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**VALUES
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**SUSTAINABILITY
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HUDBAY

COPPER WORLD COMPLEX 2022 PEA PRESENTATION

June 16, 2022

HUDBAY

CAUTIONARY INFORMATION

This presentation contains forward-looking information within the meaning of applicable Canadian and United States securities legislation. All information contained in this presentation, other than statements of current and historical fact, is forward-looking information. Often, but not always, forward-looking information can be identified by the use of words such as “plans”, “expects”, “budget”, “guidance”, “scheduled”, “estimates”, “forecasts”, “strategy”, “target”, “intends”, “objective”, “goal”, “understands”, “anticipates” and “believes” (and variations of these or similar words) and statements that certain actions, events or results “may”, “could”, “would”, “should”, “might” “occur” or “be achieved” or “will be taken” (and variations of these or similar expressions). All of the forward-looking information in this presentation is qualified by this cautionary note. Forward-looking information is not, and cannot be, a guarantee of future results or events. Forward-looking information is based on, among other things, opinions, assumptions, estimates and analyses that, while considered reasonable by the company at the date the forward-looking information is provided, inherently are subject to significant risks, uncertainties, contingencies and other factors that may cause actual results and events to be materially different from those expressed or implied by the forward-looking information. The risks, uncertainties, contingencies and other factors that may cause actual results to differ materially from those expressed or implied by the forward-looking information are described under the heading “Risk Factors” in our most recent annual information form for the year ended December 31, 2021, under the heading “Financial Risk Management” in our management’s discussion and analysis for the period ended March 31, 2022 and under the heading “Cautionary Note Regarding Forward Looking Information” in our news release dated June 8, 2022. Should one or more risk, uncertainty, contingency or other factor materialize or should any factor or assumption prove incorrect, actual results could vary materially from those expressed or implied in the forward-looking information. Accordingly, you should not place undue reliance on forward-looking information. Hudbay does not assume any obligation to update or revise any forward-looking information after the date of this presentation or to explain any material difference between subsequent actual events and any forward-looking information, except as required by applicable law.

Qualified Person and NI 43-101

The scientific and technical information contained in this presentation has been approved by Olivier Tavchandjian, P. Geo, Hudbay’s Vice-President, Exploration and Technical Services. Mr. Tavchandjian is a qualified person pursuant to Canadian Securities Administrators’ National Instrument 43-101 - Standards of Disclosure for Mineral Projects (“NI 43-101”).

This PEA is preliminary in nature, includes inferred resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves and there is no certainty the preliminary economic assessment will be realized. As a result of this PEA, the 2017 feasibility study and technical report in respect of the standalone Rosemont project (the “2017 Feasibility Study”), including the estimates of mineral reserves and mineral resources contained therein, is no longer current and should not be relied upon by investors.

With the completion of the PEA, the company has determined that the Copper World Complex is a material mineral project for purposes of NI 43-101 and expects to file a NI 43-101 technical report to support the disclosure in our June 8, 2022 news release within 45 days of its release. The new technical report will be the current technical report in respect of all the mineral properties that form part of the Copper World Complex and shall supersede and replace the 2017 Feasibility Study.

Non-IFRS Financial Performance Measures

Cash cost and sustaining cash cost per pound of copper produced are shown because the company believes they help investors and management assess the performance of its operations, including the margin generated by the operations and the company. Unit operating costs are shown because these measures are used by the company as a key performance indicator to assess the performance of its mining and processing operations. EBITDA is shown to provide additional information about the cash generating potential in order to assess the company’s capacity to service and repay debt, carry out investments and cover working capital needs. These measures do not have a meaning prescribed by IFRS and are therefore unlikely to be comparable to similar measures presented by other issuers. These measures should not be considered in isolation or as a substitute for measures prepared in accordance with IFRS and are not necessarily indicative of operating profit or cash flow from operations as determined under IFRS. Other companies may calculate these measures differently. For further details on these measures, please refer to page 39 of Hudbay’s management’s discussion and analysis for the three months ended March 31, 2022 available on SEDAR at www.sedar.com.

All amounts in this presentation are in U.S. dollars unless otherwise noted.

AGENDA

- Hubday Overview
- Execution of Alternative Strategy in Arizona
- Copper World Complex PEA Highlights
- Mine Plan, Processing and Economics
- Next Steps & Upside Opportunities
- Q&A session



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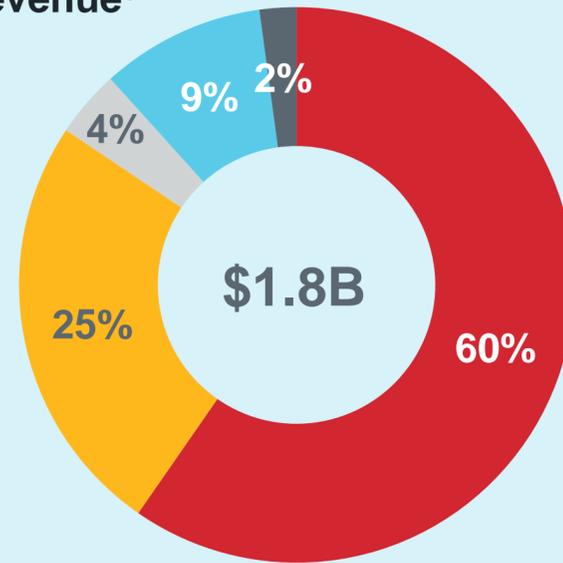
CANDACE BRÛLÉ
VP INVESTOR
RELATIONS

DIVERSIFIED MID-TIER COPPER PRODUCER

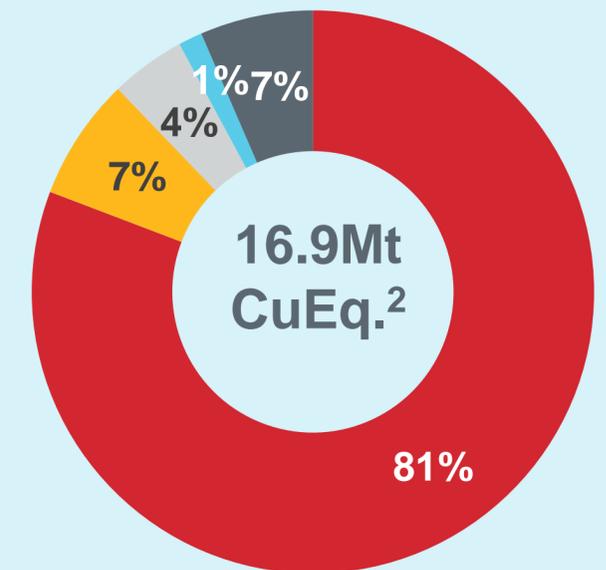
- ~20% year-over-year growth in copper production and ~30% growth in gold production in 2022
- Existing operations offer further near-term growth in copper and gold production
- Leading low-cost profile expected to generate significant near-term cash flow
- World-class organic growth pipeline offers medium-to-long-term copper production optionality

REVENUE AND RESERVES BY METAL

Revenue¹

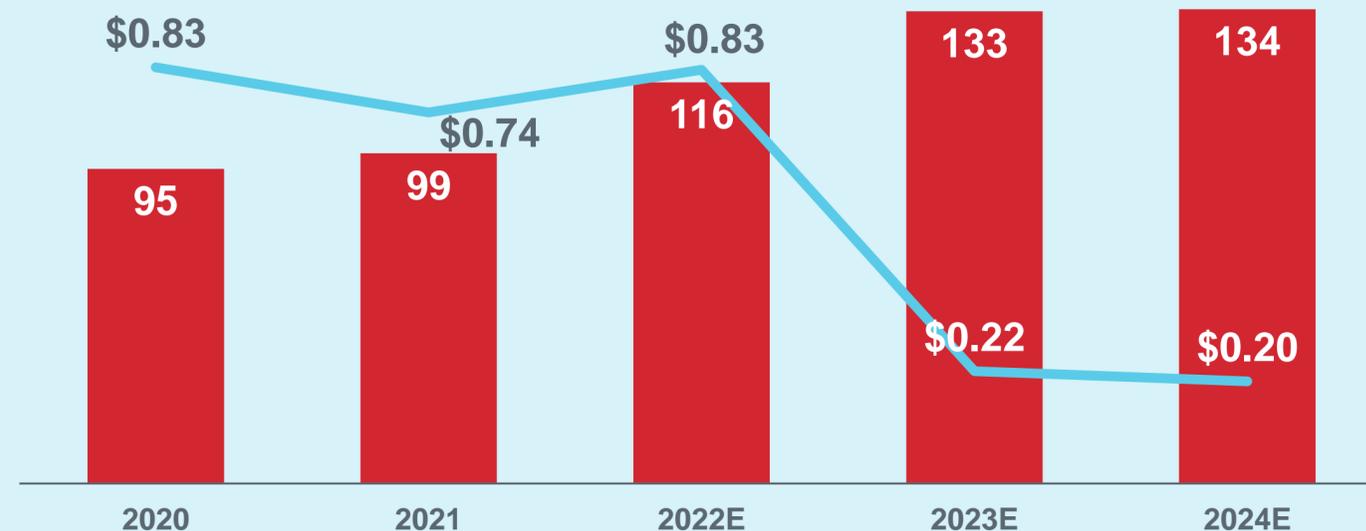


Resources²



ANNUAL COPPER PRODUCTION & CASH COSTS^{3,4}

Consolidated Copper Production (000 tonnes)



Consolidated Copper Cash Costs (US\$/lb)

1. Revenue calculated using median of 2022 production guidance and select commodity pricing (\$4.20/lb Cu, \$1,800/oz Au, \$25.00/oz Ag, \$1.30/lb Zn, and \$14.00/lb Mo).
 2. Measured and indicated mineral resource estimates inclusive of reserves. Total copper equivalent in situ resources as of January 1, 2022, calculated using select commodity pricing (\$3.45/lb Cu, \$1,500/oz Au, \$20.00/oz Ag, \$1.15/lb Zn, and \$11.00/lb Mo).
 3. Midpoint of copper production guidance shown for years 2022 to 2024.
 4. Midpoint of consolidated cash costs, net of by-product credits, guidance range for 2022. Company's Constancia and Snow Lake technical reports used for 2023 to 2024 with Snow Lake's reported gold cash costs converted to copper cash costs, net of by-product credits, using reported copper and gold production and a gold price assumption of US\$1,650/oz for 2023 and US\$1,600/oz for 2024.

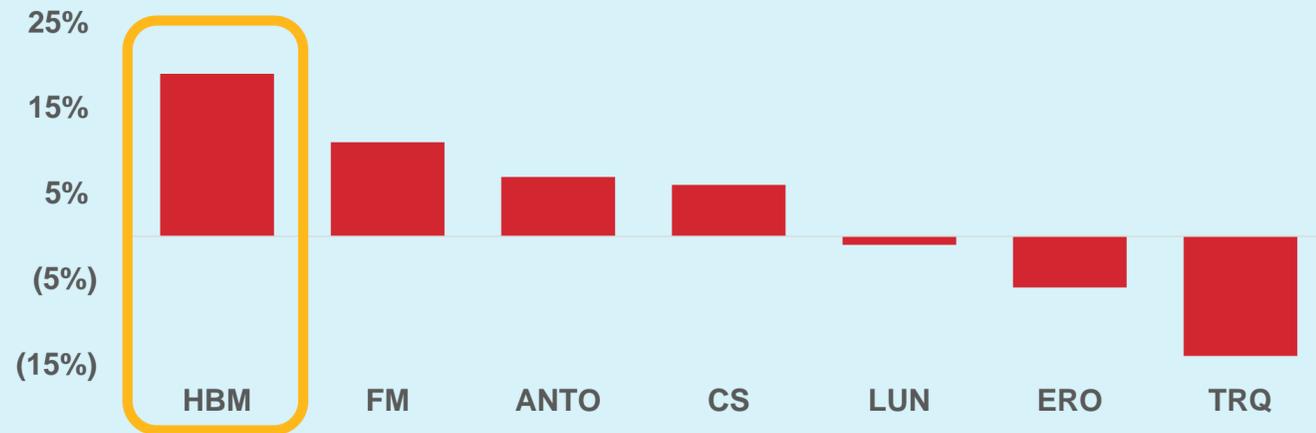
HUDBAY COPPER GROWTH PIPELINE

LEADING FREE CASH FLOW GROWTH AND SIGNIFICANT COPPER RESOURCE OPTIONALITY

- Meaningful near-term free cash flow growth with high quality organic pipeline offering significant long-term growth

LEADING NEAR-TERM FREE CASH FLOW YIELDS

(2023E FCF Yields at Spot Prices)



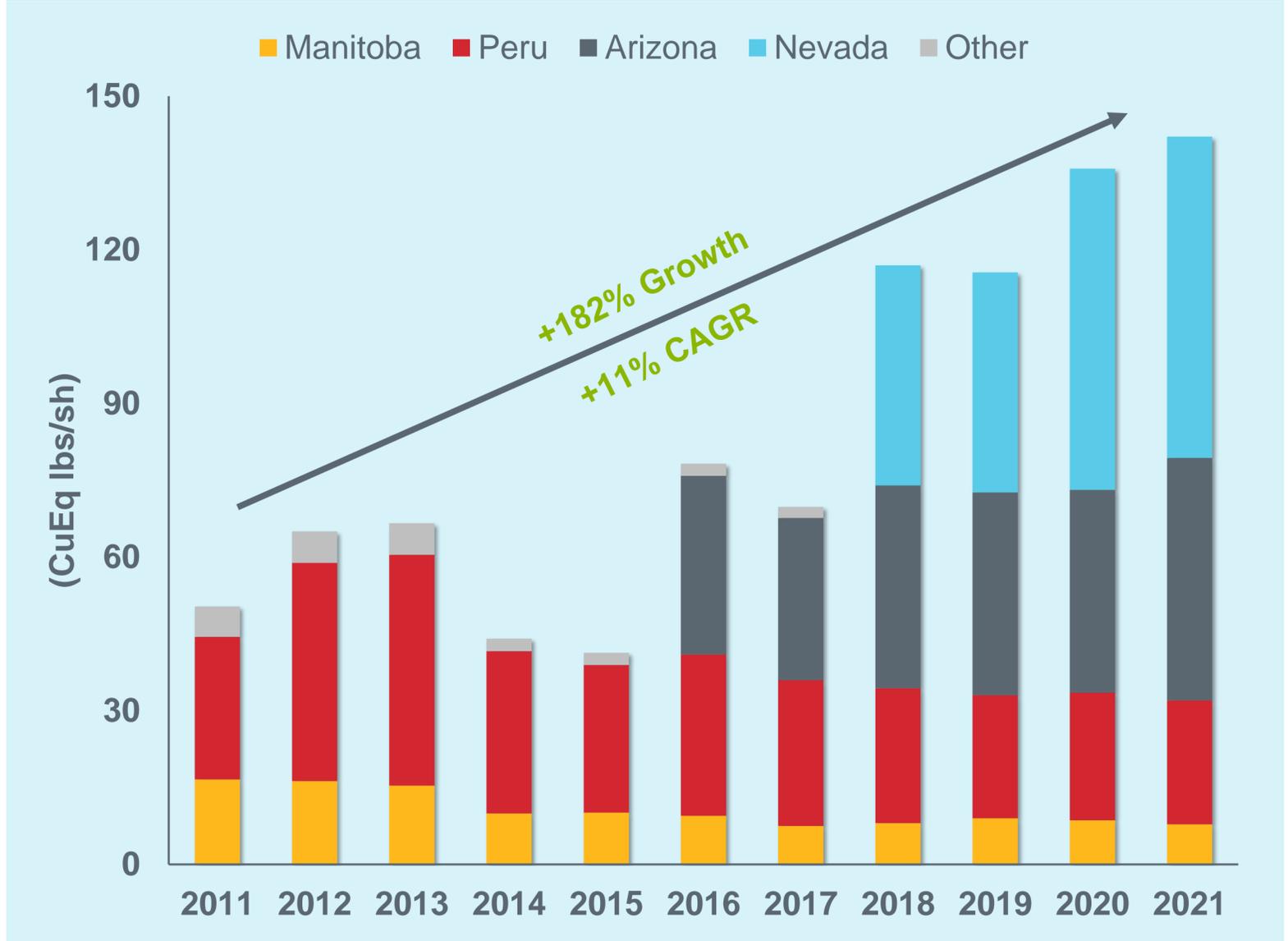
LEADING COPPER PIPELINE WITH ADDITIONAL OPTIONALITY

(NAV/sh Sensitivity to 10% Change in Copper Price)



Source: Scotiabank Global Equity Research, March 24, 2022.

SIGNIFICANT GROWTH IN COPPER RESOURCES PER SHARE¹



1. Excludes depletion from production. The following metals price assumptions were applied to reserves for purposes of calculating copper equivalent: \$3.45/lb Cu, \$1.15/lb Zn, \$1,500/oz Au, \$20.00/oz Ag and \$11.00/lb Mo. Does not include impact of precious metal streams, as applicable.

PROJECT HISTORY

August 2019

AUGUSTA (2007 – 2014)

- Approach to Rosemont development was centered around pursuing a large NPV project with the federal permitting process
 - Focused on attracting investors instead of executability
 - Alternative permitting approaches were never considered, and private land was unexplored

Permitting Progression

- 10 permits issued from a variety of federal/state agencies (ADWR, ADEQ, EPA etc.)
- 3 challenges/appeals won against both project opponents (SSSR, FICO) and local County
- U.S Forest Service Final Environmental Impact Statement Complete

HUDBAY (2014 – 2019)

- Acquired Augusta in 2014 assuming ownership of the Rosemont project
 - Technical work redone and summarized in updated 2017 feasibility study
- Augusta Federal permitting process continued until unprecedented U.S. District Court ruling
 - Vacated USFS's issuance of the Final ROD, suspending construction at Rosemont

Permitting Progression

- Key federal permits obtained including Final ROD, 404 Water Permit & Mine Plan of Operations
- ADEQ 401 Certification issued
- All permits required to begin construction were issued before ROD was vacated

Construction Suspended & Appeal Process Initiated

Potential for continued federal (NEPA) permitting litigation even upon successful outcome

Private land development plan pursued for state permitting

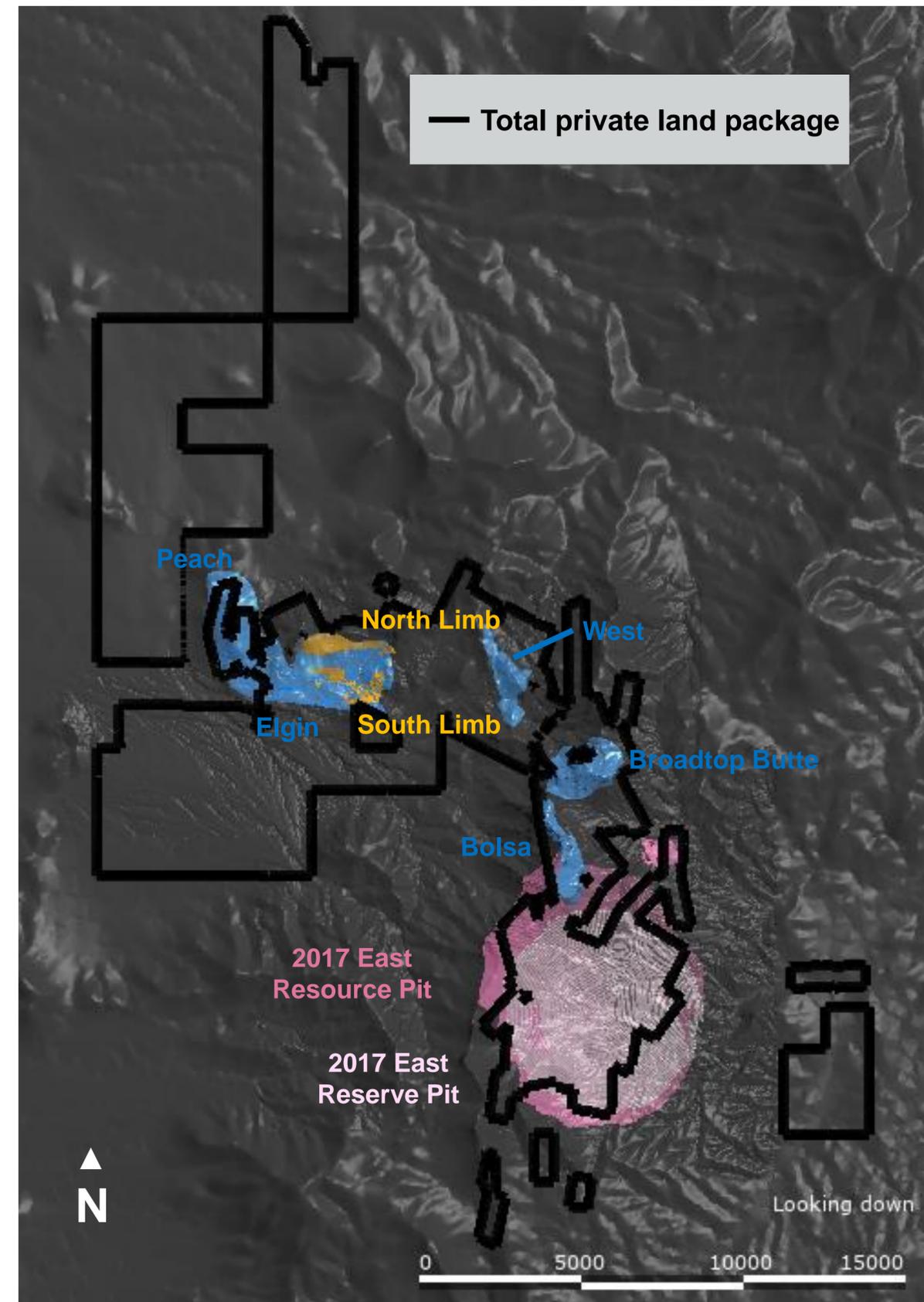
FEDERAL LAND ROSEMONT DEVELOPMENT STRATEGY

Note: ADWR = Arizona Department of Water Resources; ADEQ = Arizona Department of Environmental Quality; SSSR = Save the Scenic Santa Ritas; FICO = Farmers Investment Co.; USFS = United States Forest Service, ROD = Record of Decision, NEPA = National Environmental Policy Act

EXECUTION OF ALTERNATIVE STRATEGY

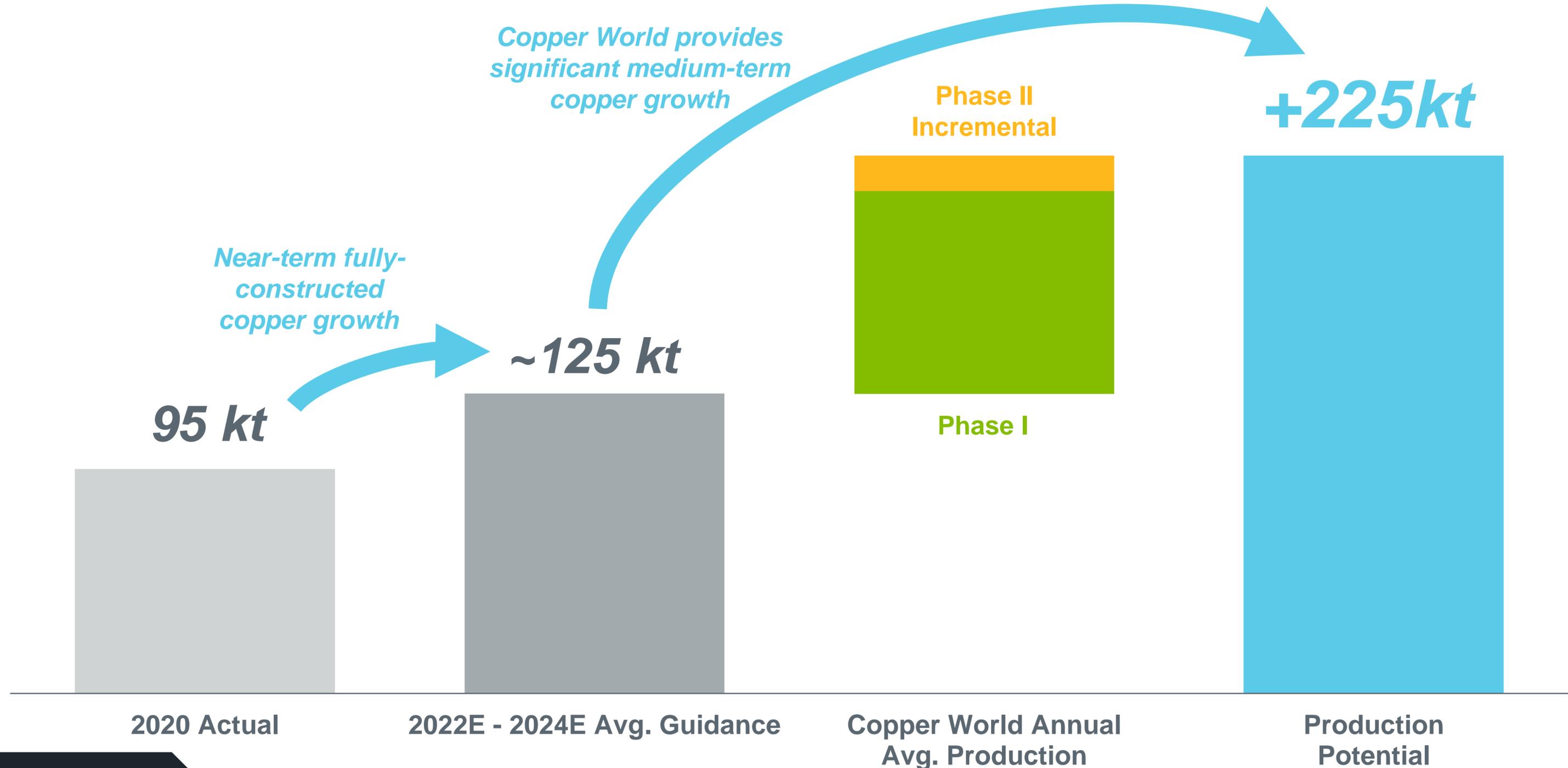
EVALUATING OPTIONS TO UNLOCK VALUE IN ARIZONA SINCE AUGUST 2019

- Conducting Internal Study on Private-only Plan at East in 2019
- Discovering New Mineralization on Patented Mining Claims
 - Initiated a drill program in 2020 in support of a private land development plan; subsequently expanded throughout 2021
 - Discovered oxide and sulfide mineralization in seven deposits over a 7km strike area
- Expanding Private Land Package
 - Acquired additional land in the area to support an operation entirely on private land
 - Total package includes 4,500 acres, enough to support the first 16 years of production on private land
- Advancing State-Level Permitting
 - Initiated in 2021 with MLRP application
 - Aquifer protection permit and air quality permit are the remaining key state-level permits, which are expected to be advanced in H2 2022
- Unlocking District Potential
 - Remodeled 2017 mineral resource estimate, incorporated the new mineral resources discovered in 2021 and completed new metallurgical test work
 - 2022 PEA included a comprehensive review of the mine plan, process design, tailings deposition strategies and permitting requirements



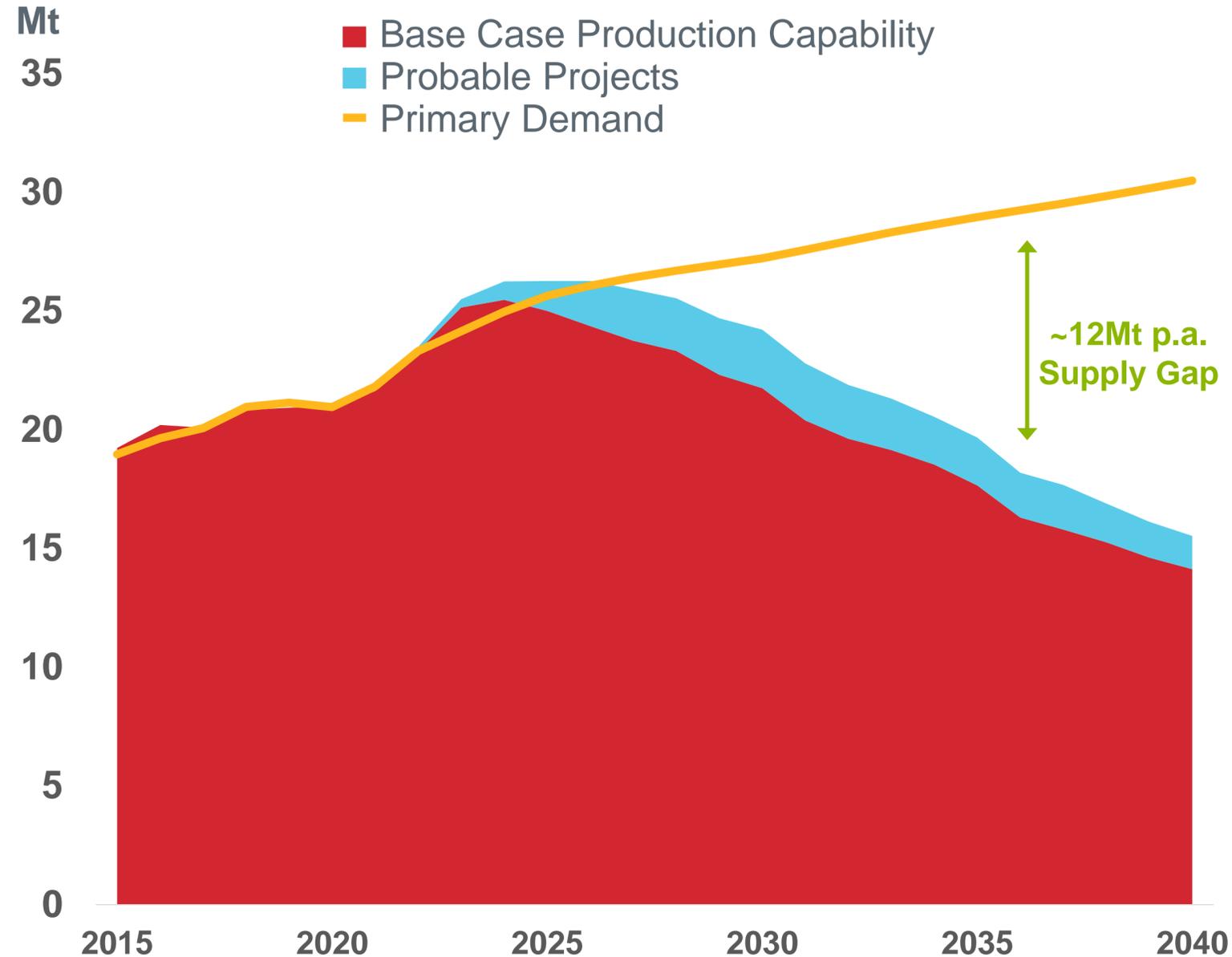
SIGNIFICANT COPPER PRODUCTION OPTIONALITY

COPPER WORLD PROVIDES THE NEXT LEG OF COPPER PRODUCTION GROWTH AT HUBBAY



COPPER SUPPLY GAP

GLOBAL COPPER MINES AND PROJECTS UNABLE TO MEET LONG-TERM DEMAND EXPECTATIONS



Declining Copper Grades

- Global copper resources continue to be depleted and the average mined copper grade has declined by more than 40% since 1990



Scarcity of Copper Projects of Scale

- New copper discoveries of scale have become less frequent, especially in tier 1 jurisdictions



Protracted Timelines to Development

- Lead times to advance projects to construction remain lengthy; increasing social and regulatory risks leading to project permitting delays

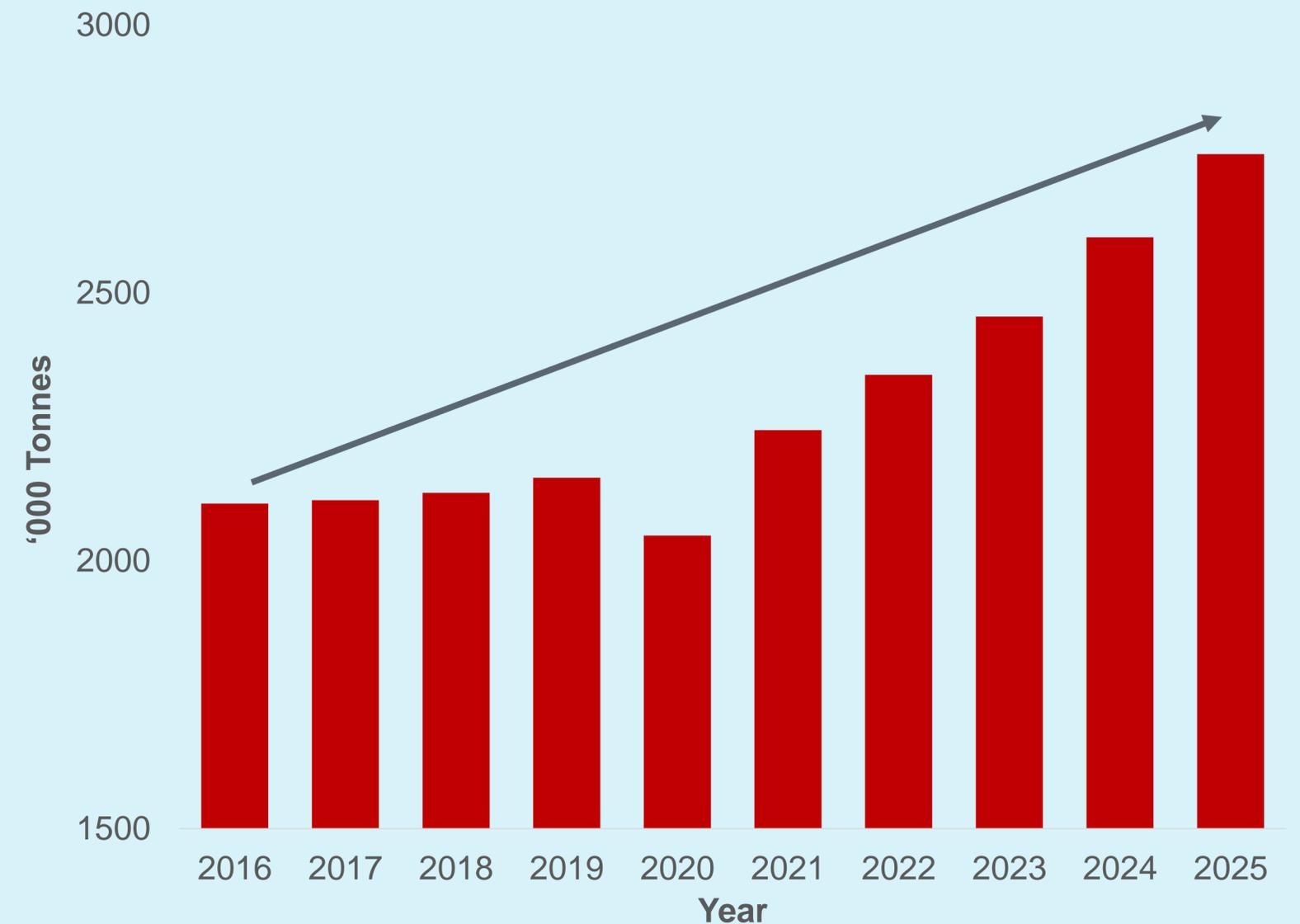
Source: Wood Mackenzie, Copper Long-term Outlook Q4 2021.

SUPPORTING DOMESTIC U.S. COPPER SUPPLY CHAIN

GREEN TRANSITION AND DEMAND FOR COPPER IN THE U.S. IS ACCELERATING

- Copper cathodes produced at the Copper World Complex are expected to be sold entirely to U.S. domestic customers
- Global mine production, and ultimately smelter production, will struggle to keep pace with metal demand boosted by the green energy revolution
- The U.S. is expected to remain a net copper metal importer and domestic supply will be required to satisfy growing U.S. metal demand related to:
 - Increased manufacturing capacity
 - Infrastructure development
 - Bolstering the country's energy independence
 - Domestic EV battery supply chain and production needs

GROWING U.S COPPER CONSUMPTION



Source: Goldman Sachs Commodities Research, Metals: A New Supercycle pg. 29

ENVIRONMENTAL STEWARDSHIP

HUDBAY OPERATES IN A MANNER THAT DEMONSTRATES OUR COMMITMENT TO THE ENVIRONMENT

- Near-term GHG mitigation is focused on energy efficiency at our operations
- Over 50% of our total energy consumption is from renewable sources
 - All electricity at operations supplied by regional grids
 - Manitoba electricity source is nearly 100% renewable hydropower
- Hubday made the strategic shift in the 1990s to improve emissions in the Manitoba operations by closing the legacy zinc smelter and opening the modern hydrometallurgical zinc plant
- In alignment with the Toward Sustainable Mining Energy and GHG Emissions Management Protocol
- Defining GHG Emissions reduction targets in 2022
- Examining the opportunity to reprocess tailings in Manitoba and potentially reduce environmental footprint

LEADING EMISSIONS RANKING

	t CO2e/t CuEq	Rank
Boliden	0.9	1
Ero	1.4	2
Hubday	1.5	3
Southern Copper	1.8	4
BHP	2.1	5
Lundin	2.1	6
Antofagasta	2.6	7
Vale	2.7	8
Teck	3.7	9
Anglo American	4.2	10
Glencore	4.2	11
Freeport-McMoRan	4.2	12
First Quantum	4.6	13
Rio Tinto	5.7	14
South32	16.9	15

Source: Barclays research report "Explaining Metals Emissions" dated January 13, 2022 using production emission intensity for diversified and copper mining companies.



DESIGNED TO REDUCE ENERGY CONSUMPTION AND GHG EMISSIONS

“MADE IN AMERICA” COPPER TARGETS GHG EMISSION REDUCTIONS

- Copper World Complex will produce copper cathode expected to be sold entirely to domestic U.S. customers
- Reduces the operation's total energy consumption, GHG emissions and sulfur (SO₂) emissions by eliminating overseas shipping, smelting and refining
- Many local benefits, including \$3.3B in U.S. taxes, more than 500 direct jobs and up to 3,000 indirect jobs in Arizona



↓ 10%

lower energy consumption, including 30% decline related to downstream processing by 2030 climate change goals

↓ 10-15%

reduction in overall GHG emissions

Targeting further GHG reductions as part of Hubbay's reduction targets to

align with global ↓ 50% by 2030 climate change goal



PEAK HIGHLIGHTS

HUDBAY

DEVELOPMENT STRATEGY

OVER US\$100M SPENT PROGRESSING THE COPPER WORLD COMPLEX SINCE 2020

EXPLORATION DRILLING

- ✓ Identification of historic mineralization and deposits in the Copper World areas
- ✓ Exploration program initiated in October 2020
- ✓ 2021 exploration budget increased by +300% based on early results
- ✓ 7 deposits identified with over 200,000 feet drilled to-date and drilling continues at site

ADDITIONAL PRIVATE LAND PURCHASES

- ✓ Purchased +2400 acres of additional private land to host infrastructure and tailings

NEW MINERAL RESOURCE BASE

- ✓ 310 holes used to define initial resource at Copper World containing high-grade areas closer to surface than at East (formerly Rosemont)
- ✓ Drilling at Copper World continues to identify additional mineralization and to convert material to higher classifications
- ✓ Resource model for East (formerly Rosemont) redone following Constancia's approach results in lower tonnage at higher grade

PEA

- Combines initial resources from Copper World and new resource model for East (formerly Rosemont)
- Two phase development plan with first 16 years on private land
- Production of cathodes from leaching both concentrates and oxides

2022 PEA HIGHLIGHTS

TWO-PHASED APPROACH WITH PRIVATE LAND FOR FIRST 16 YEARS

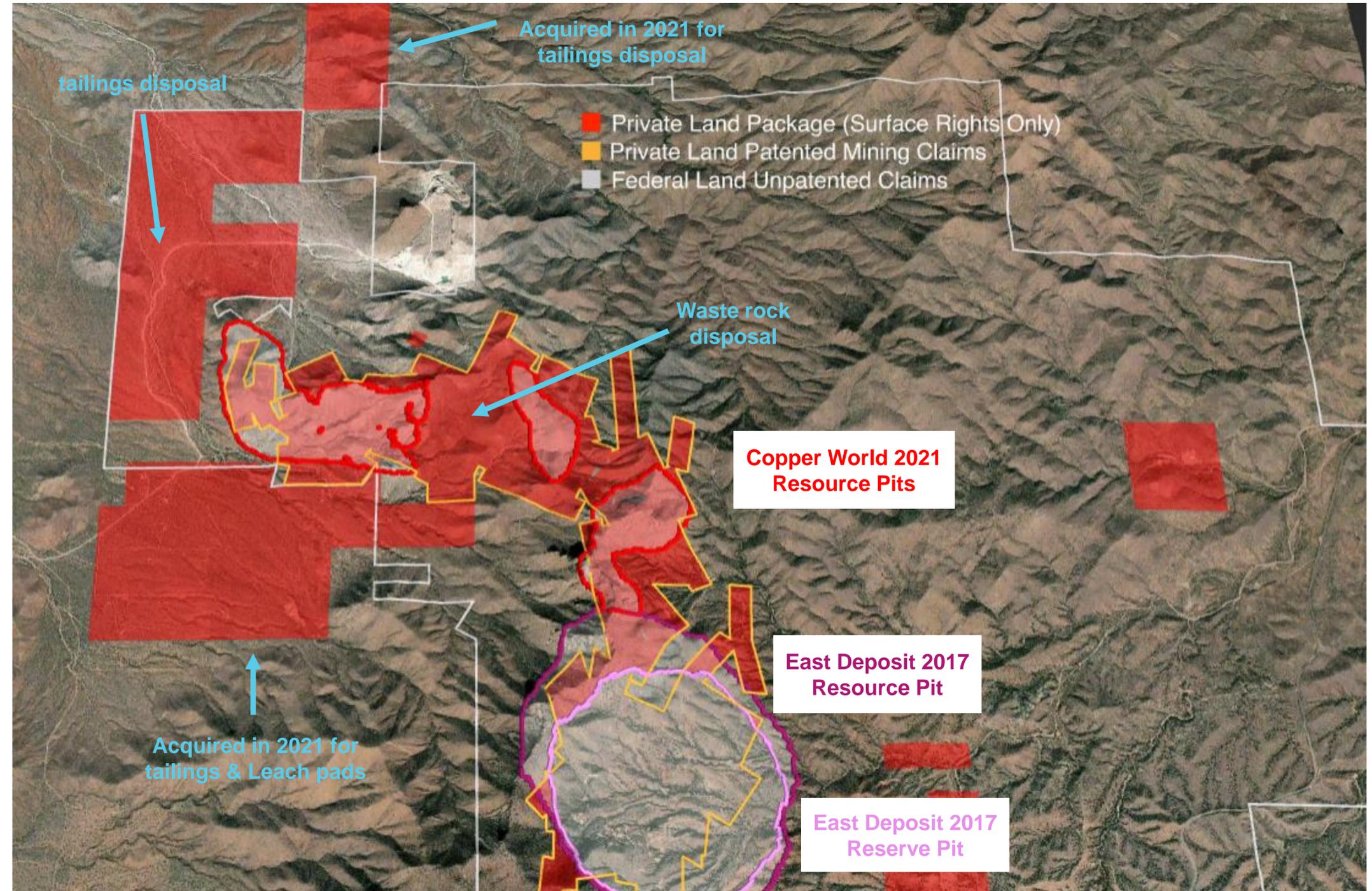
- Sulfide and oxide resources at low strip ratio were delineated in the Copper World areas (80% already in indicated category) with a large portion on private land
- The East deposit (formerly Rosemont) resource model was redone
- Sufficient land has been acquired for 16 years of tailings, waste rock and leach pads disposal on private land
- Metallurgical studies and engineering have been conducted to support several enhancements to the process flowsheet including:
 - Sulfuric acid plant producing power and acid
 - Leaching of oxides from the Copper World and East deposits, with internally produced acid
 - Atmospheric leaching of copper concentrates to produce copper cathodes with SX/EW plant
 - Precious metals recovered in doré from residue

Domestic US copper cathode production significantly reduces energy consumption, CO2 and SO2 emissions

PRIVATE LAND ADDED TO SUPPORT INFRASTRUCTURE

PURCHASED +2400 ACRES OF ADDITIONAL PRIVATE LAND TO HOST INFRASTRUCTURE AND TAILINGS

- More could be mined within private land limits but room for waste, tailings and leach pads is the # 1 constraint during Phase I
- 2,400 acres were acquired in 2021 north of the 'F area' and south around the Helvetia Ranch
- Newly acquired areas will be used for tailings disposal and for ROM leach pads
- Waste rock will be disposed in the Copper World areas in between pits and within pits post mining
- Opportunities to acquire more surface rights which could unlock significant additional value



2022 PEA TWO-PHASED APPROACH

PHASE I (PRIVATE LAND)

- 16 years with state permitting at 60 kstpd mill feed and additional 20 kstpd on average oxide leach
- When there is available concentrate leach capacity, as internal production varies year to year, we would buy external Cu concentrate to fill Cu cathode production capacity
- When additional capacity exists in the sulfuric acid plant, external molten sulfur will be purchased to produce acid
- When sulfuric acid production exceeds oxide leaching needs, excess production is sold
- Excess power production is sold

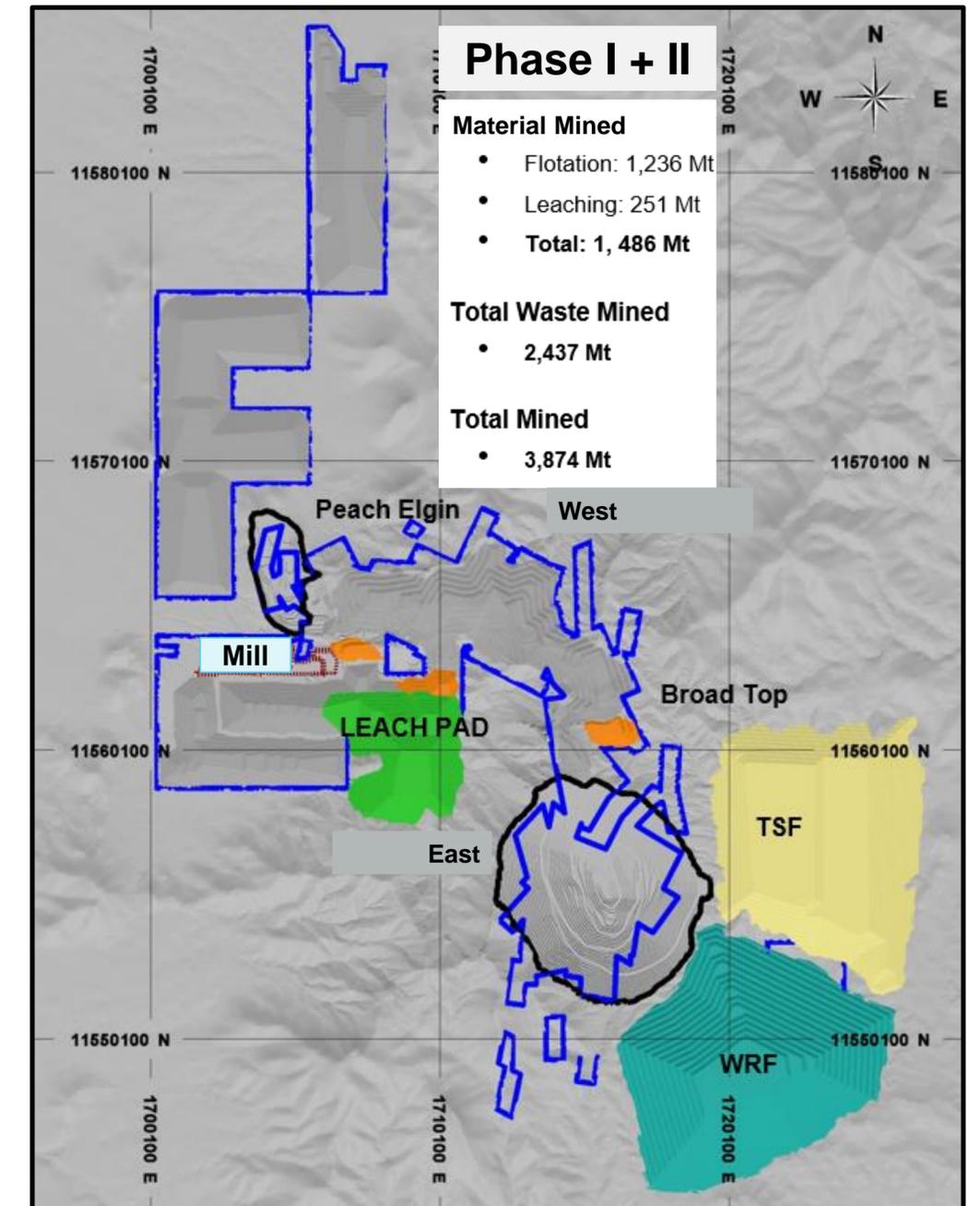
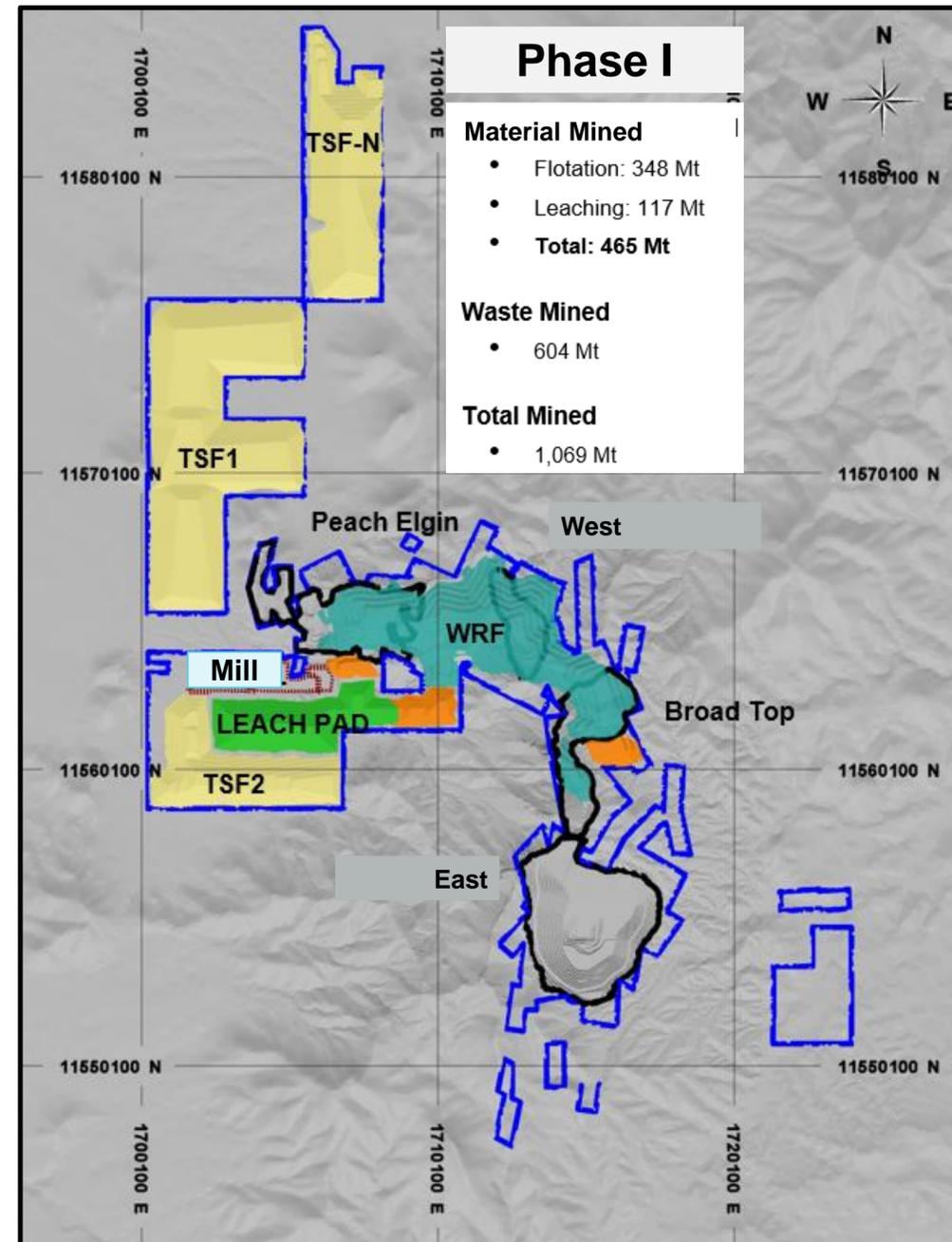
PHASE II (FEDERAL LAND)

- All remaining economic sulfide and oxide resources are mined with federal permits (NEPA) in place
- Mill throughput increases to 90 kstpd with same locations for dry stack tailings and waste rock facility as per the 2017 Feasibility Study
- Continue to convert Cu concentrate to Cu cathodes and produce doré, power and sulfuric acid
- The 9th circuit decision in May 2022 clarified the permitting path for Phase II; Hudbay expects to pursue and obtain federal permits within the constraints imposed by the court's decision, which continues to allow the U.S. Forest Service to approve projects under existing mining regulations

LAND AVAILABILITY: KEY CONSTRAINT DURING PHASE I

LAND AVAILABLE TO OPERATE DURING PHASE I WITHOUT FEDERAL PERMIT REQUIREMENTS IS THE MAIN CONSTRAINT

- During Phase I, land available to dispose tailings (TSF), waste rocks (WRF) and heap leach pads (HLP) does not exceed 1,070Mt
- More resources could be mined within the limits of our private land tenements but cannot be disposed without a federal permit
- Phase I is not the optimum mine plan on private land but one that can be executed with state level permits only
- Phase II accesses 100% of the resource while disposing tailings and waste rock on federal land



2022 PEA OPTIMIZATION OPPORTUNITIES

PROJECT ADHERANCE TO CONSTRAINTS

- The 2022 PEA is not the optimum economic project but the best project within known permitting and private land constraints
 - Ignoring private land and other permitting constraints, mining could occur at a higher production rate and/or at much better grade
 - Phase I is limited to 60 kstpd flotation to align with commitments in the state air & aquifer protection permit applications
 - Phase II has been limited to 90 kstpd flotation to align with the previous mine plan of operations although the size of the resource would easily support a larger production rate

FURTHER OPPORTUNITIES

- Many options identified through the course of the PEA will be considered in the coming months while we progress the PFS:
 - Acquisition of additional land at the Copper World Complex would unlock additional value from the mine plan
 - Conservative approach adopted for the PEA assumes all processing facilities start at the same time. Minimal pre-stripping provides an opportunity to process early feed in year -1, which will be further investigated during the PFS
 - Processing route is highly flexible
 - Potential for synergies with the other business units of Hudbay, e.g. processing of concentrates from Snow Lake and Constanca

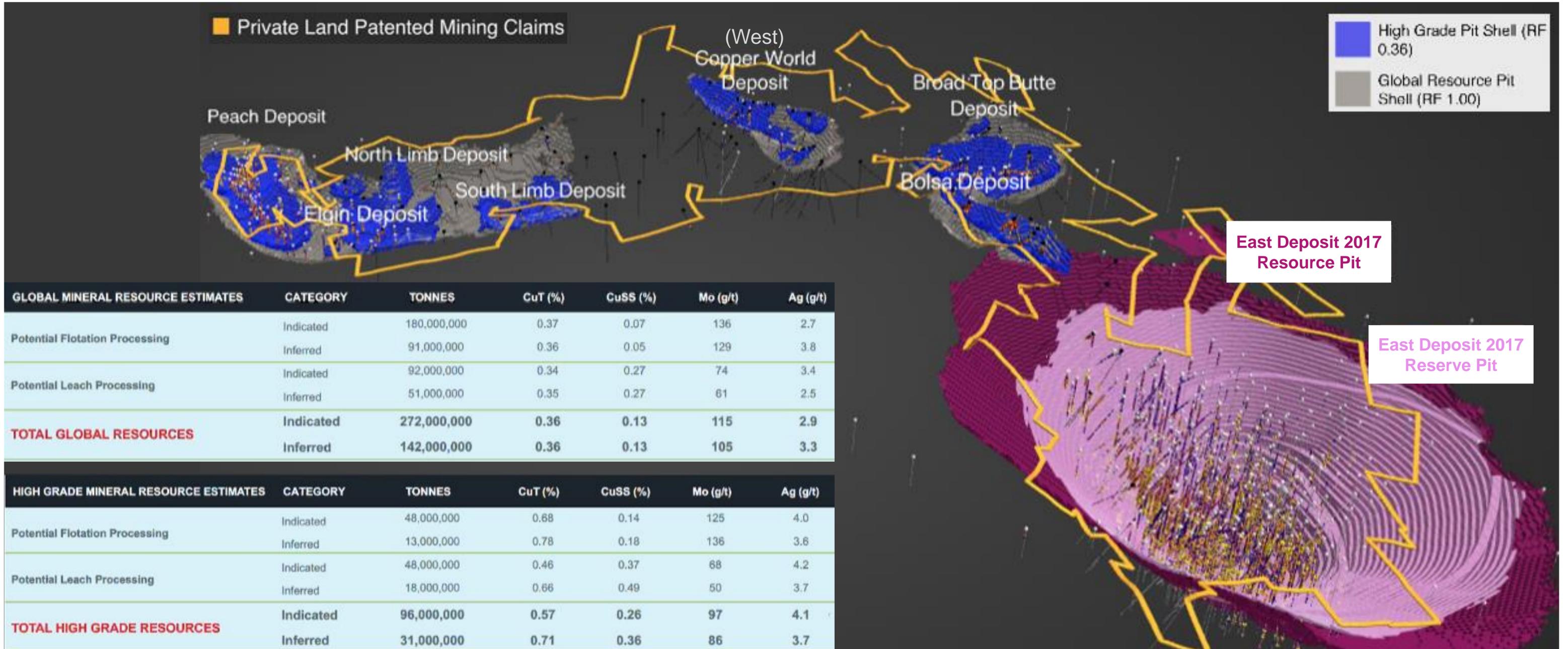


MINER PLAN

HUDBAY

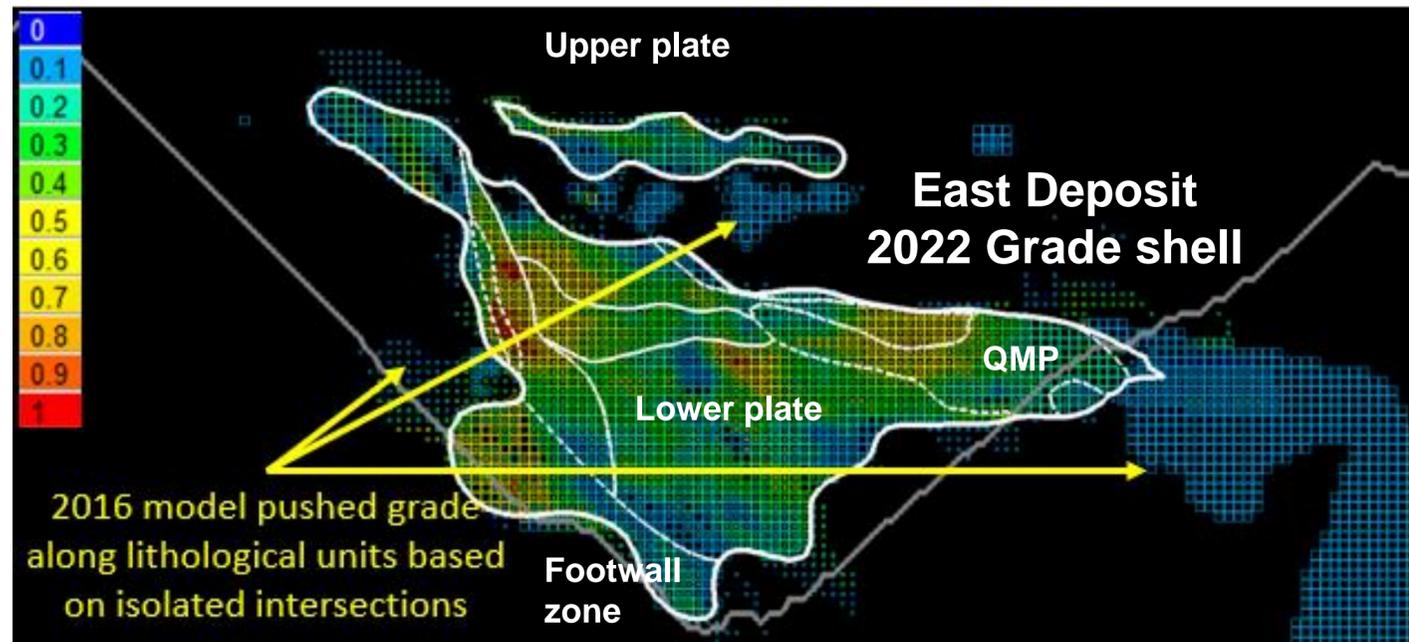
2021 COPPER WORLD INITIAL RESOURCE ESTIMATES

SIGNIFICANT HIGH-GRADE PORTION CLOSE TO SURFACE – MAJORITY ON PRIVATE LAND



2022 HIGHER GRADE MINERAL RESOURCE ESTIMATES

EAST DEPOSIT REVISED USING CONSTANCIA'S RESOURCE METHODOLOGY



- East Deposit 2022 resource model based on same data as in 2017 but methodology differs on three aspects:
 - Honoring four structural domains (Footwall, Lower, Upper and QMP) within a 0.1% Cu grade shell
 - No capping on Cu grade
 - Over-smoothing corrected
- Results in lower tonnage but higher grade within the mineralized envelope (less dilution/grade smearing)
- Revised modeling approach independently reviewed and validated by Golder Associates

- Copper World discoveries and remodeling of the East deposit result in an enhanced resource basis to develop the mine plan with a **global increase in both tonnage and grade** in all resource categories compared to 2017

Total Copper World Complex – Comparison of Mineral Resource Estimates ^{1,2}									
	2017			2022			% Change		
	Tonnes (millions)	Cu (%)	Cu (000 tonnes)	Tonnes (millions)	Cu (%)	Cu (000 tonnes)	Tonnes (millions)	Cu (%)	Cu (000 tonnes)
Measured and Indicated	1,147	0.36	4,129	1,173	0.41	4,829	2%	14%	17%
Inferred	75	0.30	224	262	0.37	957	252%	22%	328%

Note: totals may not add up correctly due to rounding.
¹ 2017 mineral resource estimates are inclusive of mineral reserve estimates.
² 2022 mineral resource estimates include both flotation and leach material.

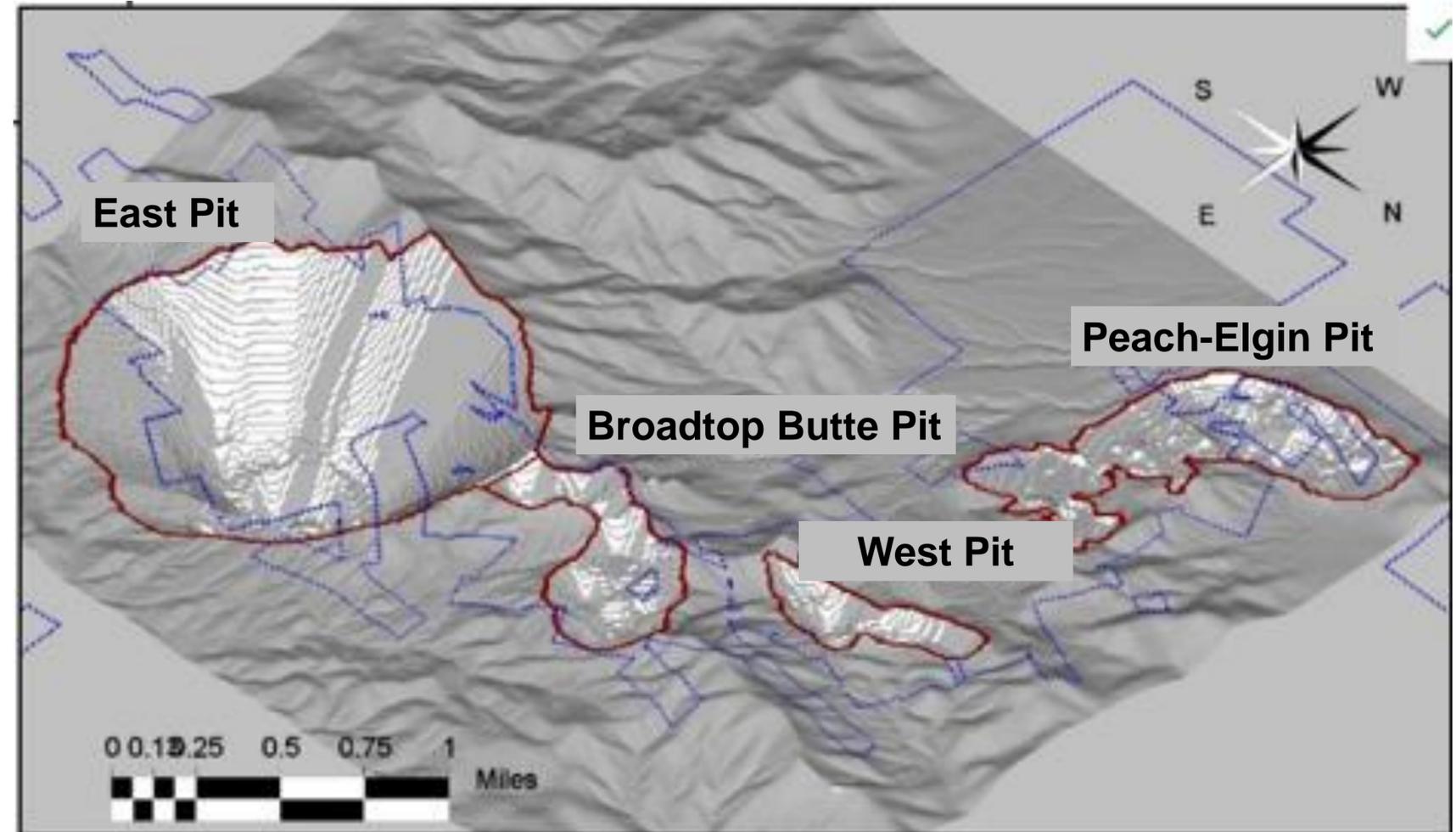
PIT OPTIMIZATION COMBINES FLOTATION AND LEACHING

INITIAL STEP: OVERALL PIT OPTIMIZATION IGNORES LAND AND FEDERAL PERMITTING CONSTRAINTS

- A revenue factor of 1.0 was used for mineral resource estimates (break-even economics at \$3.45/lb Cu):

	Short Tons (millions)	Metric Tonnes (millions)	Cu (%)
Measured + Indicated	1,293	1,173	0.41
Inferred	289	262	0.37

- A revenue factor of 0.85 was selected as the optimum pit shell to guide the mine design for the PEA with the maximum NPV
- The PEA final pit shell selected for the mine design utilizes ~93% of the mineral resource estimate



Class	Short tons	TCu%	SCu%	CuSS%	Ox (CuSS/TCu)	Mo%	Ag_g/t	Au_g/t
Measured	842,865,540	0.44	0.36	0.08	0.18	0.013	4.924	0.001
Indicated	392,734,876	0.36	0.25	0.11	0.31	0.012	3.673	0.007
Inferred	250,853,891	0.36	0.26	0.10	0.28	0.011	3.744	0.006
Grand Total	1,486,454,307	0.41	0.32	0.09	0.23	0.012	4.394	0.003

Pit shell for mine design using a revenue factor of 0.85.

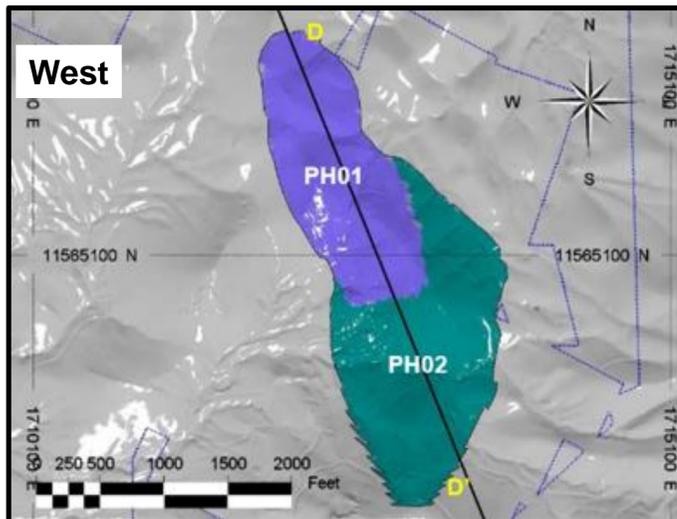
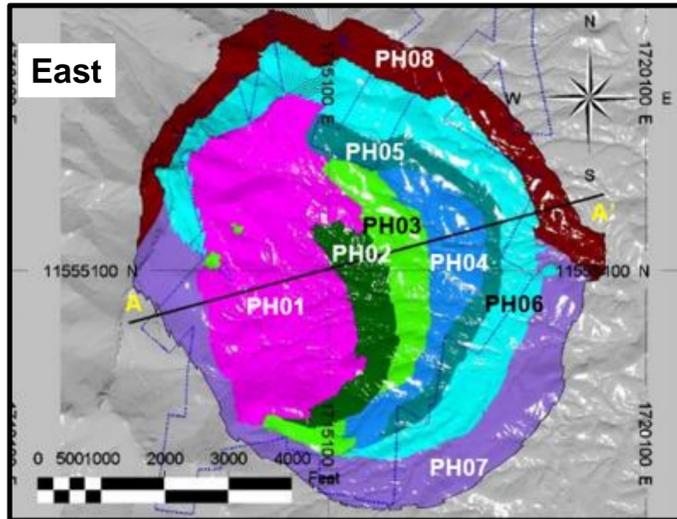
PIT OPTIMIZATION MINING PHASES

PIT SHELLS USED AS A BASIS TO DESIGN MINING PHASES FOR EACH PIT, WHILE ALSO CONSIDERING PERMITTING CONSTRAINTS

Phase I Mining

Phase II Mining

RO_PH04 is in both Phase I & Phase II

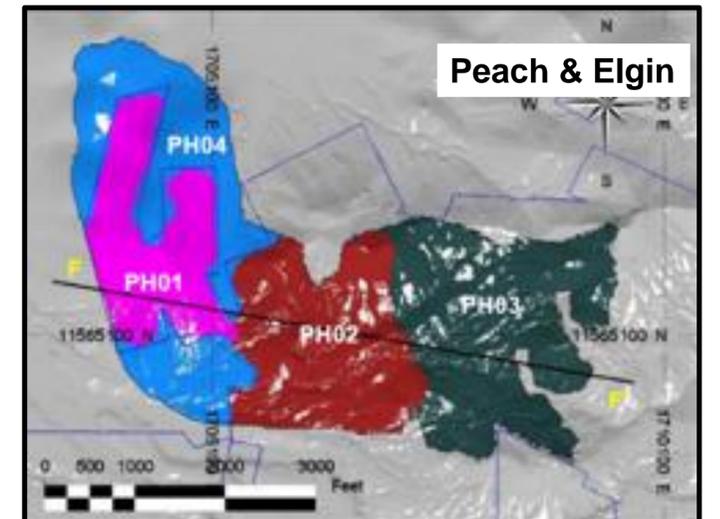
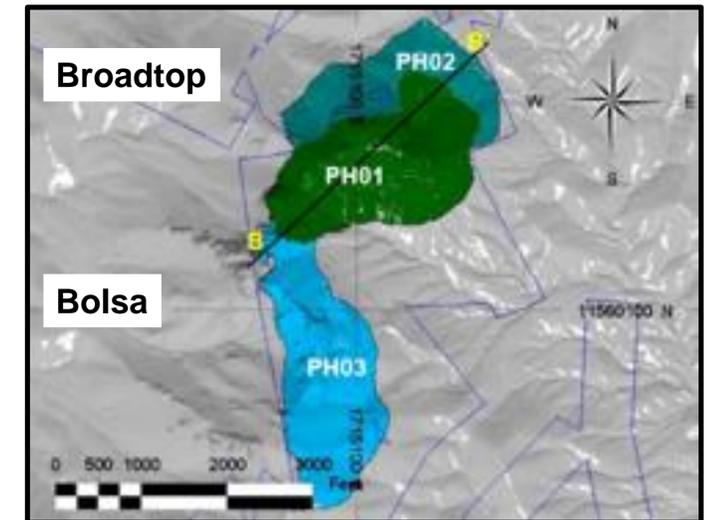


East	Short tons	TCu%	SCu%	CuSS%	Ox (CuSS/TCu)	Mo%	Ag_g/t	Au_g/t
RO_PH01	68,373,931	0.52	0.37	0.14	0.28	0.009	6.052	0.000
RO_PH02	57,934,733	0.52	0.44	0.08	0.16	0.010	6.272	0.000
RO_PH03	59,598,138	0.41	0.31	0.10	0.24	0.007	5.493	0.000
RO_PH04	128,691,810	0.49	0.39	0.10	0.20	0.009	5.711	0.000
RO_PH05	135,918,116	0.51	0.42	0.09	0.18	0.013	5.040	0.000
RO_PH06	276,287,280	0.39	0.30	0.09	0.24	0.012	3.565	0.000
RO_PH07	162,304,349	0.40	0.36	0.03	0.08	0.015	5.931	0.000
RO_PH08	222,151,105	0.33	0.29	0.05	0.14	0.014	4.402	0.002
Grand Total	1,111,259,461	0.42	0.34	0.08	0.19	0.012	4.904	0.000

BTB	Short tons	TCu %	SCu %	CuSS %	Ox (CuSS/TCu)	Mo%	Ag_g/t	Au_g/t
BT_PH01	46,714,119	0.36	0.25	0.11	0.30	0.014	3.209	0.014
BT_PH02	40,371,844	0.30	0.27	0.03	0.10	0.014	2.319	0.008
BT_PH03	32,073,237	0.64	0.24	0.41	0.64	0.006	2.781	0.011
Grand Total	119,159,200	0.41	0.25	0.16	0.39	0.012	2.792	0.011

West	Short tons	TCu %	SCu %	CuSS %	Ox (CuSS/TCu)	Mo%	Ag_g/t	Au_g/t
CW_PH01	16,160,093	0.55	0.39	0.16	0.29	0.011	3.414	0.010
CW_PH02	30,200,297	0.31	0.19	0.12	0.39	0.010	4.032	0.017
Grand Total	46,360,390	0.40	0.26	0.14	0.34	0.011	3.817	0.014

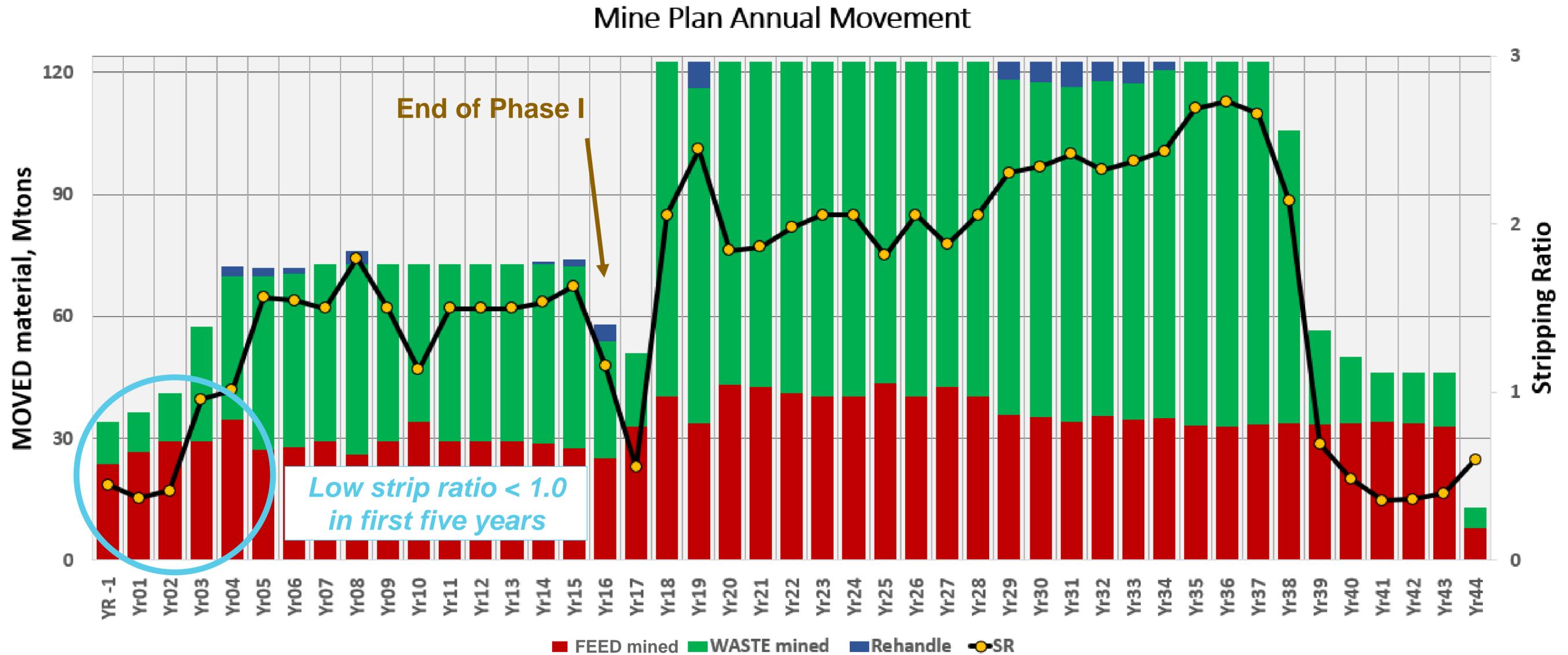
P&E	Short tons	TCu %	SCu %	CuSS %	Ox (CuSS/TCu)	Mo%	Ag_g/t	Au_g/t
PE_PH01	15,178,530	0.43	0.19	0.25	0.58	0.005	4.161	0.023
PE_PH02	26,612,848	0.43	0.33	0.11	0.26	0.013	3.326	0.015
PE_PH03	30,997,498	0.29	0.21	0.09	0.31	0.013	2.305	0.019
PE_PH04	136,886,382	0.31	0.21	0.10	0.33	0.012	2.555	0.009
Grand Total	209,675,257	0.33	0.22	0.11	0.34	0.012	2.732	0.012



LIFE OF MINE PRODUCTION SCHEDULE

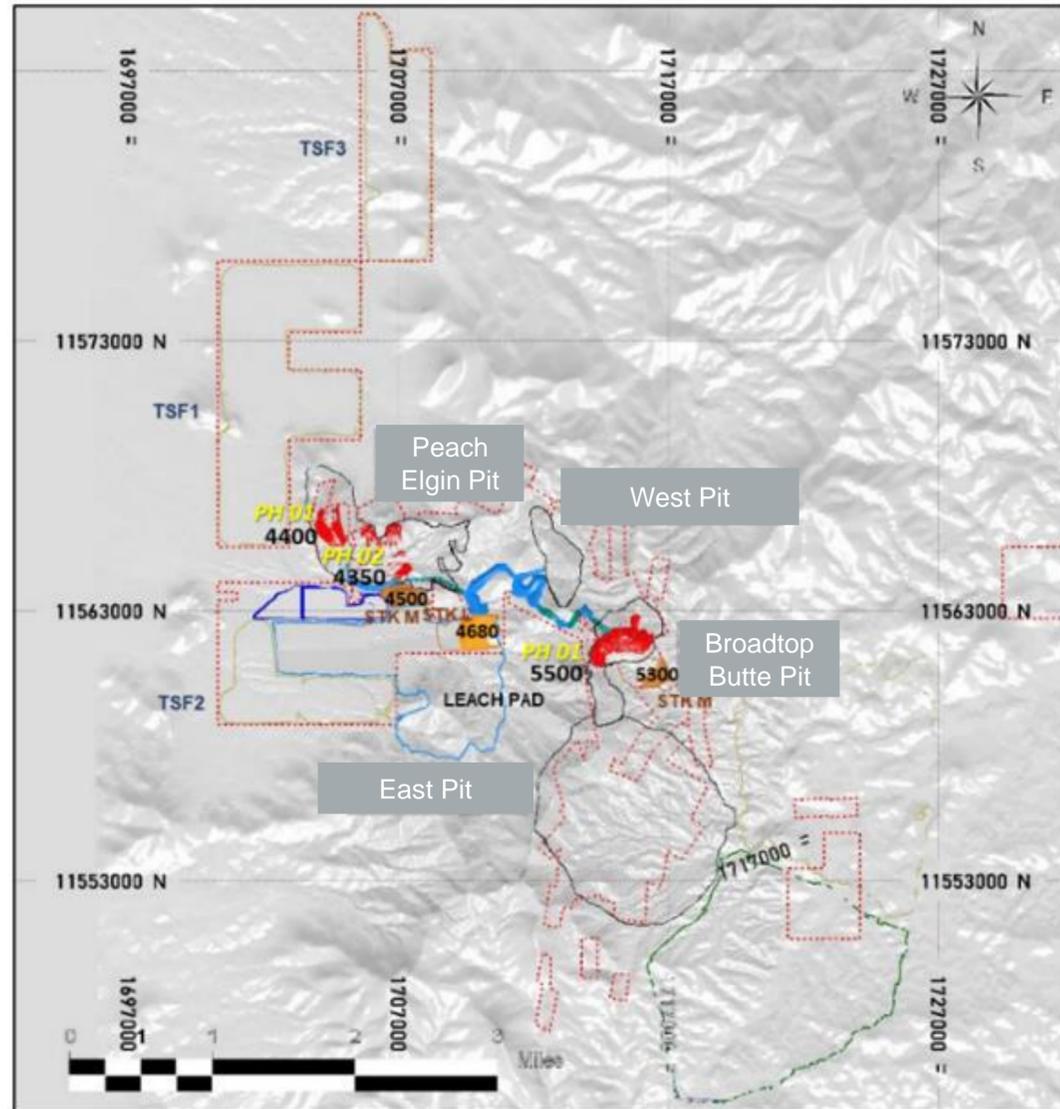
MINE PRODUCTION SCHEDULE SMOOTHED TO MATCH MILL CAPACITY, FLEET SIZE AND TO MINIMIZE RE-HANDLING

- Significantly lower strip ratio of less than 1.0 in first five years



MINIMUM PRE-STRIPPING AT PEACH-ELGIN & BROADTOP

EARLY MATERIAL FROM PEACH-ELGIN AND BROADTOP – LOW STRIP AND PROVIDES ROOM FOR FUTURE WASTE DISPOSAL



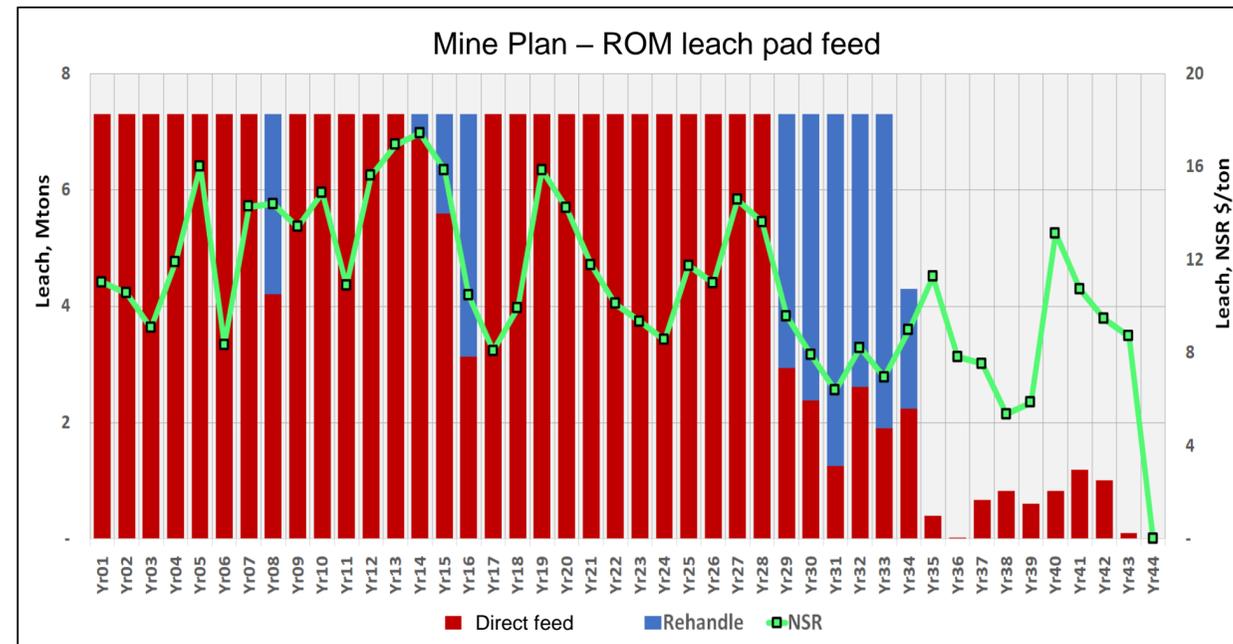
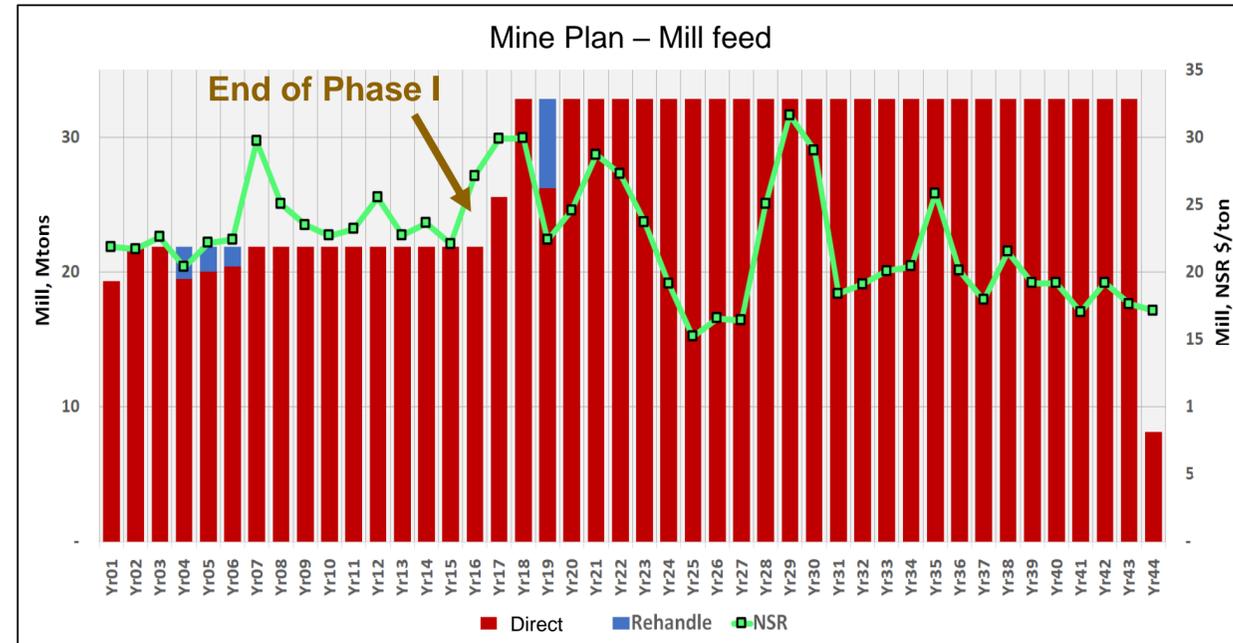
- 34MT moved in year of pre-stripping includes:
 - 10.6MT of waste
 - 6.8MT of flotation feed processed in year 1
 - 3.5MT of high grade ROM leach feed
 - 13.2MT of low grade ROM leach feed
- ROM leach feed mined during year of pre-stripping represents an opportunity for early revenue not considered in the PEA
 - Would require early completion of leach pads and SX/EW associated infrastructure
 - High probability to realize this opportunity during the PFS

~17MT of heap leach oxides stockpiled in year -1

Period	Stocks Mill					Stocks Rom Leach								
	DUMP Short Tons	Total Short Tons moved	STK_Mill_STP+ Short Tons	Cu %	CuSS%	STK_Leach_STP+ Short Tons	Cu %	CuSS%	STK_Leach_LTP+ Short Tons	Cu %	CuSS%			
YR_PP	10,581,924	34,137,219	5,777,636	0.837	0.231	1,037,563	0.213	0.079	3,516,283	0.516	0.407	13,223,812	0.197	0.160

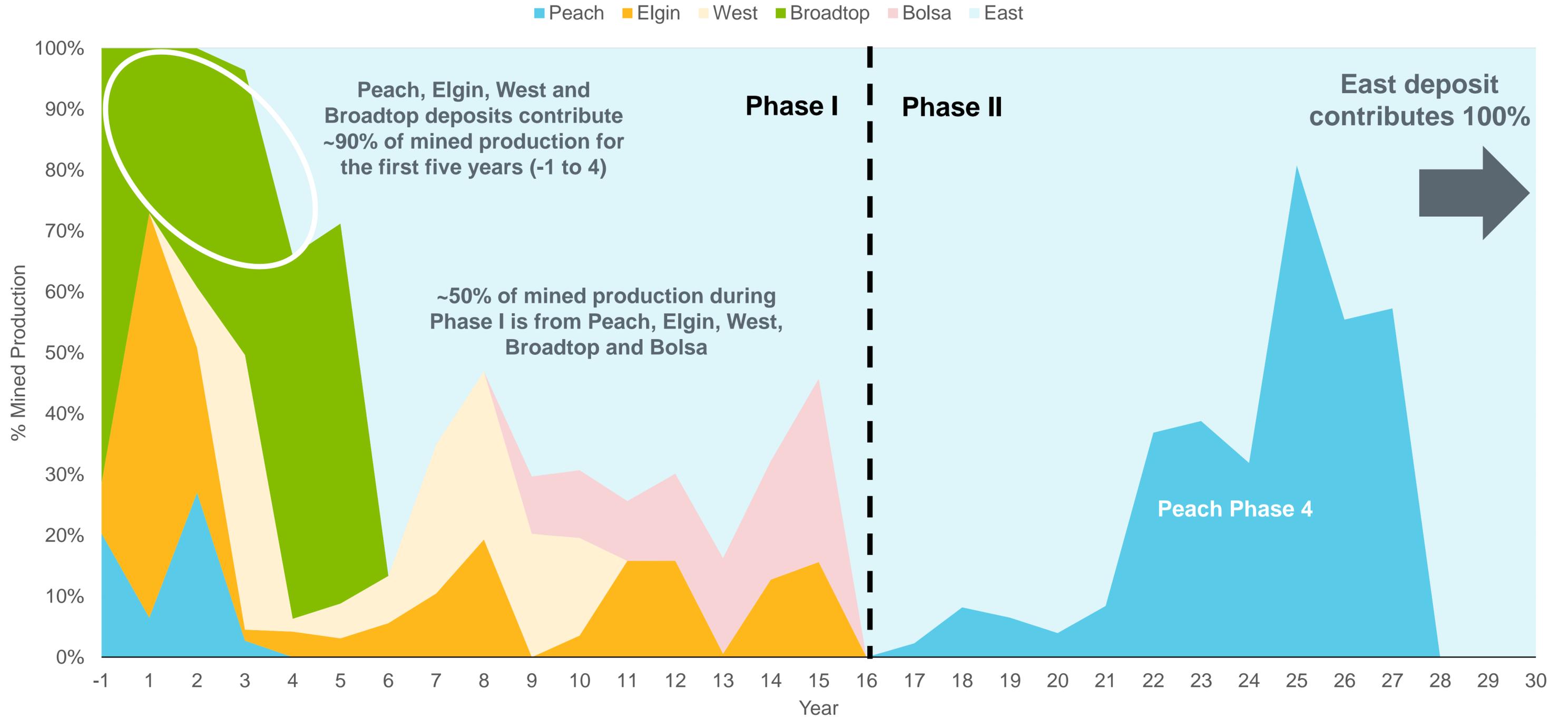
PRODUCTION SCHEDULE BASED ON MILLING CAPACITY

MINE PRODUCTION WAS CLASSIFIED AS FLOTATION OR LEACH FEED DEPENDING ON HIGHEST NSR



- Mine production was optimized based on milling capacity of 60kstp/d during Phase I and expanded to 90kstp/d during Phase II
- Drivers:
 - Maintain mill feed at capacity
 - Minimize stripping and stockpiling/re-handling
 - Honour mining phases and sequencing of waste disposal and TSF construction
- Mining of leachable material is opportunistic
- Meet SX/EW capacity
- Feed higher grade material first
- Low grade stockpiles reclaimed in years of lower oxide availability, i.e. years 8,16 and post 28
- Less leachable material towards the end of Phase II when mining deeper portion of the East pit

COPPER WORLD COMPLEX BY DEPOSIT





PROCESsing

HUDBAY

PEA PROCESSING DESIGN OBJECTIVES

PROCESSING DESIGN TARGETED SEVERAL ENHANCEMENTS OVER 2017 FEASIBILITY STUDY

OBJECTIVES

- Process the oxides at Copper World and East deposits
- Produce a finished product on site to supply the U.S. domestic copper market
- Align with overall global climate change objectives to target GHG emission reduction of 50% by 2030



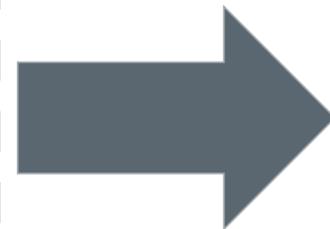
Cost Effective



Safe to Operate



Efficient Energy & Emissions



CHOSEN DESIGN ELEMENTS

- Oxide ROM heap leach
- Concentrate leach facility
- SX/EW plant
- Sulfur burner
- Acid plant



Sulfide & Oxide Synergies



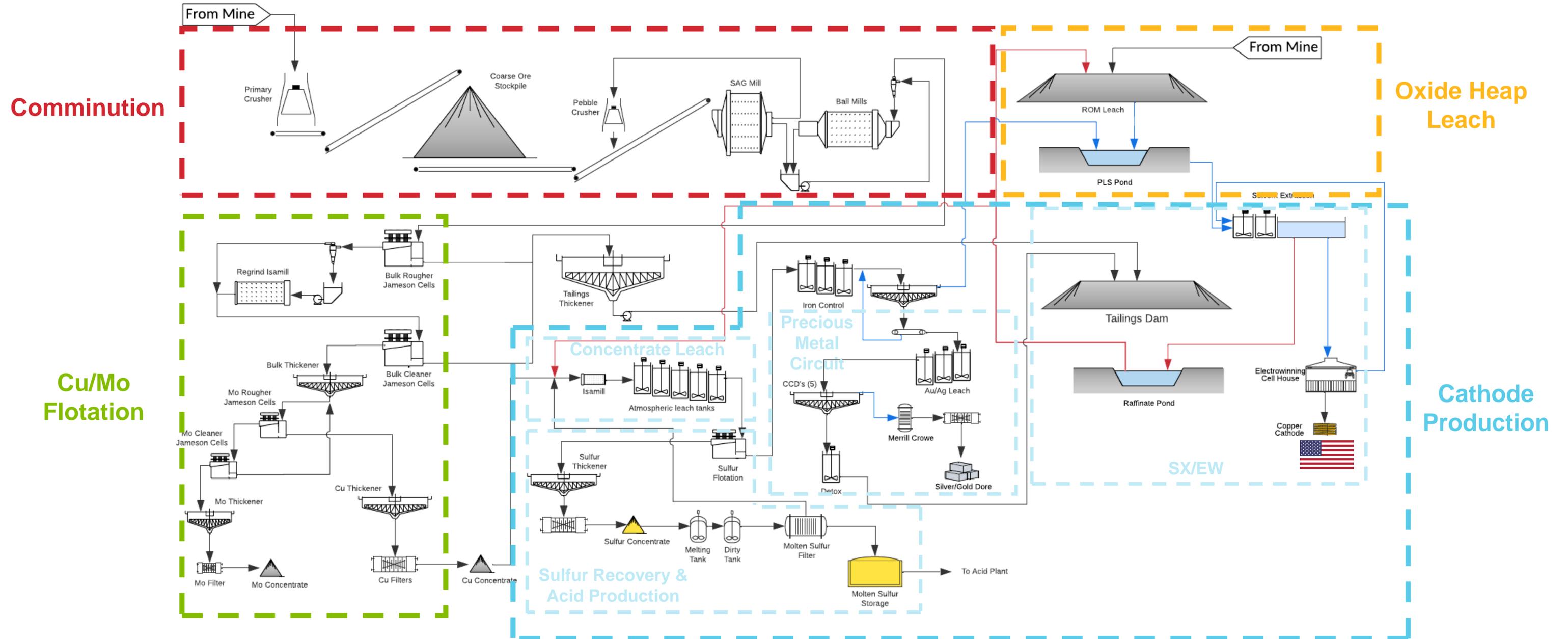
Domestic Copper Cathode Production



Low Pressure & Temperature

PROCESSING FLOWSHEET

STANDARD SULFIDE AND OXIDE PROCESSING FLOWSHEET TO PRODUCE CATHODE



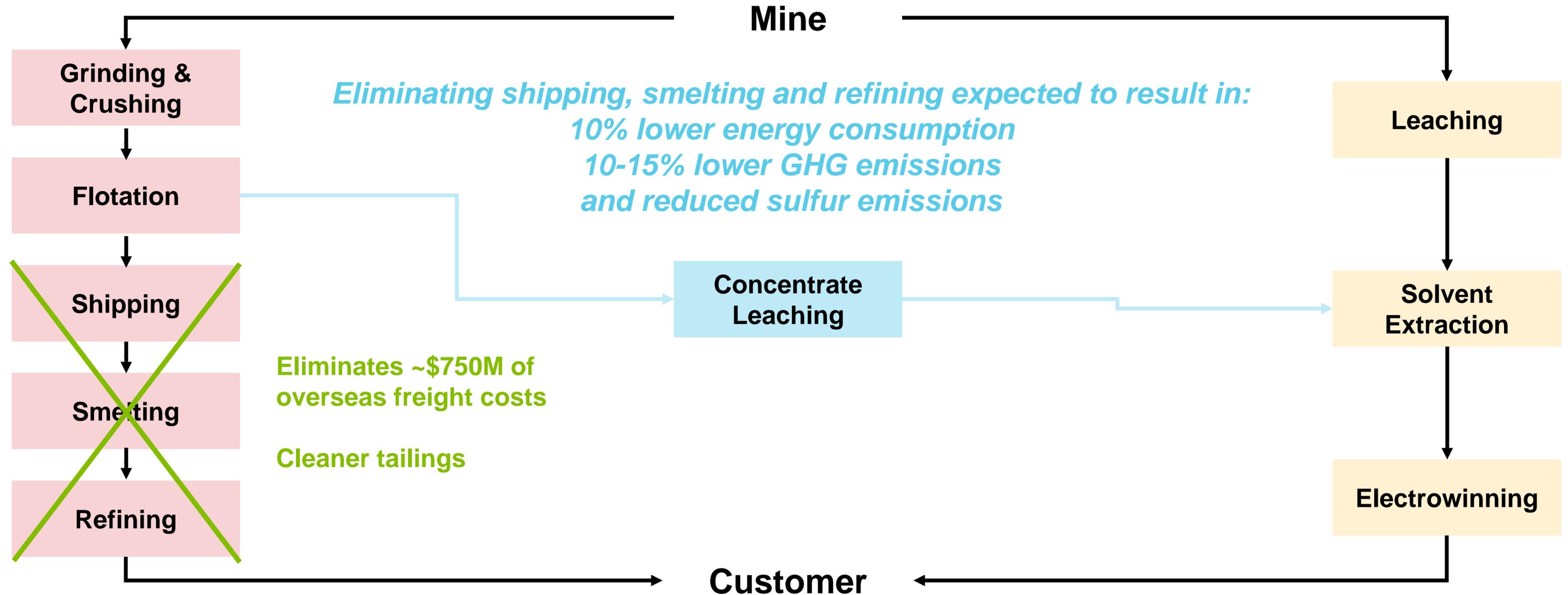
CHOSEN PROCESSING DESIGN REALIZES SYNERGIES

MAXIMIZING ECONOMIC AND ENVIRONMENTAL BENEFITS

- Maximizing project economics by capturing synergies between oxides and sulfides
 - Standard flowsheet for concentrating sulfides and leaching oxides
 - Sulfide concentrate leaching process connects sulfides and oxides – sulfuric acid by-product is used on the oxide heap leach
 - Maintains low cash cost position over the life of the operation – low cost heap leach and SX/EW facility, eliminates the need to source external acid, providing stability in operating costs and optionality depending on the copper-to-acid price ratio
 - Sulfur burner generates power during the production of sulfuric acid, resulting in an electricity credit
- Creating value from oxides at the East deposit
 - ~100Mt of oxides at the East deposit were previously classified as waste and now can be processed at the heap leach and SX/EW facility
- Reducing our carbon footprint
 - Production of copper cathode at site has many environmental benefits, including lower energy consumption and reducing GHG and sulfur emissions

MODERN MINE DESIGN REDUCES ENERGY CONSUMPTION & EMISSIONS

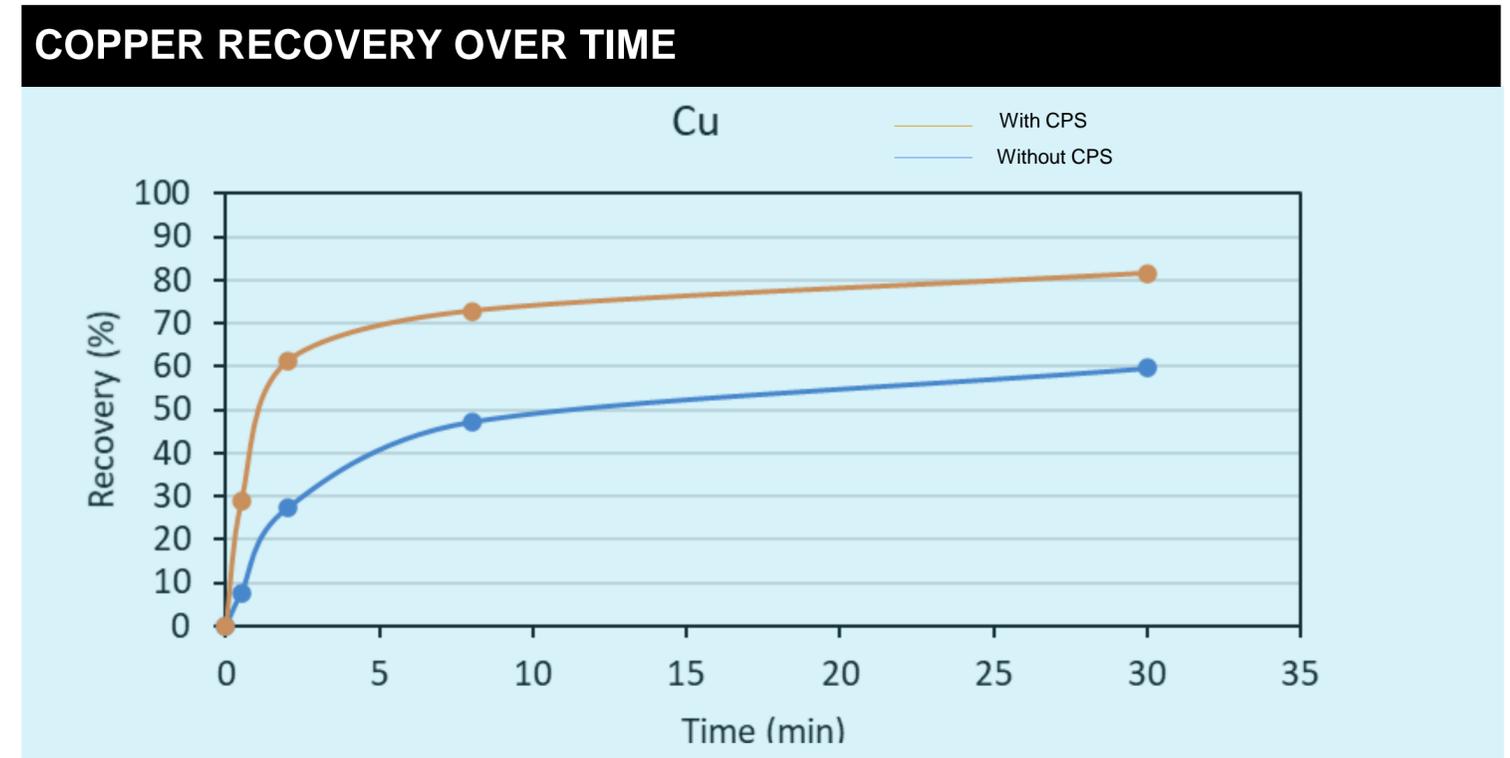
COPPER CATHODE PRODUCTION ELIMINATES THE NEED FOR OVERSEAS SMELTING AND REFINING



FLOTATION TESTWORK

- Controlled Potential Sulfidization (CPS) has been employed to improve the recovery of copper oxides (up to 58% rougher recovery) and tarnished/oxidized copper sulfides
- Additional testing ongoing to confirm the performance of Copper World mineralization through flotation
 - Expected to be completed by end of Q3 2022
- High realized recoveries from oxides due to change in tested reagent scheme

ROUGHER RECOVERY BY DEPOSIT		
Deposit	Recovery (%)	
	SCu	CuSS
East	90	58
Peach	79	15
Elgin	86	39
Broadtop	82	39



OXIDE LEACHING TESTWORK

COLUMN LEACH TEST WORK

- Preliminary column leach test work ongoing

- Data modelled to obtain preliminary acid consumption

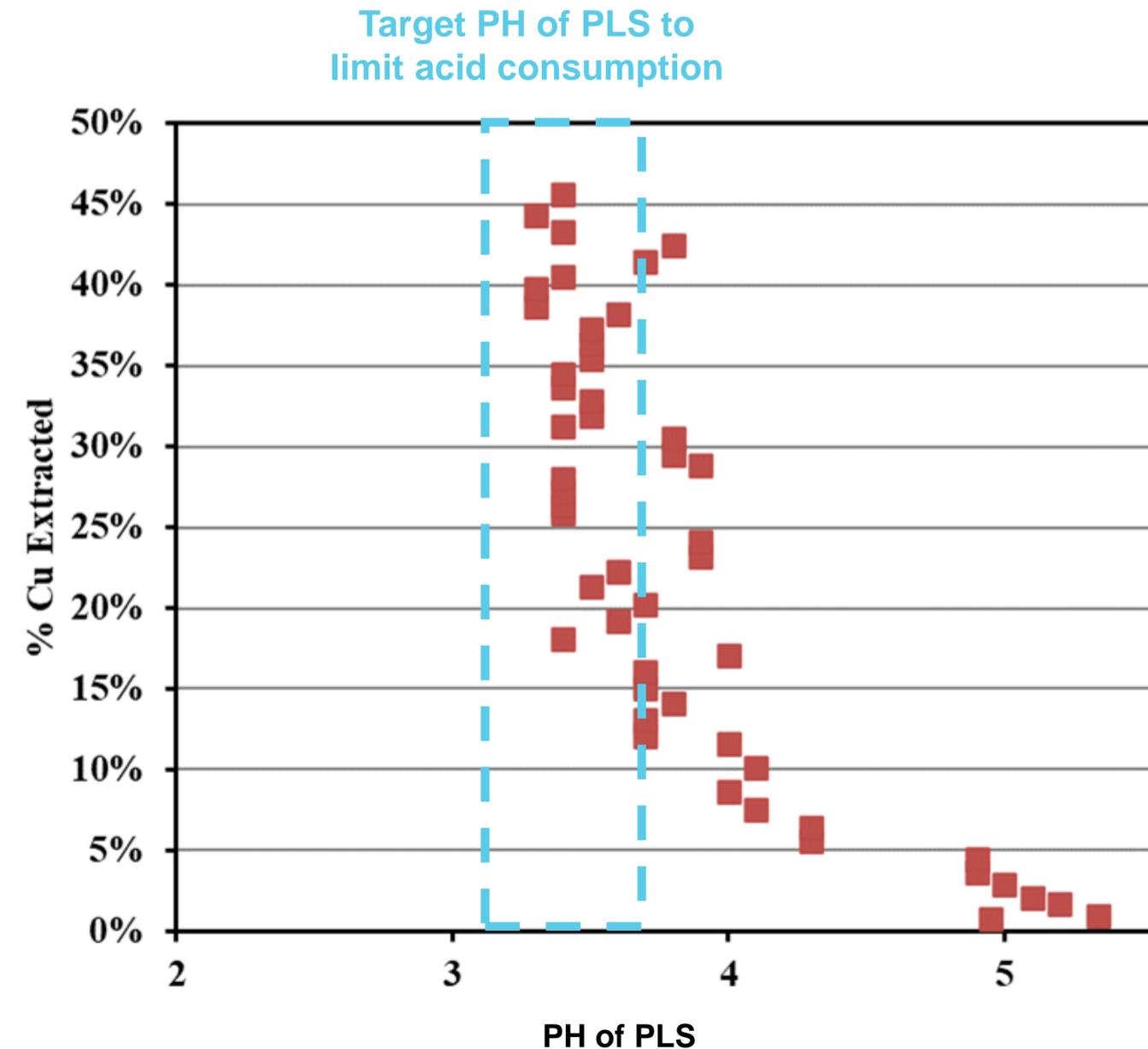
$$\text{Acid Consumption} \left(\frac{\text{lb}}{t} \right) = 6.08 * Ca + 3.99$$

- Variability mini columns set up to develop more detailed mineralogy-based model

- Additional columns required to determine lift height + optimum acid concentration

- Lift Height 5 – 15 m
- Acid to achieve PLS pH of 3 – 3.5 to limit acid consumption
- Expected to be completed end of 2022

ELGIN – CU EXTRACTION VS PH OF PLS



CONCENTRATE LEACH TESTWORK

PROVEN AND COMMERCIALIZED TECHNOLOGY

- Concentrate leaching has been around since the 1980s
 - More than 25 operations have concentrate leach facilities
 - Hudbay's hydrometallurgical zinc plant in Flin Flon
 - Freeport's Morenci and Baghdad copper mines in Arizona
 - First Quantum's Las Cruces copper mine in Spain (atmospheric leach)
 - Glencore MCM zinc-lead operation in Australia (atmospheric leach)
- Plant capacity: 1,700 tpd concentrate and 98% Cu recovery
 - Chosen atmospheric leach method was preferred for the PEA as it is easier to operate and safer
 - Method has been proven with mineralogy similar to Copper World
 - Testwork supported by Glencore Technologies benchmark testing on similar concentrates
- Sulfur burner capacity: 1,100 tpd H_2SO_4
 - 53% of H_2SO_4 produced is from internal feed
- Next steps to be evaluated in pre-feasibility study in H2 2022
 - Test programs and trade-off studies to assess a broad range of concentrates and to confirm selected method of concentrate leaching (Hudbay's Stall and Constancia Cu concentrate, regional Arizona/US operations)



ECONOMICS

HUDBAY

ROBUST PROJECT ECONOMICS

- Phase I - 16 year mine life
 - Cu production up to 100kt p.a., including 86kt p.a. from mined resources
 - Cash costs of \$1.15/lb and sustaining cash cost of \$1.44/lb
 - NPV10% of \$741M and IRR of 17%

- Phase II – 28 year mine life
 - Cu production up to 125kt p.a., including 101kt p.a. from mined resources
 - Cash costs of \$1.11/lb and sustaining cash cost of \$1.42/lb
 - NPV10% of \$555M and IRR of 49% (NPV10% of \$2.8B at time of sanction)

- LOM total – 44 year mine life
 - ~\$500M annual EBITDA
 - NPV10% of \$1.3B and IRR of 18%

SUMMARY OF KEY METRICS (at \$3.50lb Cu)

METRIC	UNIT	Phase I	Phase II	LOM
Valuation Metrics (Unlevered)¹				
Net present value @ 8% (after-tax)	\$ millions	\$1,097	\$947	\$2,044
Net present value @ 10% (after-tax)	\$ millions	\$741	\$555	\$1,296
Internal rate of return (after-tax)	%	17%	49%	18%
Payback period	# years	5.3	1.7	-
EBITDA (annual avg.) ²	\$ millions	\$438	\$530	\$497
Project Metrics				
Growth capital	\$ millions	\$1,917	\$885	\$2,802
Construction length	# years	3.0	2.0	-
Operating Metrics				
Mine life	# years	16.0	28.0	44.0
Cu cathode - mined resources (annual avg.) ³	000 tonnes	86.4	101.3	95.9
Cu cathode - total (annual avg.) ³	000 tonnes	98.7	123.3	114.3
Copper recovery - sulfide to cathode	%	77.3	80.1	79.2
Copper recovery - oxide to cathode	%	59.0	58.7	58.9
Sustaining capital (annual avg.)	\$ millions	\$33	\$35	\$34
Cash cost ⁴	\$/lb Cu	\$1.15	\$1.11	\$1.12
Sustaining cash cost ⁴	\$/lb Cu	\$1.44	\$1.42	\$1.43

Note: "LOM" refers to life-of-mine total or average.

¹ Calculated assuming the following commodity prices: copper price of \$3.50 per pound, copper cathode premium of \$0.01 per pound (net of cathode transport charges), silver stream price of \$3.90 per ounce and molybdenum price of \$11.00 per pound. Reflects the terms of the existing Wheaton Precious Metals stream, including an upfront deposit of \$230 million in the first year of Phase I construction in exchange for the delivery of 100% of silver produced.

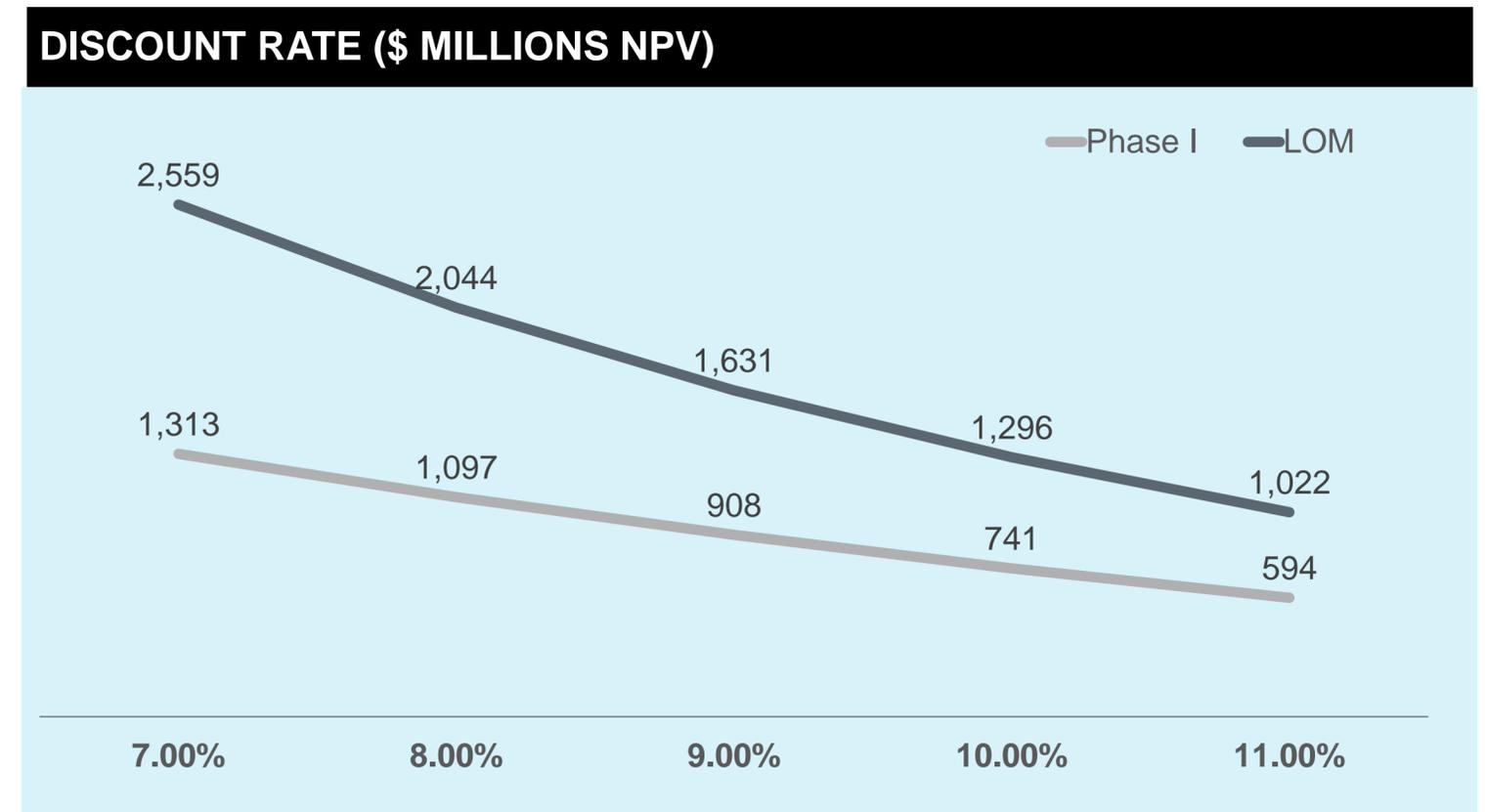
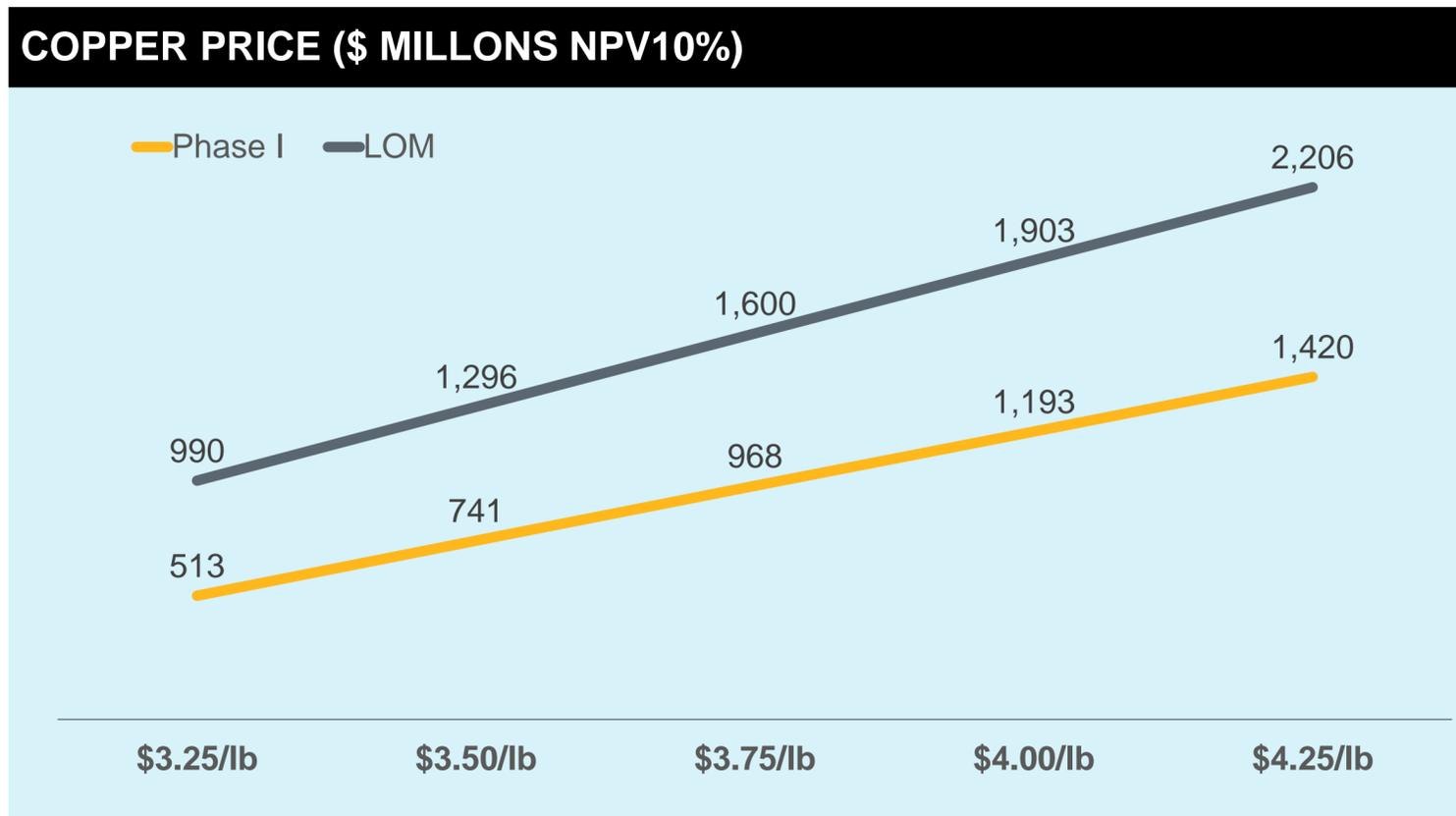
² EBITDA is a non-IFRS financial performance measure with no standardized definition under IFRS. For further information, please refer to the company's most recent Management's Discussion and Analysis for the three months ended March 31, 2022.

³ The mine plan assumes external concentrate is sourced in years when spare capacity exists at the SX/EW facility in order to maximize the full utilization of the facility. Copper cathode production from mined resources excludes the production from external concentrate. Average annual copper cathode production from external concentrates is approximately 12,000 tonnes in Phase I and 22,000 tonnes in Phase II. There remains the potential to replace external copper concentrate with additional internal feed.

⁴ Cash cost and sustaining cash cost, net of by-product credits, per pound of copper produced from internally sourced feed and excludes the cost of purchasing external copper concentrate, which may vary in price or potentially be replaced with additional internal feed. By-product credits calculated using the following commodity prices: molybdenum price of \$11.00 per pound, silver stream price of \$3.90 per ounce and amortization of deferred revenue as per the company's approach in its quarterly financial reporting. By-product credits also include the revenue from the sale of excess acid produced at a price of \$145 per tonne. Sustaining cash cost includes sustaining capital expenditures and royalties. Cash cost and sustaining cash cost are non-IFRS financial performance measures with no standardized definition under IFRS. For further details on why Hudbay believes cash costs are a useful performance indicator, please refer to the company's most recent Management's Discussion and Analysis for the three months ended March 31, 2022.

HIGHLY SENSITIVE TO THE COPPER PRICE

- At \$4.00/lb Cu, the Phase I NPV10% increases to \$1.2B and IRR increases to 21%
- At \$4.00/lb Cu, the LOM NPV10% increases to \$1.9B and IRR increases to 22%



CAPITAL COSTS

- Phase I Growth Capital: \$1.9B
 - Bottom-up approach
 - 20% contingency applied to direct capital costs; many components at advanced level of engineering
 - \$100M of equipment savings due to utilization of a crusher, SAG and two ball mills purchased by previous owner
- Phase II Growth Capital: \$885M
 - Expansion of crushing facility and flotation plant
 - Construction of new tailings facility
 - 40% contingency due to long lead time

CAPITAL COST SUMMARY				
METRIC	UNIT	Phase I	Phase II	LOM
Growth - EPCM	\$M	\$1,345	\$621	\$1,966
Growth - owner's costs	\$M	\$572	\$264	\$836
Growth - subtotal	\$M	\$1,917	\$885	\$2,802
Sustaining	\$M	\$531	\$967	\$1,498
Deferred stripping	\$M	\$111	\$456	\$567
Total	\$M	\$2,559	\$2,308	\$4,867

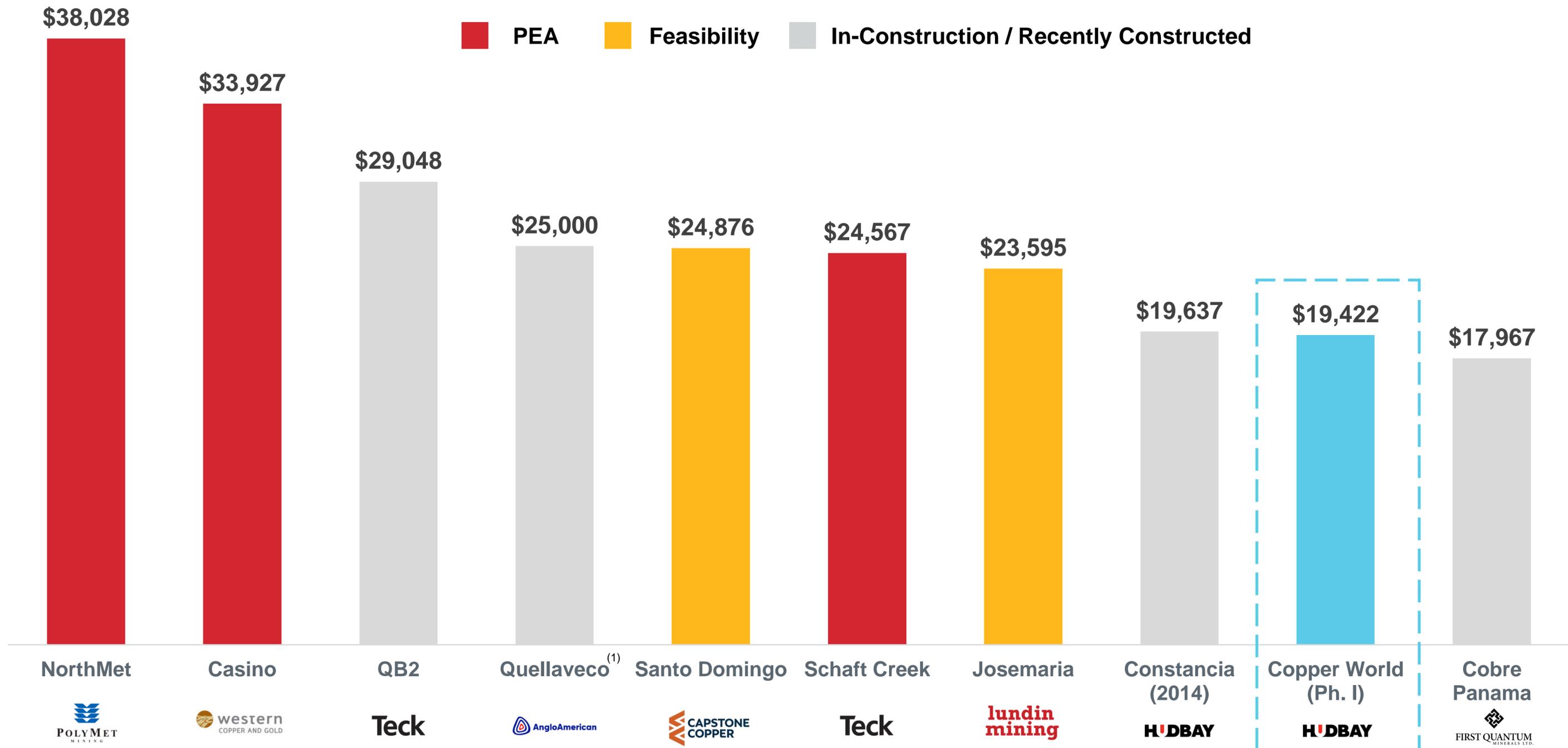
GROWTH CAPITAL DETAILS - EPCM				
METRIC	UNIT	Phase I	Phase II	LOM
Sitewide	\$M	\$15	\$5	\$20
Mining	\$M	\$38	\$0	\$38
Primary crushing	\$M	\$31	\$33	\$64
Sulfide plant	\$M	\$227	\$144	\$371
Molybdenum plant	\$M	\$15	\$0	\$15
Reagents	\$M	\$9	\$5	\$13
Plant services	\$M	\$29	\$14	\$43
SX/EW plant	\$M	\$190	\$60	\$250
Concentrate leach plant	\$M	\$88	\$0	\$88
Acid plant	\$M	\$77	\$0	\$77
Doré plant	\$M	\$20	\$0	\$20
Site services and utilities	\$M	\$3	\$3	\$5
Internal infrastructure	\$M	\$19	\$10	\$29
External infrastructure	\$M	\$102	\$0	\$102
Common construction	\$M	\$84	\$54	\$138
Other	\$M	\$173	\$118	\$291
Contingency	\$M	\$224	\$177	\$401
Total	\$M	\$1,345	\$621	\$1,966

GROWTH CAPITAL DETAILS - OWNER'S COSTS				
METRIC	UNIT	Phase I	Phase II	LOM
Pre-stripping	\$M	\$57	\$0	\$57
Mining fleet and equipment	\$M	\$186	\$0	\$186
Tailings storage	\$M	\$20	\$264	\$284
Heap leach pad	\$M	\$45	\$0	\$45
Earthworks and roads	\$M	\$28	\$0	\$28
G&A and other	\$M	\$156	\$0	\$156
Indirects and contingency	\$M	\$79	\$0	\$79
Total	\$M	\$572	\$264	\$836

SUSTAINING CAPITAL DETAILS				
METRIC	UNIT	Phase I	Phase II	LOM
Mining	\$M	\$305	\$439	\$744
Processing	\$M	\$163	\$365	\$528
Admin	\$M	\$63	\$163	\$226
Deferred stripping	\$M	\$111	\$456	\$567
Total	\$M	\$642	\$1,423	\$2,065

CAPITAL INTENSITY

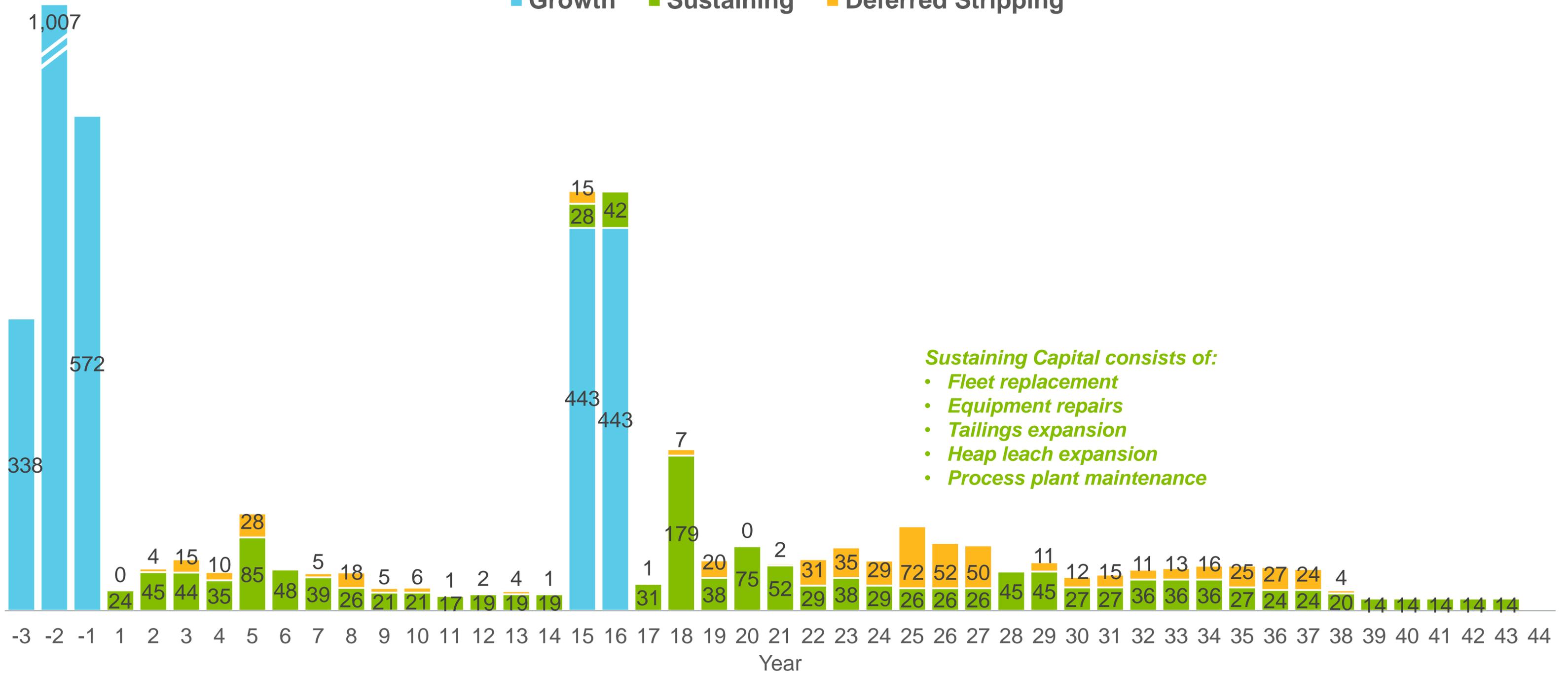
OPEN PIT COPPER PROJECTS IN THE AMERICAS (US\$/tonne Cu)



Source: Company filings. Includes recent North and South America open pit copper development projects and brownfield expansions that add more than 100kt Cu p.a.
 1. Quellaveco capital intensity based on copper equivalent production.

CAPITAL COST PROFILE (US\$M)

■ Growth ■ Sustaining ■ Deferred Stripping



Sustaining Capital consists of:

- Fleet replacement
- Equipment repairs
- Tailings expansion
- Heap leach expansion
- Process plant maintenance

OPERATING COSTS

- Opex estimates were developed utilizing budget quotes from different suppliers, experience at Hudbay's operations, and regional labor costs
- Site visits were conducted to other similar facilities in Arizona to better understand the operations and maintenance requirements
- Opex estimates were validated against actual costs at Constancia and with other similar projects/operations in Arizona
- Leaching cost per lb of Cu produced benefit from high grade feed, electricity credits and production of acid at site

OPERATING COST DETAILS - MINING				
METRIC	UNIT	Phase I	Phase II	LOM
Labor	\$M	\$340	\$858	\$1,198
Maintenance	\$M	\$398	\$910	\$1,307
Fuel	\$M	\$264	\$623	\$887
Blasting	\$M	\$166	\$473	\$639
Indirect	\$M	\$175	\$554	\$729
Other	\$M	\$35	\$86	\$121
Subtotal*	\$M	\$1,378	\$3,504	\$4,882
Deferred stripping	\$M	(\$111)	(\$456)	(\$567)
Total*	\$M	\$1,266	\$3,048	\$4,314

*Excludes pre-stripping costs

OPERATING COST DETAILS - PROCESSING				
METRIC	UNIT	Phase I	Phase II	LOM
Sulfide flotation	\$M	\$1,502	\$3,749	\$5,251
Molybdenum flotation	\$M	\$39	\$106	\$145
Leach plant	\$M	\$179	\$450	\$630
Acid plant	\$M	\$295	\$245	\$540
Acid plant (electricity credit)	\$M	(\$92)	(\$161)	(\$254)
Leach pad	\$M	\$6	\$7	\$13
Doré plant	\$M	\$54	\$135	\$190
SX/EW	\$M	\$362	\$775	\$1,137
Total	\$M	\$2,346	\$5,307	\$7,653

UNIT OPERATING COST SUMMARY				
METRIC	UNIT	Phase I	Phase II	LOM
Mining excl. def stripping	\$/t material moved	\$1.30	\$1.17	\$1.21
Concentrator	\$/t processed	\$4.88	\$4.79	\$4.81
Sulfide leach	\$/lb Cu prod	\$0.13	\$0.07	\$0.09
Oxide heap leach	\$/lb Cu prod	\$0.01	\$0.01	\$0.01
SX/EW	\$/lb Cu prod	\$0.10	\$0.10	\$0.10
Onsite G&A	\$/t processed	\$0.89	\$0.95	\$0.93

PHASE I PRODUCTION PROFILE

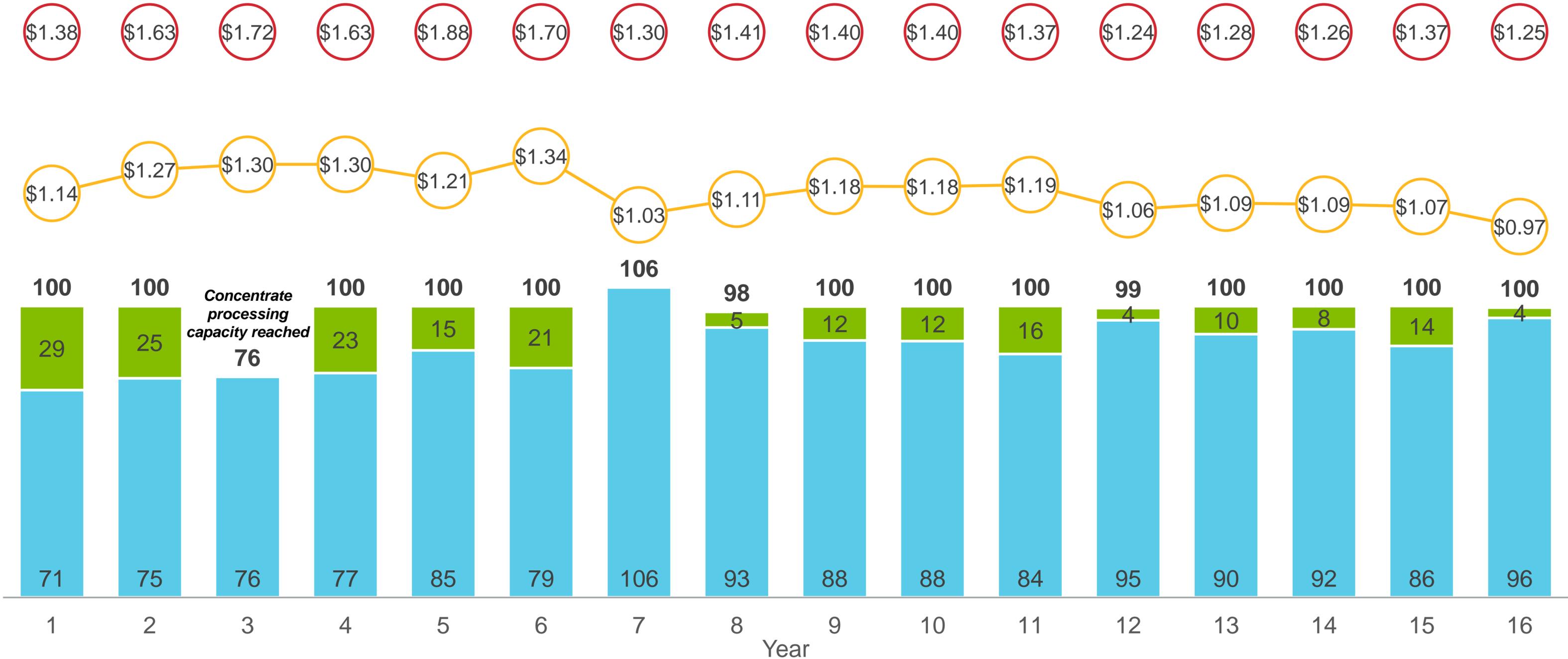
**Phase I Average Annual
Production: 98.7kt Cu
Cash Costs: \$1.15/lb Cu
AISC: \$1.44/lb Cu**

■ Copper World (kt Cu)

■ Additional Cathode Output (kt Cu)

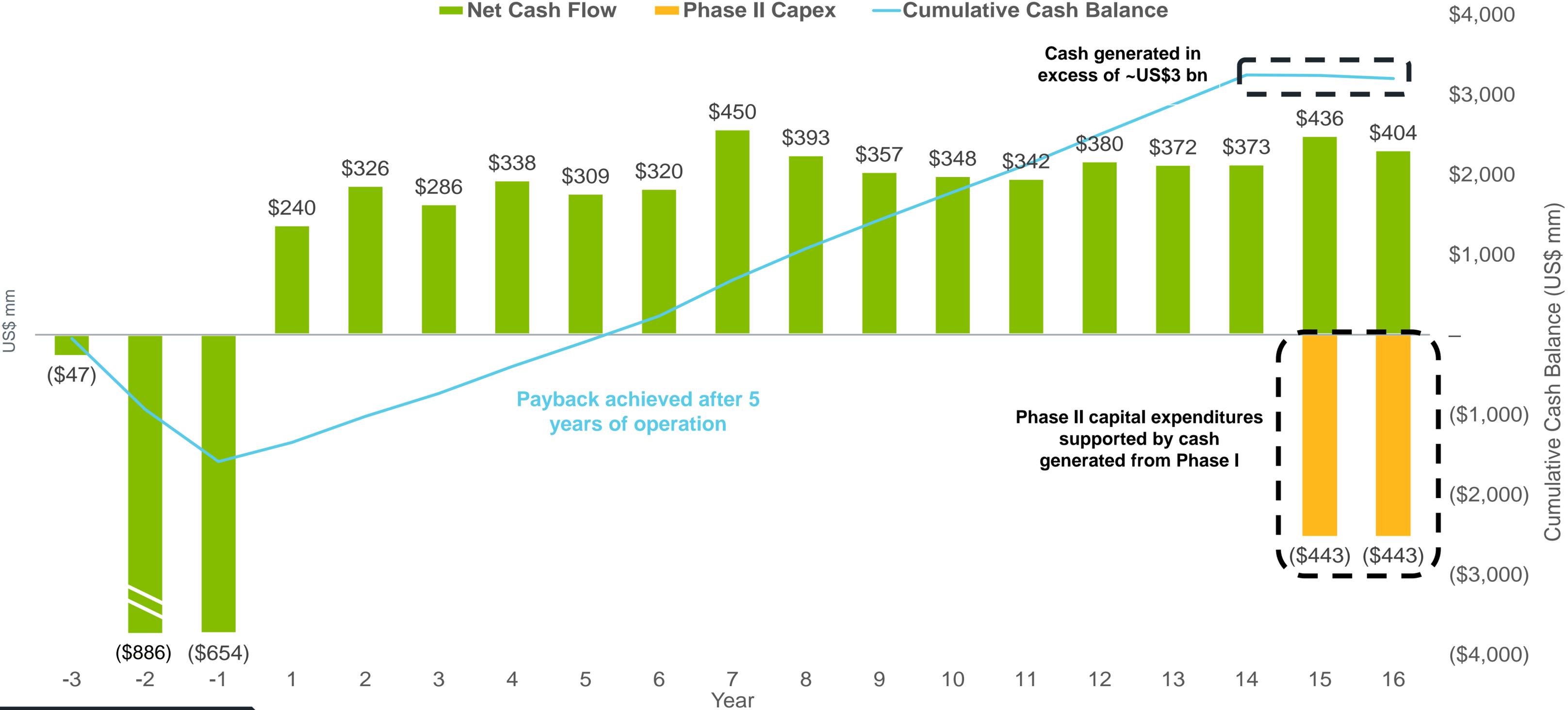
○ Cash Cost Excluding Purchased Concentrate (US\$ / lb Cu)

○ AISC Excluding Purchased Concentrate (US\$ / lb Cu)



PHASE I CASH FLOW PROFILE

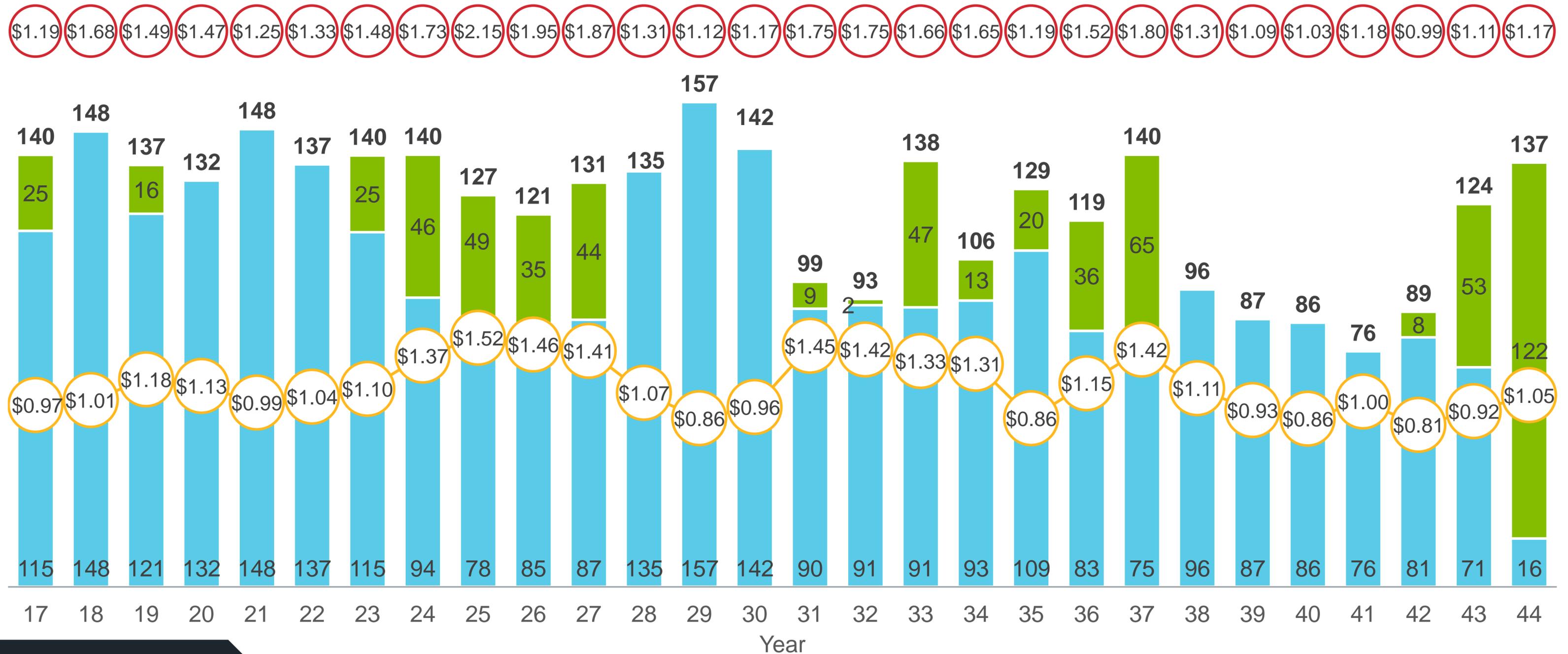
Net Cash Flow Phase II Capex Cumulative Cash Balance



PHASE II PRODUCTION PROFILE

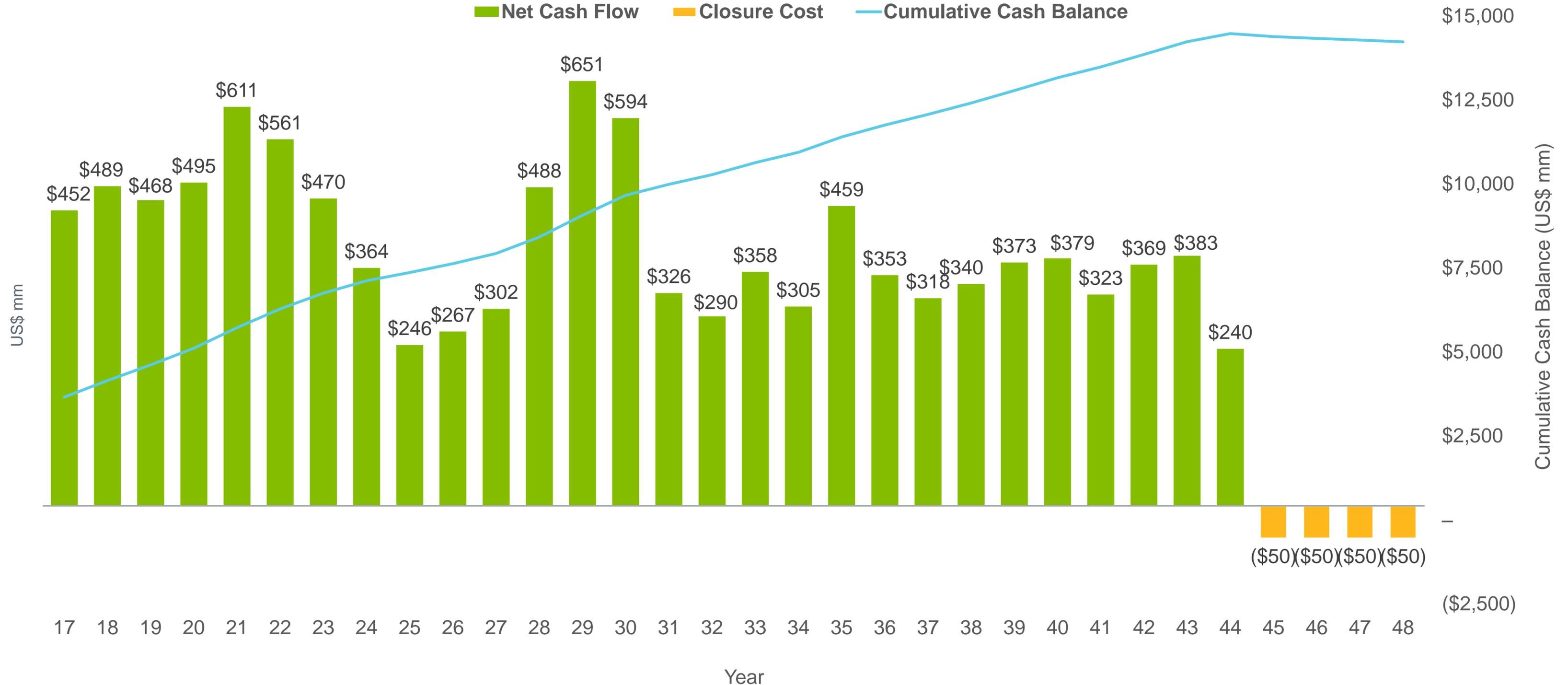
**Phase II Average Annual
Production: 123.3kt Cu
Cash Costs: \$1.11/lb Cu
AISC: \$1.42/lb Cu**

- Copper World (kt Cu)
- Additional Cathode Output (kt Cu)
- Cash Cost Excluding Purchased Concentrate (US\$ / lb Cu)
- AISC Excluding Purchased Concentrate (US\$ / lb Cu)



PHASE II CASH FLOW PROFILE

Net Cash Flow Closure Cost Cumulative Cash Balance





NEXT STEPS

HUDBAY

EARLY SITE WORKS AND EXPLORATION IN 2022

PROJECT DE-RISKING ACTIVITIES UNDERWAY

- Initial grading and clearing activities commenced in April 2022
- Seven drill rigs continue to turn at site conducting infill drilling in support of future feasibility studies
- 2022 spending guidance increased by \$30M for additional work in H2 2022



Bolsa ridge drill site preparation, May 2022



Phase I land clearing in proposed tailings areas, May 2022



Phase I land clearing in proposed tailings areas, May 2022

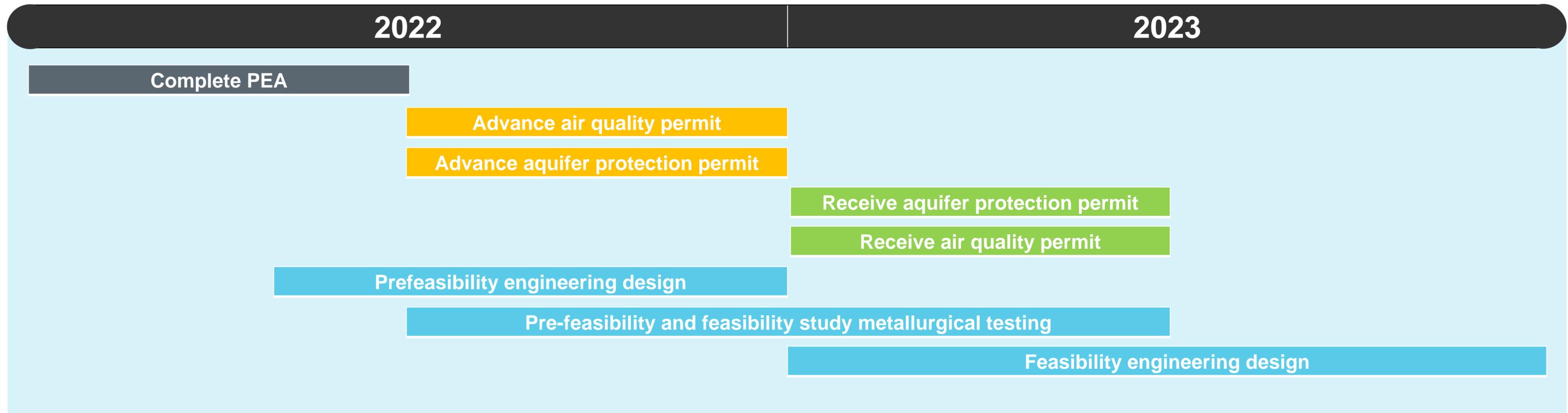


Drill rig at Bolsa deposit, May 2022

PHASE I FEASIBILITY STUDY AND PERMITS BY END OF 2023

ALIGNMENT BETWEEN KEY STATE PERMITS & ENGINEERING STUDIES TO PROJECT SANCTION

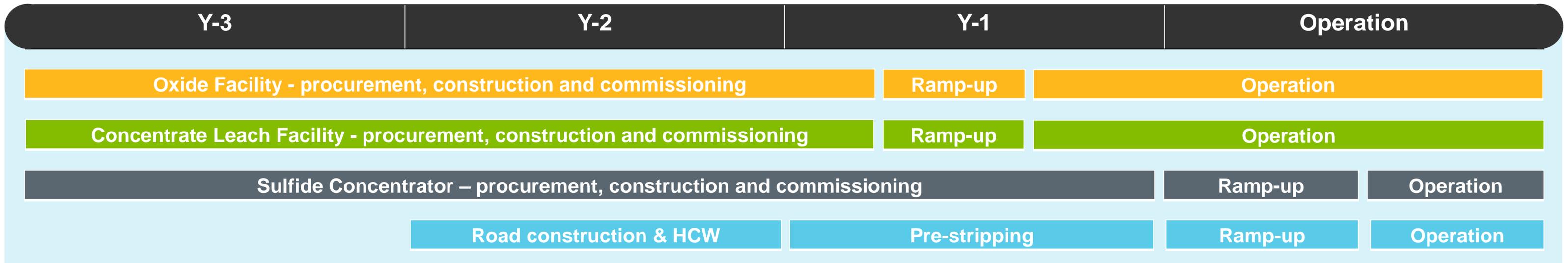
- Received first state-level permit, Mined Land Reclamation Plan (MLRP), in June 2021
- Advance pre-feasibility study and state-level permits for Phase I in H2 2022
- Definitive feasibility study and receipt of permits expected in 2023
- Potential project sanction decision in 2024



PHASE I CONSTRUCTION SCHEDULE

PEA BASED ON CONSERVATIVE APPROACH – OPPORTUNITIES TO ACCELERATE FIRST COPPER PRODUCTION

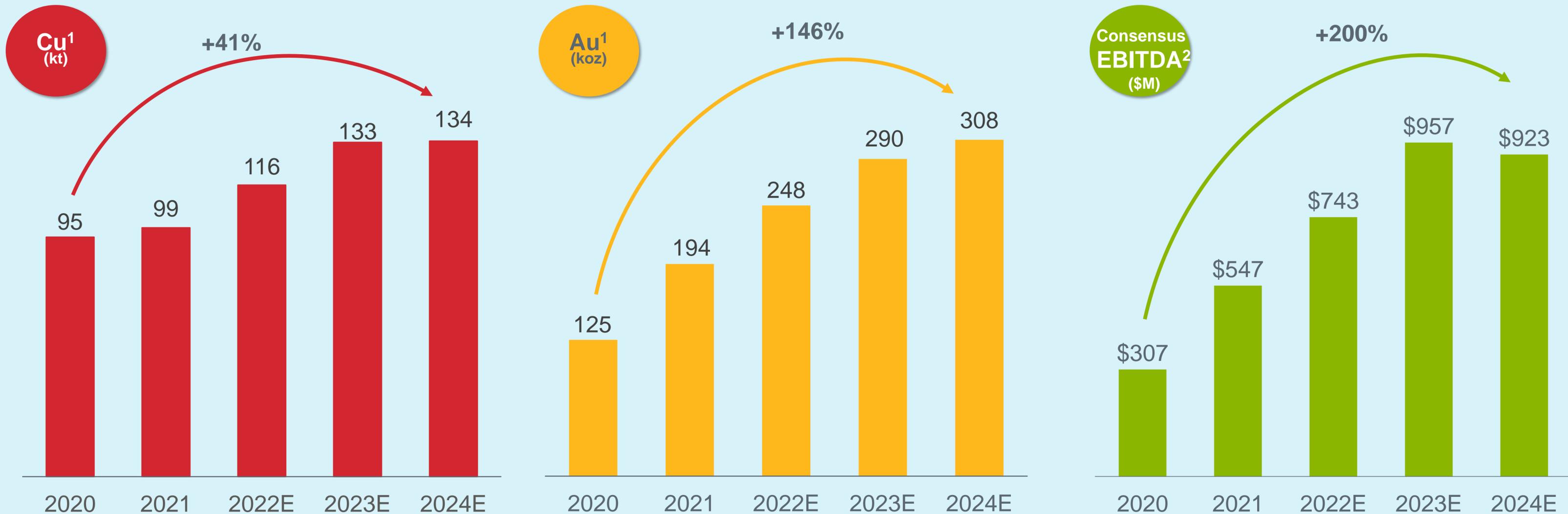
- PEA assumes a three-year construction period as a prudent base case
- Concentrator has the longest construction period
- Opportunities exist to accelerate first copper production with oxide material currently being stockpiled during pre-stripping:
 - The SX/EW and acid plant could be in operation year-2 and fed with oxides in year-1 (molten sulfur can be purchased on market)
 - The cathode production facility could be commissioned early in year-1 and start treating purchased concentrate from 3rd parties, also providing molten sulfur to feed the acid plant



HUBBAY'S GROWING PRODUCTION AND EBITDA OUTLOOK

ENTERING A PERIOD OF SIGNIFICANT PRODUCTION AND EBITDA GROWTH FROM OUR CURRENT OPERATIONS

- Completed ~\$250M brownfield investment program in 2021 and now at an inflection point in terms of meaningful copper and gold production growth, leading to significant year-over-year growth in EBITDA



1. Source: Hudbay filings. Midpoint of guidance shown for 2022 – 2024.
 2. Source: Bloomberg analyst consensus EBITDA, June 14, 2022.

PRUDENT FINANCING STRATEGY TO DRIVE INVESTMENT DECISION

SEVERAL PRELIMINARY COPPER WORLD FUNDING OPPORTUNITIES

- Ultimate project sanction timelines will depend on securing a prudent funding package, which is not expected until 2024 at the earliest
- Internal cash flow – entering a period of significant near-term free cash flow generation over the next several years after the recent completion of brownfield investments in Peru and Manitoba
- Existing precious metals stream – \$230M stream deposit is expected to be payable upon project sanction
- Potential minority JV partner – 100kt long-life copper assets in good jurisdictions are scarce
 - Strong interest from a variety of traditional and strategic 3rd parties for exposure to unique copper asset and in partnering with Hudbay to leverage our mine development and operating expertise
- Limited project financing – standard non-recourse project financing facility



Hudbay has done an excellent job discovering and advancing Copper World. We look forward to working closely with them as they bring this project online.

Randy Smallwood, Wheaton Precious Metals

PROJECT UPSIDE OPPORTUNITIES

EVALUATING MANY OPPORTUNITIES TO FLEX THE SCOPE & TIMING OF THE PROJECT

- Expanding private land Phase I
 - Acquire additional land to unlock the full potential of mining on private land / extend beyond 16 years
- Operating opportunities to further enhance project economics
 - Early start of the concentrate leach facility converting externally-sourced concentrates into Cu cathodes and sulfuric acid
 - Could be financed separate as an industrial complex, further de-risking project development
 - 100% modular - easy to flex concentrate leach facility, acid plant and SX/EW capacity
 - Early start of oxide processing - sending oxides mined during pre-stripping to the leach and SX/EW facility
 - Send Hudbay copper concentrates to our Arizona processing plant
 - Snow Lake Cu concentrate, Constancia concentrate swap, railing future concentrates from Flin Flon or Mason
- Green opportunities to further reduce energy consumption and emissions
 - Use of autonomous or electric haul trucks and various post-reclamation land uses (eg. solar energy site)
- Early receipt of permits for Phase II
 - Resolve federal permitting faster and for a larger project, i.e. resource could easily support a 120kstpd flotation component

COPPER WORLD COMPLEX

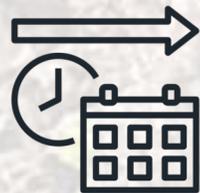
ROBUST PEA DEMONSTRATES THE NEXT LEG OF MEANINGFUL COPPER PRODUCTION GROWTH AT HUDBAY



Phase I provides **attractive economics producing 100kt Cu p.a. at first quartile cash costs** over a 16-year mine life requiring state-level permits only



Designed to produce “**Made in America**” **copper** cathode to feed growing U.S. copper demand



Phase II provides **meaningful long-term growth** in copper production and **significant optionality** over the long mine life



Modern mine provides numerous **ESG benefits**, including lower energy consumption, GHG emissions and sulfur emissions



Many **de-risking, project funding and upside opportunities** exist to unlock further value in this attractive region for all of our stakeholders



APPENDIX

HUDBAY

NINTH CIRCUIT COURT OF APPEALS DECISION

NET IMPACT IS FAVOURABLE FOR COPPER WORLD PHASE II

- The 9th Circuit Court of Appeals 2-1 split decision issued in May 2022 did not agree with a key part of the July 2019 District Court's decision – that the U.S. Forest Service (“USFS”) must review off-claim mining activities under its Part 251 regulations
 - The majority concluded that the USFS had relied on two errors in its approval of the Rosemont project relating to claim validity assumptions and rights under the mining law
 - The majority did not state that the USFS could not approve Rosemont under its Part 228A mining regulations
 - The dissent concluded that the Part 228A mining regulations are legally applicable to all legitimate mining activities regardless of whether they are on a valid claim or not:

“The regulations that the USFS has adopted to fill in the gaps left by the Mining Law make two things clear: (1) the lawfulness of waste-rock disposal does not depend on whether the mine operator has valid mining claims to the disposal area, and (2) it was not arbitrary and capricious for the USFS to apply Part 228A to Rosemont’s proposed deposit of waste rock because on their express terms they apply to this activity as a matter of law.”

- The net impact of the 9th Circuit decision is favourable for Copper World Phase II compared to the District Court's opinion

PHASE I

PHASE I: PHYSICALS	Unit	PHASE I	Y-03	Y-02	Y-01	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y10	Y11	Y12	Y13	Y14	Y15	Y16
Resources Mined																					
Copper World deposits	Mt	216.2	-	-	21.4	24.2	26.5	25.7	20.8	17.6	3.3	9.3	11.1	7.9	9.5	6.8	8.0	4.3	8.4	11.4	0.0
East deposit	Mt	224.9	-	-	-	-	-	1.0	10.7	7.1	21.8	17.2	12.6	18.6	21.5	19.7	18.5	22.2	17.7	13.5	22.7
Total resources mined	Mt	441.1	-	-	21.4	24.2	26.5	26.7	31.6	24.8	25.1	26.5	23.7	26.5	31.0	26.5	26.5	26.5	26.1	24.9	22.7
Waste Mined																					
Copper World deposits	Mt	117.8	-	-	9.6	9.0	11.0	15.2	18.5	6.3	0.8	8.9	3.6	12.5	7.8	2.3	0.6	4.2	4.9	2.5	-
East deposit	Mt	430.3	-	-	-	-	-	10.3	13.4	32.5	38.0	30.8	38.9	27.2	27.4	37.4	39.1	35.6	35.3	38.1	26.3
Total waste mined	Mt	548.1	-	-	9.6	9.0	11.0	25.6	31.9	38.7	38.8	39.7	42.5	39.7	35.2	39.7	39.7	39.7	40.1	40.7	26.3
Material Moved																					
Rehandle	Mt	13.8	-	-	-	-	-	-	2.2	1.7	1.4	-	2.8	-	-	-	-	-	0.4	1.5	3.8
Total material moved	Mt	1,003.0	-	-	31.0	33.2	37.5	52.2	65.7	65.2	65.3	66.2	69.0	66.2	66.2	66.2	66.2	66.2	66.6	67.2	52.8
Strip Ratio																					
Copper World deposits	X:X	0.54	-	-	0.45	0.37	0.41	0.59	0.89	0.35	0.23	0.97	0.33	1.60	0.82	0.34	0.08	0.97	0.58	0.22	-
East deposit	X:X	1.91	-	-	-	-	-	10.77	1.25	4.55	1.75	1.79	3.09	1.46	1.27	1.90	2.11	1.60	1.99	2.82	1.16
Total strip ratio	X:X	1.24	-	-	0.45	0.37	0.41	0.96	1.01	1.56	1.54	1.50	1.80	1.50	1.13	1.50	1.50	1.50	1.54	1.63	1.16
Mill																					
Tonnes milled	Mt	315.6	-	-	-	17.5	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9
Headgrade - Cu	%	0.47%	-	-	-	0.47%	0.45%	0.45%	0.45%	0.45%	0.45%	0.56%	0.48%	0.45%	0.45%	0.45%	0.49%	0.45%	0.45%	0.45%	0.51%
Headgrade - Ag	g/tonne	5.13	-	-	-	3.82	3.84	4.08	3.10	4.26	7.02	7.36	5.94	4.44	4.52	6.39	7.27	4.30	6.00	4.42	5.17
Headgrade - Mo	%	0.01%	-	-	-	0.01%	0.01%	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Leach																					
Tonnes leached	Mt	106.0	-	-	-	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
Headgrade - CuSS	%	0.29%	-	-	-	0.24%	0.24%	0.20%	0.26%	0.36%	0.19%	0.32%	0.32%	0.30%	0.33%	0.24%	0.35%	0.38%	0.39%	0.35%	0.23%
Headgrade - Cu	%	0.39%	-	-	-	0.34%	0.31%	0.27%	0.36%	0.47%	0.25%	0.40%	0.42%	0.39%	0.44%	0.32%	0.46%	0.50%	0.52%	0.48%	0.31%
Purchased Cu Conc																					
Cu Concentrate	Kt	807.6	-	-	-	119.8	101.1	-	94.2	61.9	86.6	-	21.9	47.5	49.0	67.0	16.9	39.0	32.5	55.8	14.4
Grade - Cu	%	25.00%	-	-	-	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
Grade - Au	g/tonne	0.50	-	-	-	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Grade - Ag	g/tonne	15.00	-	-	-	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Recovery to Cu Cathode																					
From Mill	%	77.3%	-	-	-	71.2%	70.5%	72.9%	70.9%	74.2%	77.4%	80.3%	79.9%	80.6%	79.2%	79.4%	79.9%	79.2%	80.4%	76.1%	82.0%
From Leach	%	59.0%	-	-	-	55.9%	59.9%	59.5%	56.8%	59.7%	58.5%	62.2%	60.6%	60.2%	59.0%	58.8%	59.8%	59.0%	58.3%	57.6%	58.5%
From Purchased	%	97.7%	-	-	-	96.2%	97.9%	-	97.4%	97.9%	98.0%	-	98.2%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%
Cu Cathode Produced																					
From Mill	Kt	1,137.9	-	-	-	58.7	63.0	65.2	63.4	66.3	69.2	89.9	76.0	72.8	70.8	71.0	77.1	70.8	71.9	68.0	83.9
From Leach	Kt	243.7	-	-	-	12.5	12.2	10.5	13.7	18.5	9.6	16.5	16.7	15.5	17.2	12.6	18.0	19.6	20.2	18.3	12.1
From Purchased	Kt	197.2	-	-	-	28.8	24.7	-	22.9	15.1	21.2	-	5.4	11.6	12.0	16.4	4.1	9.6	8.0	13.7	3.5
Total Cu cathode	Kt	1,578.8	-	-	-	100.0	100.0	75.8	100.0	100.0	100.0	106.4	98.0	99.9	100.0	100.0	99.3	100.0	100.0	100.0	99.5
Mo Conc Produced																					
Mo Concentrate	Kt	34.3	-	-	-	2.5	1.9	2.2	1.4	1.4	1.8	3.1	2.2	2.0	2.0	2.0	2.3	2.5	2.3	2.1	2.6
Grade - Mo	%	51.13%	-	-	-	54.33%	50.39%	43.17%	48.04%	45.92%	51.67%	53.88%	51.87%	50.71%	50.47%	51.24%	51.98%	52.39%	52.34%	51.61%	52.96%
Mo in concentrate	Kt	17.6	-	-	-	1.3	1.0	1.0	0.7	0.6	0.9	1.6	1.2	1.0	1.0	1.0	1.2	1.3	1.2	1.1	1.4
Doré Produced																					
Ag in Doré - internal feed	000 oz	26,808	-	-	-	1,102	1,155	1,214	928	1,290	2,357	2,478	1,989	1,485	1,503	2,157	2,454	1,449	2,026	1,472	1,749
Ag in Doré - purchased conc	000 oz	349	-	-	-	28.8	24.7	-	22.9	15.1	21.2	-	5.4	11.6	12.0	16.4	4.1	9.6	8.0	13.7	3.5
Au in Doré - purchased conc	000 oz	12	-	-	-	1.7	1.5	-	1.4	0.9	1.3	-	0.3	0.7	0.7	1.0	0.2	0.6	0.5	0.8	0.2
Acid Plant																					
Purchased sulfur	Kt	1,097.1	-	-	-	76.4	55.7	-	37.2	62.4	86.7	90.7	79.9	73.0	66.0	74.0	81.2	69.6	81.1	75.1	88.0
Excess acid produced/sold	Kt	1,570.9	-	-	-	118.4	59.4	77.2	115.2	60.4	152.3	25.8	52.1	118.8	97.5	161.5	111.1	85.6	83.1	111.2	141.2
Total Production																					
Cu Eq Produced	Kt	1,739.9	-	-	-	109.6	107.5	83.7	107.0	106.7	112.5	119.1	108.3	109.5	109.4	112.4	112.2	109.9	111.1	109.7	111.4

PHASE I

PHASE I: UNIT COSTS	Unit	PHASE I	Y-03	Y-02	Y-01	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y10	Y11	Y12	Y13	Y14	Y15	Y16
Mining (\$/t materials moved excluding pre-strip)																					
Mining	\$/tonne	1.42	-	-	-	1.47	1.53	1.38	1.18	1.36	1.43	1.42	1.38	1.44	1.44	1.44	1.44	1.44	1.43	1.42	1.62
Deferred Stripping	\$/tonne	(0.11)	-	-	-	(0.01)	(0.11)	(0.29)	(0.15)	(0.42)	-	(0.07)	(0.26)	(0.08)	(0.09)	(0.01)	(0.02)	(0.05)	(0.01)	(0.22)	-
Mining ex def stripping	\$/tonne	1.30	-	-	-	1.46	1.42	1.09	1.03	0.93	1.43	1.35	1.12	1.36	1.35	1.43	1.41	1.38	1.42	1.20	1.62
Processing (\$/t processed (tonnes milled + tonnes leached))																					
Sulfide flotation	\$/tonne	3.56	-	-	-	3.37	3.57	3.61	3.58	3.57	3.56	3.57	3.58	3.57	3.57	3.57	3.58	3.57	3.57	3.57	3.58
Molybdenum flotation	\$/tonne	0.09	-	-	-	0.08	0.09	0.18	0.08	0.09	0.07	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Leach Plant	\$/tonne	0.43	-	-	-	0.42	0.45	0.67	0.42	0.43	0.38	0.39	0.39	0.41	0.43	0.41	0.40	0.42	0.39	0.40	0.38
Acid Plant	\$/tonne	0.70	-	-	-	0.83	0.59	0.14	0.44	0.65	0.84	0.88	0.79	0.73	0.68	0.74	0.80	0.42	0.71	0.80	0.85
Acid Plant (electricity credit)	\$/tonne	(0.22)	-	-	-	(0.24)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)
Leach pad	\$/tonne	0.01	-	-	-	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Doré plant	\$/tonne	0.13	-	-	-	0.10	0.09	0.10	0.08	0.10	0.18	0.18	0.15	0.12	0.12	0.16	0.18	0.11	0.15	0.11	0.13
SXEW	\$/tonne	0.86	-	-	-	0.94	0.87	0.70	0.86	0.86	0.86	0.91	0.85	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Total	\$/tonne	5.57	-	-	-	5.52	5.46	5.20	5.27	5.50	5.70	5.81	5.64	5.58	5.55	5.63	5.70	5.56	5.65	5.58	5.69
Other Unit Costs (\$/t processed (tonnes milled + tonnes leached))																					
Onsite G&A	\$/tonne	0.89	-	-	-	0.97	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Sustaining cash cost (\$/lb Cu)																					
Cash cost ¹	\$/lb	1.15	-	-	-	1.14	1.27	1.30	1.30	1.21	1.34	1.03	1.11	1.18	1.18	1.19	1.06	1.09	1.09	1.07	0.97
Sustaining cash cost ¹	\$/lb	1.44	-	-	-	1.38	1.63	1.72	1.63	1.88	1.70	1.30	1.41	1.40	1.40	1.37	1.24	1.28	1.26	1.37	1.25
Total cash cost ²	\$/lb	1.41	-	-	-	1.75	1.75	1.30	1.73	1.52	1.72	1.03	1.23	1.41	1.42	1.51	1.15	1.29	1.26	1.36	1.05
Total sustaining cash cost ²	\$/lb	1.66	-	-	-	1.92	2.03	1.72	1.99	2.09	2.01	1.30	1.51	1.61	1.61	1.66	1.32	1.47	1.42	1.62	1.32

¹ Internal feed only; ² Includes purchased concentrate

PHASE I: CASH FLOWS	Unit	PHASE I	Y-03	Y-02	Y-01	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y10	Y11	Y12	Y13	Y14	Y15	Y16
Cash Flows																					
Gross rev - internal	\$M	11,475	-	-	-	606	620	626	635	686	666	877	761	732	728	706	794	751	763	718	806
Gross rev - purchased	\$M	1,552	-	-	-	227	195	-	180	119	167	-	42	92	94	129	33	75	63	108	28
TC/RC	\$M	(75)	-	-	-	(6)	(5)	(5)	(3)	(3)	(3)	(7)	(5)	(4)	(5)	(4)	(5)	(6)	(5)	(5)	(6)
Freight	\$M	(43)	-	-	-	(2)	(2)	(2)	(2)	(2)	(4)	(4)	(3)	(2)	(2)	(3)	(4)	(2)	(3)	(2)	(3)
Royalty	\$M	(253)	-	-	-	(14)	(14)	(12)	(14)	(14)	(16)	(21)	(17)	(16)	(16)	(16)	(18)	(16)	(16)	(15)	(19)
Opex - Mining	\$M	(1,266)	-	-	-	(48)	(53)	(57)	(68)	(61)	(93)	(90)	(77)	(90)	(89)	(95)	(94)	(92)	(95)	(81)	(86)
Opex - Processing	\$M	(2,346)	-	-	-	(133)	(145)	(138)	(140)	(146)	(151)	(154)	(150)	(148)	(147)	(149)	(151)	(147)	(150)	(148)	(151)
Opex - Purch Cu Conc	\$M	(1,332)	-	-	-	(198)	(167)	-	(155)	(102)	(143)	-	(36)	(78)	(81)	(111)	(28)	(64)	(54)	(92)	(24)
Opex - Onsite G&A	\$M	(376)	-	-	-	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(24)
Opex - Property tax	\$M	(296)	-	-	-	(35)	(33)	(33)	(32)	(30)	(24)	(22)	(20)	(18)	(16)	(13)	(9)	(5)	(3)	(3)	(3)
Opex - Surety bond fees	\$M	(34)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Closure Costs	\$M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tax - Federal income	\$M	(494)	-	-	-	-	-	-	-	(3)	(2)	(26)	(34)	(51)	(51)	(48)	(64)	(60)	(63)	(48)	(46)
Tax - State income	\$M	(98)	-	-	-	-	-	-	-	-	(1)	(6)	(7)	(10)	(10)	(9)	(13)	(12)	(12)	(9)	(9)
Tax - State severance	\$M	(62)	-	-	-	-	-	(1)	(2)	(2)	(2)	(4)	(4)	(6)	(6)	(6)	(7)	(6)	(7)	(6)	(5)
Cash From Ops before WC	\$M	6,351	(2)	(2)	(2)	372	372	354	375	418	368	519	426	376	374	357	411	391	394	393	458
WC Changes - AR	\$M	(91)	-	-	-	(91)	2	21	(21)	1	(3)	(4)	8	(2)	0	(2)	1	0	(0)	(0)	(1)
WC Changes - AP	\$M	76	62	123	(80)	(17)	1	(30)	28	3	2	(21)	4	10	(0)	4	(11)	4	(1)	5	(11)
WC Changes - Stream	\$M	230	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash From Operations	\$M	6,565	291	121	(82)	264	375	345	383	422	368	493	438	383	375	359	401	395	393	397	446
Growth - EPCM	\$M	(1,177)	(239)	(635)	(303)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Growth - Owners Costs	\$M	(475)	(48)	(223)	(205)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Growth - Contingency	\$M	(265)	(51)	(149)	(64)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sustaining capital	\$M	(531)	-	-	-	(24)	(45)	(44)	(35)	(85)	(48)	(39)	(26)	(21)	(21)	(17)	(19)	(19)	(19)	(28)	(42)
Deferred stripping	\$M	(111)	-	-	-	(0)	(4)	(15)	(10)	(28)	-	(5)	(18)	(5)	(6)	(1)	(2)	(4)	(1)	(15)	-
Cash From Investing	\$M	(2,559)	(338)	(1,007)	(572)	(24)	(49)	(59)	(45)	(112)	(48)	(43)	(44)	(26)	(27)	(18)	(21)	(23)	(20)	(43)	(42)
Net cash flow	\$M	4,007	(47)	(886)	(654)	240	326	286	338	309	320	450	393	357	348	342	380	372	373	354	404
NPV @ 8%	\$M	1,097																			
NPV @ 10%	\$M	741																			
IRR	%	17%																			
PAYBACK	# years	5.3																			

PHASE II

PHASE II: PHYSICALS	Unit	PHASE II	LOM	Y15	Y16	Y17	Y18	Y19	Y20	Y21	Y22	Y23	Y24	Y25-29	Y30-34	Y35-39	Y40-44	Y45-49
Resources Mined																		
Copper World deposits	Mt	124.2	340.4	-	-	0.7	3.0	2.0	1.5	3.3	13.8	14.1	11.6	74.2	0.0	-	-	-
East deposit	Mt	783.2	1,008.1	-	-	29.1	33.4	28.6	37.6	35.6	23.6	22.3	24.8	109.2	158.4	151.3	129.4	-
Total resources mined	Mt	907.4	1,348.5	-	-	29.8	36.4	30.5	39.1	38.8	37.3	36.4	36.4	183.4	158.4	151.3	129.4	-
Waste Mined																		
Copper World deposits	Mt	19.3	137.1	-	-	0.8	0.2	0.1	0.3	2.2	3.9	4.3	2.5	5.0	-	-	-	-
East deposit	Mt	1,643.2	2,073.5	-	-	15.7	74.6	74.6	71.9	70.2	70.0	70.5	72.2	363.7	376.7	329.7	53.4	-
Total waste mined	Mt	1,662.5	2,210.6	-	-	16.5	74.8	74.7	72.1	72.4	73.9	74.8	74.8	368.7	376.7	329.7	53.4	-
Material Moved																		
Rehandle	Mt	30.9	44.7	-	-	-	-	6.0	-	-	-	-	-	4.0	21.0	-	-	-
Total material moved	Mt	2,600.8	3,603.8	-	-	46.3	111.2	111.2	111.2	111.2	111.2	111.2	111.2	556.1	556.1	481.0	182.8	-
Strip Ratio																		
Copper World deposits	X:X	0.16	0.40	-	-	1.15	0.08	0.04	0.18	0.67	0.28	0.30	0.22	0.07	-	-	-	-
East deposit	X:X	2.10	2.06	-	-	0.54	2.23	2.61	1.91	1.98	2.97	3.16	2.91	3.33	2.38	2.18	0.41	-
Total strip ratio	X:X	1.83	1.64	-	-	0.55	2.05	2.45	1.84	1.87	1.98	2.05	2.05	2.01	2.38	2.18	0.41	-
Mill																		
Tonnes milled	Mt	805.4	1,120.9	-	-	23.2	29.8	29.8	29.8	29.8	29.8	29.8	29.8	149.0	149.0	149.0	126.6	-
Headgrade - Cu	%	0.41%	0.42%	-	-	0.56%	0.56%	0.43%	0.48%	0.56%	0.55%	0.46%	0.37%	0.41%	0.38%	0.37%	0.31%	-
Headgrade - Ag	g/tonne	5.06	5.08	-	-	6.75	8.21	5.66	4.56	4.85	5.41	5.30	4.22	3.60	5.33	5.26	5.27	-
Headgrade - Mo	%	0.01%	0.01%	-	-	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.02%	0.01%	0.01%	0.01%	0.01%	0.02%	-
Leach																		
Tonnes leached	Mt	121.6	227.6	-	-	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	33.1	30.4	2.3	2.8	-
Headgrade - CuSS	%	0.23%	0.26%	-	-	0.18%	0.22%	0.35%	0.32%	0.26%	0.23%	0.21%	0.19%	0.27%	0.17%	0.15%	0.25%	-
Headgrade - Cu	%	0.31%	0.35%	-	-	0.24%	0.28%	0.47%	0.42%	0.35%	0.30%	0.29%	0.27%	0.36%	0.22%	0.22%	0.30%	-
Purchased Cu Conc																		
Cu Concentrate	Kt	2,534.0	3,341.6	-	-	101.0	-	64.5	-	-	-	101.7	189.1	525.9	293.6	499.7	758.5	-
Grade - Cu	%	25.00%	25.00%	-	-	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	-
Grade - Au	g/tonne	0.50	0.50	-	-	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-
Grade - Ag	g/tonne	15.00	15.00	-	-	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	-
Recovery to Cu Cathode																		
From Mill	%	80.1%	79.2%	-	-	81.5%	81.3%	79.8%	80.0%	80.3%	76.6%	76.6%	75.1%	76.9%	83.0%	82.1%	81.4%	-
From Leach	%	58.7%	58.9%	-	-	58.9%	61.5%	59.2%	58.6%	58.7%	58.6%	56.3%	56.1%	58.6%	59.1%	54.7%	61.8%	-
From Purchased	%	97.1%	97.3%	-	-	97.5%	-	98.1%	-	-	-	97.8%	97.8%	97.8%	97.4%	96.7%	96.5%	-
Cu Cathode Produced																		
From Mill	Kt	2,617.5	3,755.4	-	-	106.1	136.1	102.5	115.2	134.7	125.2	104.1	83.9	471.8	466.6	447.1	324.2	-
From Leach	Kt	219.4	463.1	-	-	9.3	11.4	18.3	16.4	13.6	11.7	10.8	9.9	69.8	40.1	2.8	5.3	-
From Purchased	Kt	615.4	812.6	-	-	24.6	-	15.8	-	-	-	24.9	46.3	128.6	71.5	120.8	182.9	-
Total Cu cathode	Kt	3,452.3	5,031.1	-	-	140.0	147.5	136.7	131.6	148.3	136.9	139.8	140.0	670.2	578.2	570.7	512.5	-
Mo Conc Produced																		
Mo Concentrate	Kt	116.6	150.9	-	-	2.8	3.2	3.1	4.0	4.5	3.4	4.5	4.0	16.6	24.1	24.4	21.9	-
Grade - Mo	%	52.96%	52.54%	-	-	51.07%	51.14%	52.89%	51.34%	51.68%	50.85%	54.45%	54.43%	51.54%	53.31%	53.48%	53.88%	-
Mo in concentrate	Kt	61.7	79.3	-	-	1.4	1.6	1.7	2.1	2.3	1.7	2.5	2.2	8.6	12.8	13.0	11.8	-
Doré Produced																		
Ag in Doré - internal feed	000 oz	68,539	95,347	-	-	2,657	4,165	2,853	2,295	2,443	2,659	2,591	2,032	8,624	13,528	13,333	11,359	-
Ag in Doré - purchased conc	000 oz	1,094	1,443	-	-	44	-	28	-	-	-	44	82	227	127	216	328	-
Au in Doré - purchased conc	000 oz	37	48	-	-	1	-	1	-	-	-	1	3	8	4	7	11	-
Acid Plant																		
Purchased sulfur	Kt	655.2	1,752.3	-	-	45.9	71.5	76.2	22.4	18.3	48.5	51.6	42.0	140.5	59.8	78.6	-	-
Excess acid produced/sold	Kt	5,733.3	7,304.3	-	-	187.7	78.3	44.8	106.7	96.9	71.7	99.5	103.9	725.8	711.5	1,827.6	1,678.9	-
Total Production																		
Cu Eq Produced	Kt	3,949.5	5,689.4	-	-	155.6	166.0	150.8	146.7	164.4	151.2	156.8	154.5	735.4	670.4	684.0	613.5	-

PHASE II

PHASE II: UNIT COSTS	Unit	PHASE II	LOM	Y15	Y16	Y17	Y18	Y19	Y25-29	Y30-34	Y35-39	Y40-44	Y45-49						
Mining (\$/t materials moved excluding pre-strip)																			
Mining	\$/tonne	1.35	1.37	-	-	1.85	1.27	1.27	1.31	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.35	1.56	-
Deferred Stripping	\$/tonne	(0.18)	(0.16)	-	-	(0.03)	(0.07)	(0.18)	(0.00)	(0.02)	(0.27)	(0.32)	(0.26)	(0.33)	(0.12)	(0.17)	-	-	-
Mining ex def stripping	\$/tonne	1.17	1.21	-	-	1.83	1.21	1.09	1.31	1.30	1.05	1.01	1.06	0.99	1.20	1.18	1.56	-	-
Processing (\$/t processed (tonnes milled + tonnes leached))																			
Sulfide flotation	\$/tonne	4.04	3.89	-	-	4.43	3.78	3.77	3.80	3.79	3.78	3.77	3.78	3.78	3.84	4.56	4.53	-	-
Molybdenum flotation	\$/tonne	0.11	0.11	-	-	0.11	0.10	0.08	0.12	0.13	0.11	0.09	0.08	0.10	0.12	0.13	0.13	-	-
Leach Plant	\$/tonne	0.49	0.47	-	-	0.49	0.39	0.35	0.46	0.49	0.42	0.40	0.41	0.44	0.47	0.57	0.62	-	-
Acid Plant	\$/tonne	0.26	0.40	-	-	0.46	0.52	0.55	0.23	0.21	0.39	0.41	0.35	0.27	0.18	0.23	0.14	-	-
Acid Plant (electricity credit)	\$/tonne	(0.17)	(0.19)	-	-	(0.19)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.19)	(0.22)	-	-
Leach pad	\$/tonne	0.01	0.01	-	-	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	-	-
Doré plant	\$/tonne	0.15	0.14	-	-	0.17	0.22	0.15	0.12	0.13	0.14	0.14	0.11	0.10	0.15	0.17	0.18	-	-
SXEW	\$/tonne	0.84	0.84	-	-	1.05	0.90	0.84	0.82	0.90	0.84	0.86	0.86	0.83	0.74	0.83	0.88	-	-
Total	\$/tonne	5.72	5.68	-	-	6.53	5.75	5.60	5.41	5.51	5.53	5.52	5.44	5.36	5.34	6.31	6.27	-	-
Other Unit Costs (\$/t processed (tonnes milled + tonnes leached))																			
Onsite G&A	\$/tonne	0.95	0.93	-	-	1.01	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	0.78	0.79	-	-
Sustaining cash cost (\$/lb Cu)																			
Cash cost ¹	\$/lb	1.11	1.12	-	-	0.97	1.01	1.18	1.13	0.99	1.04	1.10	1.37	1.19	1.26	1.07	0.90	-	-
Sustaining cash cost ¹	\$/lb	1.42	1.43	-	-	1.19	1.68	1.49	1.47	1.25	1.33	1.48	1.73	1.57	1.55	1.36	1.08	-	-
Total cash cost ²	\$/lb	1.46	1.44	-	-	1.35	1.01	1.42	1.13	0.99	1.04	1.47	1.97	1.56	1.49	1.49	1.64	-	-
Total sustaining cash cost ²	\$/lb	1.73	1.71	-	-	1.53	1.68	1.69	1.47	1.25	1.33	1.79	2.22	1.87	1.75	1.72	1.75	-	-
¹ Internal feed only; ² Includes purchased concentrate																			
PHASE II: CASH FLOWS	Unit	PHASE II	LOM	Y15	Y16	Y17	Y18	Y19	Y25-29	Y30-34	Y35-39	Y40-44	Y45-49						
Cash Flows																			
Gross rev - internal	\$M	24,722	36,197	-	-	969	1,212	995	1,096	1,230	1,125	977	804	4,556	4,413	4,159	3,186	-	-
Gross rev - purchased	\$M	4,845	6,397	-	-	194	-	124	-	-	-	196	364	1,012	563	951	1,440	-	-
TC/RC	\$M	(280)	(355)	-	-	(6)	(6)	(7)	(10)	(11)	(8)	(11)	(10)	(41)	(58)	(60)	(54)	-	-
Freight	\$M	(111)	(154)	-	-	(4)	(7)	(5)	(4)	(4)	(4)	(4)	(3)	(14)	(22)	(22)	(19)	-	-
Royalty	\$M	(587)	(841)	-	-	(24)	(32)	(24)	(25)	(30)	(28)	(24)	(19)	(103)	(104)	(101)	(74)	-	-
Opex - Mining	\$M	(3,048)	(4,314)	-	-	(84)	(134)	(121)	(146)	(145)	(116)	(112)	(118)	(551)	(668)	(568)	(285)	-	-
Opex - Processing	\$M	(5,307)	(7,653)	-	-	(195)	(209)	(204)	(197)	(201)	(201)	(201)	(198)	(977)	(958)	(955)	(811)	-	-
Opex - Purch Cu Conc	\$M	(4,180)	(5,512)	-	-	(167)	-	(106)	-	-	-	(168)	(312)	(867)	(484)	(824)	(1,251)	-	-
Opex - Onsite G&A	\$M	(877)	(1,253)	-	-	(30)	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(185)	(183)	(118)	(102)	-	-
Opex - Property tax	\$M	(292)	(588)	-	-	(16)	(15)	(15)	(15)	(14)	(17)	(16)	(16)	(68)	(53)	(40)	(6)	-	-
Opex - Surety bond fees	\$M	(55)	(89)	-	-	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(9)	(9)	(9)	(9)	(5)	-
Closure Costs	\$M	(200)	(200)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(200)	-
Tax - Federal income	\$M	(1,616)	(2,110)	-	-	(55)	(83)	(50)	(65)	(84)	(73)	(59)	(36)	(304)	(281)	(276)	(249)	-	-
Tax - State income	\$M	(317)	(415)	-	-	(11)	(16)	(10)	(13)	(16)	(14)	(12)	(7)	(60)	(55)	(54)	(49)	-	-
Tax - State severance	\$M	(190)	(252)	-	-	(7)	(9)	(6)	(7)	(9)	(8)	(7)	(5)	(36)	(33)	(33)	(29)	-	-
Cash From Ops before WC	\$M	12,509	18,859	-	-	562	662	533	577	678	616	520	404	2,353	2,068	2,051	1,690	(205)	-
WC Changes - AR	\$M	91	-	-	-	(36)	(5)	10	3	(15)	11	(5)	0	(16)	42	15	(44)	130	-
WC Changes - AP	\$M	(76)	-	81	-	(42)	19	(17)	(10)	2	(6)	28	18	(31)	(9)	(35)	105	(179)	-
WC Changes - Stream	\$M	-	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash From Operations	\$M	12,524	19,089	81	-	484	676	526	570	665	621	544	422	2,306	2,102	2,031	1,751	(254)	-
Growth - EPCM	\$M	(444)	(1,621)	(222)	(222)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Growth - Owners Costs	\$M	(264)	(739)	(132)	(132)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Growth - Contingency	\$M	(177)	(442)	(89)	(89)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sustaining capital	\$M	(967)	(1,498)	-	-	(31)	(179)	(38)	(75)	(52)	(29)	(38)	(29)	(169)	(162)	(109)	(56)	-	-
Deferred stripping	\$M	(456)	(567)	-	-	(1)	(7)	(20)	(0)	(2)	(31)	(35)	(29)	(184)	(67)	(79)	-	-	-
Cash From Investing	\$M	(2,308)	(4,867)	(443)	(443)	(32)	(187)	(58)	(75)	(55)	(60)	(73)	(58)	(353)	(229)	(188)	(56)	-	-
Net cash flow	\$M	10,216	14,222	(361)	(443)	452	489	468	495	611	561	470	364	1,953	1,873	1,842	1,695	(254)	-
NPV @ 8%	\$M	947	2,044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NPV @ 10%	\$M	555	1,296	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRR	%	49%	18%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PAYBACK	# years	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

PRICE DECK AND MARKETING ASSUMPTIONS

PRICE DECK		
PRICE / RATE	UNIT	LONG TERM
Metals		
Copper	\$/lb	3.50
Copper net premium ¹	\$/lb	0.01
Molybdenum	\$/lb	11.00
Gold - offtaker	\$/oz	1,600.00
Silver - offtaker	\$/oz	22.00
Silver - stream	\$/oz	3.90
Stream contracted escalator ²	% per year	1.00
Other		
Molten sulfur - purchases	\$/tonne	215.00
Molten sulfur - sales	\$/tonne	195.00
Acid - sales	\$/tonne	145.00
Electricity	\$/kWh	0.075
NSR royalty	%	3.00

¹ Copper cathode premium net of cathode transport charge

² Annual escalator begins in Year 4

MARKETING ASSUMPTIONS		
PRICE / RATE	UNIT	LONG TERM
Molybdenum Concentrate		
Treatment charge	\$/lb	1.30
Payable % - Mo	%	99.00
Freight	\$/wmt	20.00
Moisture	%	6.00
Doré		
Refining charge - doré bar	\$/oz	0.40
Refining charge - Au	\$/oz	0.55
Payable % - Au	%	99.90
Payable % - Ag	%	99.90
Freight	\$/oz	1.40
Purchased Copper Concentrate		
Purchase price	\$/dmt	1,649.55
Cu grade	%	25.00
Mo grade	%	0.01
Au grade	g/dmt	0.50
Ag grade	g/dmt	15.00
Zn grade	%	0.20
S grade	%	35.00
Treatment charge	\$/dmt	80.00
Refining charge - Cu	\$/lb	0.08
Payable % - Cu	%	96.50
Payable % - Au	%	90.00
Payable % - Ag	%	90.00
Min deduction - Cu	%	1.00
Min grade - Au	g/dmt	1.00
Min grade - Ag	g/dmt	30.00
Freight capture	\$/dmt	80.00

TAX ASSUMPTIONS

TAX ASSUMPTIONS		
METRIC	UNIT	Phase I
<u>Federal Income Tax</u>		
Income tax rate	%	21.00%
Depletion - Federal rate	%	15.00%
Depletion - net income limitation	%	50.00%
<u>State Income Tax</u>		
Income tax rate	%	3.87%
Basis rate	%	50.00%
Severance tax rate	%	3.00%
<u>Property Tax</u>		
Discount rate	%	12.30%
Assessment ratio	%	16.00%
Estimated primary tax rate	%	14.43%
Income taxes allowed	%	21.00%
Capex deduction per year	%	10.00%
<u>Opening Balance - NOLs</u>		
Federal	\$ millions	\$112
State	\$ millions	\$95
<u>Opening Balance - Tax Pools</u>		
Mine development	\$ millions	\$277
Capitalized Exploration	\$ millions	\$27
Mineral Property	\$ millions	\$168

INCOME TAX DEPRECIATION RATES					
YEAR	MINE DEV	PROJECT	SUSTAINING	CAPITAL EXPLOR	INFRASTRUCTURE
1	73.00%	10.71%	7.14%	5.00%	5.00%
2	6.00%	19.13%	14.29%	10.00%	9.50%
3	6.00%	15.03%	14.29%	10.00%	8.55%
4	6.00%	12.25%	14.29%	10.00%	7.70%
5	6.00%	12.25%	14.29%	10.00%	6.93%
6	3.00%	12.25%	14.29%	10.00%	6.23%
7	-	12.25%	14.29%	10.00%	5.90%
8	-	6.13%	7.14%	10.00%	5.90%
9	-	-	-	10.00%	5.91%
10	-	-	-	10.00%	5.90%
11	-	-	-	5.00%	5.91%
12	-	-	-	-	5.90%
13	-	-	-	-	5.91%
14	-	-	-	-	5.90%
15	-	-	-	-	5.91%
16	-	-	-	-	2.95%

COPPER WORLD COMPLEX MINERAL RESOURCE ESTIMATES

(AS AT MAY 1, 2022)

COPPER WORLD COMPLEX MINERAL RESOURCE ESTIMATES	CATEGORY	Tonnes (Millions)	Cu Grade (%)	Soluble Cu Grade (%)	Mo (g/t)	Ag (g/t)
Flotation	Measured	687	0.45	0.05	138	5.1
	Indicated	287	0.36	0.06	134	3.6
	Total M&I	973	0.42	0.05	137	4.6
	Inferred	210	0.36	0.05	119	3.9
Leach	Measured	105	0.37	0.26	-	-
	Indicated	94	0.35	0.26	-	-
	Total M&I	200	0.36	0.26	-	-
	Inferred	52	0.40	0.29	-	-

Note: totals may not add up correctly due to rounding.

1 Mineral resource estimates that are not mineral reserves do not have demonstrated economic viability. Mineral resource estimates do not include factors for mining recovery or dilution.

2 Mineral resource estimates constrained to a Lerch Grossman pit shell with a revenue factor of 1.0 using a copper price of \$3.45 per pound.

3 Using a 0.1% copper cut-off grade and an oxidation ratio lower than 50% for flotation material, and a 0.1% soluble copper cut-off grade and an oxidation ratio higher than 50% for leach material.

The reserve and resource estimates included in this presentation were prepared in accordance with National Instrument 43-101 – Standards of Disclosure for Mineral Projects (“NI 43-101”) and the Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves: Definitions and Guidelines.

This presentation has been prepared in accordance with the requirements of the securities laws in effect in Canada, which differ from the requirements of United States securities laws. Canadian reporting requirements for disclosure of mineral properties are governed by NI 43-101. For this reason, information contained in this presentation containing descriptions of the Company’s mineral deposits may not be comparable to similar information made public by United States companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.



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