SILVER STANDARD

CREATING VALUE

September 2016 Corporate Presentation



Cautionary Notes

Cautionary Note Regarding Forward-Looking Statements

This presentation contains forward-looking information within the meaning of Canadian securities laws and forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 (collectively, "forward-looking statements"). All statements, other than statements of historical fact, are forward-looking statements. Generally, forward-looking statements can be identified by the use of words or phrases such as "expects," "anticipates," "plans," "projects," "estimates," "assumes," "intends," "strategy," "goals," "objectives," "potential," "believes," or variations thereof, or stating that certain actions, events or results "may," "could," "would," "might" or "will" be taken, occur or be achieved, or the negative of any of these terms or similar expressions. These forward-looking statements or information relate to, among other things: future production of gold, silver and other metals; future costs of inventory, and cash costs per payable ounce of precious metals sold; expected exploration and development expenditures; the prices of precious metals; the timing of cessation of San Miguel open pit mining activities and stockpile processing at the Pirquitas mine; the effects of laws, regulations and government policies affecting our operations or potential future operations; future successful development of our projects; the anticipated benefits from the acquisition of Claude Resources Inc. ("Claude Resources"); expected timing to complete engineering studies at the Chinchillas project and make a decision about whether to move forward with the project; the sufficiency of our current working capital, anticipated operating cash flow or our ability to raise necessary funds; estimated production rates for gold, silver and other metals; timing of production and the cash costs and total costs of production at the Marigold mine, the Seabee Gold Operation and the Pirquitas mine; the estimated cost of sustaining capital; ongoing or future development plans and capital replacement, improvement or remediation programs; the estimates of expected or anticipated economic returns from our mining projects, including future sales of metals, concentrate or other products; and our plans and expectations for our properties and operations.

These forward-looking statements are subject to a variety of known and unknown risks, uncertainties and other factors that could cause actual events or results to differ from those expressed or implied, including, without limitation, the following: uncertainty of production, development plans and cost estimates for the Marigold mine, the Seabee Gold Operation, the Pirquitas mine and our projects; our ability to replace Mineral Reserves; our ability to successfully integrate the acquisition of Claude Resources; subject to exercising our election to proceed, our ability to complete and successfully integrate Golden Arrow Resources Corporation's ("Golden Arrow") Chinchillas project, on a joint venture basis, into our current operations; commodity price fluctuations; political or economic instability and unexpected regulatory changes; currency fluctuations; the possibility of future losses; general economic conditions; fully realizing the value of our shareholdings in Pretium Resources Inc. and our other marketable securities, due to changes in price, liquidity or disposal cost of such marketable securities; potential export duty and related interest on past production and sales of silver concentrate from the Pirquitas mine; counterparty and market risks related to the sale of our concentrate and metals; uncertainty in the accuracy of Mineral Reserves and Mineral Resources estimates and in our ability to extract mineralization profitably; differences in U.S. and Canadian practices for reporting Mineral Reserves and Mineral Resources; lack of suitable infrastructure or damage to existing infrastructure; future development risks, including start-up delays and cost overruns; our ability to obtain adequate financing for further exploration and development programs and opportunities; uncertainty in acquiring additional commercially mineable mineral rights; delays in obtaining or failure to obtain governmental permits, or non-compliance with our permits; our ability to attract and retain qualified personnel and management; potential labour unrest, including labour actions by our unionized employees at the Pirquitas mine; the impact of governmental regulations, including health, safety and environmental regulations, including increased costs and restrictions on operations due to compliance with such regulations; reclamation and closure requirements for our mineral properties; social and economic changes following closure of a mine, including the expected closure of the Pirquitas mine in 2017, may lead to adverse impacts and unrest; unpredictable risks and hazards related to the development and operation of a mine or mineral property that are beyond our control; indigenous peoples' title claims and rights to consultation and accommodation may affect our existing operations as well as development projects and future acquisitions; failure to effectively manage our tailings facilities at the Seabee Gold Operation could negatively impact production; assessments by taxation authorities in multiple jurisdictions; recoverability of value added tax and changes to the collection process in Argentina; claims and legal proceedings, including adverse rulings in litigation against us and/or our directors or officers; compliance with anti-corruption laws and internal controls, and increased regulatory compliance costs; complying with emerging climate change regulations and the impact of climate change; extreme weather conditions may adversely impact production and profitability at the Seabee Gold Operation; uncertainties related to title to our mineral properties and the ability to obtain surface rights; the sufficiency of our insurance coverage; civil disobedience in the countries where our mineral properties are located; operational safety and security risks; actions required to be taken under human rights law; competition in the mining industry for mineral properties; shortage or poor quality of equipment or supplies; an event of default under our convertible notes may significantly reduce our liquidity and adversely affect our business; failure to meet covenants under our senior secured revolving credit facility; conflicts of interest that could arise from certain of our directors' involvement with other natural resource companies; information systems security threats; and those other various risks and uncertainties identified under the heading "Risk Factors" in our most recent Annual Information Form filed with the Canadian securities regulatory authorities and Annual Report on Form 40-F filed with the U.S. Securities and Exchange Commission ("SEC").

The foregoing list is not exhaustive of all factors and assumptions which may have been used. We cannot assure you that actual events, performance or results will be consistent with these forward-looking statements, and management's assumptions may prove to be incorrect. Our forward-looking statements reflect current expectations regarding future events and operating performance and speak only as of the date hereof and we do not assume any obligation to update forward-looking statements if circumstances or management's beliefs, expectations or opinions should change other than as required by applicable law. For the reasons set forth above, you should not place undue reliance on forward-looking statements. All references to "$" in this presentation are to U.S. dollars unless otherwise stated.

Qualified Persons: Except as otherwise set out herein, the scientific and technical information contained in this presentation relating to the Marigold mine has been reviewed and approved by Thomas Rice and James N. Carver, each of whom is a SME Registered Member, a Qualified Person under National Instrument 43-101 — Standards of Disclosure for Mineral Projects ("NI 43-101") and our employee. The scientific and technical data relating to the Seabee Gold Operation has been reviewed and approved by Gordon Reed, P.Eng., and F. Carl Edmunds, P. Geo., each of whom is a Qualified Person under NI 43-101 and our employee. The scientific and technical information relating to the Pirquitas mine has been reviewed and approved by Bruce Butcher, P.Eng., and F. Carl Edmunds, P. Geo., each of whom is a Qualified Person under NI 43-101 and our employee.

Cautionary Note to U.S. Investors

This presentation includes Mineral Reserves and Mineral Resources classification terms that comply with reporting standards in Canada and the Mineral Reserves and the Mineral Resources estimates are made in accordance with NI 43-101. NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. These standards differ significantly from the requirements of the SEC set out in SEC Industry Guide 7. Consequently, Mineral Reserves and Mineral Resources information included in this presentation is not comparable to similar information that would generally be disclosed by domestic U.S. reporting companies subject to the reporting and disclosure requirements of the SEC. Under SEC standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically produced or extracted at the time the reserve determination is made. In addition, the SEC's disclosure standards normally do not permit the inclusion of information concerning "Measured Mineral Resources," "Indicated Mineral Resources" or "Inferred Mineral Resources" or other descriptions of the amount of mineralization in mineral deposits that do not constitute "reserves" by U.S. standards in documents filed with the SEC.

Cautionary Note Regarding Non-GAAP Measures

This presentation includes certain terms or performance measures commonly used in the mining industry that are not defined under International Financial Reporting Standards ("IFRS"), including cash costs per payable ounce of precious metals sold, realized metal prices and adjusted net income (loss). Non-GAAP measures do not have any standardized meaning prescribed under IFRS and, therefore, may not be comparable to similar measures reported by other companies. We believe that, in addition to conventional measures prepared in accordance with IFRS, certain investors use this information to evaluate our performance. The data presented is intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. These non-GAAP measures should be read in conjunction with our consolidated financial statements. Readers should refer to our management's discussion and analysis, available under our corporate profile at www.sedar.com or on our website at www.silverstandard.com, under the heading "Non-GAAP and Additional GAAP Financial Measures" for a more detailed discussion of how we calculate such measures and for a reconciliation of such measures to IFRS terms.

High-Quality Intermediate Precious Metals Producer

Production Growth and Scale

- Three mining operations with prospective land positions
- Producing 400,000 oz AuEq in 2016 *(on annualized basis)*

Generating Free Cash Flow

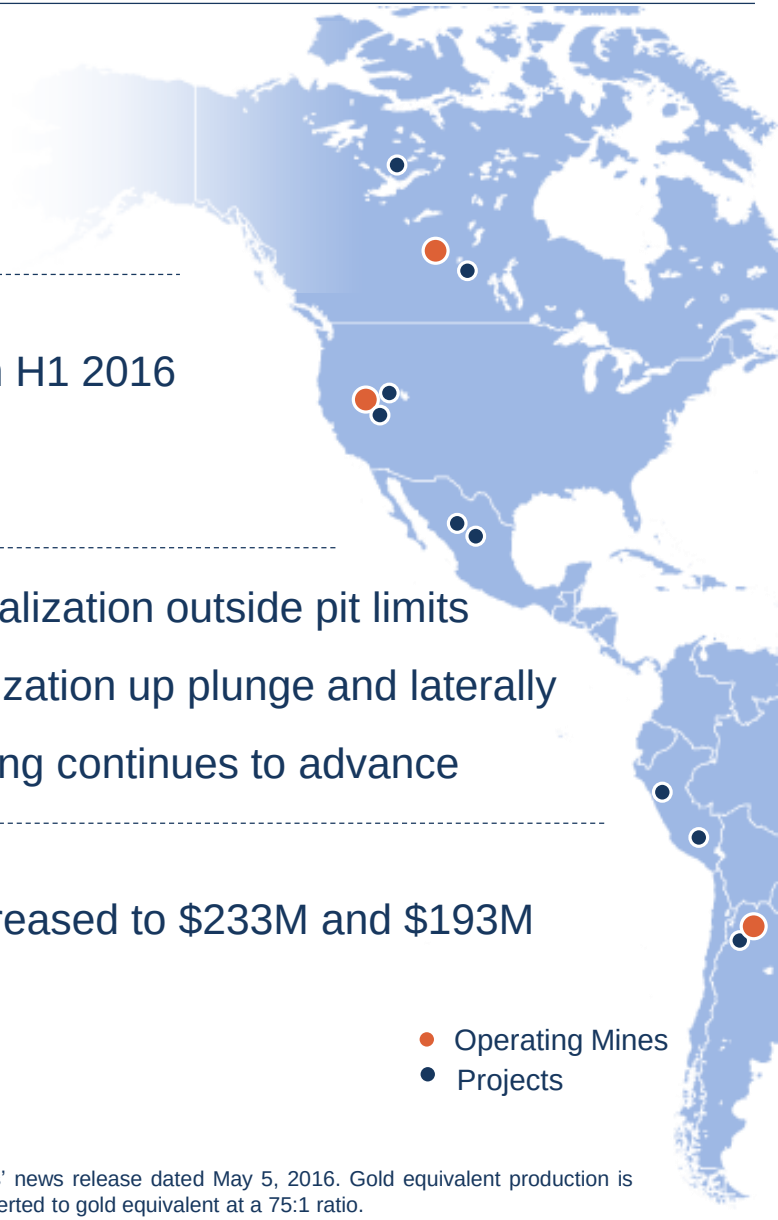
- Operating cash flow totaled $43M in H1 2016
- Net income of $15M in H1 2016

Creating Mine Life Extension

- Drilling at Marigold identifying mineralization outside pit limits
- Drilling at Santoy extending mineralization up plunge and laterally
- Chinchillas engineering and permitting continues to advance

Strong Financial Position

- Cash and marketable securities increased to $233M and $193M
- Convertible notes of $265M



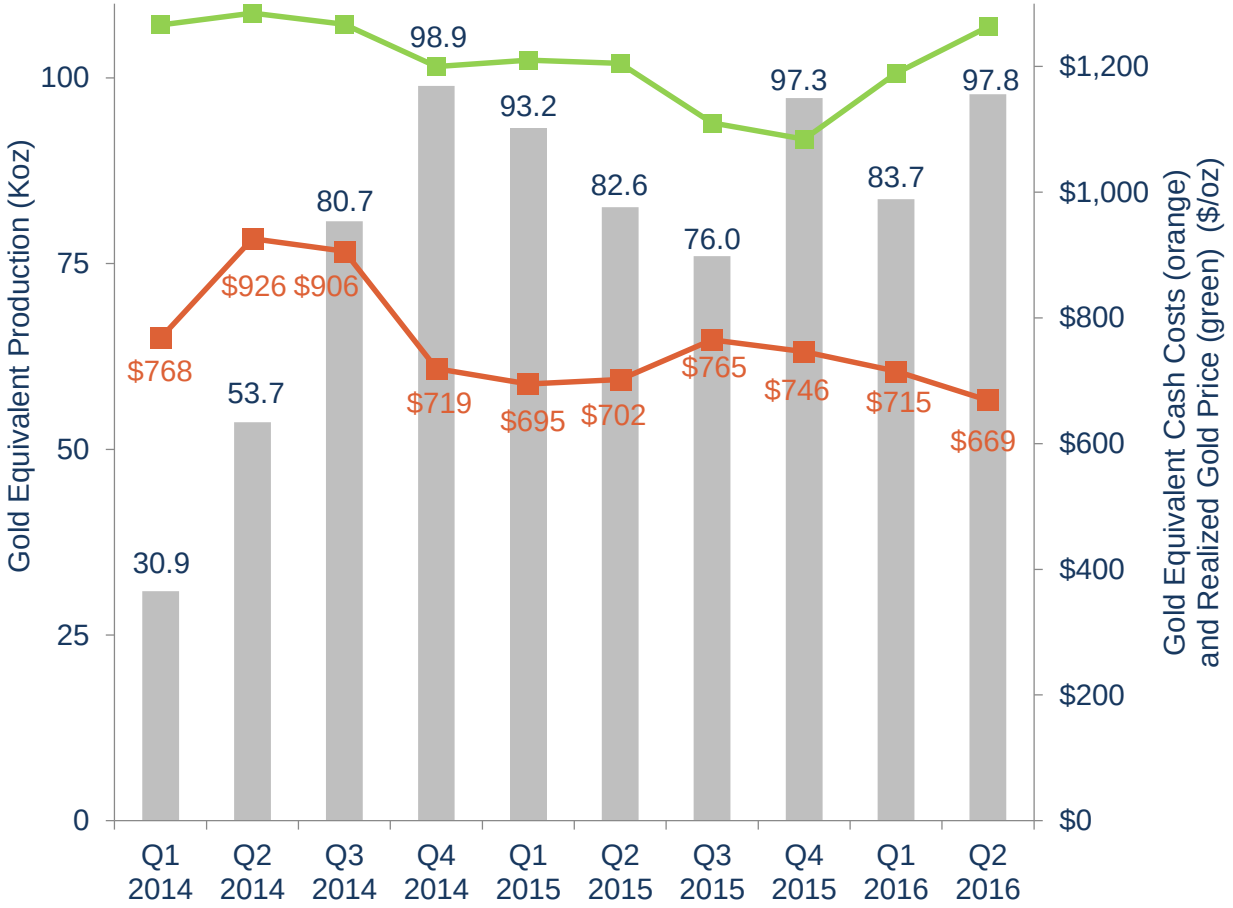
Notes: For 2016 guidance, refer to Silver Standard's new release dated August 10, 2016 and Claude Resources' news release dated May 5, 2016. Gold equivalent production is calculated based on the mid-point of previously announced 2016 guidance for our three operations, with silver converted to gold equivalent at a 75:1 ratio.

Strong H2 2016 with Investment Catalysts

Marigold Production Growth	▪ 5-year average annual production increases by ~35,000oz ▪ H2 2016 gold production 100,000 to 110,000 oz
Seabee Performance Excels	▪ Operational Excellence program update Q4 2016 ▪ Resources to Reserves conversion drilling at Seabee
Exploration Success Continues	▪ Resource expansion drilling at Marigold extended into H2 ▪ Up-dip discovery at Santoy mine complex for follow up H2
Pursuing Pirquitas LOM Extension	▪ EIS submission for Chinchillas project Q3 2016 ▪ Chinchillas project development decision in Q4 2016

Notes: For 2016 guidance, refer to our new release dated August 10, 2016. Please see "Cautionary Note Regarding Non-GAAP Measures" in this presentation.

Delivering Scale and Margin



98Koz

Gold Eq. Production in 2Q16

$669/oz

Gold Eq. Cash Costs in 2Q16

Notes: Gold Eq. production includes gold ounces produced at the Seabee Gold Operation for the entire second quarter of 2016, including the period from April 1, 2016 to May 30, 2016, prior to our acquisition of Claude Resources. Gold Eq. cash costs include cash costs for the Seabee Gold Operation for the period from May 31, 2016 to June 30, 2016, the period for which we were entitled to all economic benefits of the mine following our acquisition. Gold Eq. ounces have been established using the realized silver price and the weighted average realized gold price at each of our operations in the respective quarters and applied to the recovered metal content of the gold and silver ounces produced, as applicable. Gold price used to determine Q1 2014 values is the average gold spot price for the quarter. Realized metal prices and cash costs are non-GAAP financial measures. Please see "Cautionary Note Regarding Non-GAAP Measures" in this presentation.

Creating Value with Operational Excellence

Marigold: Moving 80Mt of Material per Year, a 50% Increase since 2014

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DRILL



Reduced drills to four from six

BLAST



Improved blasting pattern / products and loading sequence

LOAD

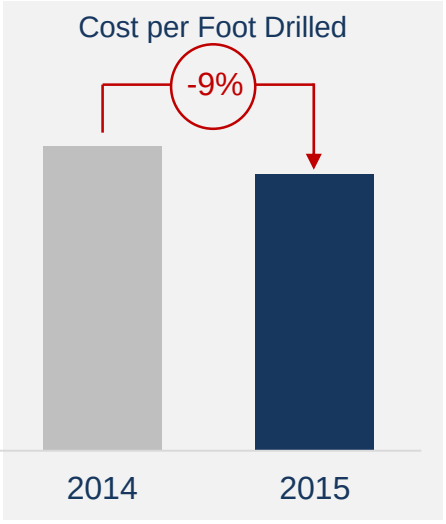


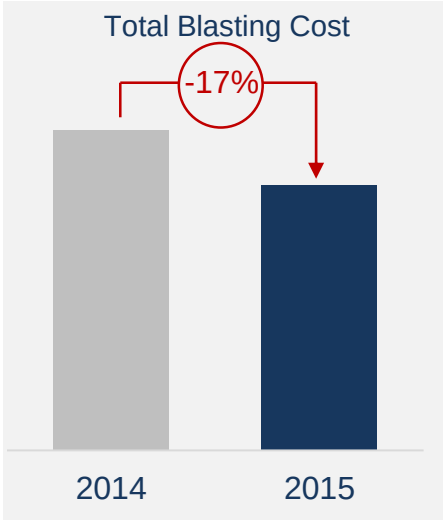
Used most effective shovel operator to train others

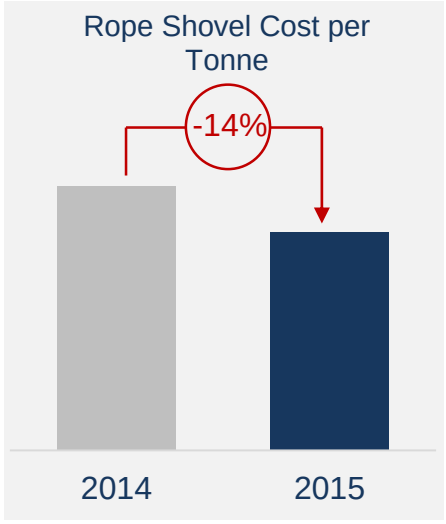
HAUL

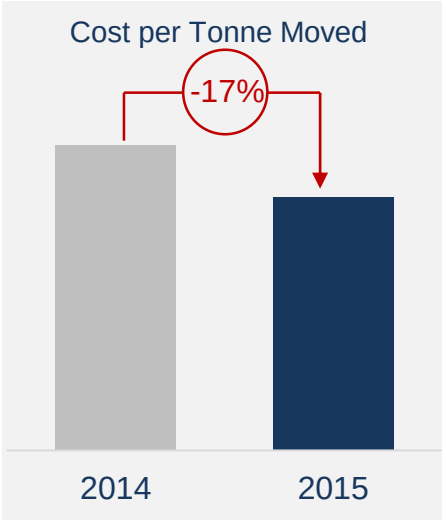


Implemented a 'hot shift change' for truck operators









2016 Consolidated Full-Year Guidance

Production and Cash Costs

	Marigold	Pirquitas	Seabee	Silver Standard
	Gold	Silver	Gold	Gold Equivalent
Production	200K – 210K oz	9M – 10M oz	70K – 73K oz	385K – 415K oz
Cash Costs *(US$/oz)*	$650/oz – $700/oz	$9.00/oz – $10.00/oz	$610/oz – $640/oz	$660/oz – $710/oz

Annualized Basis 400,000 oz AuEq at $685/oz cash costs in 2016

Notes: For discussion on 2016 guidance, refer to our new release dated August 10, 2016 (the “Q2 2016 News Release”). Production guidance for the Seabee Gold Operation includes actual production for the first half of 2016 and gold production guidance for the second half of 2016 as reported in our Q2 2016 News Release. Cash costs guidance for the Seabee Gold Operation is for the second half of 2016 only as reported in our Q2 2016 News Release. Annualized gold equivalent production and cash costs are calculated based on the mid-point of previously announced 2016 production and cash costs guidance for our three operations, with silver converted to gold equivalent at a 75:1 ratio. Cash costs is a non-GAAP financial measure. Please see "Cautionary Note Regarding Non-GAAP Measures” in this presentation.



MARIGOLD
GROWTH IN NEVADA

Track Record of Performance and Growth

- Open pit, run-of-mine heap leach gold operation
- Continuous production since 1988
- Strong safety and environmental practices
- Excellent infrastructure
- Q2 2016 Gold production results:
  - Produced 47,195 oz Au at cash costs of $663/oz Au
- Exploration success drives 2016 budget increase by $2.1M



Long Mine Life 9-year Mineral Reserve life with potential to extend

Note: Cash costs is per payable ounce of gold sold and is a non-GAAP financial measure. Please see "Cautionary Note Regarding Non-GAAP Measures" in this presentation.

Marigold Operating Outlook

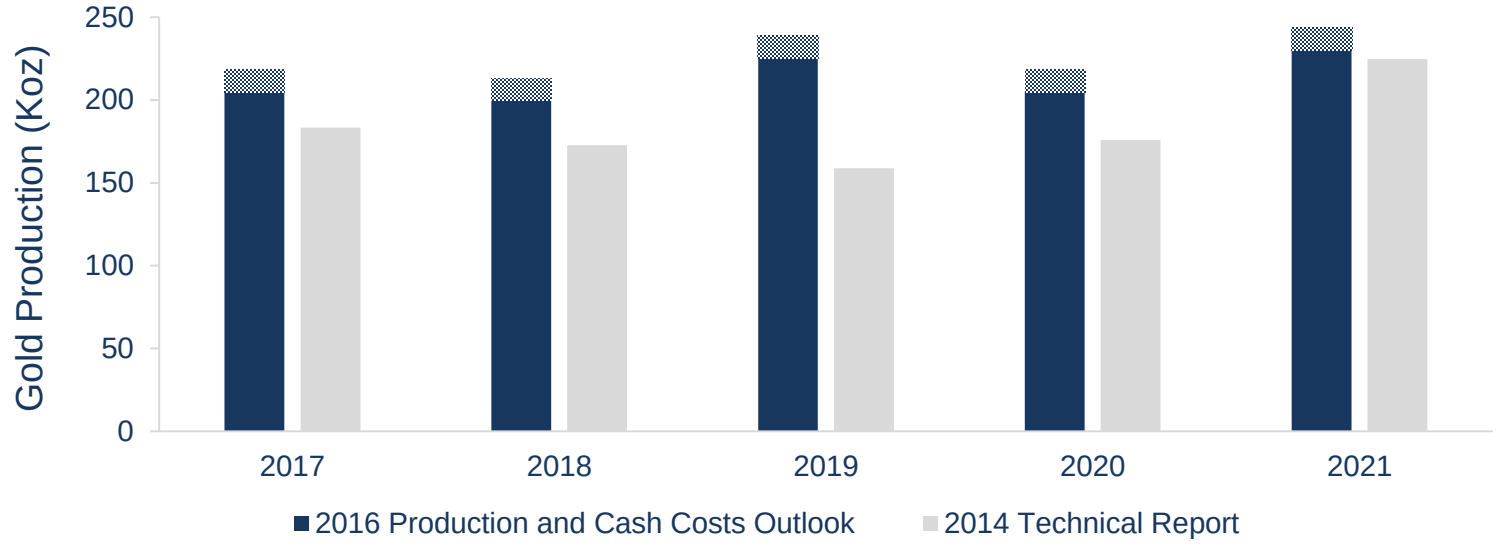
	2017	2018	2019	2020	2021
Gold production (Koz)	205 – 215	200 – 210	225 – 235	205 – 215	230 – 240
Cash costs ($/oz)	$655 – $705	$830 – $880	$740 – $790	$660 – $710	$550 – $600
Capital investment ($M)	$30	$35	$25	$20	$25
Capitalized deferred stripping ($M)	$18	$15	$15	$30	$70

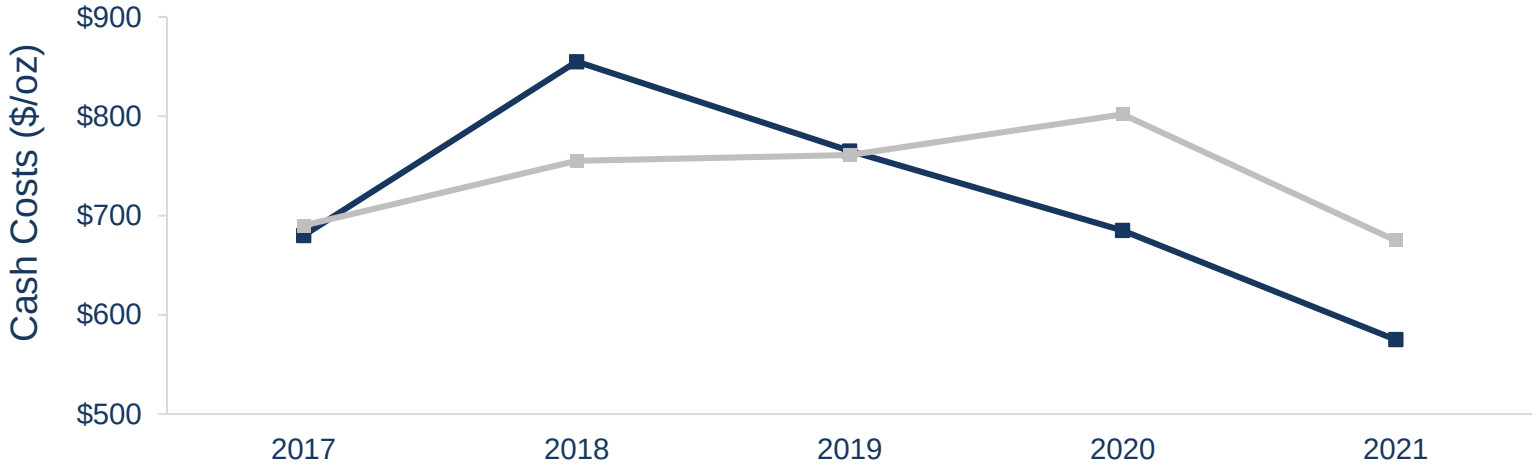
Expanding Margins Forecast average annual production up by 35K oz Au at reduced cash costs

Notes: Elevated deferred stripping activity in 2020 and 2021 relates to stripping further phases of the mine plan that is expected to benefit future periods and support mine life extension. Please refer to our news release dated September 15, 2016. Cash costs is a non-GAAP financial measure. Please see "Cautionary Note Regarding Non-GAAP Measures" in this presentation.

Expanded Margins

Increased Production and Reduced Cash Costs

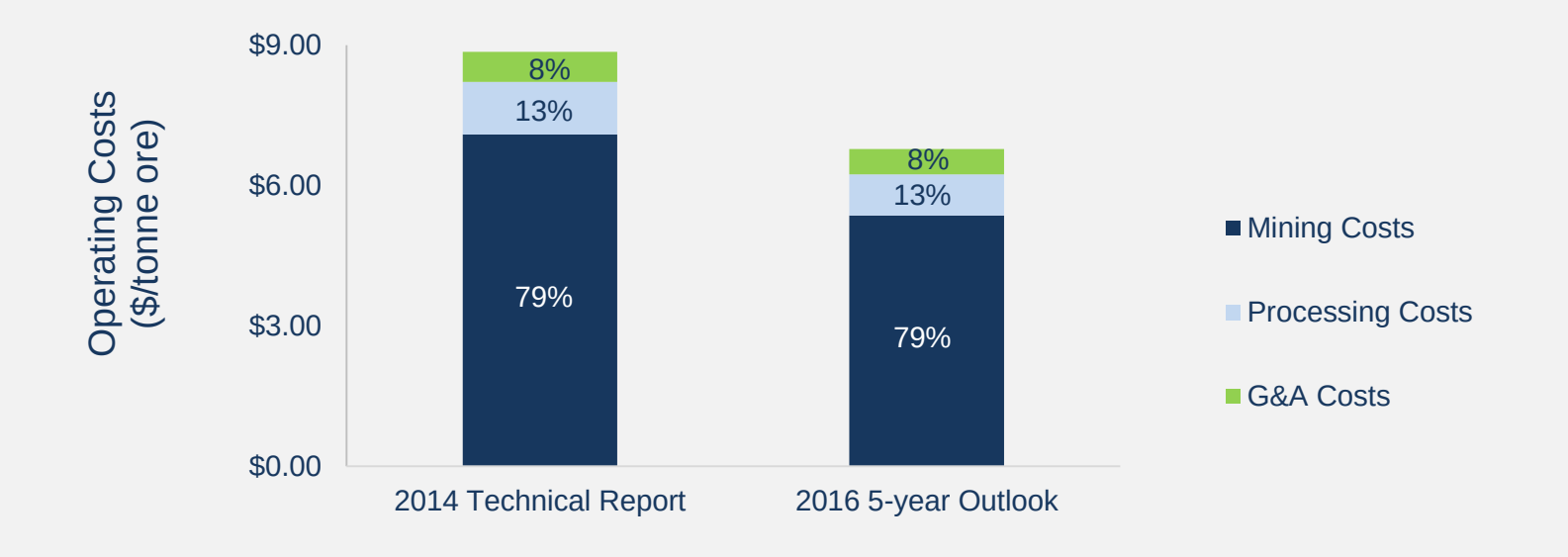


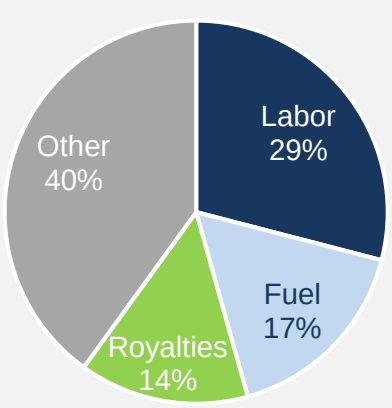


Notes: Please refer to our news release dated September 15, 2016. Cash costs values represent the mid point of guidance range. Cash costs is per payable ounce of gold sold and is considered a non-GAAP financial measure. Please see "Cautionary Note Regarding Non-GAAP Measures" in this presentation.

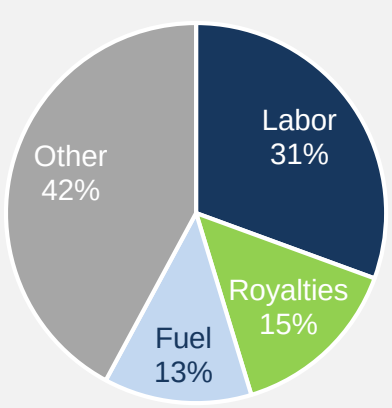
Lower Operating Cost Profile

Focus and Discipline for Long Term Value





2014 Marigold Technical Report

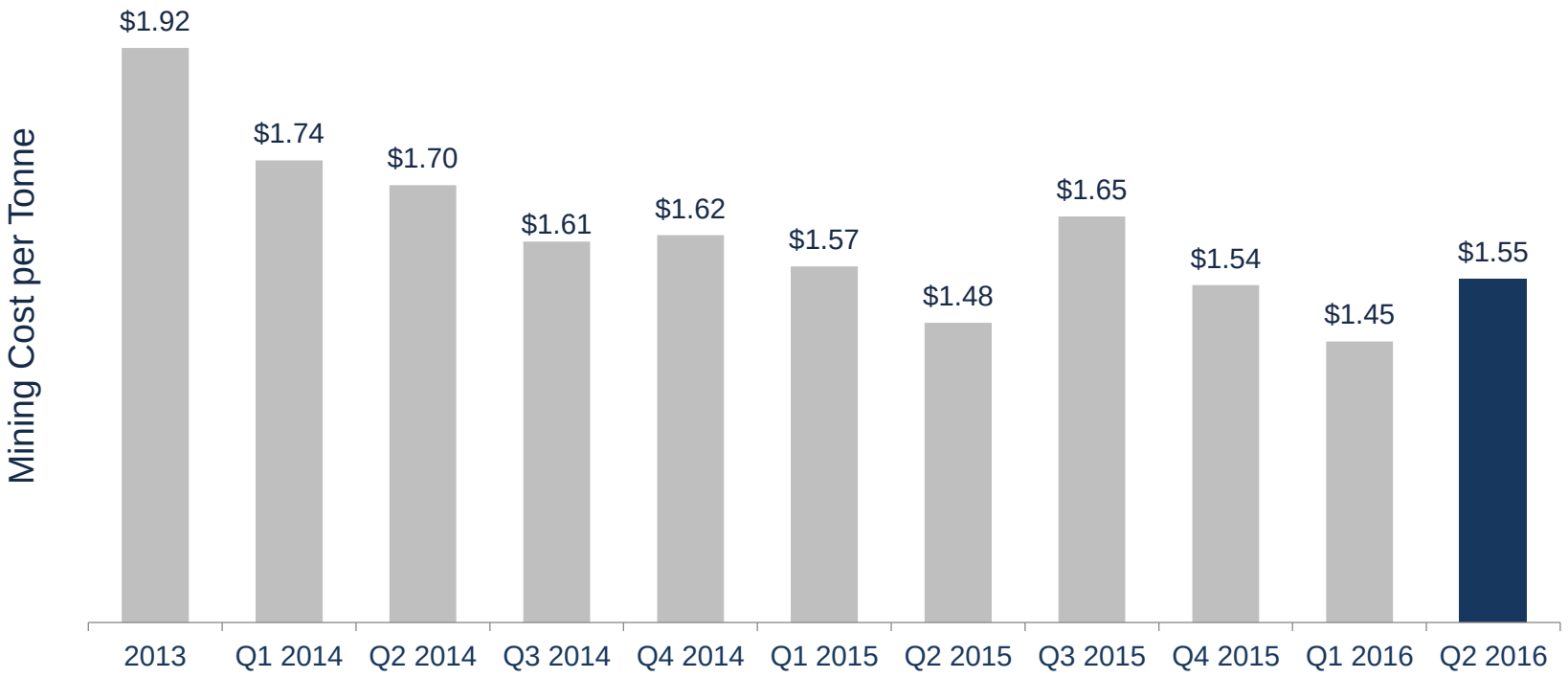


2016 Marigold 5-year Outlook

Note: Please refer to our news release dated September 15, 2016. Operating cost breakdown is based on the average operating cost for period from 2017 to 2021 and does not include sustaining capital investment.

Operational Excellence is Fundamental

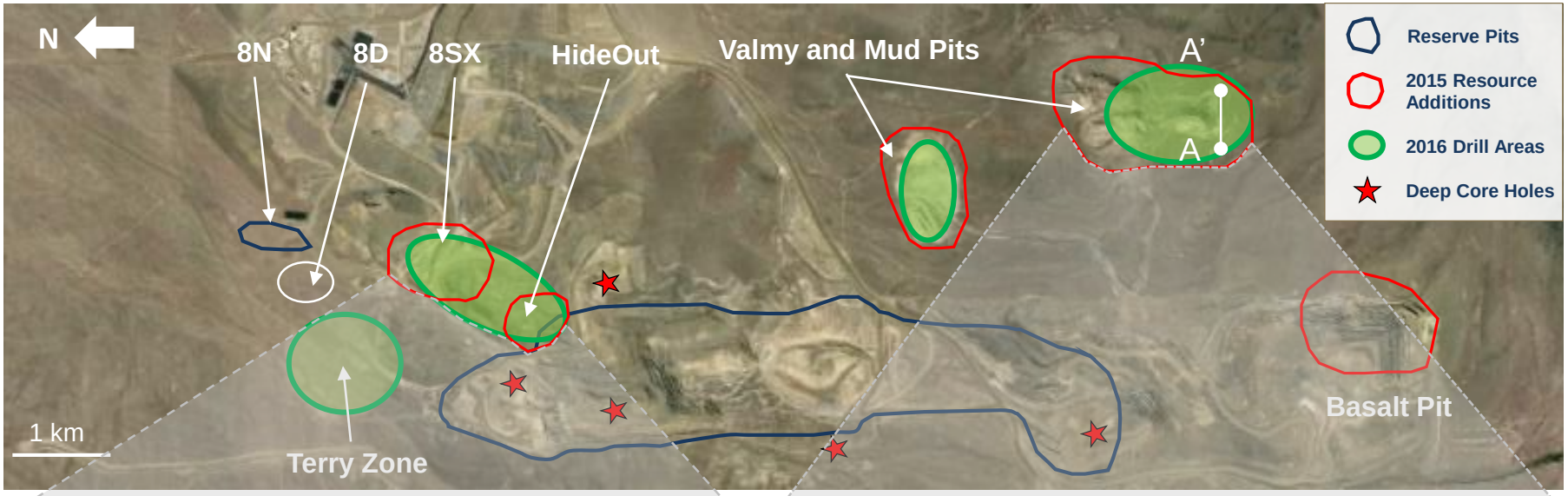
Long-term Cost Savings



Lowering Costs Savings of 1¢ cost per tonne mined = $800,000 annually

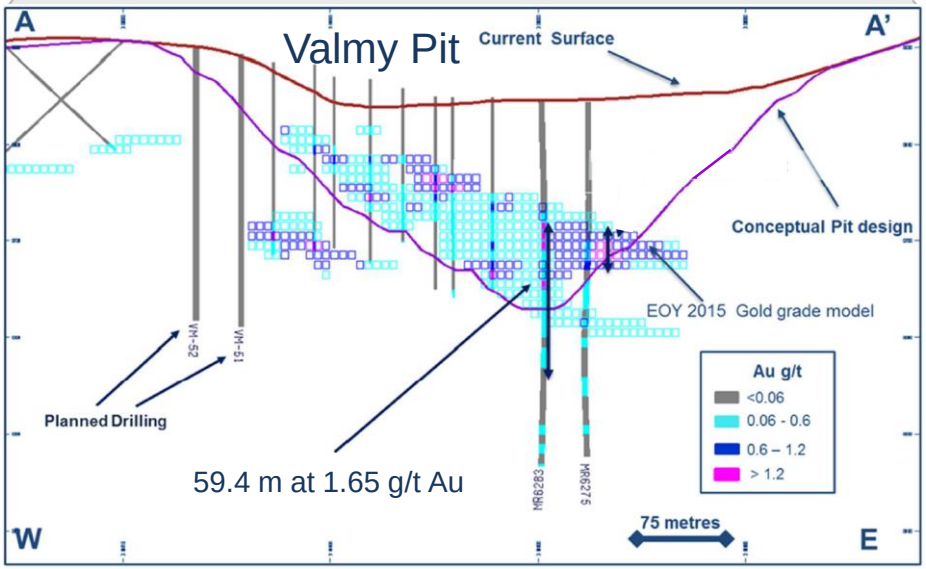
Notes: Annual savings of $800,000 based on assumption of 80 million tonnes of material moved annually. Please see "Cautionary Notes" in this presentation.

Exploration Success and Resource Conversion



Higher-grade discoveries since 2014

- 8SX: 91.4 m at 2.48 g/t Au
- 8D: 164.6 m at 1.67 g/t Au
- HideOut: 76.2 m at 2.47 g/t Au
- Terry Zone: 39.6 m at 1.56 g/t Au



Notes: See news releases dated July 6, 2015, September 18, 2015, May 9, 2016 and August 8, 2016 for drillhole highlights and reference data for the Marigold exploration drill program. See also "Cautionary Notes" and "Reserves & Resources: Notes to Tables" in this presentation.

SEABEE GOLD OPERATION
HIGH-GRADE GOLD MINE



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Seabee Gold Operation Overview

High-margin Underground Operation in a Stable Jurisdiction

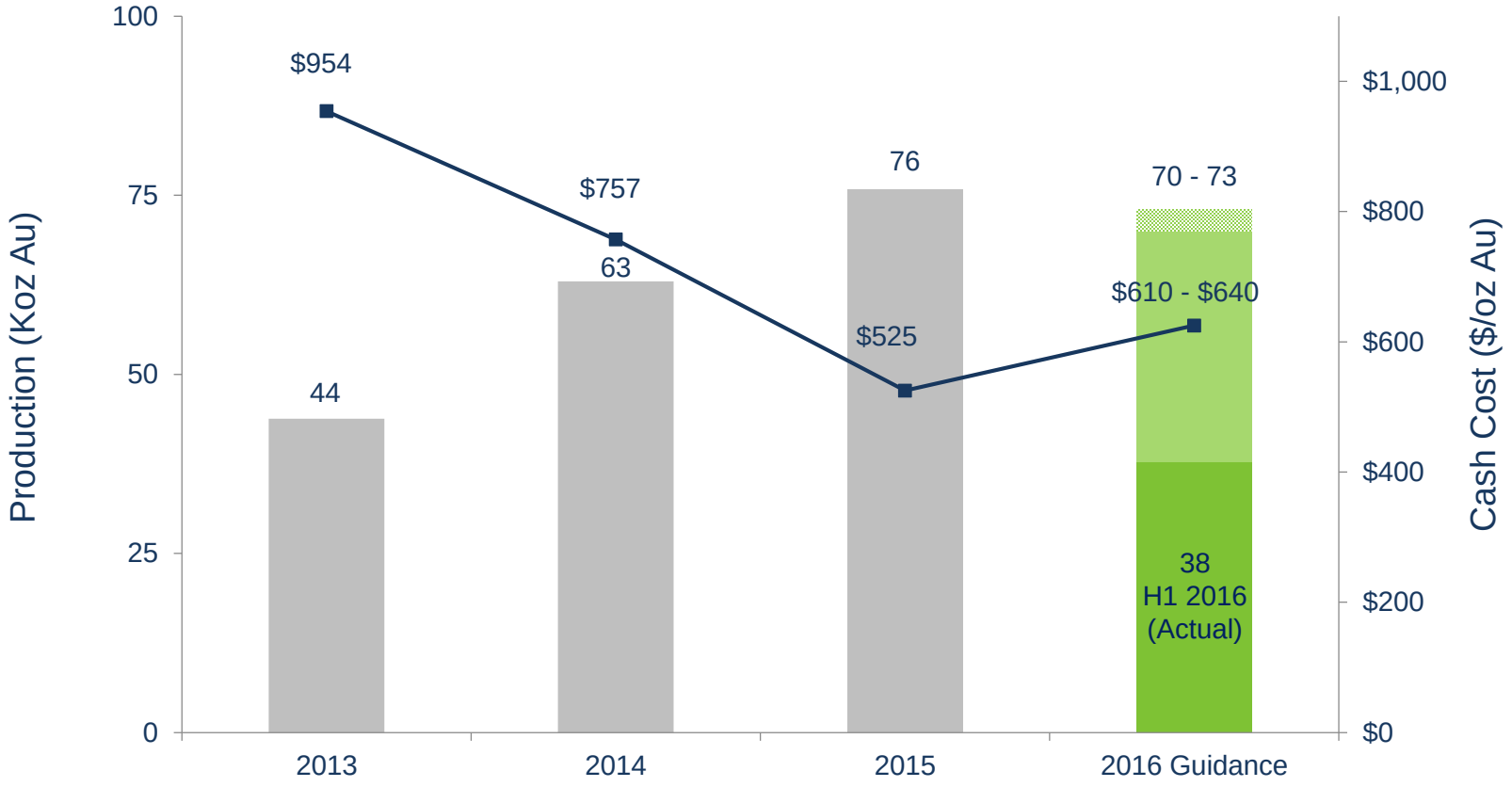
- High-grade, underground mine in Saskatchewan, Canada
- Mill operating since 1991 with current capacity of 850 tpd
- Strong safety and environmental practices
- H2 2016 Guidance:
  - 32,000 to 35,000 oz Au production
  - $610/oz to $640/oz Au cash costs
- Large underexplored land position of +23,000 ha
- Brownfields exploration drilling of 18,000 m and UG exploration development drilling of 65,000 m in 2016



Note: Q2 2016 production is for the period from April 1, 2016 to June 30, 2016 and includes operating results for the Seabee Gold Operation for the period from April 1 to May 30, 2016 prior to our acquisition of Claude Resources. For discussion on H2 2016 guidance, refer to our news release dated August 10, 2016. Cash costs is per payable ounce of gold sold and is a non-GAAP financial measure. Please see "Cautionary Note Regarding Non-GAAP Measures" in this presentation.

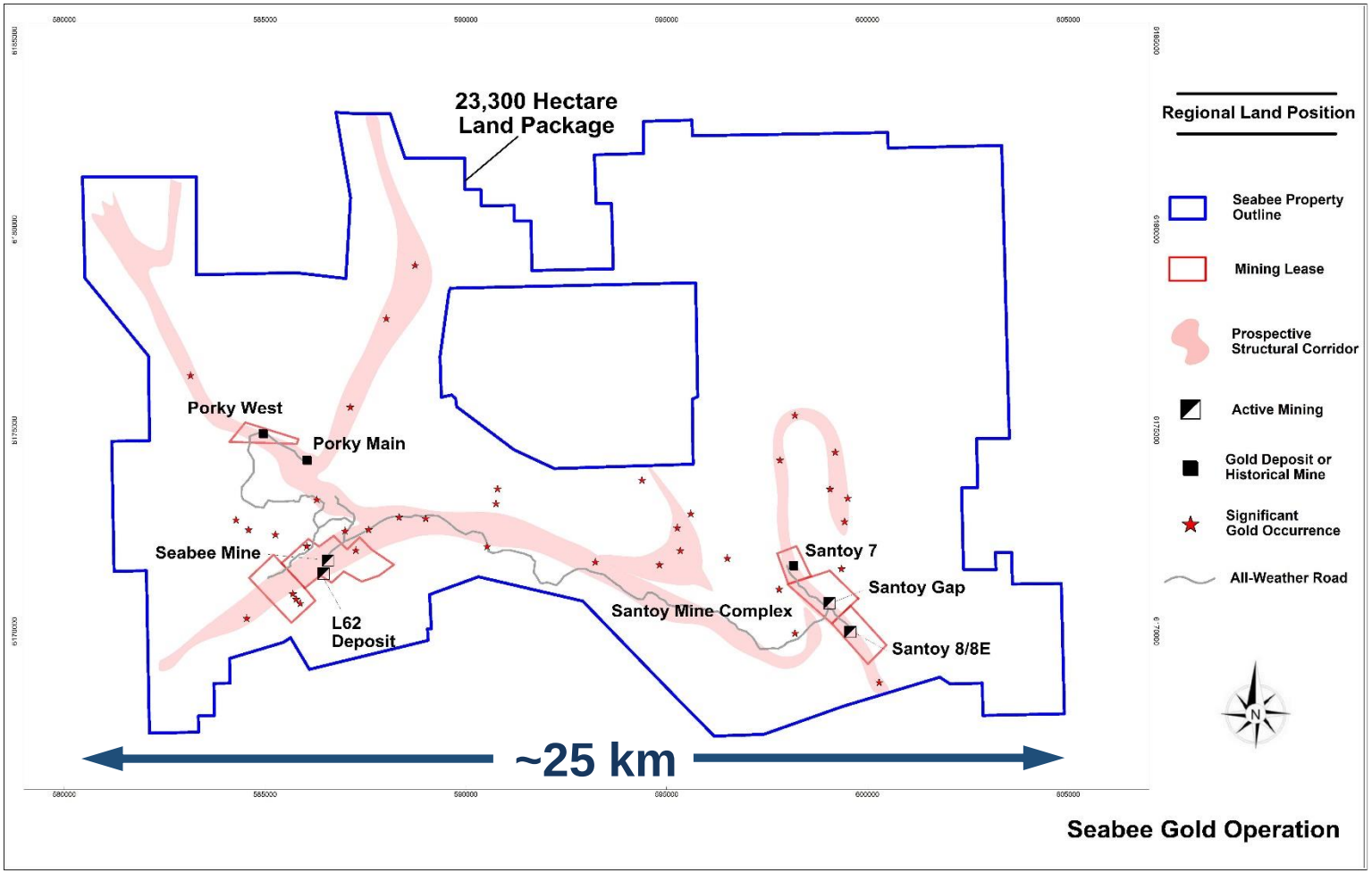
Improved Operating Profile

Higher Gold Grade and Lower Costs with Santoy Discovery



Notes: 2016 cash costs guidance of $610/oz to $640/oz is for the second half of 2016 only as reported in our news release dated August 10, 2016. 2016 production guidance includes actual production for the first half of 2016 and gold production guidance for the second half of 2016 as reported in our news release dated August 10, 2016. Cash costs is a non-GAAP financial measure. Please see "Cautionary Note Regarding Non-GAAP Measures" in this presentation.

Well-Positioned for Discovery with $2M Spend in 2016

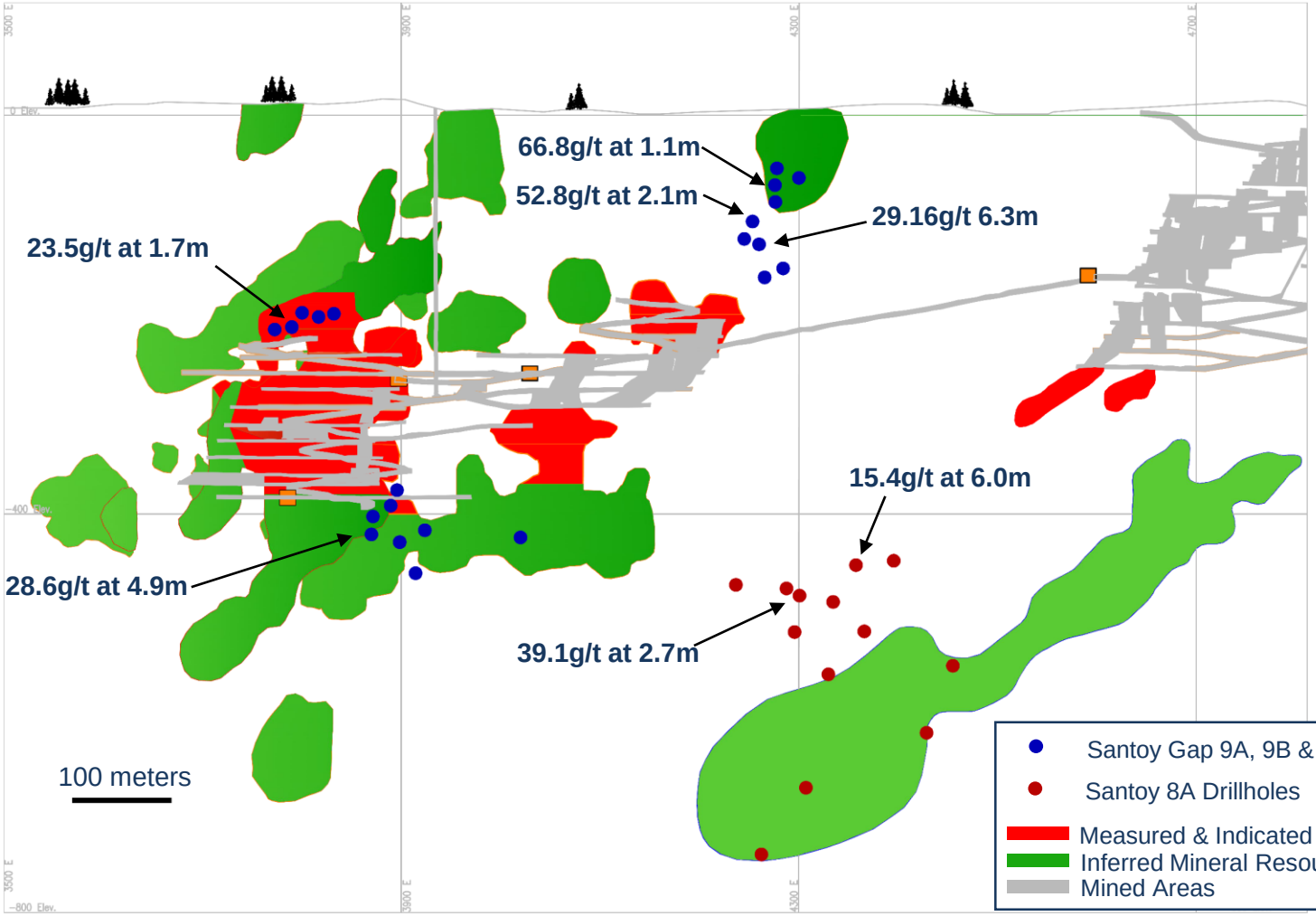


Underexplored Total exploration spend from 2013 to 2015 of $2.5 million

Notes: Exploration spend for Claude Resources includes actual spend in 2013, 2014, and 2015.

Santoy Mine Complex: Key Value Driver

Focus on Resource to Reserve Conversion



New Resource Potential Drilling new mineralized areas outside Mineral Resources

Notes: Measured and Indicated Mineral Resources are inclusive of Mineral Reserves. See news release dated August 8, 2016 for drillhole highlights and reference data for the Seabee Gold Operation exploration program. See also “Cautionary Notes” and “Seabee Gold Operation: Mineral Reserves and Mineral Resources as at December 31, 2015” in this presentation.



PIRQUITAS
LARGE OPEN-PIT SILVER MINE

Proven Capability and Delivery

Free cash flow in 2016

- 100%-owned and operated open pit silver-zinc mine
- In commercial production since 2009
- Good safety record and solid stakeholder relations
- Improved flotation plant processes: +5,000 tpd in August 2016
- 10.3M oz Ag record annual production in 2015
- 2.5M oz Ag produced at record low cash costs of $8.87/oz Ag in Q2 2016
- Evaluating Chinchillas project for new ore supply to Pirquitas plant

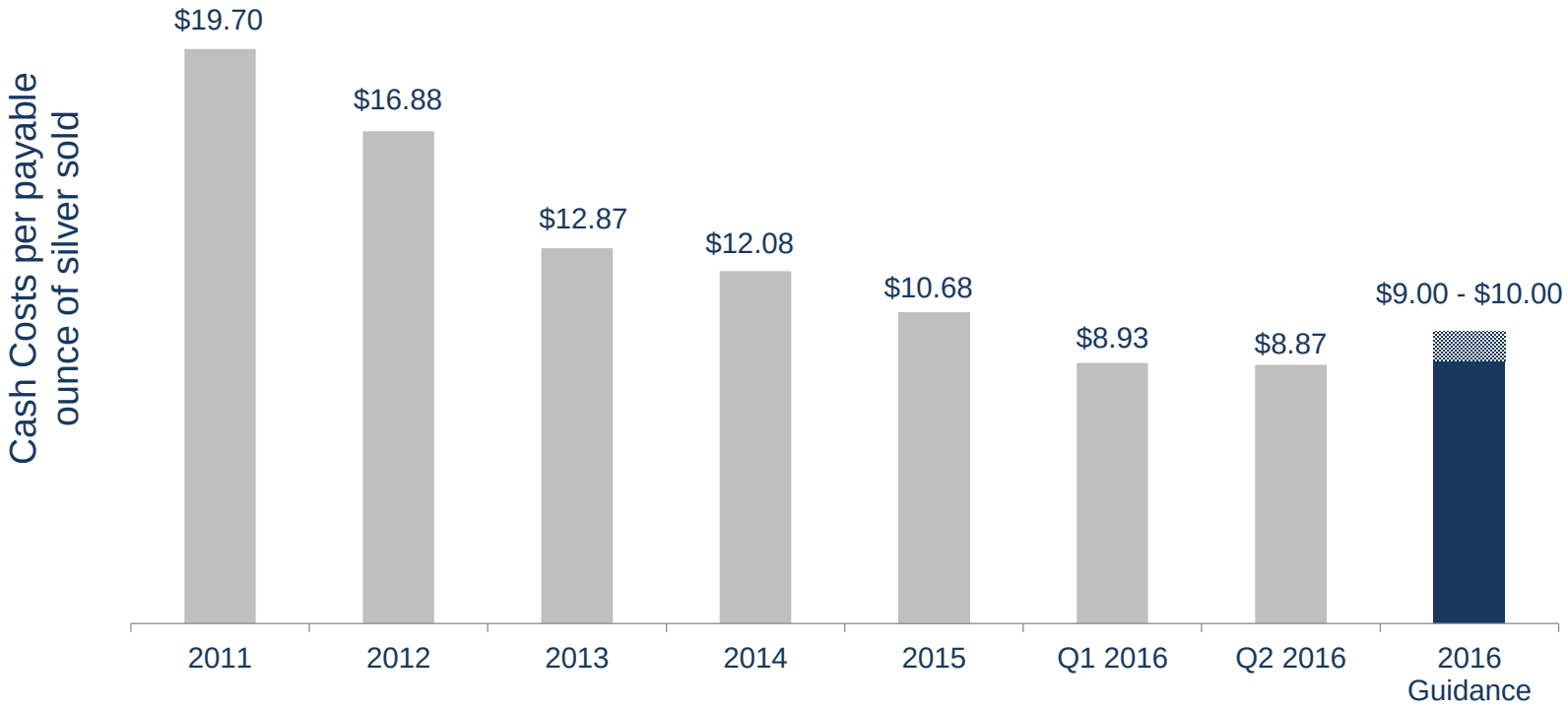


Consistency Achieved guidance for fourth consecutive year

Notes: Cash costs is a non-GAAP financial measure. Please see "Cautionary Note Regarding Non-GAAP Measures" in this presentation.

Pirquitas Cash Costs Trending Down

Lowered 2016 Cash Costs Guidance



Lowering Costs Achieved record low cash costs again Q2 2016

Notes: Cash costs is a non-GAAP financial measure. Please see "Cautionary Note Regarding Non-GAAP Measures" in this presentation. Information for 2011 has not been restated for IFRIC 20, Stripping costs in the Production Phase of a Surface Mine.

Chinchillas Project

Potential to Extend Pirquitas Operating Life

- Silver-lead-zinc deposit located 30 km from Pirquitas mine
- +15,000 meters resource infill drilling completed since Q4 2015
  - 49 meters at 673 g/t silver
  - 30 meters at 637 g/t silver
  - 66 meters at 278 g/t silver
- Increased budget to $9.0M in 2016 for accelerated exploration and technical studies *(YTD spend of ~$3.9M)*
- Option to evaluate the Chinchillas project; Q4 2016 development decision





Notes: See news releases dated October 1, 2015 for information on the Chinchillas project agreement and August 10, 2016 for discussion on latest project developments and capex guidance. Drill results are as reported by Golden Arrow in their news releases dated December 2, 2015 and January 11, 2016. Also see Golden Arrow's news release dated May 25, 2016 for a discussion of 2016 drilling and pre-development program.

Chinchillas Mineral Resources

Potential to Extend Pirquitas Operating Life

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Chinchillas Indicated Mineral Resources

Cut-off AgEq (g/t)	Mt	AgEq (g/t)	Ag (g/t)	Pb (%)	Zn (%)	AgEq (Moz)	Ag (Moz)	Pb (Mlbs)	Zn (Mlbs)
45	34.2	142	91	0.82	0.57	155	100	618	431
90	21.9	183	123	1.06	0.62	129	86	510	301
110	17.5	204	139	1.17	0.62	115	79	453	241
130	13.9	226	158	1.29	0.61	101	71	394	187
150	**11.0**	**249**	**177**	**1.40**	**0.59**	**88**	**63**	**341**	**143**
170	**8.8**	**272**	**197**	**1.51**	**0.57**	**77**	**55**	**293**	**111**

Chinchillas Inferred Mineral Resources

Cut-off AgEq (g/t)	Mt	AgEq (g/t)	Ag (g/t)	Pb (%)	Zn (%)	AgEq (Moz)	Ag (Moz)	Pb (Mlbs)	Zn (Mlbs)
45	32.9	85	42	0.44	0.76	90	44	322	548
90	10.2	129	69	0.71	0.98	42	22	158	219
110	5.8	153	83	0.87	1.05	28	15	111	133
130	3.5	175	98	1.08	1.05	19	11	82	80
150	**2.2**	**195**	**110**	**1.29**	**1.08**	**14**	**8**	**63**	**53**
170	**1.4**	**216**	**122**	**1.53**	**1.09**	**10**	**6**	**47**	**34**

Notes: Mineral Resource estimate reported by Golden Arrow in its technical report dated effective April 12, 2016 entitled “Mineral Resource Estimate for the Chinchillas Silver-Lead-Zinc Project, Jujuy Province, Argentina” (the “Chinchillas Technical Report”) available at www.sedar.com under Golden Arrow's profile and at www.goldenarrowresources.com. As reported by Golden Arrow in the Chinchillas Technical Report, silver equivalent was calculated using the formula AgEq = Ag g/t + (Pb% * 36.09) + (Zn% * 36.09), and Mineral Resources were estimated using metal prices of $19 per ounce of silver, $1 per pound of lead and $1 per pound of zinc. We have assumed the reported amounts are all Indicated Mineral Resources and not Measured Mineral Resources, and have chosen to disclose cut-off grades of 150 AgEq g/t and 170 AgEq g/t as they reflect the range of cut-off grades we have historically used for mine planning purposes at the Pirquitas mine. The Mineral Resources estimate was prepared by Golden Arrow in accordance with NI 43-101 under the supervision of a qualified person. A qualified person of Silver Standard has not done sufficient work to classify these Mineral Resources as current, we are not treating this estimate as current and the estimate should not be relied upon. All Mineral Resources are reported exclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Inferred Mineral Resources have a great amount of uncertainty as to their existence and as to whether they can be mined legally or economically. There is no assurance that all or part of the Inferred Mineral Resources can be upgraded to a higher category. See “Cautionary Notes” in this presentation.

Pirquitas Underground

Focused on Mine Life Extension

- Potential small-scale, high-grade ore feed from the Chocaya, Oploca and Cortaderas veins
- Positive drill results from 2015 drill program:
  - 3.16 meters at 1,436 g/t silver
  - 1.93 meters at 1,890 g/t silver
  - 0.83 meters at 2,670 g/t silver
- To be evaluated if the Chinchillas project goes ahead

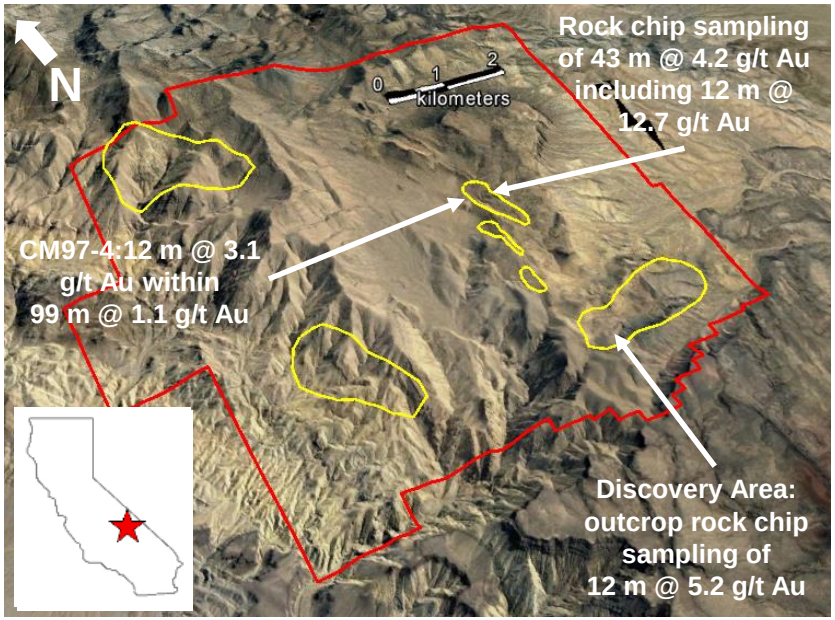


Notes: See news release dated September 21, 2015 for drillhole highlights and reference data for the Pirquitas exploration drill program. See also “Cautionary Notes”.

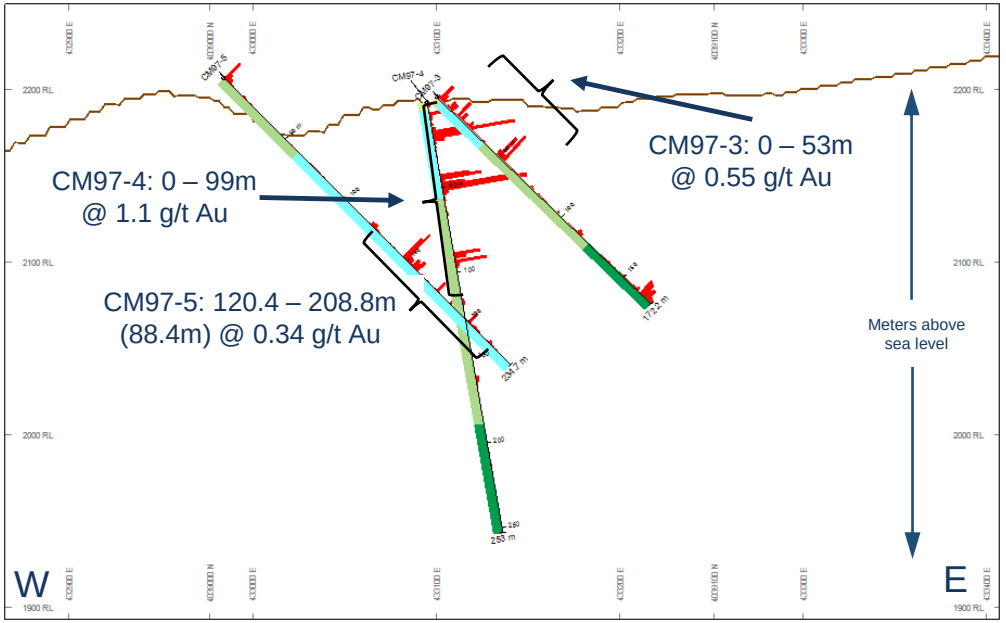
Perdito Project

High-grade, Carlin-type sediment-hosted gold deposits in California

- Multiple, ready-to-drill targets
- $1.5M planned for drilling/field work in 2016; drill program to begin Q4 2016
- Gold grades of up to 10.9 g/t confirmed by duplicate surface sampling
- Large land package of 5,780 hectares near major infrastructure
- 3-year option agreement to earn in 100% interest



Drill targets at Perdito project (yellow); Property outline (red)

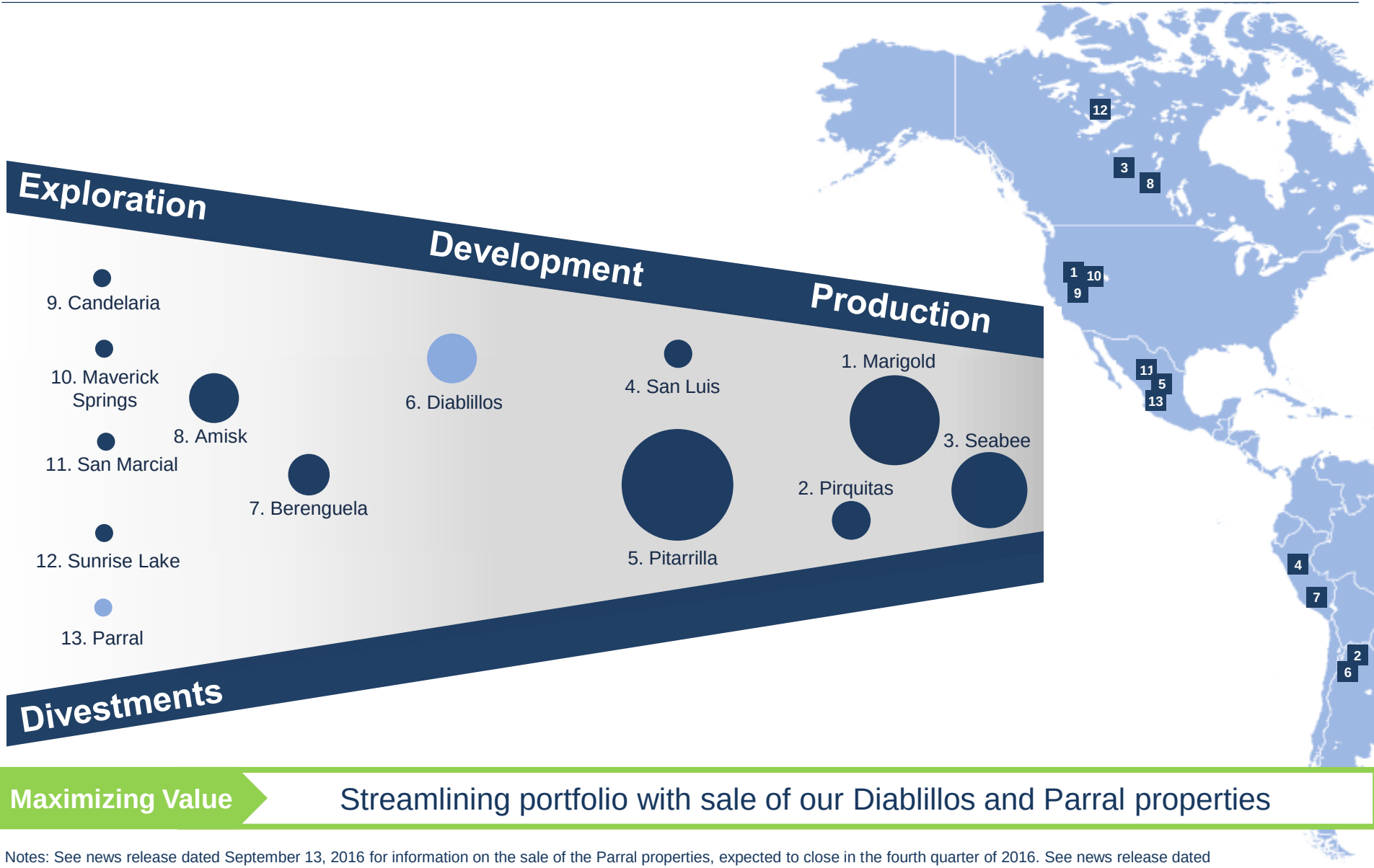


Cross section of drillholes CM97-3, CM97-4, CM97-5

Notes: See news release dated March 31, 2016 for information on the Perdito option agreement. Select drill intercepts presented are as reported by Great Bear Resources Ltd. in its news release dated April 8, 2013. All such drill intercepts are considered as "historical data" and have not been independently verified by us. See also "Cautionary Notes" in this presentation.

Properties, Projects and Production

Over $570M Cash from Divestments since 2010



Maximizing Value Streamlining portfolio with sale of our Diablillos and Parral properties

Notes: See news release dated September 13, 2016 for information on the sale of the Parral properties, expected to close in the fourth quarter of 2016. See news release dated September 19, 2016 for information on the transaction on the Diablillos and M-18 projects, expected to close in November 2016. See also “Cautionary Notes” in this presentation.

Delivering Long-Term Value for our Shareholders

Portfolio Strength to Last and …

- Three precious metals mines located in the Americas
- Producing 400,000 oz AuEq at $685/oz cash costs *(pro forma 2016)*
- Balance sheet with $233M in cash and $193M in marketable securities
- +$1.5B market cap with listings on NASDAQ and TSX

… Growth for Scale

- H2 2016 production of 180,000 to 210,000 oz AuEq
- Marigold 5-year outlook adds 20% more gold production
- OE program update at Seabee
- Development potential at the Chinchillas project
- Resource expansion drilling at Marigold H2 2016
- Resource to Reserve conversion drilling at Seabee

Notes: For 2016 guidance, refer to “2016 Consolidated Full-Year Guidance” in this presentation and to our news release dated August 10, 2016. Gold equivalent production and cash costs are calculated based on the mid-point of previously announced 2016 guidance for our three operations, with silver converted to gold equivalent at a 75:1 ratio. H2 2016 production guidance range was calculated based on annualized full year guidance less actual gold equivalent production for H1 2016, with silver converted to gold equivalent at a 75:1 ratio. Cash costs is per payable ounce of metal sold is a non-GAAP financial measure. See "Cautionary Note Regarding Non-GAAP Measures” in this presentation.

Value & Growth



San Luis Project

High-Grade Gold Development Option

High grade mineralization with M+I Mineral Resources of

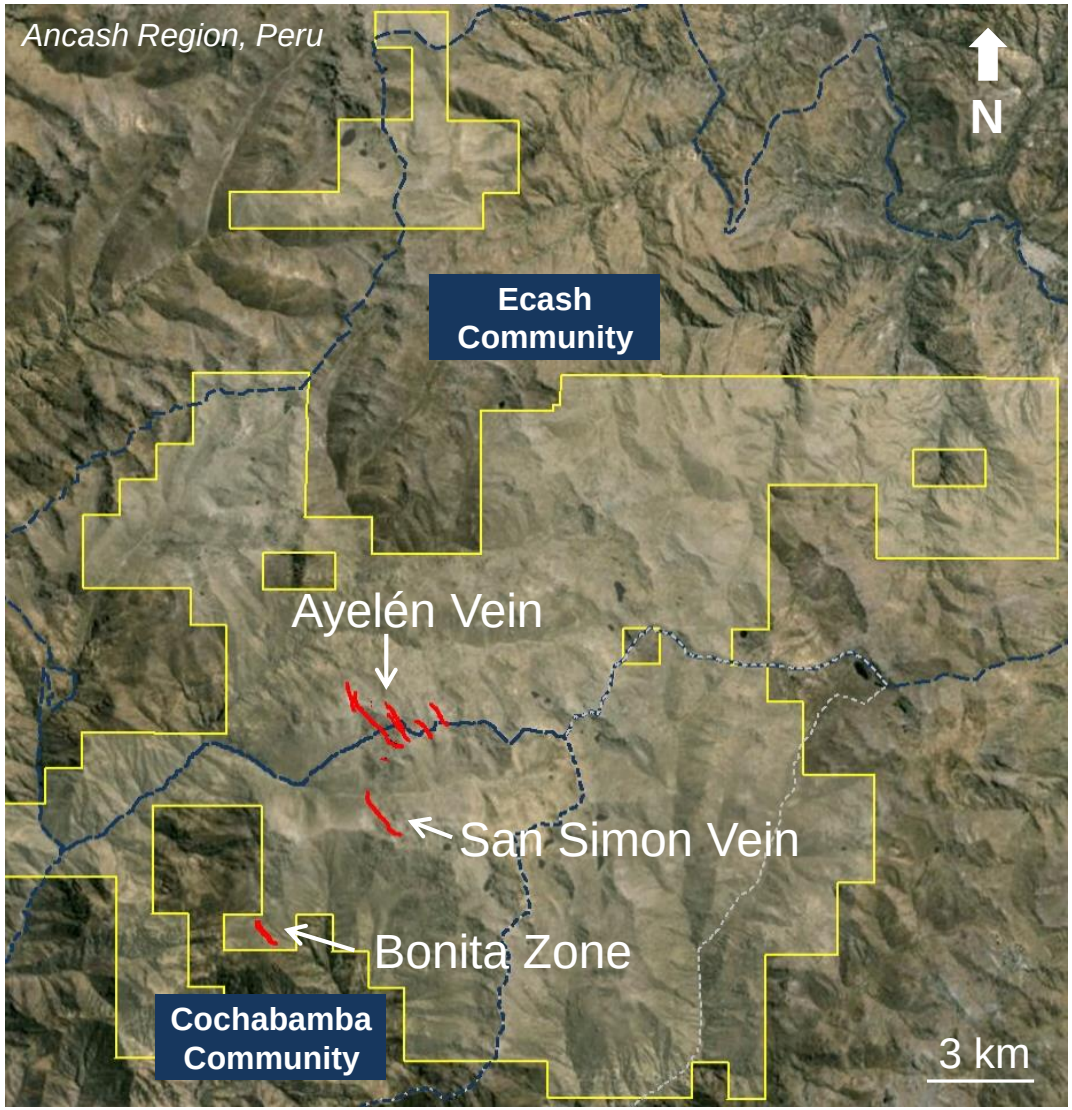
- 9.0M oz Ag at 578.1 g/t
- 0.35M oz Au at 22.4 g/t

Already Secured

- EIA
- Feasibility Study

Going forward

- Pursuing community agreements



Notes: Measured and Indicated Mineral Resources are inclusive of Mineral Reserves. See "Cautionary Notes", Mineral Reserves and Mineral Resources tables and "Reserves and Resources: Notes to Tables" in this presentation.

Pitarrilla Project

Large Mineral Resource Development Option

- Development stage silver-lead-zinc deposit
- Open pit / UG project with potential for long life
- Conventional flotation and leaching
- Measured and Indicated Mineral Resources
  - Open pit: 497M oz Ag at 96.7 g/t
  - Underground: 29M oz Ag at 173.5 g/t
- Maintaining social license



Optionality One of the largest undeveloped silver Mineral Resources

Note: See “Cautionary Notes”, Mineral Reserves and Mineral Resources tables and “Reserves & Resources: Notes to Tables” in this presentation.

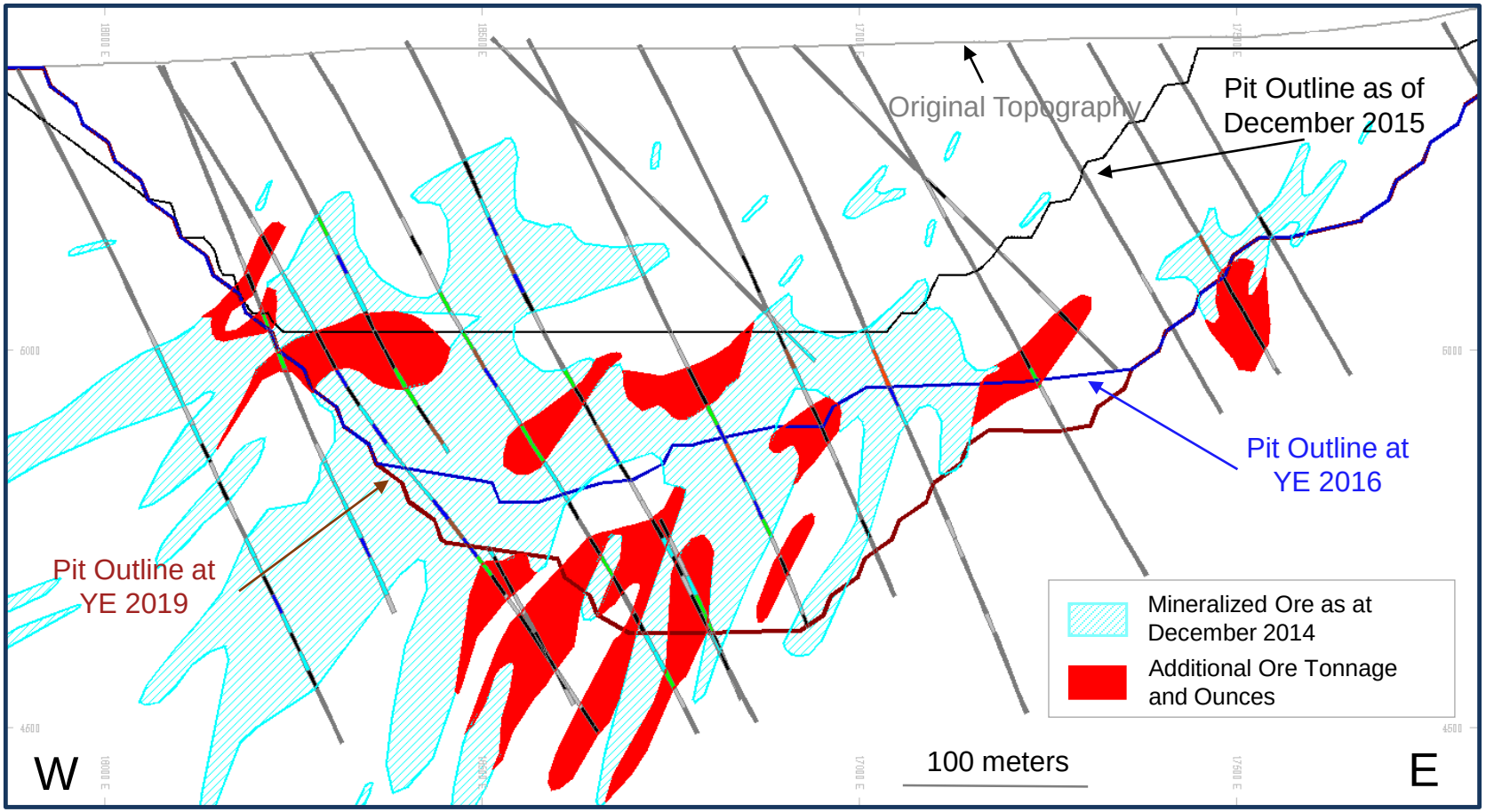
Q2 2016 Highlights

Strong Production	97,759 oz AuEq, 17% higher Q-on-Q *(pro-forma 2016)*
Low Cash Costs	$669/oz AuEq, 6% lower Q-on-Q
Free Cash Flow	Increased cash balance to $233M, up by $15M
Operating Cash Flow	$35.7M cash generated by operating activities *(before interest & taxes)*
Net Income	$12.5M net income and $23.6M adjusted net income

Notes: Gold equivalent production includes gold ounces produced at the Seabee Gold Operation for the entire second quarter of 2016, including the period from April 1, 2016 to May 30, 2016, prior to our acquisition of Claude Resources. Gold equivalent cash costs include cash costs for the Seabee Gold Operation for the period from May 31, 2016 to June 30, 2016, the period for which we were entitled to all economic benefits of the mine following our acquisition. Cash costs is per payable ounce of gold and silver sold, respectively, and cash costs and adjusted net income are considered non-GAAP financial measures. Please see "Cautionary Note Regarding Non-GAAP Measures" in this presentation.

Marigold Mine: Assay Program

Increases Contained Gold by 13%



Notes: See news releases dated July 6, 2015 and August 10, 2016 for additional information on the Marigold assay program. See also “Cautionary Notes” in this presentation.

Mineral Reserves
(as at December 31, 2015)

Mineral Reserves							
	Location	Tonnes millions	Silver g/t	Gold g/t	Zinc %	Silver million oz	Gold million oz
Proven Mineral Reserves							
San Luis	Peru	0.06	604.5	28.3		1.1	0.05
Total						1.1	0.05
Probable Mineral Reserves							
Marigold	U.S.	140.30		0.45			2.04
Marigold Leach Pad Inventory	U.S.						0.13
Pirquitas	Argentina	2.99	171.9		0.25	16.5	
Pirquitas Stockpiles	Argentina	2.21	109.1		0.71	7.7	
San Luis	Peru	0.45	426.2	16.70		6.1	0.24
Total						30.4	2.41
Total Proven and Probable Mineral Reserves							
Marigold	U.S.	140.30		0.45			2.04
Marigold Leach Pad Inventory	U.S.						0.13
Pirquitas	Argentina	2.99	171.9		0.25	16.5	
Pirquitas Stockpiles	Argentina	2.21	109.1		0.71	7.7	
San Luis	Peru	0.51	447.2	18.06		7.2	0.29
Total Proven and Probable						**31.5**	**2.46**

Mineral Resources: Measured and Indicated

(as at December 31, 2015)

Mineral Resources									
	Location	Tonnes	Silver	Gold	Lead	Zinc	Copper	Silver	Gold
		millions	g/t	g/t	%	%	%	million oz	million oz
Measured Mineral Resources (Inclusive of Proven Mineral Reserves)									
Pitarrilla	Mexico	10.13	91.7					29.8	
San Luis	Peru	0.06	757.6	34.30				1.3	0.06
Total								31.2	0.06
Indicated Mineral Resources (inclusive of Probable Mineral Reserves)									
Marigold	U.S.	301.70		0.46					4.45
Marigold Leach Pad Inventory	U.S.								0.13
Pirquitas	Argentina	13.67	122.4			1.01		53.8	
Pirquitas UG	Argentina	2.34	241.1			4.11		18.2	
Pirquitas Stockpiles	Argentina	2.32	107.3			0.73		8.0	
Pitarrilla	Mexico	149.82	97.1		0.31	0.83		467.5	
Pitarrilla UG	Mexico	5.16	173.5		0.50	1.19		28.8	
San Luis	Peru	0.43	555.0	20.80				7.7	0.29
Diablillos	Argentina	20.41	109.4	0.90				71.8	0.59
Berenguela	Peru	18.67	116.2				0.96	69.8	
Total								725.4	5.46
Measured and Indicated Mineral Resources (Inclusive of Mineral Reserves)									
Marigold	U.S.	301.70		0.46					4.45
Marigold Leach Pad Inventory	U.S.								0.13
Pirquitas	Argentina	13.67	122.4			1.01		53.8	
Pirquitas UG	Argentina	2.34	241.1			4.11		18.2	
Pirquitas Stockpiles	Argentina	2.32	107.3			0.73		8.0	
Pitarrilla	Mexico	159.95	96.7		0.33	0.86		497.3	
Pitarrilla UG	Mexico	5.16	173.5		0.50	1.19		28.8	
San Luis	Peru	0.48	578.1	22.40				9.0	0.35
Diablillos	Argentina	20.41	109.4	0.90				71.8	0.59
Berenguela	Peru	18.67	116.2				0.96	69.8	
Total Measured and Indicated								**756.6**	**5.52**

Mineral Resources: Inferred
(as at December 31, 2015)

Mineral Resources									
	Location	Tonnes millions	Silver g/t	Gold g/t	Lead %	Zinc %	Copper %	Silver million oz	Gold million oz
Inferred Mineral Resources									
Marigold	U.S.	38.80		0.44					0.55
Pirquitas	Argentina	0.79	87.3			1.88		2.2	
Pirquitas UG	Argentina	0.94	202.0			6.97		6.1	
Pitarrilla	Mexico	9.04	76.6		0.16	0.54		22.2	
Pitarrilla UG	Mexico	1.31	139.0		0.85	1.21		5.9	
San Luis	Peru	0.02	270.1	5.60				0.2	
Diablillos	Argentina	0.004	132.9	0.07				0.0	0.0
Berenguela	Peru	2.27	113.6				0.82	8.3	
Total Inferred								44.9	0.55

Reserves and Resources

Notes to Tables

All estimates set forth in the Mineral Reserves and Mineral Resources table have been prepared in accordance with NI 43-101. The estimates of Mineral Reserves and Mineral Resources for each property other than the Marigold mine have been reviewed and approved by Bruce Butcher, P.Eng., our Director, Mine Planning, F. Carl Edmunds, P.Geo., our Chief Geologist, and Trevor J. Yeomans, ACSM, P.Eng., our Director, Metallurgy, each of whom is a Qualified Person.

Mineral Resources are reported inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Mineral Resources and Mineral Reserves figures have some rounding applied, and thus totals may not sum exactly. All ounces reported herein represent troy ounces, and "g/t" represents grams per tonne. All $ references are in U.S. dollars.

Metal prices utilized for Mineral Reserves estimates are $1,100 per ounce of gold, $16.00 per ounce of silver and $2,094 per tonne of zinc, except as noted below for the San Luis project. Metal prices utilized for Mineral Resources estimates are $1,400 per ounce of gold, $22.50 per ounce of silver, $2,425 per tonne of zinc and $3.00 per pound of copper, except as noted below for the San Luis project.

All technical reports for the properties are available under our profile on the SEDAR website at www.sedar.com or on our website at www.silverstandard.com.

Marigold: Mineral Reserves and Mineral Resources estimates are reported below the as-mined surface as at December 31, 2015. Except for updates to cost parameters and metal price assumptions, all other key assumptions, parameters and methods used to estimate Mineral Reserves and Mineral Resources are set out in the Marigold Technical Report. Mineral Reserves estimate was prepared under the supervision of Thomas Rice, SME Registered Member, a Qualified Person and our Technical Services Manager at the Marigold mine, and is reported at a cut-off grade of 0.065 g/t payable gold. Mineral Resources estimate was prepared under the supervision of James N. Carver, SME Registered Member, and our Chief Geologist at the Marigold mine, and Karthik Rathnam, MAusIMM (CP), and our Senior Resource Geologist at the Marigold mine, each of whom is a Qualified Person. Mineral Resources estimate is reported based on an optimized pit shell at a cut-off grade of 0.065 g/t payable gold and includes an estimate of Mineral Resources for the Valmy property and mineralized stockpiles. Mineral Resources estimate for the Valmy property is reported based on historical data (including collar, survey, lithology and assay data) provided by Newmont Mining Corporation upon our acquisition of the property on September 24, 2015, using ordinary kriging with appropriate estimation parameters. Such data has been verified by James N. Carver and Karthik Rathnam by conducting detailed verification checks, including QA/QC of location, geological, density and assay data. Mineral Resources for mineralized stockpiles were estimated using Inverse Distance cubed.

Pirquitas: Mineral Reserves and Mineral Resources estimates are reported below the as-mined surface as at December 31, 2015. Except for the optimized pit constraints and updates in metal price assumptions, cut-off grade used for the Mineral Reserves estimate and value estimation methodology used in the Mineral Resources block model, all other key assumptions, parameters and methods used to estimate Mineral Reserves and Mineral Resources are set out in the Pirquitas Technical Report. Mineral Reserves estimate is reported at a cut-off grade of $20.67 per tonne net smelter return (“NSR”). Mineral Resources estimate for the open pit is reported at a cut-off grade of $22.17 per tonne NSR, constrained within an open pit resource shell. Underground Mineral Resources (Pirquitas UG) are reported below the open pit resource pit shell; Mineral Resources for the Mining Area (which includes San Miguel, Chocaya, Oploca and Potosí zones) are reported at a cut-off grade of $85.00 per tonne NSR; and Mineral Resources for the Cortaderas Area are reported at a cut-off grade of $75.00 per tonne NSR. Mineral Reserves and Mineral Resources in surface stockpiles are reported at a cut-off grade of $21.61 per tonne NSR and were determined based on grade, rehandling costs and recovery estimates from metallurgical testing.

San Luis: Mineral Reserves estimate is reported at a cut-off grade of 6.9 g/t gold equivalent, using a gold price of $800 per ounce and a silver price of $12.50 per ounce .Mineral Resources estimate is reported at a cut-off grade of 6.0 g/t gold equivalent, using a gold price of $600 per ounce and a silver price of $9.25 per ounce.

Pitarrilla: Mineral Resources estimate for the open pit is reported at a cut-off grade of $16.38 per tonne NSR for direct leach ore, using an average recovery of 56% silver, and $16.40 per tonne NSR for flotation/leach ore, using average recoveries of 75% silver, 73% lead and 75% zinc, constrained within an open pit resource shell. Underground Mineral Resources (Pitarrilla UG) are reported below the constrained open pit resource pit shell above a cut-off grade of $80.00 per tonne NSR, using grade shells that have been trimmed to exclude distal and lone blocks that would not support development costs.

Diablillos: Mineral Resources estimate is reported at a cut-off grade of $30.16 per tonne NSR, using average recoveries of 87% gold and 78% silver, constrained within an open pit resource shell.

Berenguela: Mineral Resources estimate is reported at a cut-off grade of $45.70 per tonne NSR, constrained within an open pit resource shell.

Seabee Gold Operation

Mineral Reserves and Mineral Resources as at December 31, 2015

	Tonnes	Gold Grade g/t	Contained Gold ounces
Proven Mineral Reserves	518,100	7.48	124,700
Probable Mineral Reserves	458,200	7.78	114,600
Proven and Probable Mineral Reserves	**976,400**	**7.62**	**239,300**
Measured Mineral Resources	132,500	6.95	29,600
Indicated Mineral Resources	509,400	6.06	99,300
Measured and Indicated Mineral Resources	**642,000**	**6.24**	**128,800**
Inferred Mineral Resources	**3,598,500**	**8.76**	**1,012,900**

Notes: All estimates have been prepared in accordance with NI 43-101. The estimates of Mineral Reserves and Mineral Resources have been reviewed and approved by Gordon Reed, P.Eng., and F. Carl Edmunds, P. Geo., each of whom is a Qualified Person under NI 43-101 and our employee.

Mineral Resources are reported inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Mineral Resources and Mineral Reserves figures have some rounding applied, and thus totals may not sum exactly. All ounces reported herein represent troy ounces, and "g/t" represents grams per tonne.

Metal price utilized for Mineral Reserves and Mineral Resources estimates is CDN$1,400 per ounce of gold using metallurgical and process recovery of 96.2 percent and overall ore mining and processing costs derived from 2015 and 2014 realized costs. Mineral Reserves and Mineral Resources for the Seabee deposit are reported at a cut-off of 4.6 g/t. Mineral Reserves and Mineral Resources for the Santoy 8 and Santoy Gap are reported at a cut-off of 3.75 g/t. Mineral Resources for Porky Main are reported at a cut-off grade of 3.0 g/t.

The technical report is available under Claude Resources' profile on the SEDAR website at www.sedar.com.

Strong Technical and Commercial Experience

Board of Directors

Peter Tomsett
Chairman

Michael Anglin

Paul Benson

Brian Booth

Gustavo Herrero

Beverlee Park

Richard Paterson

Steven Reid

Management Team

Paul Benson
President, CEO and Director

Gregory Martin
SVP and CFO

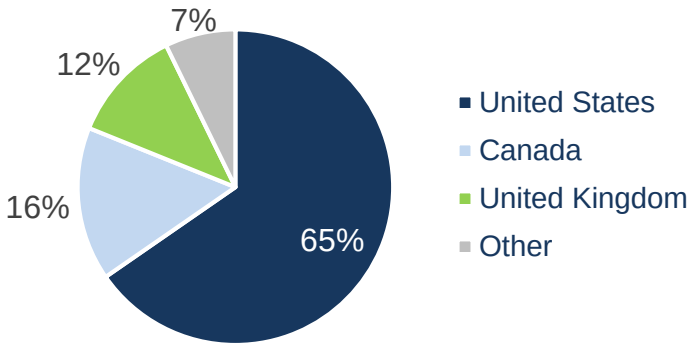
Alan Pangbourne
COO

John DeCooman
VP, Business Development and Strategy

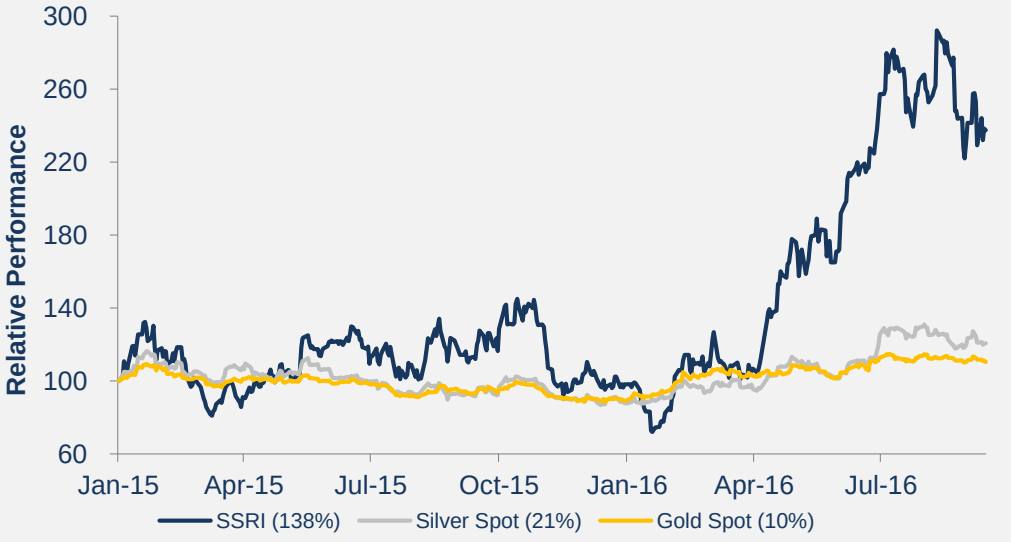
Ownership and Capitalization Summary

Top 10 Shareholders	% of Shares Outstanding
Van Eck Value	15.1%
Renaissance Technologies	4.0%
Sun Valley Gold	2.7%
Connor Clark & Lunn	2.3%
Deutsche Bank Trust Company	1.8%
The Vanguard Group	1.7%
Investec Asset Management	1.7%
TD Asset Management Yield	1.5%
Sprott Asset Management	1.4%
Sentry Investments	1.4%

Institutional Holdings by Country



Holding by Investor Class: 55% Institutional
45% Retail and Other



	$ Million
Cash and Cash Equivalents	$233
Marketable Securities	$193
Convertible Notes	$265
Revolving Credit Facility	$75
Market Capitalization	$1,490

Total Shares Outstanding: 118.4 million

Source: Bloomberg; as at September 15, 2016. Cash and cash and cash equivalents, marketable securities, convertible notes, revolving credit facility and shares outstanding as at June 30, 2016. Market capitalization as at September 15, 2016.

Notes

Notes

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Telephone: 1.604.689.3846