

# Atacama Pacific Delivers Pre-Feasibility Study for the Cerro Maricunga Oxide Gold Project

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TORONTO, ONTARIO--(Marketwired - Aug 20, 2014) - [Atacama Pacific Gold Corp.](#) (TSX VENTURE:ATM) ("Atacama Pacific") is pleased to announce that the Pre-Feasibility Study ("PFS") recently completed on its flagship Cerro Maricunga Oxide Gold Project ("Cerro Maricunga") has demonstrated the technical and economic viability of an 80,000 tonne per day heap leach operation generating attractive financial returns. The Cerro Maricunga property is located 140 kilometres by road northeast the Copiapó, Chile within the Maricunga Mineral Belt. All dollar amounts are in US\$.

## Highlights from the PFS include:

- **2.96 million recoverable gold ounces over life of mine ("LOM")**
- **Average annual production over the first 8 years of 281,000 gold ounces**
- **13 year mine life**
- **Average LOM cash costs of \$683 per ounce**
- **Initial capital costs, including contingencies, of \$398.9 million**
- **Sustaining costs, including contingencies, of \$187.6 million**
- **Strong total operating cash flows of \$1.27 billion at \$1,350 per ounce gold ("/oz Au")**

The PFS calculates an after-tax net present value at a 5% discount rate ("NPV<sup>5%</sup>") of \$409.3 million and internal rate of return ("IRR") of 25.0%. Table 1 summarizes the financial projections for the planned operation on both a pre-tax and after-tax basis at a base case gold price of \$1,350 per ounce.

Table 1 - Summary of Project Economics

\$1,350/oz Au	Units	Pre-Tax Case	After-Tax Case
IRR	%	28.6 %	25.0 %
NPV <sup>5%</sup>	\$ M	521.2	409.3
Average Annual Revenues	\$ M	307.7	307.7
Average Annual Cash Flow* - 1 <sup>st</sup> Five Years	\$ M	117.4	108.7
Average Annual Cash Flow*	\$ M	96.3	83.4
Payback Period	years	2.8	3.0

\* after sustaining capital costs

Santiago-based consultancies, Alquimia Conceptos S.A. ("Alquimia") and NCL Ingenieria y Construcción SpA. ("NCL"), prepared the PFS in accordance with Canadian National Instrument 43-101 "Standards of Disclosure for Minerals Projects" ("NI 43-101"). The PFS has an effective date of August 20, 2014.

"The completion of the Cerro Maricunga PFS clearly demonstrates the technical and commercial viability of a large scale, conventional open pit mining and oxide heap leach processing facility which will be one of the largest new gold operations in South America," stated Carl Hansen, President and CEO of Atacama Pacific. "The scale of the planned Cerro Maricunga gold production will vault Atacama Pacific into to the realm of mid-tier gold producers with the capacity to operate with significant positive cash margins. With the PFS completed, we will commence work on a Feasibility Study in preparation for permitting and the goal of starting construction in late 2016."

Projected total gold production over the 13-year LOM is 2.96 million ounces at an average operating cash

cost of \$683/oz Au. All-in sustaining cost of \$941/oz Au, including total cash costs of \$864/oz Au, have been projected.

## Pre-Feasibility Study Parameters

The PFS was completed using the following guiding parameters:

&#8226; LOM	13 years
&#8226; LOM Recoverable Gold Ounces	2.96 million ounces
&#8226; Average Annual Production 1 <sup>st</sup> Eight Years	281,000 ounces gold
&#8226; Average Annual LOM Production	228,000 ounces gold
&#8226; Average LOM Strip Ratio	1.76 : 1 (waste to ore)
&#8226; Designed Processing Capacity	29.2 million tonnes per annum
&#8226; Mining Cut-off Grade	0.15 grams per tonne gold
&#8226; Metallurgical Recovery	79.2%
&#8226; Average Mining Cost	\$1.40 per tonne mined
&#8226; Processing costs	\$2.52 per tonne processed
&#8226; General and Administration	\$0.54 per tonne processed
&#8226; Gold Price	\$1,350/oz Au

## Mining

Gold will be produced from heap leaching 294.4 million tonnes ("Mt") of ore with an average grade of 0.40 grams per tonne gold ("g/t Au"). Ore will be mined at a rate of 80,000 tonne per day and an average LOM strip ratio of 1.76 to 1 (517.4 Mt waste to 294.4 Mt ore) has been calculated. Table 2 presents the planned mining and production schedule. Gold production begins to decline in Year 9 as the mining activities increase in depth in the pit; however, the reduction in mined ore is partially offset by increasing gold grades at depth.

Conventional open pit mining methods have been considered in mining the Cerro Maricunga deposit. The PFS considers utilizing a maximum fleet of seventeen 290-tonne haul trucks (Komatsu 9300E-4SE), four 42-cubic metre hydraulic shovels (Komatsu PC8000), five production drills (Atlas PV 275) along with various ancillary equipment to achieve the maximum annual total ore and waste movement of 94 million tonnes. No additional production fleet equipment is considered during the LOM. The PFS takes into account that the mining fleet will be leased and Atacama Pacific has received a proposed lease agreement.

The preliminary open pit design incorporates 10 metre ("m") high benches with 38 m wide main haul roads at a maximum grade of 10% and overall pit walls angles varying from 45 to 48 degrees. The final pit will be 2500 m long and 1000 m wide. The waste dump is situated immediately adjacent to the pit and is sufficient to handle all planned waste material.

Table 2 - Mining and Production Schedule

Year	Ore ( <i>'000 tonnes</i> )	Waste ( <i>'000 tonnes</i> )	Strip Ratio ( <i>waste:ore</i> )	Grade ( <i>g/t Au</i> )	Production ( <i>'000 oz Au</i> )
-1	5,652	5,348	0.95	0.44	-
1	23,548	26,131	1.11	0.46	285
2	29,200	47,163	1.62	0.42	314
3	29,200	54,038	1.85	0.41	303
4	29,200	54,475	1.87	0.37	275
5	29,200	64,949	2.22	0.38	278
6	29,200	60,669	2.08	0.36	270
7	29,200	55,310	1.89	0.35	257
8	29,200	46,328	1.59	0.36	263
9	20,025	45,579	2.28	0.35	220
10	15,480	31,820	2.06	0.42	165
11	12,778	18,614	1.46	0.47	155
12	8,374	5,626	0.67	0.55	119
13	4,174	1,370	0.33	0.54	58
Totals	294,431	517,419	1.76	0.40	2,963

Note: Rounding may result in apparent summation errors.

## Processing

Oxide mineralization will be trucked to a primary gyratory crusher facility (METSO MK II 62" x 75"), located immediately west of the pit boundary where it will be crushed to 165 millimetres ("mm"). The primary crushed material will then be conveyed approximately 2.9 kilometres ("km") to feed two secondary cone crushers (METSO MP 1000) and three tertiary cone crushers (METSO MP 800). The final crushed product, measuring (P<sub>80</sub>) 19 mm, will be conveyed 2.4 km to the heap leach pads.

Crushed material will be stacked on the heap leach pad by a radial stacker in 50 by 50 m modules in layers 10 m thick. The final leach pad height will be approximately 100 m. A pad irrigation rate of 10 liters/hour/metre<sup>2</sup> has been considered. NaCN and lime consumption are expected to be 0.23 kilograms per tonne ("kg/t") and 2.7 kg/t respectively. The cost of consumables was established from recent quotes provided by Chilean-based suppliers. The pregnant leaching solution containing gold will be pumped to a conventional carbon adsorption facility (ADR plant) where gold from process solutions is recovered to a final gold doré product.

Average gold recoveries of 79.2% have been used in the PFS based on 34 column tests and over 100 bottle roll tests completed on ore from the Cerro Maricunga deposit. The majority of the column tests have been completed on ore crushed to 19 mm; however, 78% to 80% gold recoveries have been achieved on material crushed to 50 mm (2 inches) and 77% recoveries were achieved on 100 mm crushed material.

Ball mill work indices varying from 9.77 to 11.26 kilowatt hours per tonne have been obtained from ore from Cerro Maricunga classifying the material as relatively soft. Bond Abrasion indices averaging 0.095 suggest the ore has low abrasive characteristics.

Further metallurgical testing will focus on ore crushed to 50 mm, which represents the projected product size from a secondary crusher. See "*Project Opportunities and Risks*" section.

## Capital Requirements

The PFS projects initial capital expenditures for the development of an open pit mining and conventional heap leach processing operation at Cerro Maricunga of \$398.9 million which includes contingencies of \$46.5 million and engineering, procurement, and construction management ("Owner") costs of \$12.7 million. A breakdown of these costs is provided in Table 3.

Table 3 - Summary of Initial Capital Expenditures<sup>1</sup>

Item	\$ millions
<b>Mine</b>	
Pre-stripping	15.3
1 <sup>st</sup> Fleet Lease Payment	7.5
Mining Support	19.6
<b>Process Plant</b>	
Crushing & Stockpiles	143.4
Leach Pads	83.7
ADR & EW/Smelting	23.3
First Fill	2.0
<b>Infrastructure</b>	
Support Facilities	34.9
Roads	10.1
Owner	12.7
Capital Costs (without contingencies)	352.5
Contingencies <sup>2</sup>	46.5
<b>Total Initial Capital<sup>3</sup></b>	<b>398.9</b>

<sup>1</sup> The PFS has been completed to a level of accuracy of +20% to -5%.

<sup>2</sup> Contingencies are 15% of capital costs excluding "Mine" costs.

<sup>3</sup> Rounding may result in apparent summation errors.

Sustaining capital requirements during the LOM, including mine, annual heap leach pad expansions, and closure costs, total \$187.6 million including \$23.0 million in contingencies.

The costs for the major mining equipment are based on recent quotes obtained by NCL and are priced at constant second quarter 2014 prices. Equipment costs include delivery to the site and assembly.

## Leasing

Quotes have been received for the lease of the mining fleet, truck maintenance shop, the construction and operation of a water pipeline and the electrical supply infrastructure.

Komatsu has provided a letter of intent for a \$234.4 million lease to own arrangement for the major mining fleet equipment. The quote is for a lease period of 5 years for the drilling/loading/hauling fleet with a final payment in following year for the purchase of the fleet. The auxiliary equipment lease is for a period of 3 years with a payment in the fourth year for final purchase.

The construction of a truck maintenance shop will be undertaken by ARRIGONI under a \$28.4 million leaseback over a period of 13 years.

Atacama Pacific has been provided a letter of intent from ELECENOR, a multinational engineering and construction firm, for the construction and operation of the water supply infrastructure from Copiapó to Cerro Maricunga. The annual cost of the lease is \$17.5 million for the first 8 years and declines to \$10 million in year 13, reflecting lower ore throughput. The same firm has offered to construct and operate the electrical distribution system at a price of \$5 million per year.

Unitary leasing costs are as follows:

&#8226; Mining Fleet and Truck Maintenance Shop \$0.32 per tonne mined  
 &#8226; Water and Power Infrastructure \$0.91 per tonne processed

## Taxes

The Chilean tax rate used in the PFS is 20%. In addition, included in the economic analysis is the variable Chilean specific mining tax levied on operational income.

## Mineral Resources and Reserves

The Cerro Maricunga global resource estimate is presented in Table 4. The global resource estimate was used for the estimation of the pit constrained oxide-associated gold resource reported in Atacama Pacific's January 28, 2014 press release and was used to establish the mineral reserves used in the PFS.

The Cerro Maricunga proven and probable mineral reserve estimate, summarized in Table 5, lies within an optimized open pit shell generated using economic and technical input parameters established in the PFS.

The mineral reserve represents a diluted ore tonnage. No inferred category mineral resources were used in the preparation of the mineral reserves.

The Cerro Maricunga resource estimate and reserve calculation were prepared under guidelines established by the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM"), CIM Standards on Mineral Resources and Reserves - Definitions and Guidelines (2014).

Table 4 - Global Resource Estimate

Zone	Measured		Indicated		Measured and Indicated			Inferred		
	Tonnes (millions)	Grade (g/t Au)	Tonnes (millions)	Grade (g/t Au)	Tonnes (millions)	Grade (g/t Au)	Gold Ounces (000's)	Tonnes (millions)	Grade (g/t Au)	Gold Ounces (000's)
Lynx	20.1	0.46	82.8	0.40	102.9	0.41	1,344	7.0	0.37	84
Crux	92.0	0.35	119.1	0.32	211.1	0.33	2,227	28.1	0.30	266
Phoenix	40.7	0.46	79.1	0.42	119.8	0.44	1,678	22.8	0.34	253

Totals	152.8	0.39	281.0	0.37	433.8	0.38	5,249	57.9	0.32	603
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Notes to Accompany Mineral Resource Table:

1. Mineral resources are reported as global unconstrained resources at a 0.15 g/t Au cut-off grade.
2. Mineral resources are not confined within a pit using mining parameters.
3. Rounding may result in apparent summation differences between tonnes, grade and contained gold ounces.
4. Tonnage and grade measurements are in metric units. Contained gold ounces are reported as troy ounces.

Table 5 - Mineral Reserve Estimate

	Tonnes	Grade	Gold Ounces
0.15 g/t Au Cut-off Grade	(millions)	(g/t Au)	(000's)
Proven	126.9	0.39	1,603
Probable	167.6	0.40	2,140
Total Proven and Probable	294.4	0.40	3,743

Notes to Accompany Mineral Reserves Table:

1. Mineral reserves are reported as constrained within measured and indicated pit design and supported by a mine plan featuring a constant throughput rate. The pit design and mine plan were optimized using the following economic and technical parameters: gold price of \$1300/oz Au; recovery to dore assumptions 79.5% for gold; \$10.0/oz of Au refining charges; ore and waste average mining cost of \$1.45/t, and process and G+A costs of \$3.09/t processed; average pit slope angles that range from 40° to 48°; an assumption of 100% mining recovery and 3% of mining dilution.
2. Mineral reserves are contained within the existing mineral resources.
3. Rounding may result in apparent summation differences between tonnes, grade and contained gold ounces.
4. Tonnage and grade measurements are in metric units. Contained gold ounces are reported as troy ounces.

## Water

Water for the Cerro Maricunga operation will be supplied from a water treatment facility located in the City of Copiapó and owned by the Chilean water utility Aguas Chañar S.A. ("Aguas Chañar"). Atacama Pacific entered into an agreement with Aguas Chañar, reported on July 10, 2013, for the purchase of 2.5 million cubic metres of water annually, representing a flow rate of 80 litres per second ("l/s"). Water requirements for the 80,000 tonnes per day Cerro Maricunga operation are projected to be in the range of 85 l/s and 90 l/s.

The PFS takes into account that water supply infrastructure from Copiapó to Cerro Maricunga will be constructed and operated under a lease arrangement as previously described. The electrical supply line will follow the same right of way as the water pipeline allowing grid electricity to be used for the operation of the pump stations resulting in significant savings over generator supplied energy.

## Sensitivities

Table 6 provides a summary of the impact of changes in the gold price on key economic indicators.

Table 6 - Sensitivity of Economic Indicators

Item	Unit	Base Case		
		\$1,250/ oz Au	\$1,350/ oz Au	\$1,450/ oz Au
<b>Before Tax</b>				
NPV 0%	\$ M	556.2	852.4	1,149.7
NPV 5%	\$ M	306.4	521.2	736.0
IRR	%	19.4	28.6	37.5
Payback Period	years	3.9	2.8	2.2
Average Annual Cash Flow*	\$ M	73.5	96.3	119.0
<b>After Tax</b>				
NPV 0%	\$ M	453.4	685.5	912.0
NPV 5%	\$ M	241.5	409.3	574.3
IRR	%	17.3	25.0	32.4
Payback Period	years	4.1	3.0	2.5
Average Annual Cash Flow*	\$ M	65.6	83.4	100.8

\* after sustaining capital costs

## Project Opportunities and Risks

The PFS has largely defined the operating scope of mining and processing operation at Cerro Maricunga. However, Atacama Pacific has identified increasing the ore crush size as a potential opportunity that will be examined during the feasibility study. Increasing the crush size to 50 mm from the 19 mm would result in a reduction in the capital costs as a result of the elimination of the tertiary crushers. A reduction in operating

costs could also be realized as lower rates of NaCN and lime consumption are expected based upon test results.

The key risks typical of all large scale mining projects, including, but not limited to, confidence in mineral resource estimates, metallurgical performance, capital and operating cost increases, commodity price decreases, securing reasonably priced project financing, ability to attract and retain experienced professionals, etc., apply to Cerro Maricunga. With the acquisition of the majority of the necessary water resources for the development of Cerro Maricunga, one of the main development risks has been significantly reduced.

## **Permitting**

Chile has an established and clearly defined and regulated permitting process for development projects. In order to develop a mining and processing operation at the Cerro Maricunga project, an Environmental Impact Study, "Estudio de Impacto Ambiental" ("EIA") must be obtained from the Chilean environmental authority, Servicio de Evaluación Ambiental ("SEA"). The EIA process takes up to 18 months to complete and takes into consideration all aspects of a proposed development. Once permits of this nature are granted, Atacama Pacific would have a five year period to complete construction of the project.

Atacama Pacific has completed the acquisition of required base line environmental data necessary for the submittal of an EIA. During or upon completion of the Feasibility Study, it is the intention of Atacama Pacific to prepare and submit an EIA application.

## **Pre-Feasibility Study Basis and Assumptions**

This study constitutes a PFS for NI 43-101 purposes with an effective date of August 20, 2014. The PFS has been completed to a level of accuracy of +20% to -5%. No inferred resources have been taken into account in demonstrating the economic viability of the project.

Key assumptions used in the economic analysis in the PFS include the following:

Exchange Rate (CLP/US\$)	600
Fuel Price (\$/litre)	\$ 0.90
Energy (\$/MWh)	\$ 100
Lime (\$/kg)	\$ 178
NaCN (\$/kg)	\$ 2,650
Water (\$/cubic metre)	\$ 0.75

## **About NCL Ingeniería y Construcción SpA.**

NCL is a consulting company formed in Santiago, Chile, in 1985. Its main objective is to provide focused advice and solutions for mining companies requiring specialized services mainly in the fields of resource estimation, mine design and planning (for open pit and underground methods), mine equipment selection, optimization of mine unit operations and mining cost estimation.

NCL has successfully completed a wide range of studies and projects within its field of expertise through the different stages in mining project development and has completed conceptual studies to bankable feasibility studies for clients on a global basis. It has also a relevant experience in the area of project assessments and valuations, due diligence and technical audits. The company's office in Santiago employs 36 full time mining engineers and a total permanent staff of 45.

## **About Alquimia Conceptos S.A.**

Alquimia was formed in 2002, in response to a growing industry demand for specialized consultancy in mining-metallurgical processes, which allow optimizing the operations of existing plants, as well as designing and evaluating the feasibility of new projects.

Since inception, Alquimia has carried out over 250 projects in both consulting and engineering studies, with nearly 500,000 man-hours dedicated to major mining projects in Chile with clients including Anglo American, Codelco, Xstrata Copper and Minera Esperanza amongst others.

### **National Instrument 43-101**

Maria Leticia Conca Benito, Mining Engineer, Universidad de Chile, Registered Member of Chilean Mining Commission, CEO and Project Director, Alquimia, is an independent qualified person as defined by NI 43-101, is responsible for the compilation of the information and preparation of the overall PFS and is responsible for the information provided for the metallurgy and process plant design. Ms. Conca has reviewed and approved the information provided in this press release.

Carlos Guzmán, a mining engineer, Fellow of the Australasian Institute of Mining and Metallurgy and a registered member of the Chilean Mining Commission, is an independent qualified person as defined NI 43-101. Mr. Guzmán is a Principal and Project Director with NCL, Santiago, Chile and is responsible for the mining related sections of the PFS including the generation of the pit shell for constrained resources and the mineral reserve estimate.

Dr. Eduardo Magri, a mining engineer (University of Witwatersrand) and a Fellow of the Southern African Institute of Mining and Metallurgy, is an independent qualified person as defined NI 43-101 and is responsible for the mineral resource estimate.

The Cerro Maricunga resource estimate was prepared under CIM Standards on Mineral Resources and Reserves - Definitions and Guidelines (2014).

Atacama Pacific will file a NI 43-101 compliant Technical Report on the Cerro Maricunga PFS with the applicable Canadian securities regulatory authorities within 45 days of this press release.

### **FORWARD LOOKING STATEMENTS**

This news release contains forward-looking statements, including predictions, projections and forecasts. Forward-looking statements include, but are not limited to, statements with respect to the PFS, including the potential for annual gold production in the first five years of production of 291,000 ounces, total gold production of 2.96 million ounces over a 13 year mine life, life of mine estimated operating cash costs of \$683 /oz Au, preliminary initial capital cost estimate of \$398.9 million with sustaining capital of \$187.6 million, references to pre-tax or after-tax pay-back periods, references to pre-tax and after-tax net present values, references to internal rate of returns, statements related to cash flows, statements regarding potential development opportunities, statements regarding the expectation to increase mineral resources, statements regarding expectations for receipt of permits and environmental approvals, exploration results (including with respect to water resources), the success of exploration activities generally, mine development prospects, and potential future gold production. Often, but not always, forward-looking statements can be identified by the use of words such as "plans", "planning", "expects" or "does not expect", "continues", "scheduled", "estimates", "forecasts", "intends", "potential", "anticipates", "does not anticipate", or "belief", or describes a "goal", or variation of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved.

Forward-looking statements involve known and unknown risks, future events, conditions, uncertainties and other factors which may cause the actual results, performance or achievements to be materially different from any future results, prediction, projection, forecast, performance or achievements expressed or implied by the forward-looking statements. Such factors include, among others, the results of due diligence activities, changes in economic parameters and assumptions, the interpretation and actual results of current exploration activities; changes in project parameters as plans continue to be refined; the results of regulatory and permitting processes; future prices of gold; possible variations in grade or recovery rates; failure of equipment or processes to operate as anticipated; labour disputes and other risks of the mining industry; the results of further economic and technical studies, delays in obtaining governmental approvals or financing or in the completion of exploration, as well as those factors disclosed in Atacama Pacific's publicly filed documents.

Although Atacama Pacific has attempted to identify important factors that could cause actual actions, events

or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements.

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.

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