yet optimised to maximise gravity recoveries. To understand the potential for gravity recovery of gold and silver, a gravity characterization (E-GRG) test program was carried out on all composites. The E-GRG tests show good gold recoveries for all samples in all size fractions including volcanic samples, which showed improved recoveries over past test work programs. There remain opportunities to further optimise gravity and flotation in combination to improve recoveries beyond those achieved to date. Work is now commencing to examine this potential focussing on coarser size fractions. Gravity characterization (E-GRG) recoveries achieved to date are summarized as follows:

| Composite Name            | Head     | Grade    | Gravity Only Recovery |        |  |
|---------------------------|----------|----------|-----------------------|--------|--|
|                           | Au (g/t) | Ag (g/t) | Au (%)                | Ag (%) |  |
| Limestone Conglomerate 01 | 1.55     | 126.0    | 41.2                  | 14.7   |  |
| Limestone Conglomerate 02 | 0.65     | 45.0     | 42.6                  | 16.5   |  |
| Limestone Conglomerate 03 | 0.37     | 61.0     | 53.4                  | 13.0   |  |
| Blackshale 01             | 0.73     | 221.0    | 23.9                  | 16.8   |  |
| Blackshale 02             | 0.20     | 52.0     | 37.3                  | 28.7   |  |
| Blackshale 03             | 0.14     | 26.0     | 20.2                  | 19.9   |  |
| Volcanic 01               | 1.30     | 41.0     | 32.0                  | 15.3   |  |
| Volcanic 02               | 0.30     | 52.0     | 43.6                  | 20.9   |  |
| Volcanic 03               | 0.62     | 54.8     | 27.5                  | 16.1   |  |

The work is being carried out at McClelland Laboratories in Reno Nevada, with a parallel gravity focussed program recently initiated at Gekko Systems in Ballarat Australia, under the supervision of independent engineers Moose Mountain Technical Services. Tracey Meintjes, P.Eng. of MMTS, a qualified person under the meaning of NI 43-101 reviewed the technical information in this news release. The Ixtaca deposit gold and silver mineralisation occurs as electrum (a gold/silver alloy) and gold and silver bearing sulphides in epithermal veins and veinlets cutting carbonate (limestone and shale) and volcanic rocks. There is negligible disseminated mineralisation in the carbonate rocks which host the majority of the gold and silver vein mineralisation, the remainder of which occurs in the overlying altered volcanic ash units. Gold and silver mineralogy vary little within domains and grade varies according to the density of veining. The detailed mineralogy and geologic observations carried out before metallurgical test work indicated the opportunity to pre-concentrate electrum and precious metal bearing sulphides to create a gold silver concentrate. The three prior rounds of metallurgical test work, and the work reported today, confirm a likely flow sheet of gravity and flotation to produce a concentrate for either off site refining or subsequent leaching to create a gold-silver doré. Stage 2, now underway, of the current PFS metallurgical test work program is focussed on the development and optimisation of concentrate leaching parameters and additional sample material has been collected to support this work. Offsite refining of the concentrates will also be evaluated. Results will be reported once they are received in final form.

Apart from the ongoing metallurgical test work program, a number of other development activities are currently underway, including advanced engineering and environmental baseline studies to meet the requirements of a PFS and the submittal of an environmental permit application and risk assessment to the Mexican regulatory agency responsible for mine permitting. To date Almaden has completed or initiated the following studies:

- Hydrologic studies including the drilling of water test wells and installation of hydrologic equipment for baseline monitoring of existing subsurface water flow and quality on the project site;
- Baseline surface water quality and flow measurements:
- Geochemical characterization of rock materials:
- Condemnation drilling of areas where mine infrastructure is planned:
- Geotechnical drilling to confirm foundation, footing and subsurface material quality;
- Geomechanical drilling to confirm rock strength, hardness and pit slope parameters;

- PFS level metallurgical test work described herein;
- Flora and fauna studies:
- Installation of a weather station.

The Company has selected independent engineers Moose Mountain Technical Services and Knight Piesold Ltd. to prepare a PFS study.

## About the Ixtaca Drilling Program and the Ixtaca Project

The 100% owned Ixtaca Zone is a blind discovery made by the Company in 2010 on claims staked by the Company. The deposit is an epithermal gold-silver deposit, mostly hosted by veins in carbonate units and crosscutting dykes ("basement rocks") with a minor component of disseminated mineralisation hosted in overlying volcanic rocks.

The Ixtaca deposit is located in a developed part of Mexico in Puebla State, the location of significant manufacturing investments including Volkswagen and Audi plants. The project is accessed by paved road and is roughly 20 kilometres from an industrial park with rail service where significant manufacturers such as Kimberly Clark have facilities. Any potential mining operation at Ixtaca would be located in an area previously logged or cleared with negligible to no current land usage.

The Company has access to the entire project area and works closely with local officials and residents. The Company has employed roughly 70 people in its exploration program who live local to the Ixtaca deposit. For example, local employees have made up virtually all the drilling staff and have been trained on the job to operate the Company's wholly owned drills. The Company has implemented a comprehensive science based and objective community relations and education program for employees and all local stakeholders to transparently explain the exploration and development program underway as well as the potential impacts and benefits of any possible future mining operation at Ixtaca. The Company regards the local inhabitants to be major stakeholders in the Ixtaca deposit's future along with the Company's shareholders. Every effort is being made to create an open and clear dialogue with our stakeholders to ensure that any possible development scenarios that could evolve from the anticipated PFS are properly understood and communicated throughout the course of the Company's exploration and development program. To better explain the impacts of a mining operation at Ixtaca the Company has conducted numerous tours for local residents to third party operated mines in Mexico so that interested individuals can form their own opinions on the basis of first-hand experience. The Company invites all interested parties to visit www.almadenminerals.com to find out more about our community development, education and outreach programs.

## **About Almaden**

Almaden is a well-financed mineral exploration company working in North America. The company has assembled mineral exploration projects, including the Ixtaca deposit and the Tuligtic Project, through its grass roots exploration efforts. While the properties are largely at early stages of development they represent exciting opportunities for the discovery of significant gold, silver and copper deposits as evidenced at Ixtaca. Almaden's business model is to find and acquire mineral properties and develop them by seeking option agreements with others who can acquire an interest in a project by making payments and exploration expenditures. Through this means the company has been able to expose its shareholders to discovery and capital gain without the funding and consequent share dilution that would be required if the company were to have developed these projects without a partner. The company intends to expand this business model, described by some as prospect generation, by more aggressively exploring and developing several of its projects including the Ixtaca deposit.

On Behalf of the Board of Directors

"Morgan Poliquin"
Morgan J. Poliquin, Ph.D., P.Eng.
President, CEO and Director
Almaden Minerals Ltd.

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