AQM Copper Releases Updated Preliminary Economic Assessment for the Zafranal Copper Gold Project

12.09.2013 | Marketwired

VANCOUVER, BRITISH COLUMBIA--(Marketwired - Sep 12, 2013) - AQM Copper Inc. (TSX VENTURE:AQM)(BVL:AQM) ("AQM" or the "Company") is pleased to announce the completion of a positive, independent Updated Preliminary Economic Assessment ("PEA Update ") of the Company's Zafranal Project ("Project") located in the Southern Peru Porphyry Copper Belt. This PEA Update follows the PEA issued on January 18, 2013 ("January 2013 PEA") that was based on concentrator throughput of 80,000 tonnes per day (t/d), producing an average of 93,907 tonnes per annum (t/a) of copper in concentrate and a heap leach and electrowinning process expected to yield an average of 9,276 t/a of high quality copper cathode from oxide and secondary sulphide material.

The PEA Update was commissioned to examine opportunities to develop a smaller, less capital-intensive project that would incorporate an alternative water source to desalinated seawater, while using the same long-term forecasted copper (Cu) and gold (Au) prices as those used in the January 2013 PEA, US$3.00/lb and US$1,274/oz, respectively.

The PEA Update was completed by Tetra Tech, and contains production parameters, capital costs, operating costs, pre-tax and post-tax financial projections for an open pit mine processing 44,000 t/d of mill feed, producing an average of 54,556 t/a of copper in concentrate and a heap leach and electrowinning process expected to yield an average of 5,949 t/a of copper cathode. The Project is projected to yield the following financial results:

Summary of Financial Results[1]

Description	Pre-tax	Post-tax[2]
Initial Capital Cost (US$ million)	1,122	1,122
Net Cash Flow (US$ million)	3,592	2,068
Net Present Value at 5% discount rate (US$ million)	1,855	988
Net Present Value at 8% discount rate (US$ million)	1,261	616
Net Present Value at 10% discount rate (US$ million)	971	435
Payback (years)[3]	2.6	3.2
Internal Rate of Return (%)	25.4	18.2

Notes:

[1] Valuation based on 100% Project and 100% Equity. The Zafranal Project is owned through a 50/50 corporate joint venture between Teck Resources Ltd. and the Company's operating subsidiary, Minera AQM Copper Peru S.A.C. ("MAQM"). MAQM is owned 60% by the Company and 40% by Mitsubishi Materials Corporation. As such, the Company has a 30% beneficial ownership interest in the Zafranal Project.

[2] Includes mining royalty, special mining tax, corporate income tax and workers' profit sharing

[3] From the start of mill operations

Tetra Tech prepared the PEA Update including a new resource estimate based on a revised geological model of the Zafranal Main and Victoria Zones, which incorporates 39 additional drill holes. The resource estimate included in the PEA Update pertains to the Main and Victoria Zones, whereas the January 2013 PEA also included resources from the Sicera Norte and Sicera Sur Zones. Sicera Norte and Sicera Sur Zones were excluded from the updated resource estimation, as these deposits were deemed uneconomical given their tonnage and grade of mineralization and distance from the proposed process facilities. A summary of the mineral resource for the PEA Update at a 0.2% and a 0.3% copper cut-off grade appears in the following tables:

Zafranal Main and Victoria Zones Kriged Resource at 0.2% Copper Cut-off

DESCRIPTION	TONNAGE	Cu (%)	Au (g/t)
Zafranal Main Measured	185,431,844	0.45	0.09

Victoria Measured	27,303,116	0.29	0.04
Total Measured	212,734,960	0.43	0.09
Zafranal Main Indicated	340,207,216	0.35	0.08
Victoria Indicated	68,000,158	0.26	0.03
Total Indicated	408,207,374	0.34	0.07
Total Measured & Indicated	620,942,335	0.37	0.08
Zafranal Main Inferred	36,692,919	0.27	0.11
Victoria Inferred	12,539,388	0.26	0.04
Total Inferred	49,232,307	0.26	0.09

Zafranal Main and Victoria Zones Kriged Resource at 0.3% Copper Cut-off

DESCRIPTION	TONNAGE	Cu (%)	Au (g/t)
Zafranal Main Measured	114,076,693	0.57	0.10
Victoria Measured	8,960,982	0.39	0.05
Total Measured	123,037,675	0.56	0.10
Zafranal Main Indicated	139,911,533	0.51	0.09
Victoria Indicated	13,344,577	0.35	0.05
Total Indicated	153,256,110	0.50	0.09
Total Measured & Indicated	276,293,785	0.52	0.09
Zafranal Main Inferred	6,997,829	0.41	0.22
Victoria Inferred	2,075,345	0.36	0.05
Total Inferred	9,073,174	0.40	0.18

The reader should be aware that this economic assessment is preliminary in nature, and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability. The valuation is based on 100% of the Project and 100% Equity. The reader should also be aware that there is no certainty that the results projected in the preliminary economic assessment of the Project will be realized.

PEA UPDATE HIGHLIGHTS

- The portion of the reported resource within an economic pit shell ("in-pit mineral resource") suitable as feed to a concentrator totals 352.6 Mt grading 0.41%Cu and 0.08 g/t Au, and it is expected to produce 2.77 billion pounds of copper and 427,000 ounces of gold over the life of the Project.
- The in-pit mineral resource suitable as feed to a leach facility totals 61.1 Mt grading 0.34% Cu, and it is expected to produce 275.4 million pounds of copper over the life of the Project.
- Conventional open pit operation with mine life of approximately 25 years (including two years of pre-stripping and two years of stockpiled feed processing) with a strip ratio of 0.70: 1
- Conventional porphyry copper concentrator rated at a nominal 44,000 t/d throughput producing an average of 54,556 t/a of copper in concentrate over a 23-year period.
- Thickened tailings disposal in a natural basin approximately 1.6 kilometers (km) downhill from the plant site.
- A 3.7 km tunnel will feed material from the pit to the mill.
- Permanent heap leach pad and solvent extraction and electrowinning (SX-EW) plant designed to produce an average of 5,949 t/a of high quality copper cathode from oxide and secondary sulphide material over a 21-year period.
- MAQM has ongoing dialogue with regional and local authorities and the representatives of organizations of water users to assess various options for sourcing water for the Project. For this PEA Update, the fresh water supply for the Project is assumed to come from the Majes River basin during the wet season, when river flow is in flood conditions, typically exceeding 32 m^3/s. The water intake on the Majes River would be situated approximately 35 km from the proposed plant site. The water would be stored on site in a section of the Tailings Management Facility (TMF) and reclaimed for use as process water all year round.
- The Zafranal Property lies outside areas of agricultural activity and there are no communities located on the Property.
- MAQM has an ongoing extensive stakeholder relations program implemented in an effort to ensure that the Company fully engages with the local communities and regional authorities, informs on project activities, addresses concerns and reduces or mitigates the potential impacts of the Project.
- Additional exploration targets have been identified on the property and drilling is planned for early 2014.

Bruce Turner, President and Chief Executive Officer of AQM states, "We are very pleased with the results of the PEA Update as it provides the Company with an attractive alternative project development to that considered in the January 2013 PEA on the basis of water supply, site layout, and capital and operating costs. As a result of our engagement with the regional and local authorities and representatives of organizations of water users, we believe the Majes River will provide a viable water supply alternative to the previously proposed desalination plant and we will continue to discuss this option with communities located in the Majes River Basin. In addition, changes to the layout and mine plan, which now include a 3.7 km tunnel to feed material from the pit to the mill coupled with the reduced production requirements has significantly reduced our capital and operating cost estimates. We believe the revised plan to be an attractive option and the proposed production levels provide an opportunity to optimize feed grade throughout the life of the mine. We are now in a position to decide on an appropriate development scenario for the project and take it to the next level of engineering."

PEA SUMMARY

LOCATION:

- The Zafranal Project is located in southern Peru about 150 km by road (90 km straight-line distance) northwest of the city of Arequipa, 80 km from tidewater and approximately 150 km by road from the Port of Matarani.
- The regional climate is arid, with average temperatures ranging between 12°C in winter and 28°C in summer. The elevation of the proposed open pits ranges from 2,775 to 2,295 meters above sea level. Precipitation is scarce and agriculture is generally possible only in river valleys where there is irrigation.

GEOLOGY:

- The occurrence of mineralized porphyries is structurally controlled by a northwest trending series of strike-slip faults belonging to the Incapuquio fault system, and regional east-west trending structures. The intersections of these two fault systems appear to be the main mineralization control on the Property.
- Additional exploration targets have been explored along both main structural trends, with new geophysical and geochemical anomalies found on several of them. Two of these anomalies, Ganchos and Campanero are programmed for exploration in 2014.

MINERAL RESOURCE:

- The Mineral Resource was calculated using ordinary kriging on 62,025 samples from 114,922 m of drilling that resulted from 335 diamond and reverse circulation drill holes.
- The resource considered mineralized material greater than 0.2% Cu from two deposits on the Property: Main Zone and Victoria Zone.
- Measured and Indicated Resource at a 0.2% Cu cut-off is 620.9 Mt grading 0.37% Cu and 0.08 g/t Au.
- Inferred Resource is 49.2 million tonnes grading 0.26% Cu and 0.09 g/t Au.
- The Measured and Indicated Resource for the Main Zone and Victoria Zone at a 0.3% Cu cut-off is 276.3 Mt grading 0.52% Cu and 0.09 g/t Au.

MINING:

- An in-pit mineral resource suitable as feed to a concentrator was identified in the Main Zone and Victoria Zone porphyries totalling 352.6 Mt grading 0.41% Cu and 0.08 g/t Au, and this resource is expected to produce 2.77 billion pounds of copper and 427,000 ounces of gold in copper concentrate over the life of the Project.
- An in-pit mineral resource suitable as feed to a leach facility was identified in the Main Zone and Victoria Zone porphyries totalling 61.1 Mt grading 0.34% Cu and this resource is expected to produce 275.4 million pounds of copper cathode over the life of the Project.
- The in-pit mineral resources identified are amenable to open pit mining, generating two contiguous pits with a combined strike length of 3.1 km, a maximum width of 780 m, and a maximum depth of 420 m.
- Strip ratio (including pre-production tonnage) is equal to 0.70 t of waste to 1.0 t of mineralized material.
- Pre-production stripping of 44 Mt will be required prior to the start up of the leach facility. Total material movement of 76 Mt will be required prior to the start up of the concentrator.
- Conventional open pit with mine life of approximately 25 years starting with approximately 2 years of pre-stripping, followed by 21 years of mining and 2 years of low-grade stockpile re-handling.

- Revised pit slope design determined steeper overall slope angles ranging from 40° to 45°, as compared to a range of 38° to 43° in the previous design that was used for the January 2013 PEA.
- Peak daily movement of 141,000 t of material occurs in production year 3.

MILLING:

- The proposed flotation feed does not present any significant technical difficulties for beneficiation and the Zafranal mill facility will resemble other concentrators processing typical copper porphyry mineralization.
- Average copper and gold recoveries to concentrate are estimated to be 87.7% and 49.0%, respectively.
- Copper concentrate grade is expected to average 28% Cu and contain an average of 3 g/t of gold. A total of 4.48 million dmt of concentrate will be produced over the life of the Project.
- No deleterious elements in any significant concentration were found in the copper concentrate produced from the test work, and all the impurity elements were found to be below smelter penalty limits.

LEACHING:

- A permanent heap leach pad and SX-EW plant have been designed to produce a nominal 10,000 t/a of high quality copper cathode from oxide and secondary sulphide material grading in the range of 0.15 to 0.5% Cu, with an average grade of 0.34% total copper.
- The overall copper recovery is based on 60% of total contained copper.

SITE ACCESS:

- The main access to the site will be via an upgraded and partially new 50 km paved road from the plant site to Pedregal de Majes on the Pan American Highway.
- Product will be transported approximately 150 km from the plant site to the Port of Matarani via truck. An alternative truck/rail system for transporting concentrate will be studied in the next phase of engineering design.
- A new 37 km gravel topped access road will also be constructed from Corire to the plant site for transporting personnel and supplies.

FRESH WATER SUPPLY AND DISTRIBUTION:

- MAQM has ongoing dialogue with regional and local authorities and representatives of organizations of water users to investigate the alternative of extracting water from the Majes River during the five months of wet season when river flows are in flood condition and typically exceed 32m3/s. Such an arrangement could see the Company providing benefits to the local water users along the Majes River in the form of infrastructure projects such as construction and maintenance of river defenses and water intakes. The PEA Update has considered the use of Majes River as the Project´s water supply on the basis that a full year´s water requirement would be extracted only during the wet season when the river flow exceeds an agreed-to-minimum. The water would be stored on site in a section of the Tailings Management Facility and reclaimed for use as process water all year round.

POWER SUPPLY AND DISTRIBUTION:

- The power delivery and site power distribution systems are based on a total installed power requirement of 89 MW and the peak demand of 84 MW.
- Power supply for production is scheduled to be available from the New Socabaya Substation that will be located close to Arequipa. This will require the installation of an approximately 120 km long transmission line to a proposed 220 kV substation that will be located adjacent to the concentrator.

SOCIAL AND ENVIRONMENT:

- Environmental and social baseline studies for the Project have been conducted to compile a Semi-Detailed Environmental Impact Assessment (EIAsd) in order to obtain environmental certifications and permits for the exploration programs of the Project. A second modification to the EIAsd has been approved for the 2013/2014 exploration program on the Property.
- Formal baseline studies for the Project will commence in the next phase of engineering and these will form the basis of the Environmental Impact Assessment (EIA) for the Project.

INITIAL CAPITAL COSTS:

- The initial capital cost for the Project is estimated at US$1,122 million with an expected accuracy range of ±35%.
- The capital cost summary and its distribution by area in US Dollars is shown below:

	Total Labour Cost	Total Material	Total Construction	Total Equipment	Total US$
Direct Costs					
Open Pit Mining	25,673,219	55,115,966	235,945	105,535,529	186,560,659
Process Plant	11,783,276	52,537,187	8,511,875	105,035,430	177,867,768
Leach Area	2,067,575	13,948,439	3,876,163	28,273,886	48,166,063
Tailings and Water Management	183,463	38,899,961	58,990	4,087,967	43,230,381
Infrastructure	7,895,296	51,725,458	53,615,800	18,164,726	131,401,280
Fresh Water Supply	10,450,263	24,960,829	10,591,656	22,310,245	68,312,993
Power Supply and Distribution	59,136	38,468,760	39,000	-	38,566,896
Indirect Costs					
Project Indirects	3,483,280	202,890,245	-	-	206,373,525
Owner's Costs					
Owner's Costs	3,456	82,766,363	-	-	82,769,819
Project Contingency					
Contingencies	-	138,821,208	-	-	138,821,208
Total	61,598,964	700,134,416	76,929,429	283,407,783	1,122,070,592

PRODUCTION QUANTITIES:

- The average life of project material tonnages, grades and metal production are shown below:

Description	Value
Mine Life (Years)	25[4]
Material Milled/Leached	
Total Tonnes to Mill ('000)	352,637
Average Annual Tonnes to Mill ('000)	15,332
Total Tonnes to Leaching ('000)	61,096
Average Annual Tonnes to Leaching ('000)	2,909[5]
Average Grade	
Copper (%) - Mill	0.409
Gold (g/t) - Mill	0.077
Copper (%) - Leaching	0.341
Total Production	
Copper ('000 lb) - Mill	2,766,346
Gold ('000 oz) - Mill	427
Copper ('000 lb) - Leaching	275,439
Average Annual Production	
Copper ('000 lb) - Mill	120,276
Gold ('000 oz) - Mill	19
Copper ('000 lb) - Leaching	13,116[5]

Note: [4] Concentrator active for 23 years, leaching active for 21 years.
[5] Based on a 21 year life

OPERATING COSTS

- Average life of mine operating cost is estimated to be $1.09/lb Cu produced from plant feed material processed, including mining, re-handling, milling, flotation and leaching as shown below:

Cost Item	Unit	Unit Cost (US$)
Mining	$/t mined	1.57[6]

Mining	$/t milled	2.94
Milling	$/t milled	4.54
Tailings Management	$/t milled	0.10
G&A	$/t milled	0.86
Concentrator	$/t milled	8.44
Leaching	$/t leached	5.47
Concentrator	$/lb Cu produced	1.08
Leaching	$/lb Cu produced	1.21
Concentrator & Leaching	$/lb Cu produced	1.09

Note: (6) Excluding two-year pre-stripping

- The average C1 cash cost is estimated at $ 1.31 per payable (7) pound of copper, for the life of mine, (as defined by Wood Mackenzie).

(7) Produced pounds of copper net of transport losses and smelter deductions.

FINANCIAL SENSITIVITIES:

- In addition to the Base Case post-tax evaluation using a copper price of $3.00/lb, Initial Capital Cost of US$1,122 million and a discount rate of 8%, three alternate case scenarios were developed as a function of varying copper price. The following sensitivity table provides net present value, internal rate of return and payback period reported from the start of mill operations for the post-tax base case and the post-tax alternate case scenarios:

Item Description	Base Case	Alternate Case 1	Alternate Case 2	Alternate Case 3
Copper Price (US$/lb)	3.00	2.50	2.70	3.30
Gold Price (US$/oz)	1,274	1,274	1,274	1,274
Net Present Value (US$ million)	616	228	385	844
Internal Rate of Return (%)	18.2	12.2	14.7	21.4
Payback (years)	3.2	4.1	3.6	2.8

- The PEA Update was compared with the January 2013 PEA and summarized in the following table:

ITEM DESCRIPTION	UNIT OF MEASURE	UPDATED PEA 44 KTPD CONCENTRATOR	JAN 2013 PEA 80 KTPD CONCENTRATOR
Concentrator Feed	´000 t	352,637	425,310
Copper Grade	%	0.41	0.38
Gold Grade	g/t	0.08	0.07
Leach Feed	´000 t	61,096	87,256
Copper Grade	%	0.34	0.23
Waste	´000 t	291,363	543,931
Total Open Pit	´000 t	705,096	1,056,495
Strip Ratio		0.70	1.06
Concentrator Operation	years	23	15
Recoverable Cu from Concentrate	´000 lbs	2,766,342	3,105,452
Recoverable Au from Concentrate	´000 oz	426,995	478,841
Recoverable Cu from Cathode	´000 lbs	275,438	265,863
Initial Capital Expenditure	´000 US$	1,122,071	1,519,673
Sustaining Capital Expenditure	´000 US$	234,615	191,458
After Tax Total Cash Flow	´000 US$	2,067,732	1,813,801
After Tax NPV @ 8% Discount Rate	´000 US$	616,063	588,170
After Tax IRR	%	18.2	17.4
After Tax PayBack	years	3.2	2.6

Qualified Persons

The NI 43-101 Technical Report has been prepared by an integrated engineering team led by Tetra Tech in Vancouver, British Columbia, Canada. The Technical Report will be filed on SEDAR within 45 days of the

Press Release date. Further information regarding geology, sampling methods, data verification, QA/QC and assay lab is provided in the NI 43-101 Technical Report dated May 7, 2012, and the Technical Report and Preliminary Assessment of the Zafranal Project dated January 16, 2013,filed on SEDAR at www.sedar.com and can be found on the Company's website at www.aqmcopper.com.

The following Qualified Persons have reviewed and approved the technical disclosure contained in this press release:

- Gregory Z. Mosher, P.Geo., a Tetra Tech employee, regarding geological setting, deposit types, exploration, drilling data verification and mineral resource estimates
- Anoush Ebrahimi, P.Eng., a Tetra Tech employee at the time of completion of the PEA Update, regarding mining methods
- Marinus Andre De Ruijter, P.Eng., a Tetra Tech employee, regarding mineral processing and metallurgical testing, recovery methods and process capital and operating costs
- Hassan Ghaffari, P.Eng., a Tetra Tech employee, regarding infrastructure, tailings and water management and capital and operating cost estimate
- Sabry Abdel Hafez, Ph.D., P.Eng., a Tetra Tech employee, regarding mining capital and operating costs and the economic analysis
- Monica Danon-Schaffer, Ph.D., P.Eng., a Tetra Tech employee at the time of completion of the PEA Update, regarding environmental studies and permitting

On Behalf of the Board

AQM Copper Inc.

Bruce L. Turner, President and Chief Executive Officer

About AQM Copper

AQM Copper Inc. is a Canadian mineral exploration company exploring and developing copper deposits in South America. Through its Peruvian subsidiary, Minera AQM Copper Peru S.A.C. (MAQM), the Company is developing the Zafranal Copper-Gold Porphyry Project located in Southern Peru. MAQM is the operator of a 50/50 Joint Venture with Teck Resources Ltd. through a sole purpose Peruvian company, Compañia Minera Zafranal. MAQM is owned 60% by AQM Copper Inc. and 40% by Mitsubishi Materials Corporation pursuant to a transaction as outlined in the Company's press release of July 2, 2013.

The Company published a favourable independent Preliminary Economic Assessment (¨PEA¨) in January 2013 which reported a NI 43-101 compliant Measured and Indicated Resource of 557.2 Mt grading 0.36% Cu and 0.07 g/t Au. The PEA was completed by Tetra Tech WEI Inc., ("Tetra Tech"), and contains production parameters, capital costs, operating costs, pre-tax and post-tax financial projections for an open pit mine processing 80,000 t/d of mill feed and a leach operation based on the treatment of approximately 20,000 t/d of oxide and secondary sulphide material. Using long-term forecasted copper and gold prices of US$3.00/lb and US$1,274/oz respectively; and an initial capital cost of US$ 1,520 million, the Project is projected to yield a post-tax Net Present Value at 8% discount rate, of US$ 588 million and an internal rate of return (IRR) of 17.4%. The valuation is based on 100% of the Project and 100% Equity. The reader should be aware that the preliminary economic assessment is preliminary in nature, and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. The reader should also be aware that there is no certainty that the results forecast in the preliminary economic assessment will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

The Company's management and directors have extensive experience working for the world's largest mining copper producers and investment banking backgrounds. Please refer to the Company's website at www.aqmcopper.com, for further information regarding the Company and the Zafranal Project.

NEITHER THE TSX VENTURE EXCHANGE NOR ITS REGULATION SERVICES PROVIDER (AS THAT TERM IS DEFINED IN THE POLICIES OF THE TSX VENTURE EXCHANGE) ACCEPTS RESPONSIBILITY FOR THE ADEQUACY OR ACCURACY OF THIS RELEASE.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

Except for statements of historical fact relating to AQM Copper Inc., certain information contained herein constitutes "forward-looking statements". Forward-looking statements include statements that are predictive in nature, depend upon or refer to future events or conditions, or include words such as "expects", "anticipates", "plans", "believes", "considers", "intends", "targets", or negative versions thereof and other similar expressions, or future or conditional verbs such as "may", "will", "should", "would" and "could". We provide forward-looking statements for the purpose of conveying information about our current expectations and plans relating to the future and readers are cautioned that such statements may not be appropriate for other purposes. By its nature, this information is subject to inherent risks and uncertainties that may be general or specific and which give rise to the possibility that expectations, forecasts, predictions, projections or conclusions will not prove to be accurate, that assumptions may not be correct and that objectives, strategic goals and priorities will not be achieved. These risks and uncertainties include but are not limited to those identified and reported in AQM Copper Inc.'s public filings, which may be accessed at www.sedar.com. Other than as specifically required by law, we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made, or to reflect the occurrence of unanticipated events, whether as a result of new information, future events, results or otherwise.

To speak with an **Investor Relations** representative, please see the contact information below.

Contact

Pinnacle Capital Markets LTD.
Spyros P. Karellas
(416) 443-5696 / (416) 800-8921
spyros@pinnaclecapitalmarkets.ca