



Corporate Presentation

August 6, 2020

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 relating to the Rodeo property, including the Rodeo PEA results and the possibility and timing of future production from the Rodeo property; the Velardeña PEA results and anticipated future operations at the Velardeña properties, including the timing of further testing and design of bio-oxidation processes, and the expected duration of, and annual net operating margin from, the oxide plant; the El Quevar project, including efforts to significantly increase resource size, ongoing drilling and plans for additional exploration, projections from the El Quevar PEA, potential for an underground mine within Yaxtché, resource estimates, the potential to expand through further exploration, the impact of silver prices on the economics of the El Quevar project and statements regarding the transaction with Barrick with respect to the El Quevar project; plans to acquire and explore potential properties in Mexico, Argentina and Nevada; the Santa Maria property, including projections from the Santa Maria PEA and anticipated closing of the option transaction with Fabled Copper Corp.; the Yoquivo project, including resource estimates, mineralization expectations and future drilling plans; the Sand Canyon project, including anticipated drilling results and future plans of advancement; and Golden’s business strategy and financial plans and projections. 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 the third party’s mine or the oxide plant (including the potential future re-suspension of non-essential activities in Mexico, including mining, due to COVID-19) or other causes; Golden’s ability to timely obtain the necessary permits for commencement of production at Rodeo; reasonability of the economic assumptions at the basis of the results of the Rodeo PEA, updated Velardeña PEA, El Quevar PEA and Santa Maria 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 the United States, Mexico and Argentina; and financial market conditions and the availability of external financing, if required.

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 www.goldenminerals.com.

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

Certain terms in this presentation, such as “measured”, “indicated” and “inferred” mineral resources, are defined in and required to be disclosed by NI 43-101. We advise U.S. investors that these terms are not recognized under the SEC Industry Guide 7. Accordingly, the disclosures regarding mineralization in this presentation may not be comparable to similar information disclosed by Golden Minerals in the reports it files with the SEC. The estimation of measured resources and indicated resources involves greater uncertainty as to their existence and economic feasibility than the estimation of proven and probable reserves. The estimation of inferred resources involves far greater uncertainty as to their existence and economic viability than the estimation of other categories of resources. US investors are cautioned not to assume that any or all of the minerals resources are economically or legally mineable or that these mineral resources will ever be converted into mineral reserves. In addition, the SEC normally only permits issuers to report mineralization that does not constitute SEC Industry Guide 7 compliant “reserves” as in-place tonnage and grade without reference to unit amounts. 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>

We are a gold and silver company based in Golden, Colorado and we will increase shareholder value through our plans to:

- Establish Golden Minerals as a mid-tier precious metals producer with focus primarily in Mexico
- Advance the Rodeo gold project with mining and processing projected to start in early 2021
- Continue to prepare the Velardeña Properties for a potential restart using bio-oxidation for gold processing
- Advance the El Quevar Project (Salta, Argentina) via partner-funded exploration (Barrick)
- Explore high potential properties already in pipeline in Mexico, Argentina, and Nevada





RODEO

- Initial PEA results (April 2020) show \$22.5 M NPV(8) gold project with very low start-up capital cost (\$1.4M) (*PEA assumes prices of \$1,622/oz Au and \$14.38/oz Ag.*)
- Began permitting to obtain permits for early 2021 start-up of open pit mining operation

VELARDEÑA

- Transformative PEA update showing \$85M NPV 8 completed April 2020 (*PEA assumes prices of \$1,324/oz Au; \$16.23/oz Ag*)
- Successful bio-oxidation test results: 91% Au/92% Ag recovery from post-oxidation cyanide leaching of pyrite-arsenopyrite concentrates

EL QUEVAR

- April 2020: announced earn-in agreement with Barrick Gold Corp including \$1M private placement
- Allows partner funded advancement of the project at no cost to Golden
- Golden carried to pre-feasibility with excellent royalty structure

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

¹ See Resource Footnotes page

| | |
|-------------------------|--|
| Revenue | <ul style="list-style-type: none"> • \$3M annual net operating margin from oxide plant lease in Mexico • Expected duration through 2020 followed by Rodeo production in 2021 • 2021 expected net revenue from Rodeo of \$10 Million¹ |
| Resources | <ul style="list-style-type: none"> • M&I resources: 82M oz AgEq² • Inferred resources: 49M oz AgEq |
| Value | <ul style="list-style-type: none"> • \$164 M total PEA values vs. \$65M market cap -- with all PEAs assuming Au/Ag prices below current levels • Velardeña PEA \$85.9M NPV (2020)¹ • El Quevar PEA \$44.9M NPV (2018)¹ • Rodeo PEA \$22.5M NPV (2020)¹ • Santa Maria PEA \$10.6M NPV (2018)¹ • Velardeña mine and 300 tpd sulfide mill – on stand-by |
| Project Pipeline | <ul style="list-style-type: none"> • Argentina: El Quevar • Mexico: Velardeña, Rodeo, Santa Maria, Yoquivo • USA: Sand Canyon, NV |
| Cash | \$3.6M (as of 06/30/20), + \$7.9M (net) from July 2020 equity offering |
| Experience | Experienced management and directors; strong technical staff |

¹ See Resource Footnotes page

² Silver equivalents calculated using Ag:Au ratios of 74:1 (Santa Maria), 80.6:1 (Velardeña) and 113:1 (Rodeo)

Precious metals focus in Mexico, Argentina and USA (Nevada)



RODEO

- Obtaining permits for open pit mining operation to potentially start in 2021
- Near-surface gold deposit
- PEA completed Apr. 2020 – 2-yr, \$22.5M NPV8 project¹
- Material to be trucked to Velardeña oxide mill after Hecla lease concludes (2020)

SANTA MARIA

- Updated PEA and NI 43-101 resource reported Oct. 2018
- NPV8 of \$10.6 M¹
- LOI for option to sell for \$4M plus 1% NSR royalty signed with Fabled Copper Corp.



VELARDEÑA

- PEA & updated resource completed Q2 2020: \$85.9M NPV8¹
- PEA incorporates bio-oxidation processing; recent BIOX test results show greatly improved Au recoveries
- Plan for oxide plant to process Rodeo material in 2021
- Sulfide plant available for ore processing
- Ample equipment on hand to support new mine operation

YOQUIVO

- 1,975 ha property covering an unexplored gold-silver district adjacent to the Ocampo and Orisyvo deposits
- Surface sampling and mapping identified multiple high-grade epithermal veins
- Drilling targeted for Q3-Q4 2020

¹ See Resource Footnotes page

- Near-surface Au deposit 80km west of Velardeña that Golden intends to bring to production in 2021
- April 2020 PEA – open pit operation; material processed at Velardeña oxide mill
- \$24.9M after-tax free cash flow over two years

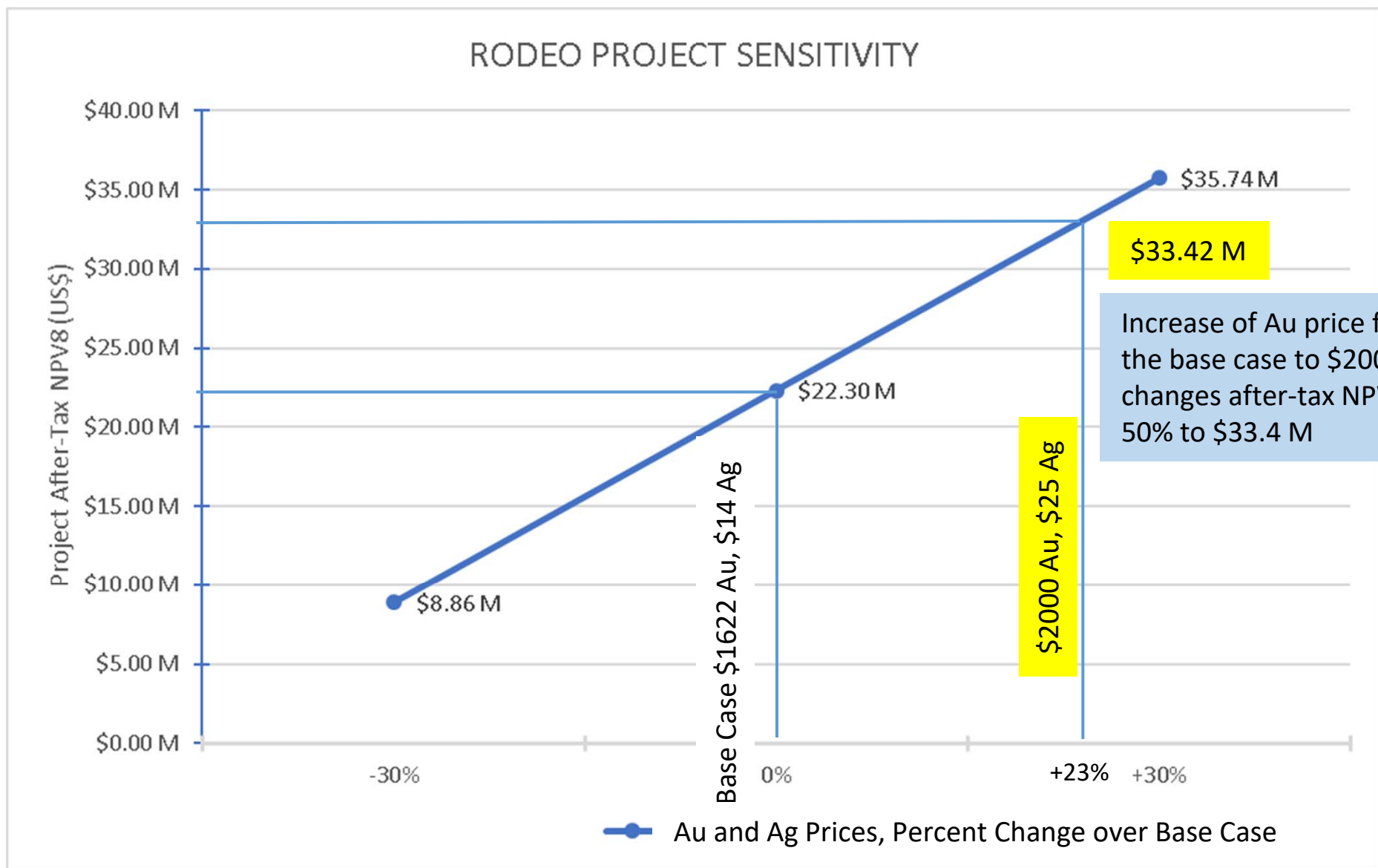
PEA Highlights:

- After-tax NPV8: \$22.5M
- Life of Mine (“LOM”) after-tax free cash flow: \$24.9M
- Pre-production development time: 1 quarter (3 months)
- LOM: 9 quarters
- Total pre-production costs, including capital and contingency: \$1.5M
- After-tax payback period: during the first production quarter
- LOM contained production: 41 Koz Au; 118 Koz Ag
- LOM payable production : 34 Koz Au ; 89 Koz Ag
- LOM average gold grade: 3.31 g/t; average silver grade: 9.65 g/t
- Cash cost per Au oz, net of by-product credits: \$798
- All-in sustaining cash cost per Au oz, net of by-product credits: \$843

Note: PEA assumes prices of \$1,622/oz gold and \$14.38/oz silver



Rodeo Project Sensitivity to Metals Prices



Increase of Au price from the base case to \$2000/oz changes after-tax NPV by 50% to \$33.4 M

\$2000 Au, \$25 Ag

\$33.42 M

Base Case \$1622 Au, \$14 Ag

\$22.30 M

RODEO PROJECT SENSITIVITY

Project After-Tax NPV8 (US\$)

\$40.00 M
\$35.00 M
\$30.00 M
\$25.00 M
\$20.00 M
\$15.00 M
\$10.00 M
\$5.00 M
\$0.00 M

-30%

0%

+23% +30%

Au and Ag Prices, Percent Change over Base Case

- 560 ha Ag/Au property with two underground mines and two processing plants; mines on care & maintenance
- Updated PEA/TR published May 2020; incorporates bio-oxidation processing designed specifically to address past challenges with Au recovery
- Recent testing of bio-oxidation & subsequent leaching of pyrite concentrates from Velardeña achieved **91% Au & 92% Ag** recovery from pyrite – arsenopyrite concentrates



| Velardeña Resources | | | | | | | | | | |
|---------------------|-----------|--------------|--------------|-----------|-----------|--------|--------|----------|---------|---------|
| Classification | Tonnes | Grade Ag g/t | Grade Au g/t | Grade Pb% | Grade Zn% | Ag Moz | Au toz | AgEq Moz | Pb M lb | Zn M lb |
| Measured | 404,000 | 317 | 5.43 | 1.6 | 1.76 | 4.12 | 71 | 9.80 | 14 | 16 |
| Indicated | 946,000 | 303 | 4.71 | 1.52 | 1.79 | 9.22 | 143 | 20.67 | 32 | 37 |
| M&I | 1,351,000 | 307 | 4.92 | 1.54 | 1.78 | 13.34 | 214 | 30.47 | 46 | 53 |
| Inferred | 1,765,000 | 354 | 4.73 | 1.72 | 1.86 | 20.08 | 268 | 41.54 | 67 | 72 |

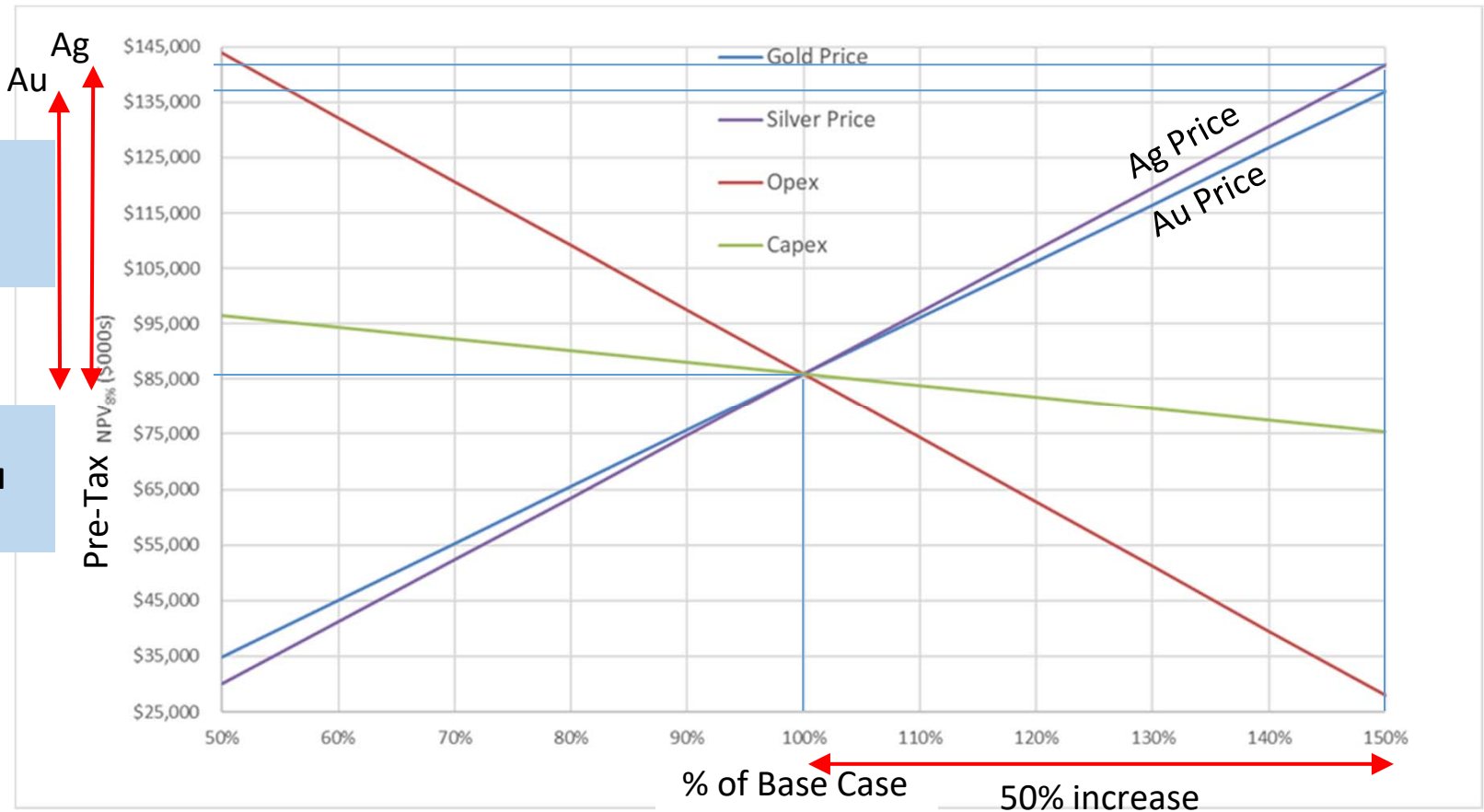
- Resources per Tetra Tech PEA NI 43-101 TR, March 2020. Prices are 3-year trailing averages as of Dec. 2019: \$16.30/oz Ag and \$1,305/oz Au. Silver equivalents calculated at 80.6:1.
- See Resource Footnotes page for additional information.

PEA Highlights:

- Pre-tax NPV8: (US)\$85.9M
- Pre-tax IRR: 139%
- Pre-tax Payback period: 1 year
- After-tax NPV8 \$70.1M
- Total pre-production capital cost: \$10.3M, including 10% contingency*
- Post-production and sustaining capital & development: \$15.9M, including 10% contingency
- LOM: 10 years
- LOM contained silver: 12.3 Moz; LOM contained gold: 188 Koz
- LOM average silver grade: 337 g/t; LOM average gold grade: 5.15 g/t
- LOM pre-tax free cash flow: \$130.2M
- LOM payable silver: 10.2 Moz; LOM payable gold production: 119 Koz
- LOM payable AgEq: 19.7 Moz (Au and Ag only at a ratio of 80Ag:1Au)
- Cash cost per payable Ag oz, net of by-product credits: \$0.92
- All-in sustaining cost per payable Ag oz, net of by-product credits: \$3.48

*Capital estimate for bio-oxidation plant includes additional contingency

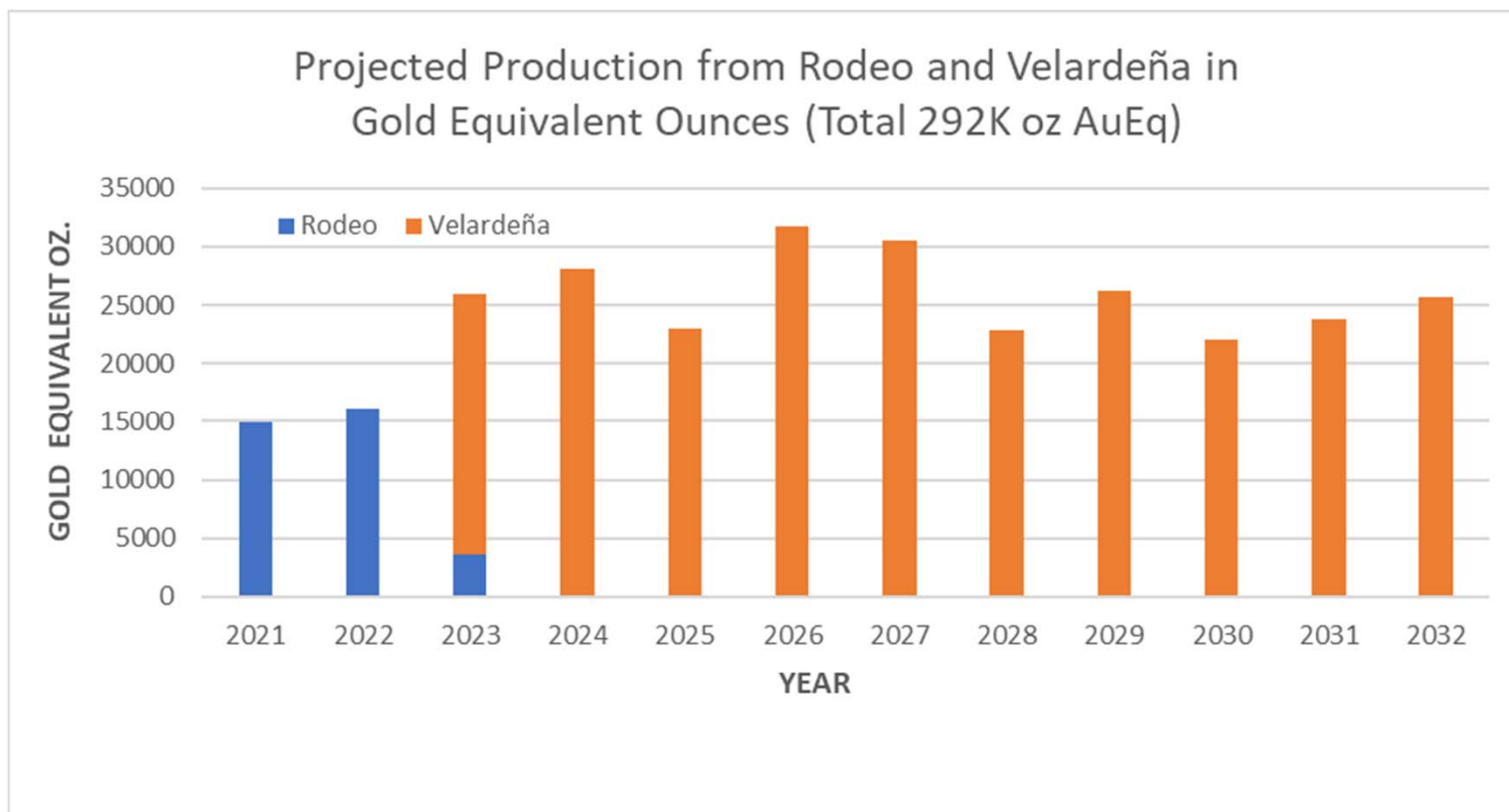
PEA assumes prices of \$1,324/oz gold, \$16.23/oz silver, \$0.90/lb lead and \$1.25/lb zinc



Recent gains in Au and Ag prices show a potential increase in projected project pre-tax NPV8 to \$192.9 million or 2.2 times the base case pre-tax NPV of \$85.9 M

PEA assumes base case prices of \$1,324/oz gold, \$16.23/oz silver, \$0.90/lb lead and \$1.25/lb zinc

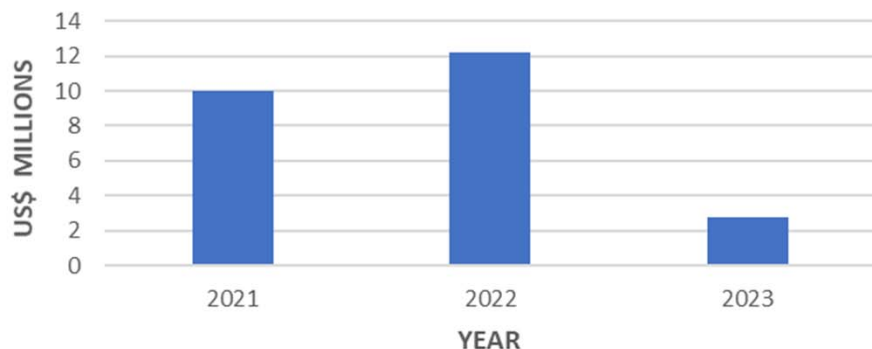
Projected Production – Rodeo and Velardeña



- Au equivalent calculated at 80:1 Ag:Au and includes only Au and Ag. Does not include Pb and Zn production from Velardeña.
- Based on PEA projections from published reports.

Projected Net Cash Flow - Rodeo and Velardeña

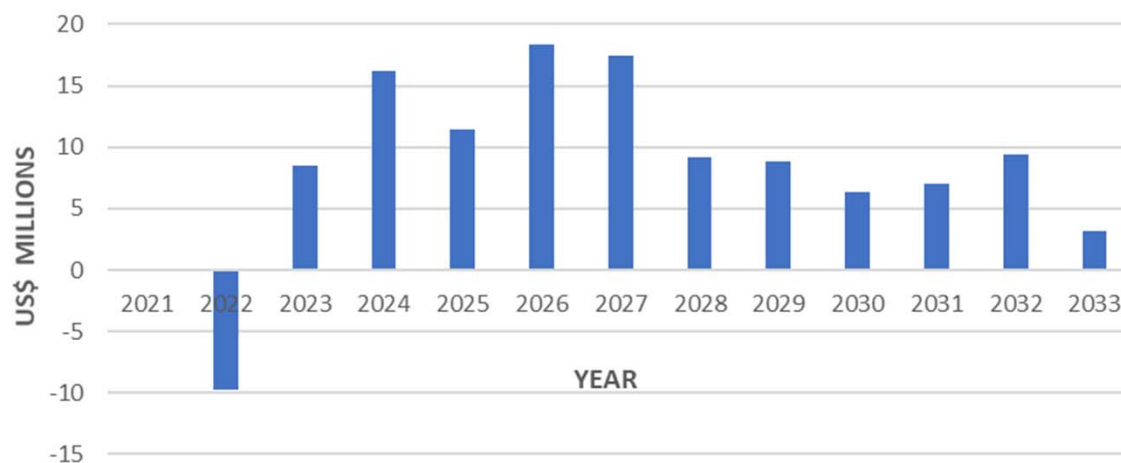
Projected After Tax Net Cash Flow from Rodeo (net after capital payback) - Total \$25 Million



Based on PEA projections from published reports. For Rodeo, assumes prices of \$1,622/oz gold and \$14.38/oz silver.

Based on PEA projections from published reports. For Velardeña, assumes prices of \$1,324/oz gold, \$16.23/oz silver, \$0.90/lb. lead, and \$1.25/lb. zinc

Projected After Tax Net Cash Flow from Velardeña (net after capital payback) - Total \$106 Million



- Successful partnership with Hecla since mid-2015
- Oct. 2018: Hecla secured use of the plant through 2020
- Q217: Hecla completed tailings impoundment expansion
- 2020 Rodeo PEA incorporates processing its material through Velardeña's oxide plant after conclusion of Hecla lease



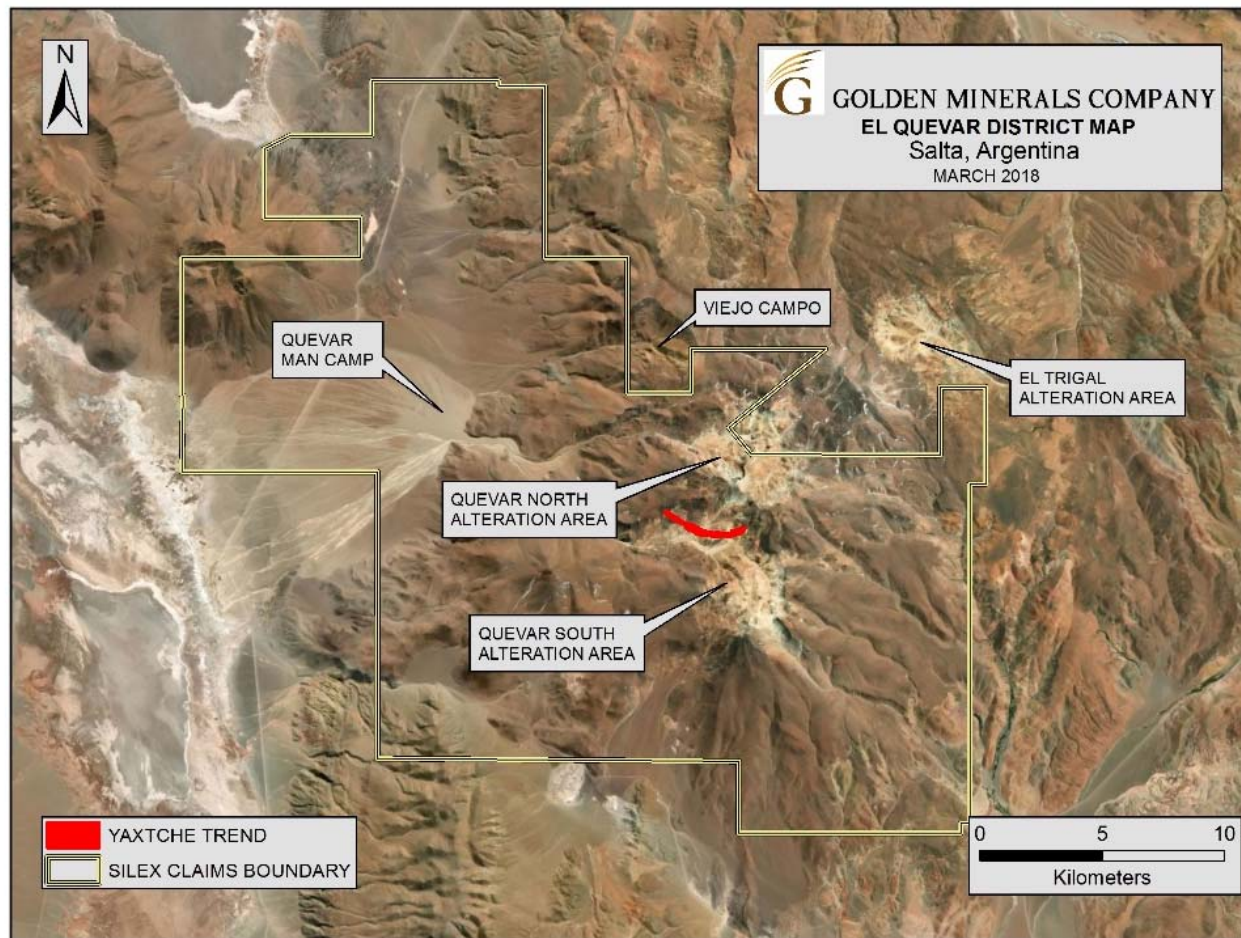
Oxide plant

Source of cash 2020: >\$3M net operating margin from lease.
2021: \$10M net operating margin from proposed Rodeo production.

Agreement partners us with a premier company with demonstrated success in finding & developing major gold projects - while we maintain upside project potential

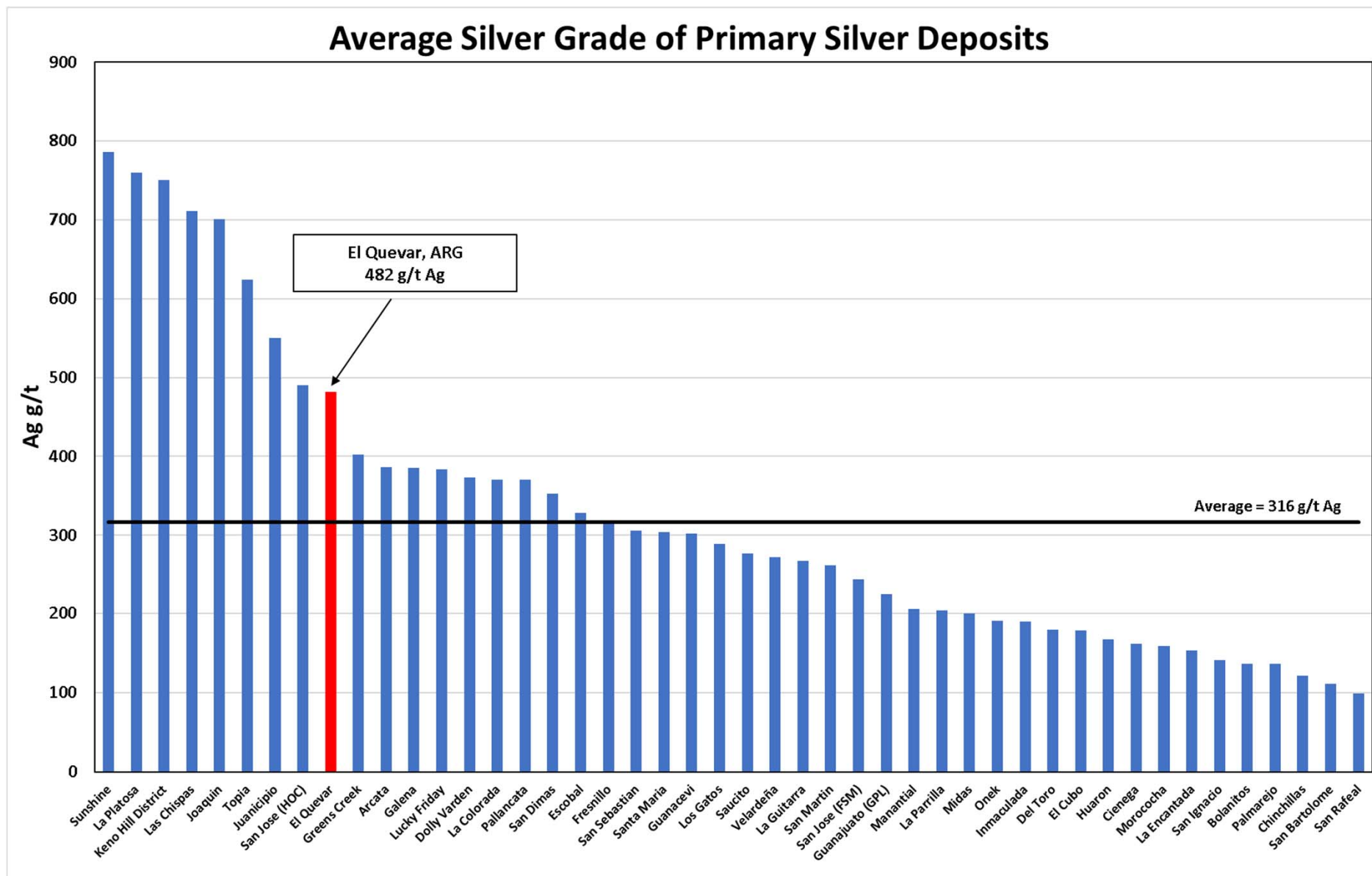
- Barrick recognizes excellent potential for plus 5M ounce gold deposit
- Barrick purchased \$1M of Golden Minerals shares
- Barrick to fund holding costs of the property and reimburse Golden for camp costs
- In addition to the 30% interest retained on earn-in, a 5% NSR silver royalty is held by Golden on the first 29M silver ounces produced
- Barrick may earn an undivided 70% interest in the project by:
 - Spending \$10M on exploration
 - Delivering an NI 43-101 compliant Pre-Feasibility Study describing a potentially profitable operation with mineral resources of not less than 2M AuEq oz, and
 - Delivering a notice of exercise to Golden within 8 years





- High-grade silver project in Salta Province, 57,000 ha
- NPV5 \$44.9 M from 2018 PEA showing 4.8M oz per year Ag production at Yaxtché deposit.
- Most of the area outside Yaxtché remains unexplored, & deposit is open to the east and west
- Additional high-grade silver targets have been identified by drilling and through geophysical studies
- Signed earn-in agreement with Barrick Gold Corp., April 2020

Significant expansion potential



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

RODEO – Q3-Q4

- ☐ Permitting for mining Q3-Q4 ⇒ applications submitted mid-June 2020
- ☐ Timeline of advancement toward intended 2021 production ⇒ in process and dependent on receipt of permits
- ☐ 34-hole 1400 meter in-fill drill program completed to further define deposit details ⇒ assays pending

☒ VELARDEÑA – Q3-Q4

Plans to advance further testing and detailed design of bio-oxidation process for possible 2022-2023 start-up

☒ YOQUIVO – Q3-Q4

Drill program projected to start in Q3

☒ SANTA MARIA – Q2-Q3

Signed Letter of Intent with Fabled Copper Corp., July 2020. Closing scheduled for Q3.

☒ SAND CANYON - Q1-Q2

Phase one drilling complete; results from Sand Canyon target confirm narrow epithermal veins and breccias with low anomalous values of Ag, As, Sb, and Mo. Plans to continue to advance the project are in preparation.

| | Tonnes (M) | Silver (M oz) | Gold (K oz) | AgEq. (M oz) | Grade Silver g/t | Gold g/t |
|------------------------------|-------------------------|----------------------------|---------------------------|---------------------------|------------------------|-------------|
| <u>VELARDEÑA</u> | | | | | | |
| Measured | 0.40 | 4.1 | 71.0 | 9.8 | 317 | 5.4 |
| Indicated | 0.95 | 9.2 | 143.0 | 20.7 | 303 | 4.7 |
| Inferred | 1.77 | 20.1 | 268.0 | 41.5 | 354 | 4.7 |
| <u>EL QUEVAR</u> | | | | | | |
| Indicated | 2.93 | 45.3 | - | 45.3 | 482 | n/a |
| Inferred | 0.31 | 4.1 | - | 4.1 | 417 | n/a |
| <u>SANTA MARIA</u> | | | | | | |
| Measured | 0.04 | 0.4 | 1.1 | 0.5 | 271 | 0.8 |
| Indicated | 0.17 | 1.6 | 5.7 | 2.0 | 291 | 1.0 |
| Inferred | 0.26 | 2.3 | 7.6 | 2.9 | 272 | 0.9 |
| <u>RODEO</u> | | | | Gold Eq. (K oz) | | |
| Indicated | 0.40 | 0.2 | 46.0 | 48.8 | 11 | 3.3 |
| Total Company M&I | M Tonnes 4.9 | Silver Moz 60.8 | Gold koz 266.8 | Moz AgEq. 81.7 | | |

- Velardeña resources per Tetra Tech PEA NI 43-101 TR, March 2020. Silver equivalents calculated at 80.6:1.
- El Quevar resources per Amec Foster Wheeler E&C Services, Inc., a Wood Group PLC company. 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.

| | |
|--|---------------------------|
| Stock Symbol | NYSE American & TSX: AUMN |
| Share Price, 52-Wk Hi/Lo (US) | \$0.46 (\$0.58/\$0.13) |
| Shares Outstanding | 149 M |
| Warrant Shares | 26 M |
| Options & Restricted Stock Units | 4 M |
| KELTIP ¹ Units | 4 M |
| Shares Outstanding - Fully Diluted | 182 M |
| 3-Month Avg. Daily Volume ² | 1.7 M |
| Cash (06/30/20)* | \$3.6 M |

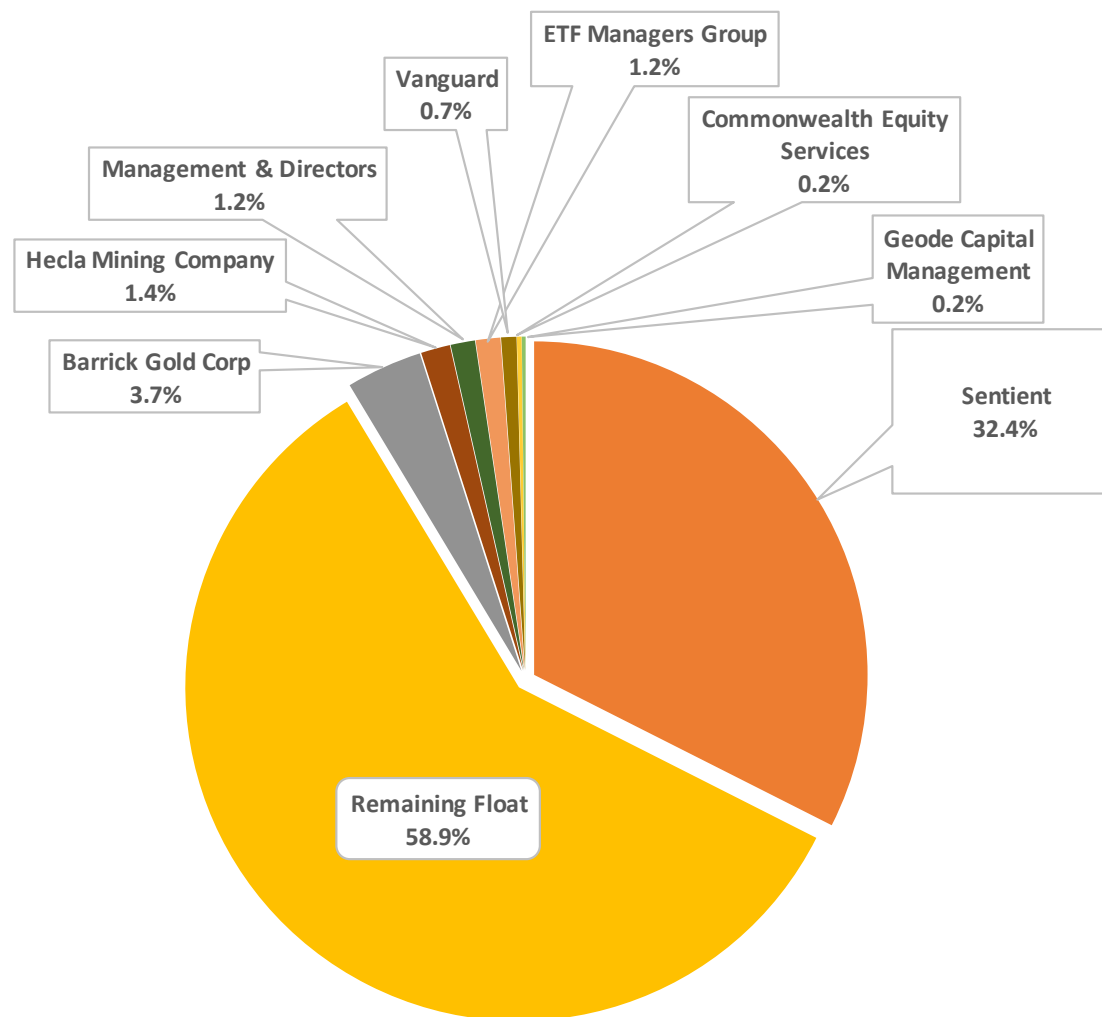
* Additional cash subsequent to 6/30/20: +\$7.9M (net)
from July 2020 equity offering

As of 09/10/2020 unless otherwise noted

¹ Key Employee Long-Term Incentive Plan ² NYSE consolidated volume only. Source – NYSE Connect



AUMN



- Figures per most recent public filings or other available records
- Figures exclude KELTIP units, restricted stock units, warrants & spousal holdings

ACCOMPANYING NOTES TO EL QUEVAR 2018 RESOURCE TABLE

- 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.

PEA AND RESOURCE INFORMATION:

VELARDEÑA:

- PEA and Resource: Tetra Tech, PEA NI 43-101 Technical Report, issue date May 8, 2020. PEA assumes metal prices of \$1,324/oz Au and \$16.23/oz Ag.
- Metal prices for NSR cutoff & AgEq calcs are 3-year trailing average as of December 2019: (US) \$16.30/troy oz Ag, \$1,305/troy oz Au, \$0.99/lb Pb and \$1.27/lb Zn. AgEq = 80.6:1.

EL QUEVAR:

- PEA: Wood Group. NI 43-101 Technical Report on PEA. Sept. 4, 2018. NPV calculated using 5% discount rate.
- Resource: Amec Foster Wheeler E&C Services Inc. a Wood Group PLC company. NI 43-101 Technical Report on Updated Mineral Resource Estimate. Feb. 26, 2018.

SANTA MARIA:

- PEA: Tetra Tech. NI 43-101 Technical Report & Updated PEA. Sept. 14, 2018. NPV calculated using 5% discount rate.

RODEO:

- PEA: Mineral Resources Engineering, effective date April 1, 2020, assumes metal prices of \$1,622/oz Au and \$14.38/oz Ag. Resource: Tetra Tech, NI 43-101 Technical Report – Mineral Resource Estimate, Jan. 26, 2017.



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