# **Atalaya Mining Plc**

# ("Atalaya" or the "Company")

#### **Proyecto Touro Pre-feasibility Study**

Atalaya Mining plc (AIM:ATYM, TSX:AYM) is pleased to announce the completion of a pre-feasibility study ("PFS") for a proposed copper open pit mine and concentrator at its Proyecto Touro in north west Spain.

## Highlights

# **Strong Project Economics**

- NPV post-tax at 8% discount rate of \$180 million using long term copper price of US3.00/lb
- Unlevered IRR of 20.5%
- Total free cash flow of \$489 million
- Annual average free cash flow of \$60m from commercial production

# Low cost Operations

- Estimated average C1 cash costs of US\$1.73/lb of payable Cu net of silver credits
- All-in sustaining costs ("AISC") of US\$1.85/lb of payable Cu net of silver credits

# **Capital Costs and Infrastructure**

- Pre-production capital expenditure of \$165 million with an additional expansion capital estimate of \$30 million in year eight
- Low LOM sustaining capital expenditure of \$55 million

#### **Project Parameters**

- Contained copper, within P&P reserves only, is estimated at 392,000 tonnes and 2.1 million ounces of silver
- 2 years of development and 12 years of operation
- Average yearly production of 30,000 tonnes copper and 70,000 ounces of silver in concentrate
- Shallow open pit mining with low waste-to-ore ratio of 2.43
- Very clean high-grade copper concentrates

#### **Overview and Introduction**

Proyecto Touro is a brownfield copper project located in the A Coruña province of the Galicia region, in north west Spain. The pre-feasibility study report was prepared using the headings of, and guidance set out in NI43-101.

The Project consists of a number of deposits of which four have partially been mined in the past (Arinteiro, Vieiro, Bama and Brandelos), and two which have not been previously mined (Monte de las Minas and Arca). The Project site is spread over approximately 800 ha within mineral rights over approximately 15,300 ha of contiguous exploration rights. Mineral resources identified to date, and subject to the current PFS, are located exclusively in the San Rafael Mining Concession.

As previously reported, Atalaya entered into a purchase option agreement to acquire a majority interest in the Project. The option agreement gave Atalaya an exclusive option to purchase up to an 80% interest in the Project. The Company has already exercised the acquisition of the initial 10%. As previously announced, when permits for the Project are granted, the Company will pay  $\in 2$  million to earn-in an additional 30% interest in the project and will escalate to 70% ownership once development capital is in place and construction is underway by paying an additional  $\notin 5$  million. Once production is declared, the Company will purchase an additional 10% interest in return for a 0.75% net smelter royalty taking the Company's total interest in the Project to 80%.

Historically, the Project was explored and operated between 1970 and 1986 by Rio Tinto Patiño (RTP). During the mine's operations, 21Mt of ore at an average grade of 0.61% Cu were extracted.

# **Geology and Exploration**

The deposit can be classed as a Mafic Siliciclastic type (Besshi-type) Volcanogenic Massive Sulphide (VMS) deposit. The ore zone consists of one or two mineralised horizons of disseminated mineralisation closely associated with coarse-grained garnet amphibolite. The mineralisation is represented in order of abundance by pyrrhotite, chalcopyrite and minor pyrite and sphalerite.

A total of 106,718m of drill holes were completed using reverse circulation, diamond drilling or a combination of both methods. The average drill hole depth was 95 meters.

# **Resource and Reserve Statements**

A resource model with block sizes of 10x10x10 meters was created. The resource estimate used a copper price of \$3.20/lb Cu and all resources, including inferred resources, are summarised in the following table. The resulting pit shell is considered to have reasonable prospects for economic extraction.

	>= 8.14 N	ISR \$/t (Int	ernal C	utoff)	>= 9.71 NSR \$/t (Breakeven Cutoff)			
Resource Class	kt	NSR \$/t	Cu%	RCu%	kt	NSR \$/t	Cu%	RCu%
Measured	69,258	22.55	0.42	0.37	67,886	22.82	0.42	0.37
Indicated	60,592	19.24	0.36	0.31	59,188	19.49	0.37	0.32
Measured + Indicated	129,850	21.00	0.39	0.34	127,074	21.27	0.40	0.35
Inferred	46,521	19.33	0.37	0.32	45,822	19.48	0.37	0.32

#### Resource Summary-Constrained by the \$3.20/lb Cu Pit

Note: the above resources are shown for the full Proyecto Touro. Further detail on the net attributable resources to Atalaya can be seen at the end of this announcement.

Mining at Touro will use conventional, open pit methods working from 10m high bench faces. Atalaya anticipates using contractors for all mining work, including drilling and blasting.

Based on a Cu price of \$2.60/lb, a total of 12 mining phases were designed from which a mine production schedule was estimated using variable net smelter return (NSR) cutoff grades ranging from \$10.00/t to \$14.00/t from year one to year five and \$8.14/t thereafter. Only 2-3 phases will be active at any given time in each year to manage ore blending, sinking rates, and stripping ratios. The schedule targets an annual copper production rate of approximately 30,000t after recoveries.

The following chart summarises the mineral reserve estimates by classification at a Cu price of \$2.60/lb.

#### Mineral Reserve Estimates by Classification

Classification	Mineral Reserves				
Classification	kt	Cu (%)			
Proven	56,769	0.44			
Probable	34,137	0.41			
Total	90,906	0.43			

Note: the above reserves are shown for the full Proyecto Touro. Further detail on the net attributable reserves to Atalaya can be seen at the end of this announcement.

Contained copper is estimated at nearly 392,000 tonnes. Waste rock tonnage is projected at about 221 Mt, resulting in an average strip ratio of 2.43. Mine life is projected at just over 12 years, excluding the preproduction stripping period. All of the mineral reserves are contained within the estimates of mineral resources.

# **Metallurgical Testwork and Processing**

The proposed process flowsheet uses conventional crushing, SAG mill - ball mill (SAB) grinding, followed by a flotation recovery circuit and concentrate thickening and filtration. Metallurgical testwork completed during the latest programme reported concentrates that averaged 29.1% Cu with an 87.0% recovery. The high-grade copper concentrate produced at Touro is expected to attract premiums in international markets owing to very low deleterious contents.

The concentrator and associated service facilities are designed for an initial phase 1 plant throughput of 6.0 Mt/y and then a phase 2 upgrade to increase plant throughput to 10 Mt/y prior to year eight. The phase 1 average head grade is 0.53% Cu with a peak of 0.57% Cu. The phase 2 average head grade is 0.35% Cu with a peak of 0.38% Cu. The overall result is consistent concentrate and copper production for both phases.

# Infrastructure and Services

The Project will utilise in-pit tailings disposal for a substantial part of the mine life owing to the multiple pit mine operating plan. During the initial years of operation, tailings will be stored in a surface Tailings Management Facility (TMF). After year eight, tailings will be stored in the exhausted Vieiro and Arinteiro open pits. The surface TMF will have an impervious liner and have a capacity of 44Mt of tailings, while the in-pit TMF will store 47Mt of tailings. A tailings thickening system will be implemented downstream of the concentrator to produce a total of 91Mt of thickened tailings with a final approximate 67% solids content.

The nominal power demand for the operation is approximately 25MW. Power for the Project will be supplied from the Portodemouros electrical substation via the nearby 66 kV distribution network. A new step-down substation and a 12 km 6.3 kV overhead power line will be constructed to the Project site.

Environmental impact assessment and rehabilitation plans were developed and submitted to the authorities as part of the permitting process. The final reclamation is designed to be implemented and completed in parallel with the cessation of mining in each area and as soon as possible after cessation of processing operations.

#### **Production Parameters and Project Economics**

Waste	221.33	M tonnes
Ore	90.91	M tonnes
Grade Cu	0.43	%
Contained Metal in concentrate,	346.82	k tonnes
Cu		
Payable Metal, Cu	340.74	k tonnes
Payable Metal, Ag	925.00	k ounces

#### Life of Mine Production

Life of mine capital costs detailed in the following table include both the initial development capital of \$164.91 million and a capital expansion in year eight of \$30.91 million. The capital expansion in year eight is required to increase throughput capacity up to 10 Mtpa for treatment of lower grade ore to maintain copper production rates from year eight onwards. Sustaining capital requirements average \$3.7 million per annum with a total expenditure

of \$55.2 million over the life of mine. The total estimated capital expenditure over the life of mine is \$259.54 million.

# Capital Expenditure

Area	Development Capex in million USD	Expansion Capex in million USD	Total LOM Capex in million USD
Mining	\$3.88	\$0.00	\$3.88
Ore Processing	\$61.91	\$18.73	\$80.64
Tailings & Waste	\$20.15	\$0.00	\$20.15
On Site Infrastructure	\$13.36	\$0.00	\$13.36
Indirect Costs	\$20.89	\$4.94	\$25.83
Owner's Costs	\$19.42	\$2.90	\$22.32
Miscellaneous	\$25.30	\$3.62	\$28.92
Sustaining Capex			\$55.22
Closure Capex			\$9.22
Total LOM Capex	\$164.91	\$30.19	\$259.54

Life of mine operating costs are based on a combination of estimated costs and actual operating costs obtained from Atalaya's existing Riotinto operations located in the south of Spain. Both fixed and variable costs have been estimated for the life of mine and are summarised below.

#### Life of Mine Operating Costs

			\$/lb
Description	Million USD	\$/tonne ore	Cu
Total Site Operating Costs	\$1,141.00	12.55	1.49
Total Off-Site Operating Costs	\$230.65	2.54	0.30
Total Operating Costs	\$1,371.65	15.09	1.79
C1 Cash Costs (net silver credits)			1.73
AISC (net silver credits)			1.85

Economic results are also summarised in the chart below assuming constant 2018 US dollars (US\$), amounts in Euros ( $\in$ ) converted to US\$ at an average life of mine exchange rate of  $\in$ 1.00:US\$1.15 and corporate tax rate of 25%.

# Summary of Key Economic Results

Parameter	Units	Value
Total Cu Production	tonnes Cu in	346,818
	concentrate	
Payable Cu	tonnes Cu in	340,741
Production	concentrate	
Mine Life	Years	12
Operating Cash Cost	US\$/lb	1.73

NPV after tax @ 8 %	US\$ million	179.9
IRR	%	20.5
Copper price	US\$/lb	3.00

This financial forecast shows that after tax, capital expenditures, and closure costs, the project will generate unlevered total free cash flow of \$489.3 million which results in an NPV of \$179.9 million at an 8% discount rate and an IRR of 20.5%. The overall project cash costs (C1), net of silver credits is US\$1.73 per pound of copper increasing to US\$1.85 per pound of copper, net of silver credits, adjusting for AISC.

The main conclusion of this report is that the Touro project is profitable under the evaluation scenario used herein. Sensitivity analyses on the project NPV were performed using 5% increments up to ± 20% on copper pricing, capital costs, operating cost inputs (mining, processing, offsite costs and G&A respectively), and exchange rate for the Euro:US dollar. The copper price variation has the greatest positive and negative impact on the project NPV. However, the project NPV remains positive in almost all scenarios, regardless of the decreased copper price or increase in capital and operating costs, as well as exchange rate differential.

# Alberto Lavandeira, CEO of Atalaya Mining Plc commented:

"The successful outcome of this study is a significant milestone for Atalaya, and validates our initial interest in the project. The strong project economics reinforce the Company's approach to operations: to discover and develop low-cost, safe and reliable assets. We look forward with confidence to updating the market with future progress at Proyecto Touro, and continuing our development towards becoming a multi-asset copper producer."

# About Atalaya Mining Plc

Atalaya is an AIM and TSX listed operational and development group which produces copper concentrates and silver by-product at its fully owned Proyecto Riotinto site in southwest Spain. In addition, the Group has a phased, earn-in agreement for up to 80% ownership of Proyecto Touro, a brownfield copper project in the northwest of Spain which is currently in the permitting stage. For further information, visit <u>www.atalayamining.com</u>

This announcement contains inside information for the purposes of Article 7 of Regulation (EU) no 596/2014.

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#### SUMMARY OF RESERVES AND RESOURCES

	>=	>= 8.14 NSR \$/t (Internal Cut-off)			>= 9.71 NSR \$/t (Breakeven Cut-off)					
	Gross	<b>NA</b> <sup>(1)</sup>	NSR			Gross	<b>NA</b> <sup>(1)</sup>	NSR		
Resource Class	kt	kt	\$/t	Cu%	RCu%	kt	kt	\$/t	Cu%	RCu%
Measured	69,258	6,926	22.55	0.42	0.37	67,886	6,789	22.82	0.42	0.37
Indicated	60,592	6,059	19.24	0.36	0.31	59,188	5,919	19.49	0.37	0.32
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Indicated	129,850	12,985	21.00	0.39	0.34	127,074	12,707	21.27	0.40	0.35
Inferred	46,521	4,652	19.33	0.37	0.32	45,822	4,582	19.48	0.37	0.32

<sup>1)</sup> NA: Net attributable

Note: gross are 100% of the resources attributable to Proyecto Touro whilst net attributable are those attributable to the Company at the current 10% ownership level. As referenced above, the Company has the option to increase its shareholding in the project to 80% upon certain milestones.

Mineral Reserve Estimates by Classification

	Mineral reserves						
Classification	Gross		Net att	ributable			
	kt	Cu (%)	Kt	Cu (%)			
Proven	56,769	0.44	5,677	0.44			
Probable	34,137	0.41	3,414	0.41			
Total	90,906	0.43	9,091	0.43			

Note: gross are 100% of the reserves attributable to Proyecto Touro whilst net attributable are those attributable to the Company at the current 10% ownership level. As referenced above, the Company has the option to increase its shareholding in the project to 80% upon certain milestones.

#### QUALIFIED PERSON AND QUALITY CONTROL

Information of a scientific or technical nature in this Proyecto Touro PFS was prepared under the supervision of Alan C. Noble P.E., an independent Qualified Person under the Canadian National Instrument 43-101, William Rose (WLR Consulting), Jaye Pickarts, Monica Barrero, Alistair Cadden (Golder), John Fleay and Matt Langridge (Minnovo).

Mr. Noble has verified the data disclosed, including sampling, analytical, and test data underlying the information or opinions contained in this announcement in accordance with standards appropriate to their qualifications. Mr. Noble is independent of Atalaya.

Atalaya will be filing the technical report pre-feasibility study for Proyecto Touro disclosed herein within 45 days of this press release. The report will be filed on SEDAR at www.sedar.com and on the Company's website.

# **GLOSSARY of TECHNICAL TERMS**

Cu	Copper
Cut-off grade	The minimum grade at which mineralized material can be economically mined and processed for the purpose of the reserve calculation.
Inferred Mineral Resource	That part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.
Indicated Mineral Resource	That part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.
lb	Pound.
Measured Mineral Resource	That part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.
Mineral Reserve	The economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. Mineral Reserves are sub-divided in order of increasing confidence into Probable Mineral Reserves and Proven Mineral Reserves. A Probable Mineral Reserve has a lower level of confidence than a Proven Mineral Reserve.

Mineral Resource	A concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.
Probable Mineral Reserve	A "Probable Mineral Reserve" is the economically mineable part of an Indicated and, in some circumstances, a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.
Proven Mineral Reserve	A "Proven Mineral Reserve" is the economically mineable part of a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified.

The above definitions of "Mineral Resource", "Inferred Mineral Resource", "Indicated Mineral Resource", and "Measured Mineral Resource" conform to CIM Definition Standards - For Mineral Resources and Mineral Reserves, as prepared by the CIM Standing Committee on Reserve Definitions, and adopted by CIM Council on 10 May 2014, and as required by NI 43-101, Standards of Disclosure for Mineral Projects, of the Canadian Securities Administrators.

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