

### Vancouver Resource Investment Conference

January 20-21, 2019



# Cautionary Statements

#### **Cautionary Note Regarding Forward Looking Statements:**

Statements made regarding matters which are not historical facts, are "forward looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 and Canadian securities legislation. These include statements regarding plans to acquire advanced or operating properties primarily in Mexico; the El Quevar project, including future development activities at El Quevar, potential for an underground mine within Yaxtche, resource estimates, the potential to expand through further exploration, and the impact of silver prices and management on the economics of the El Quevar project; the Rodeo property, including estimates of mineral resources and the possibility of the property providing a future source of material for our oxide mill; and the Velardeña Property, including the future status of the mines and the expected duration and annual net operating margin from the plant lease. These statements are subject to risks and uncertainties, including, but not limited to, lower than anticipated revenue from the oxide plant lease as a result of delays or problems at Hecla's mine or the oxide plant; earlier than expected termination of the lease or other causes; reasonability of the economic assumptions at the basis of the results of the El Quevar resource estimate and PEA; changes in interpretations of geological, geostatistical, metallurgical, mining or processing information and interpretations of the information resulting from future exploration, analysis or mining and processing experience; new information from drilling programs or other exploration or analysis; unexpected variations in mineral grades, types and metallurgy; fluctuations in silver and gold metal prices; failure of mined material or veins mined to meet expectations; increases in costs and declines in general economic conditions and continued excessive inflation in Argentina; fluctuations in exchange rates and changes in political conditions, in tax, royalty, environmental and other laws in Mexico and Argentina; financial marke

#### **Exploration Results:**

This presentation includes information regarding selected drill and sampling results on certain of our exploration properties. Complete drill and sampling results may be viewed by visiting our website at <a href="https://www.goldenminerals.com">www.goldenminerals.com</a>.

#### **Cautionary Note to U.S. Investors Regarding Estimates of Measured, Indicated and Inferred Resources:**

Certain terms in this presentation, such as "measured", "indicated" and "inferred" resources, are defined in Canadian National Instrument 43-101; however, these terms are not recognized under SEC Industry Guide 7. The SEC normally permits issuers to report mineralization that does not constitute SEC Industry Guide 7 compliance "reserves" as in-place tonnage and grade without reference to unit measures. US investors are cautioned not to assume that any or all of measured, indicated, inferred or potential resources are economically or legally mineable or that these resources will ever be converted into Guide 7 reserves. "Inferred mineral resources" have a high degree of uncertainty as to their existence and it cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. U.S. investors are urged to consider closely the disclosure in our Form 10-K and other SEC filings. You can review and obtain copies of these filings from the SEC's website at http:www.sec.gov/edgar.shtml.



## **Business Strategy**

- Establish Golden Minerals as a mid-tier precious metals producing mining company, with focus primarily in Mexico and Argentina
- Advance the El Quevar Project (Salta, Argentina)
- Explore properties selected for high grades, low development costs and near-term production
- Priority to properties within haulage distance of Golden's Velardeña mills
- Acquire advanced or operating properties, primarily in Mexico



# 2018 Accomplishments

- Maintained solid cash balance throughout 2018 despite substantial exploration project spending
- Reported first positive quarterly EPS: \$.02 in Q3
- Continued to successfully manage oxide mill lease to Hecla, generating \$3.6M net operating margin through Q3
- Completed positive PEA for El Quevar (\$44.9M NPV)<sup>1</sup>
- Completed improved PEA for Santa Maria (\$10.6M NPV)<sup>1</sup>
- Hired lead geologist for El Quevar to keep project advancement on track
- Hired new exploration manager for Mexico to increase generative exploration activities
- Made significant progress with Yoquivo; acquired Navegantes exploration property
- Profitably generated and sold the Celaya project to The Electrum Group



### Recent Project Developments

### **El Quevar**

- Positive initial PEA, Sept. 2018: \$44.9M NPV (5% disc. rate), 6 yr. life of mine,
   1,200 tpd, average Ag grade 409 gpt, cash flow \$80M
- Q4 2018: drilling with goal of increasing size of resource

#### **Santa Maria**

- Second PEA, Sept. 2018: \$10.6M NPV (5% disc. rate), 4.2 yr. life of mine, 218 tpd, average Ag grade 331 gpt, cash flow \$12.4M
- Low (\$1M) development costs, 159% IRR: cashflow should support other projects' expenditures

### Yoquivo

- Newer exploration project; underexplored precious metals district showing similar mineralization to adjacent Ocampo mining district
- Oct. 2018: reported high-grade gold-silver assays from surface sampling program covering 40% of property

Note: All dollar amounts in U.S. Dollars unless noted otherwise





Stock Symbol	NYSE American and TSX: AUMN		
Corporate Headquarters	Golden, Colorado		
Stock Price (01/17/19), 52-Wk Hi/Lo (US)	\$0.30 (\$0.48/\$0.19)		
Shares Outstanding (01/18/19)	95.6 M		
Warrant Shares Outstanding	11.5 M		
Options & Restricted Stock Units	2.3 M		
KELTIP* Units	1.6 M		
Shares Outstanding - Fully Diluted	111.0 M		
One Month Avg. Daily Volume (as of 01/17/19)**	0.18M		
Debt (9/30/18)	\$0.0 M		
Cash (9/30/18)	\$5.0 M		



# Why Invest in AUMN?

Income	<ul> <li>~\$4.5M annual net operating margin from plant lease in Mexico</li> <li>Expected duration through 2020</li> <li>\$0.05 per share per year</li> </ul>				
Resources	<ul> <li>M&amp;I resources: 78M oz AgEq¹</li> <li>Inferred resources: 39M oz AgEq</li> <li>Total resource: 1.2 AgEq oz in the ground per share of AUMN</li> </ul>				
Value	<ul> <li>El Quevar PEA \$44.9M NPV (2018)<sup>2</sup></li> <li>Santa Maria PEA \$10.6M NPV (2018)<sup>3</sup></li> <li>Velardeña mine &amp; 300 tpd sulfide plant on stand-by</li> </ul>				
Cash	\$5.0M (as of 9/30/18)				
Debt	Zero				
<b>Project Pipeline</b>	Argentina: El Quevar Mexico: Santa Maria, Yoquivo, Navegantes, Mogotes, Flechas				
Experience	Experienced management and directors; strong technical staff				

<sup>&</sup>lt;sup>1</sup> Silver equivalents calculated using Ag:Au ratios of 74:1 (Santa Maria), 70:1 (Velardeña) and 72:1 (Rodeo).

<sup>&</sup>lt;sup>2</sup> Amec Foster Wheeler E&C Services Inc., 9/4/2018. NPV calculated using 5% discount rate. Resources per 2/26/18 NI 43-101 Report.

<sup>&</sup>lt;sup>3</sup> Tetra Tech, 9/14/2018. NPV calculated using 5% discount rate.



### 3 Year AUMN and Silver

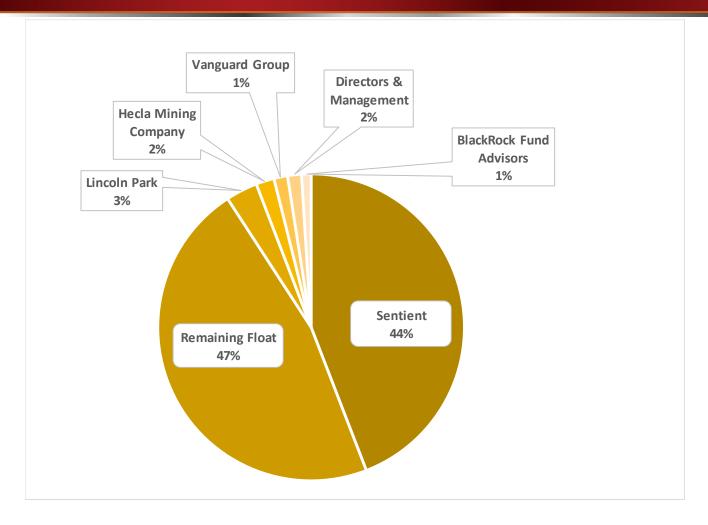


Source: Kitco.com for Ag prices; NYSE Connect for AUMN prices



# Strong Shareholder Base

### **AUMN**



95.6M issued and outstanding shares

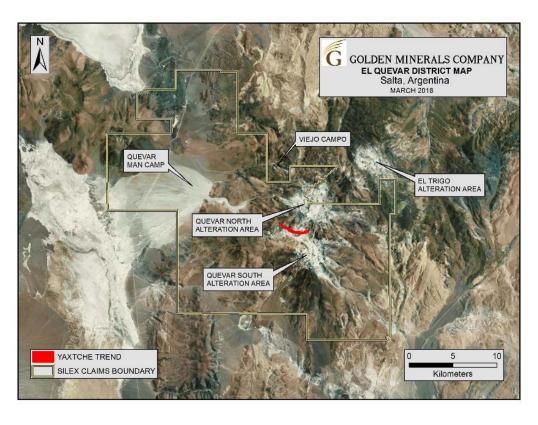


### Precious Metals Focus in Argentina and Mexico





### El Quevar - District Potential

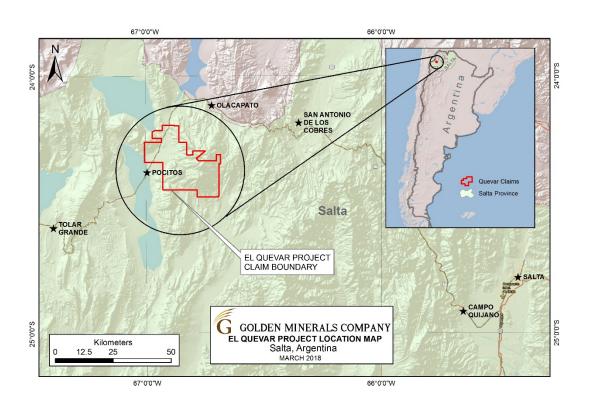


- Silver project in Salta Province, 57,000 ha
- Existing resource covers only the Yaxtché deposit – 2km strike length deposit within much larger property
- Much of the area outside
   Yaxtché remains under-explored
- Deposit open to the east and west
- Additional high-grade silver targets have been identified by drilling and through geophysical studies



# El Quevar – Significant Exploration to Date

- >1,200 m underground exploration
- >400 drill holes, ~100,000 m
- Numerous drill holes outside of resource with strong Ag values
- 2012 43-101 resource for Yaxtché – envisioned open pit on east side, underground mining on west side
- Q1 2018 new 43-101
   resource based on 2012 drill
   data but modeled to delineate
   higher-grade mineralization



2018 43-101 presents a high-grade resource with potential for an underground mine within Yaxtché



### El Quevar – 2018 Resource Estimate

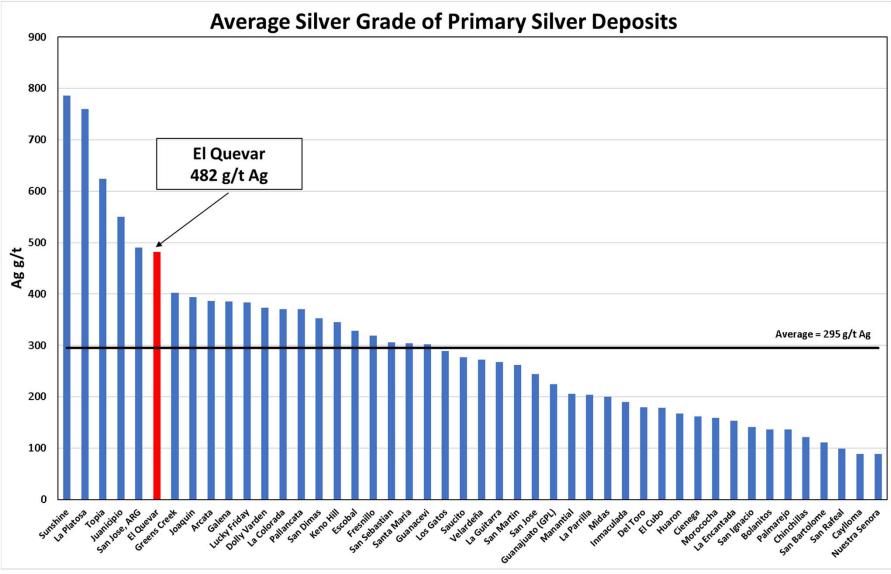
Classification	Cut-off Ag (g/t)	Tonnes (M)	Ag Grade (g/t)	Ag (M oz)
Indicated				
Sulfide	250	2.63	487	41.1
Oxide	250	0.30	434	4.2
Inferred				
Sulfide	250	0.31	417	4.1

- Based on new indicator model using tighter controls and modeling approach designed to better delineate the higher-grade mineralization
- Used 250 g/t Ag cutoff
- New estimate retains 80% of the Ag oz at 3x the grade of the 2012 resource estimate

Recent re-modeling project achieved resource goal of 3M tons at >400 g/t Ag



## El Quevar: High Grade Resource



Weighted average Ag grade of reserves and measured and indicated resources of selected representative silver deposits in Western Hemisphere, from published data compiled internally.



### PEA Results El Quevar

### **PEA results**

- ➤ 4.8 million oz Ag annual production
- ➤ 487 g/t Ag M&I resource grade
- > \$9.45 per oz Ag AISC
- > \$44.9 million NPV5
- Significant potential to expand through further exploration



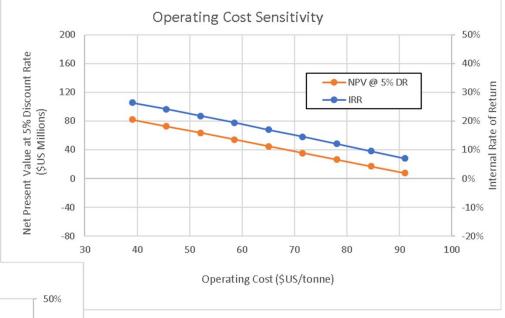
# Project is very sensitive to silver price: an increase in the price of silver will greatly enhance the economics of the project.

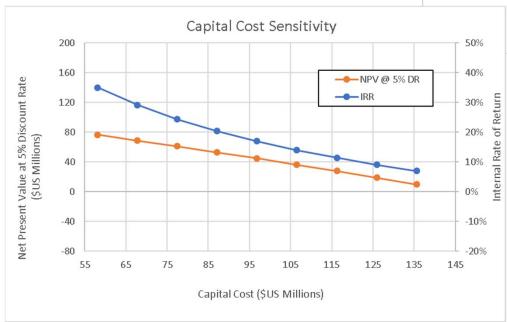
PEA based on underground mining of sulfide material at 1,200 tpd and producing a single product flotation concentrate containing 11.5 kg/t Ag over a 6-year mine life. \$97 M initial capital cost including \$16M in contingency. Three year trailing average Ag price used: \$16.66 /oz.



### PEA Results El Quevar

- Operating costs calculated using exchange rate of 28:1 Arg. Peso to \$US
- Current exchange is 38:1
- Labor is 40% of operating cost
- Operating costs in \$US terms will decrease if the new exchange rate persists

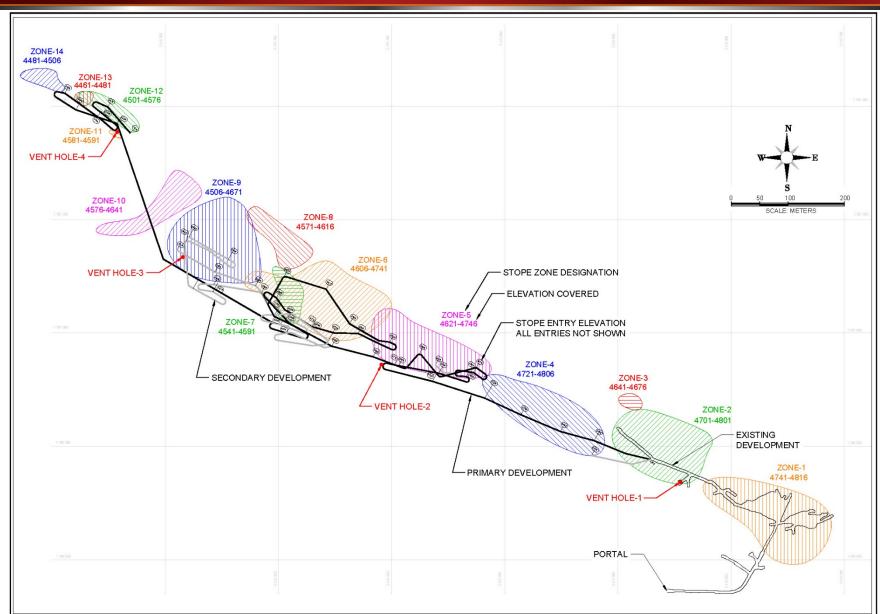




- Capital costs are estimated conservatively
- Reasonable prudence in purchasing and construction management may decrease capital estimate

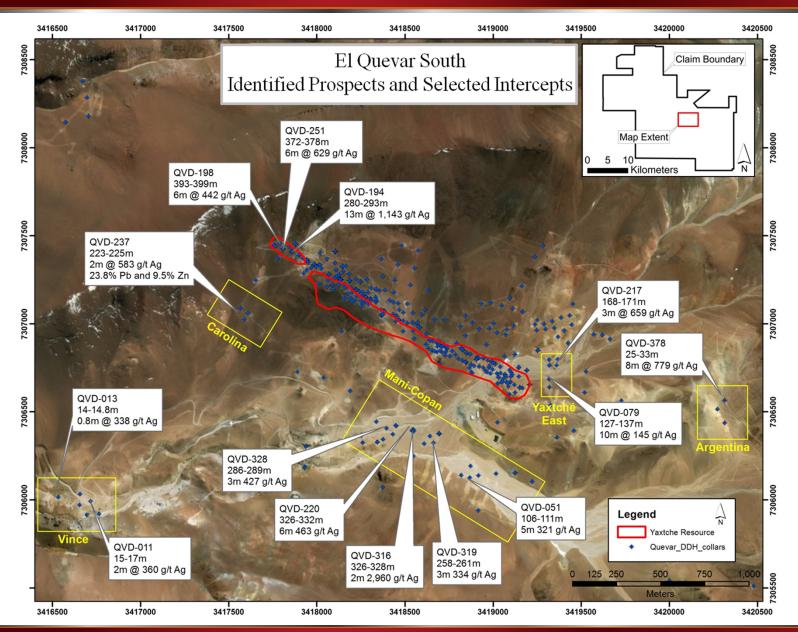


## Mine Plan El Quevar



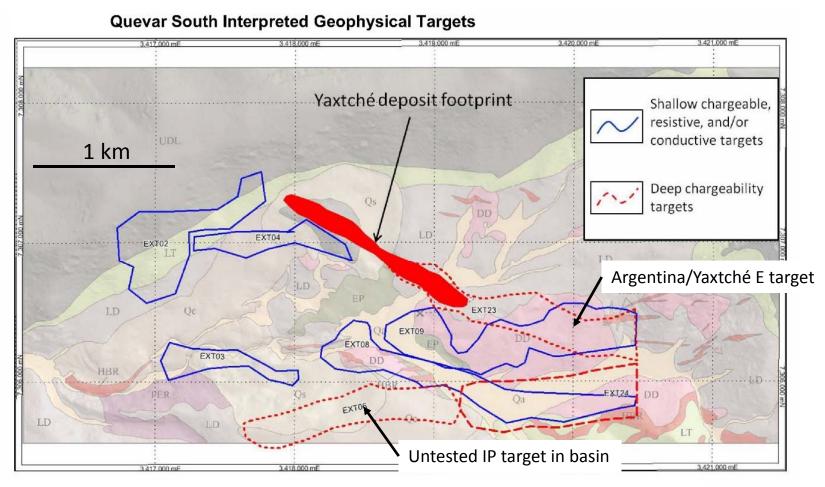


# El Quevar - Exploration





## El Quevar - Exploration



From new inversion of existing IP data. Results of new study have identified new targets.



### Principal Projects - Mexico

#### **SANTA MARIA**

- Updated PEA and NI 43-101 resource reported Oct. 2018
- Completed ~4,850 m drilling program, 2017-18, with goal of expanding resource
- Test mined: 7,100 dry tonnes mined and processed since 2015 with average grades of 338 g/t Ag and 0.8 g/t Au

#### **RODEO**

- Near-surface gold deposit
- Potential source of material for Velardeña oxide mill after Hecla lease concludes (2020)
- NI 43-101 resource reported Jan. 2017



#### **VELARDEÑA**

- Oxide plant leased to Hecla (\$4-5M annual net operating margin expected)
- Hecla has secured the right to use the plant through 2020, subject to Hecla early termination right
- Sulfide plant available for ore processing
- Ample equipment on hand to support new mine operation
- 2 silver and gold underground mines now on care & maintenance

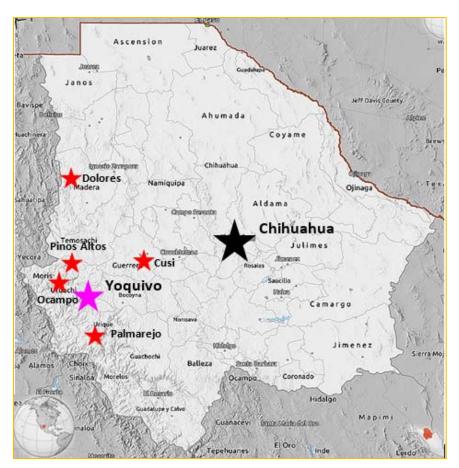
#### **YOQUIVO**

- Gold-silver exploration property near Ocampo mining district
- Surface sampling returned high-grade assays, Oct.
   2018





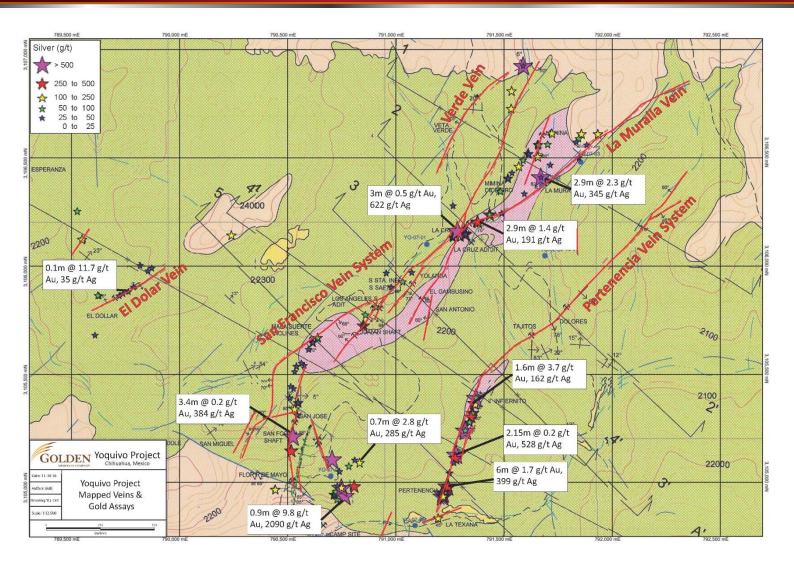
- Silver-gold exploration project located adjacent to the Ocampo mining district in western Chihuahua State, Mexico
- Golden holds an option to purchase 6 concessions covering 1,900 ha for payments totaling \$0.5 million over 4 years, subject to a 2% NSR royalty on production capped at \$2M
- Surface sampling conducted; reported high-grade assays in Oct. 2018:
  - 4m assaying 2.3 g/t Au and 489 g/t Ag, Central Breccia Zone
  - 2.9m assaying 2.3 g/t Au and 345 g/t Ag, San Francisco Vein
  - 6m assaying 1.7 g/t Au and 399 g/t Ag, Pertenencia Vein
  - 3.4m assaying 0.2 g/t Au and 384 g/t Ag, San Francisco Vein
- Mapping/sampling conducted on only 40% of the property to date



**Project Location** 



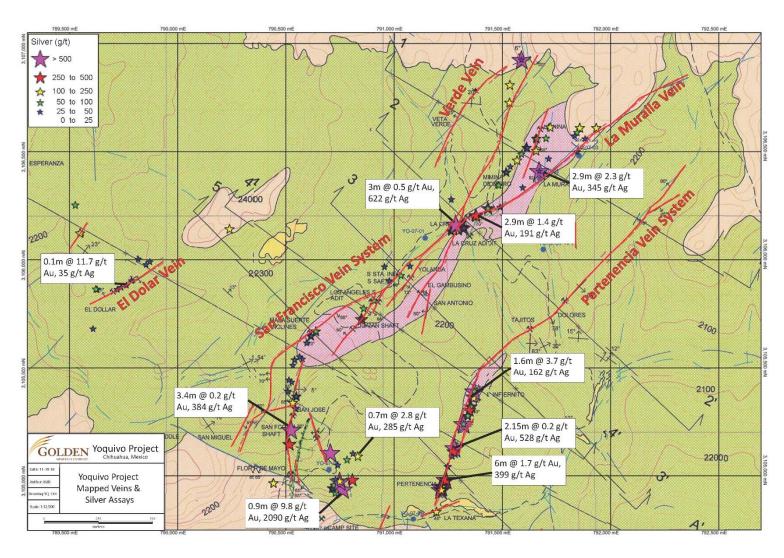
# Yoquivo



Yoquivo project geology and surface sample locations – selected gold assays



# Yoquivo



Yoquivo project geology and surface sample locations – selected silver assays



### Velardeña - Overview



Sulfide plant

Classification	Tonnes (M)	Ag (Moz)	Au (Moz)	AgEq (Moz)	Ag g/t	Au g/t
Measured	0.4	4.3	0.1	8.9	321	4.9
Indicated	1.0	9.5	0.1	18.4	311	4.1
Inferred	1.6	16.4	0.2	33.2	320	4.7

- Resources per Tetra Tech NI 43-101 resource estimate effective Feb. 20, 2015
- Assumes prices current as of Dec. 2014 of \$17/oz Ag and \$1,250/oz Au
- Silver equivalents are calculated at 60:1

- 560 ha Ag/Au property
  with two underground
  mines and two processing
  plants; oxide plant leased
  to Hecla since mid-2015
- Mines on care and maintenance until current metals prices and mine plans indicate sustainable positive operating margin
- NI 43-101 PEA (Feb. 2015;
   Tetra Tech) in place



### Velardeña – Lease of Oxide Plant

- Successful partnership since mid-2015
- Oct. 2018: Hecla exercised option to secure use of the plant through 2020
- Q2 2017: Hecla completed tailings impoundment expansion



Oxide plant

Source of cash to Golden Minerals: \$4-5M annual net operating margin, comprised of fixed & variable fees



# **Total Company Resources**

					Grade	
	Tonnes	Silver	Gold	AgEq.	Silver	Gold
	(M)	(M oz)	('000 oz)	(M oz)	g/t	g/t
VELARDEÑA PROPERTIES						
Measured	0.4	4.3	65.0	8.9	321	4.9
Indicated	1.0	9.5	126.0	18.4	311	4.1
Inferred	1.6	16.4	239.0	33.2	320	4.7
EL QUEVAR						
Indicated	2.9	45.3	-	45.3	482	n/a
Inferred	0.3	4.1	-	4.1	417	n/a
SANTA MARIA						
Measured	0.0	0.4	1.1	0.5	271	0.8
Indicated	0.2	1.6	5.7	2.0	291	1.0
Inferred	0.3	2.3	7.6	2.9	272	0.9
RODEO				Gold Eq. (Koz)		
Indicated	0.4	0.2	46.0	47.8	11	3.3

- Velardeña resources per Tetra Tech NI 43-101, 2/20/2015. Silver equivalents calculated at 70:1.
- El Quevar resources per Amec Foster Wheeler E&C Services, Inc., NI 43-101, 02/26/2018. Cutoff grade 250 gpt Ag.
- Santa Maria resources per Tetra Tech NI 43-101 & PEA, 09/14/2018. Silver equivalents calculated at 74:1. Cutoff grade 180 gpt.
- Rodeo resources per Tetra Tech NI 43-101, 01/26/2017. Gold equivalents calculated at 72:1. Cutoff grade 0.83 gpt Au.



# Appendix

#### ACCOMPANYING NOTES TO EL QUEVAR 2018 RESOURCE TABLE SHOWN ON PG. 11

- The Company retained Amec Foster Wheeler E&C Services, Inc., a Wood Group PLC company ("Wood"), to complete an updated Mineral Resource estimate in accordance with Canadian National Instrument 43-101 ("NI 43-101"). The estimate is based on the same drilling data as the 2012 technical report prepared by RPMGlobal (formerly Pincock Allen & Holt; "RPM") but uses updated geologic controls and a modeling approach designed to delineate the higher-grade mineralization.
- The 2018 El Quevar model was constructed using a hybrid approach that combined the efficiency of implicit modeling with the fine-tuning capabilities of probability-assigned constrained kriging (PACK). Structural trends were first constructed to define the orientation of the mineralization. These trends were then imported into implicit modeling software to construct wireframes that defined the limits of the silver mineralization. PACK was then used to estimate tonnes and grades within the wireframes through initially outlining the economic mineralization using indicator blocks, and then estimating grade within the blocks using ordinary kriging.
- The independent Qualified Person who prepared the Mineral Resource estimate is Gordon Seibel, a Registered Member of the Society for Mining, Metallurgy and Exploration, RM SME, who is a Principal Geologist with Wood.
- The effective date of the estimate is February 26, 2018. Mineral Resources are estimated using the CIM Definition Standards for Mineral Resources and Reserves (2014). The PEA is dated September 4, 2018.
- Reported Mineral Resources contain no allowances for hanging wall or footwall contact boundary loss and dilution. No mining recovery has been applied.
- Rounding as required by reporting guidelines may result in apparent differences between tonnes, grade and contained metal content.



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