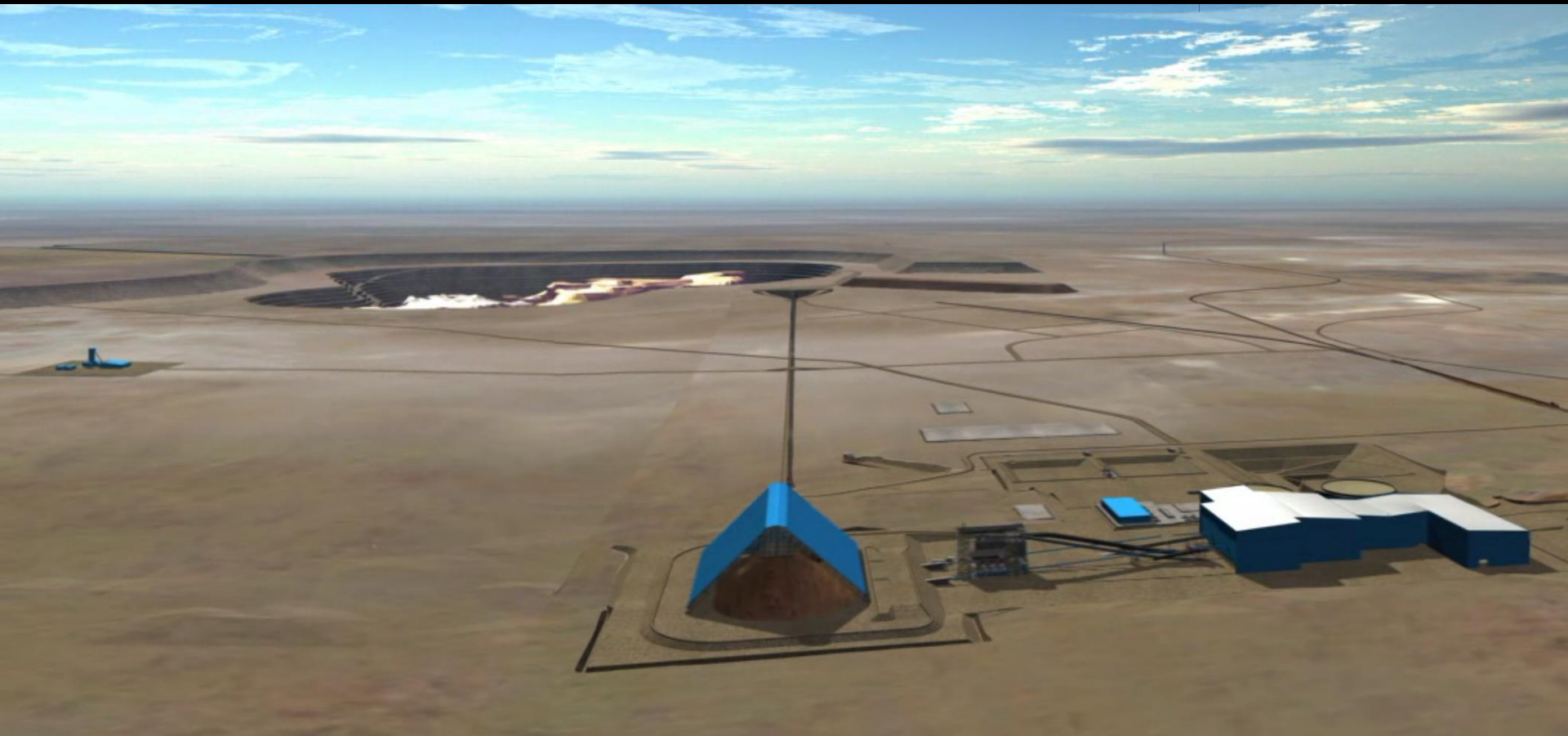


Building the future today at Oyu Tolgoi  
Integrated Development Plan 2010

# IVANHOE MINES



## Forward-Looking Statements

Certain statements made herein, including statements relating to matters that are not historical facts and statements of our beliefs, intentions and expectations about developments, results and events which will or may occur in the future, constitute “forward-looking information” within the meaning of applicable Canadian securities legislation and “forward-looking statements” within the meaning of the “safe harbor” provisions of the United States Private Securities Litigation Reform Act of 1995. Forward-looking information and statements are typically identified by words such as “anticipate,” “could,” “should,” “expect,” “seek,” “may,” “intend,” “likely,” “plan,” “estimate,” “will” “believe” and similar expressions suggesting future outcomes or statements regarding an outlook. These include, but are not limited to, Oyu Tolgoi becoming one of the World’s largest copper and gold producers; timing for first production; expansion of processing plant from 36.5 mtpy to 58 mtpy by the sixth year; expected payback period of capital; mine life under the reserve and Life-of-Mine (Sensitivity) Case and the anticipated yearly production, including average annual production; peak single year production; the ability of the mine development to support an expansion to 265,000 tonnes per day; anticipated production and financial results; launching the Oyu Tolgoi Training and Development Strategy; Rio Tinto’s exercise of its Ivanhoe Warrants; the ability to fund the remaining funding requirements for the project through debt; statements respecting anticipated business activities; planned expenditures; corporate strategies; proposed acquisitions and dispositions of assets; discussions with third parties respecting material agreements; the expected timing and outcome of the fulfillment of conditions precedent for an Investment Agreement in respect of the Oyu Tolgoi Project; the timing of commencement of full construction of the Oyu Tolgoi Project; the estimated timing and cost of bringing the Oyu Tolgoi Project into commercial production; anticipated future production and cash flows; target milling rates; the ability of the partners to arrange financing for construction of the Oyu Tolgoi Project; the impact of amendments to the laws of Mongolia and other countries in which IVN carries on business; the potential of plans to make non-core projects self-funding; and other statements that are not historical facts.

All such forward-looking information and statements are based on certain assumptions and analyses made by Ivanhoe Mines’ management in light of their experience and perception of historical trends, current conditions and expected future developments, as well as other factors management believes are appropriate in the circumstances. These statements, however, are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking information or statements. Important factors that could cause actual results to differ from these forward-looking statements include those described under the heading “Risks and Uncertainties” elsewhere in the Company’s MD&A filed on Sedar. The reader is cautioned not to place undue reliance on forward-looking information or statements.

The release also contains references to estimates of mineral reserves and mineral resources. The estimation of reserves and resources is inherently uncertain and involves subjective judgments about many relevant factors. The accuracy of any such estimates is a function of the quantity and quality of available data, and of the assumptions made and judgments used in engineering and geological interpretation, which may prove to be unreliable. There can be no assurance that these estimates will be accurate or that such mineral reserves and mineral resources can be mined or processed profitably. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Except as required by law, the Company does not assume the obligation to revise or update these forward-looking statements after the date of this document or to revise them to reflect the occurrence of future unanticipated events.

## **Disclaimer**

This presentation includes information on the Life-of-Mine Sensitivity Case, which includes Inferred mineral resources. Inferred mineral resources are considered too speculative geologically to have the economic considerations applied to them that would allow them to be categorized as mineral reserves, and there is no certainty that the Life-of-Mine Sensitivity Case will be realized.

## **IDP-10 prepared independently of Rio Tinto and joint Oyu Tolgoi Technical Committee**

The 2010 Integrated Development Plan is an independent report commissioned for the project by Ivanhoe Mines from a team of the world's foremost engineering, mining and environmental consultants, led by Australia-based AMEC Minproc and including U.S.-based Stantec Engineering. The complete Plan, a technical report compliant with Canada's 43-101 reporting standing, will be available on the SEDAR document retrieval service within 45 days.

The IDP-10 was prepared independently of Rio Tinto and the joint Ivanhoe Mines-Rio Tinto Oyu Tolgoi Technical Committee. The IDP-10 recommends that Oyu Tolgoi LLC, the Mongolian company that is developing and will operate the mining complex, conduct a comprehensive review to establish a baseline for the Project with a goal of improving or optimizing value. The IDP-10 also recommends that its conclusions be reviewed and analyzed by the joint Technical Committee to help determine detailed plans for the ongoing implementation of the Project.

## **Preparation of IDP and Qualified Persons**

The IDP-10 was prepared under the supervision of AMEC Minproc Limited. Bernard Peters, as Oyu Tolgoi Study Director for AMEC Minproc Limited and Qualified Person as defined in National Instrument 43-101, has reviewed, verified and approved the technical contents of this presentation.



# Building the future today at Oyu Tolgoi

- The 2010 Integrated Development Plan confirms that Ivanhoe's Oyu Tolgoi Project in southern Mongolia has the mineral resources to become one of the world's top three copper-gold producers and an industry model of responsible, environmentally-sound mineral development.
- This 2010 update of the 2005 Integrated Development Plan supports Ivanhoe Mines' commitment to advance Oyu Tolgoi into full construction.
- A budget for the launch of full-scale construction in 2010 has been approved by the joint Ivanhoe Mines-Rio Tinto Technical Committee.
- A comprehensive Investment Agreement for the development of Oyu Tolgoi was signed in October 2009 and took full legal effect in March 2010.
- Ivanhoe Mines owns a controlling 66% of Oyu Tolgoi. The Mongolian Government owns the remaining 34%.

# **IDP-10 a significant step toward bringing Oyu Tolgoi into the pantheon of the world's greatest mines**

---

- Declaration of first underground reserves for the high-grade Hugo Dummett deposits.
- Confirmation of Southern Oyu open-pit reserves that were first reported in 2006.
- First copper-gold production projected in 2013.
- Annual Production Highlights:
  - Averages 1.2 billion pounds of copper for 10 years.
  - Averages 650,000 ounces of gold for 10 years.
- Peak single-year production during year 7:
  - 1.7 billions pounds (800,000 tonnes) of copper.
  - 1.1 million ounces of gold.

# Key assumptions used in IDP-10 economic modelling

<b>Parameter</b>	<b>Financial Analysis assumptions</b>
Discount rate	8.00%
Copper price	\$2.00 per lb.
Gold price	\$850.00 per oz.
Silver price	\$13.50 per oz.
Treatment charges	\$70.00 per dmt
Copper refining charge	\$0.070 per lb.
Gold refining charge	\$5.00 per oz.



# Long-life, early payback

---

- Projected mine life of up to 59 years (Life-of-Mine Sensitivity Case), based on resources discovered to date. Exploration is ongoing.
- Project Net Present Value (NPV, at 8% discount):
  - **Reserve Case: US\$4.7 billion.**
  - **Life-of-Mine Sensitivity Case: US\$5.6 billion.**
  - **Real Options Analysis: US\$7.5 billion.**
- Payback period less than 6.5 years.
- Payback period of 4.62 years at current metal prices (\$3.23/lb. copper; \$1200/oz. gold)





# 2010 construction budget of US\$758 million provides early start on site development

---

- Sinking of 10-metre-diameter Shaft #2 to resume.
- Start building 31-storey, concrete headframe for Shaft #2.
- Pouring foundation for 100,000-tonne-per-day concentrator.
- Installation of 20 mw diesel power station & 35 kv power lines.
- Initial earthworks for open-pit mine at Southern Oyu deposits.
- Continuation of underground lateral development off Shaft #1.
- Start building 105 km highway to Mongolia-China border, to be paved before production begins.
- Start building regional airport, with concrete runway to handle Boeing 737-sized aircraft.



# SHAFT #1 COMPLEX



- Shaft #1 has been completed to the 1385-metre level – the deepest excavation in Mongolia’s history.
- Providing exploration & development access to Hugo underground deposits.



A 3D wireframe model of a geological deposit, colored in a dark orange/brown hue. The model shows a complex, layered structure with various shapes and sizes of polygons forming the surface. The deposit is situated on a dark background.

**Hugo  
Dummett  
Deposit**

**Completion as  
of March 2010**

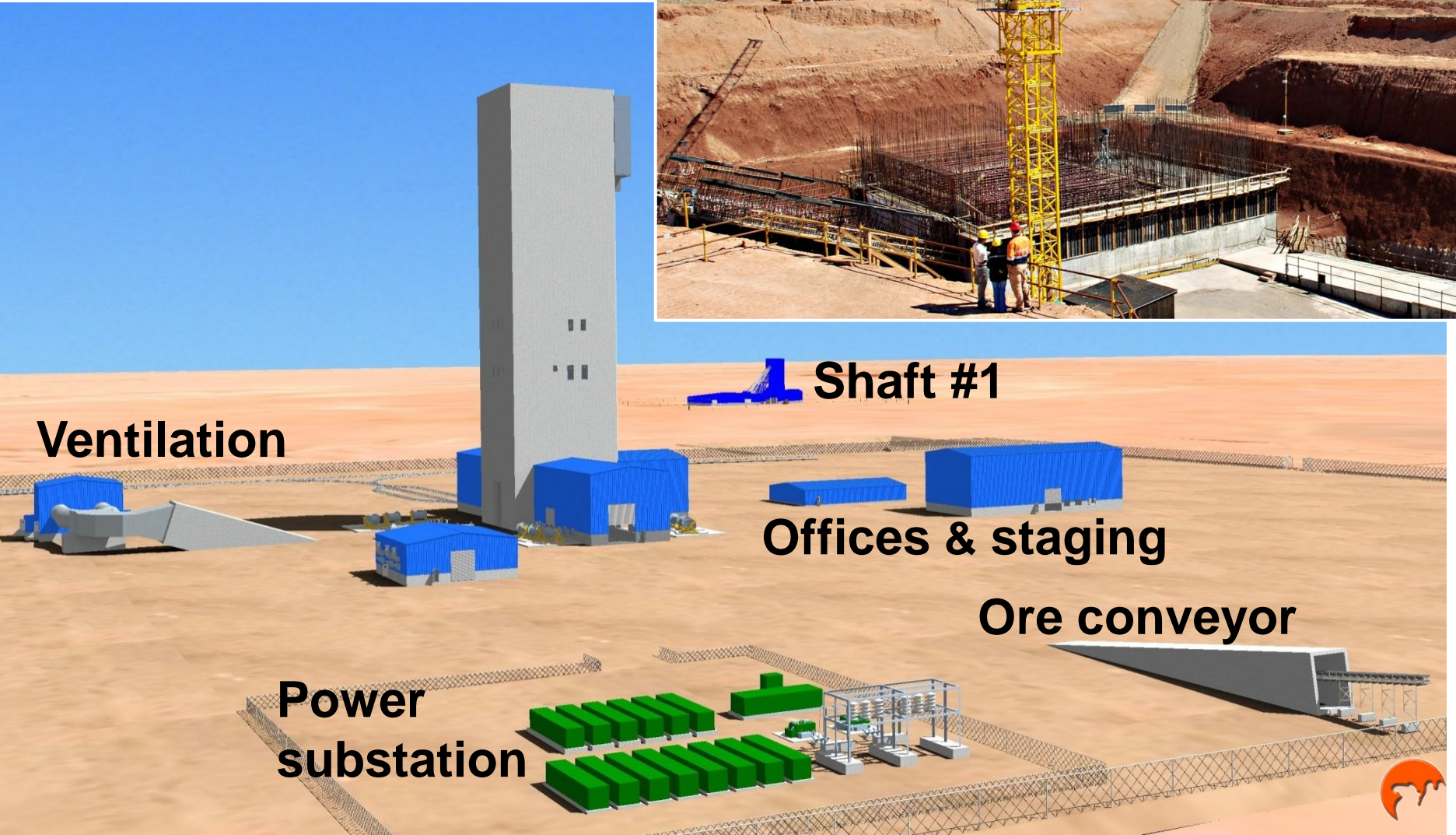
**Approx. 1000m**

**Exploration drilling  
commenced November 2009**

**< SHAFT #1  
Depth: 1,385 metres**



**Shaft #2 will deliver  
30,000 tonnes  
of ore per day  
from Hugo North Deposit**



**Ventilation**

**Shaft #1**

**Offices & staging**

**Ore conveyor**

**Power  
substation**



# Copper concentrator for Oyu Tolgoi

- engineering 76% complete
- sitework underway





**Two-line mill feed  
gives greater flexibility  
and lower operating risk**

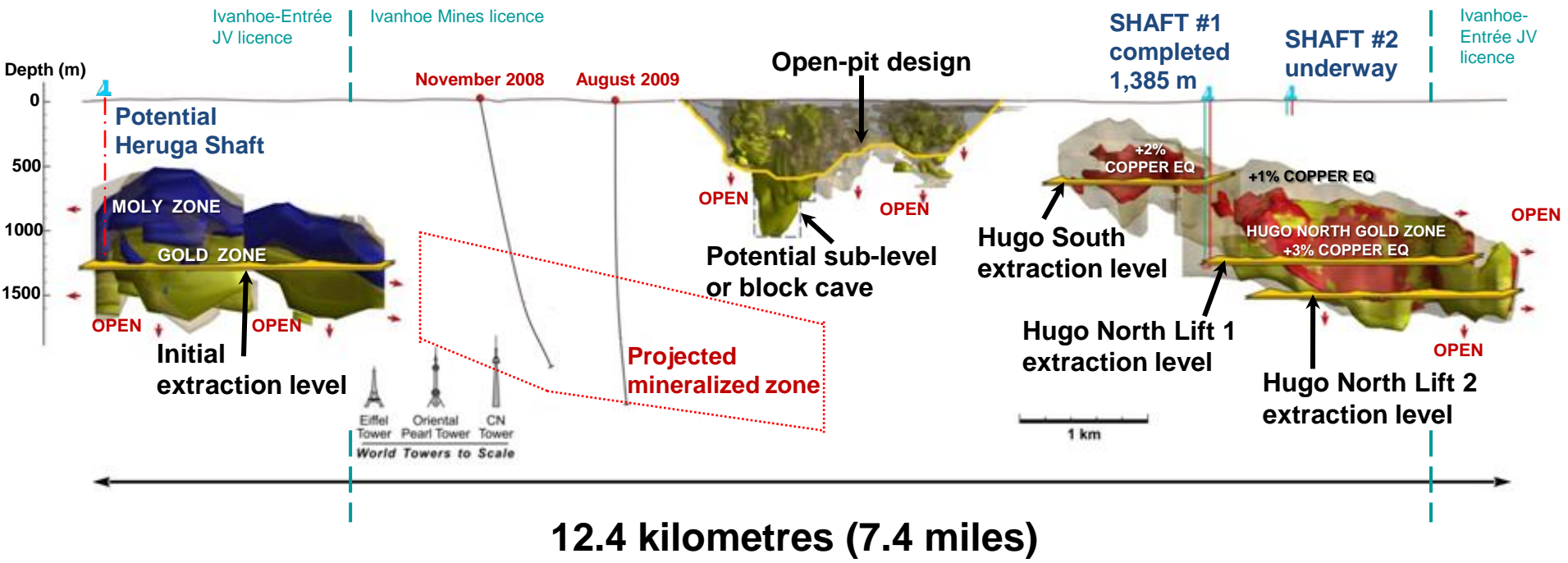
# Oyu Tolgoi mines planned in IDP-10



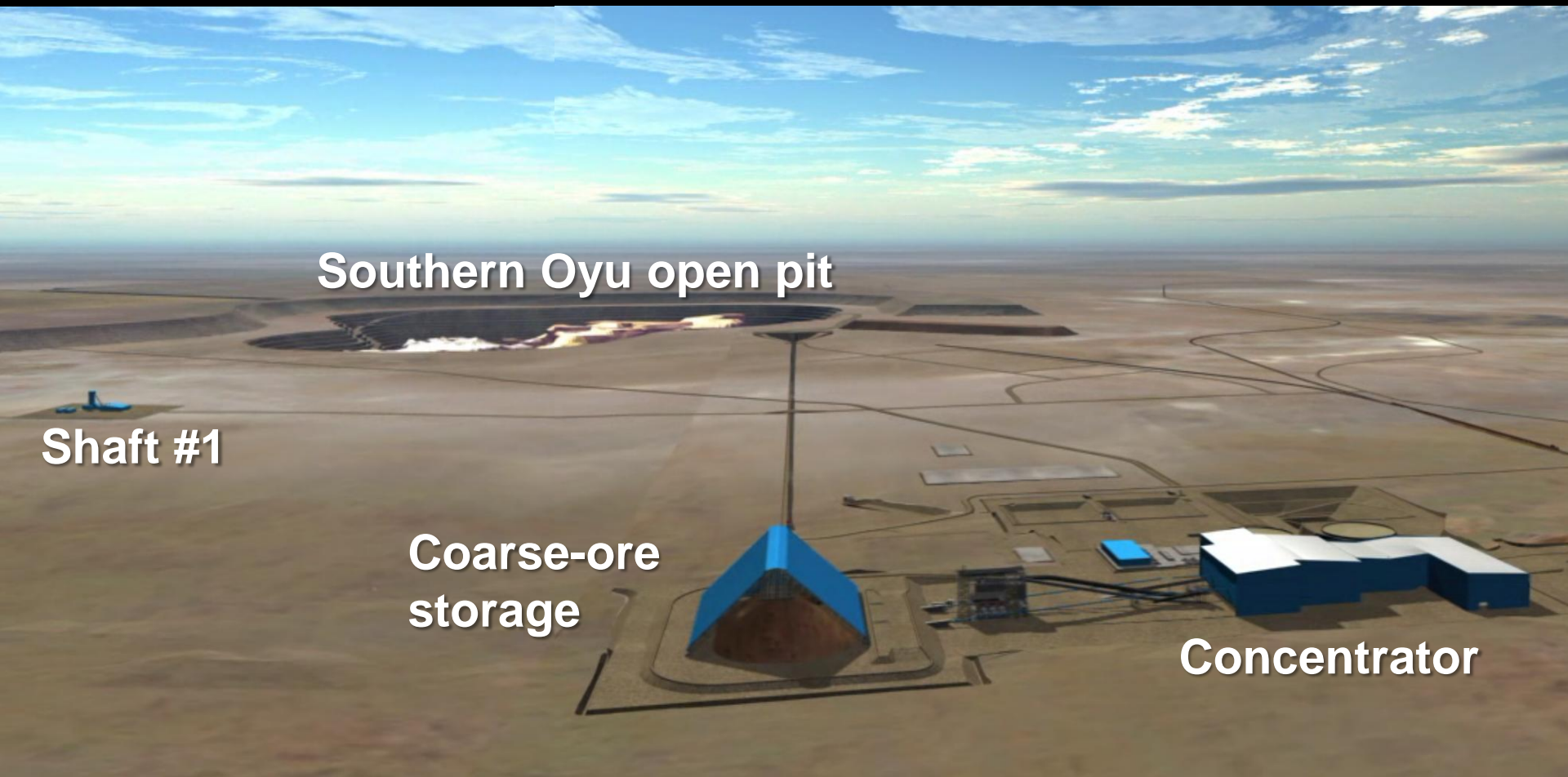
**UNDERGROUND  
BLOCK-CAVE MINE  
HERUGA DEPOSIT**

**OPEN-PIT MINE  
SOUTHERN OYU  
DEPOSITS**

**UNDERGROUND  
BLOCK-CAVE MINE  
HUGO DUMMETT  
DEPOSIT**



# Southern Oyu open pit and concentrator



Southern Oyu open pit

Shaft #1

Coarse-ore  
storage

Concentrator

Concept shows key elements of initial mine development



# Two development scenarios

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- A **Reserve Case**, based only on Proven & Probable Mineral Reserves established to date.

Mining for 27 years.

- A **Life-of-Mine Sensitivity Case**, extends from the Reserve Case to include a large base of resources identified through exploration to date but currently classified only to the level of Inferred Resources under Canada's internationally recognized definitions standards.

Mining for 59 years.

Part of the ongoing exploration program at Oyu Tolgoi is directed at upgrading Inferred Resources to higher classifications, as has been progressively accomplished during the past nine years of exploration and discovery.

# Summary production and financial results

Description	Reserve Case	Life-of-Mine Sensitivity Case
Inventory	Mineral Reserve	Mineral Reserve plus Inferred Resources
Peak Production Rate	58 mt/a	58 mt/a
	160,000 tpd	160,000 tpd
Total Processed	<b>1.393 billion tonnes</b>	<b>3.013 billion tonnes</b>
Copper Grade	0.93%	0.89%
Gold Grade	0.37g/t	0.35g/t
Copper Recovered	<b>25.2 billion lb.</b>	<b>52.5 billion lb.</b>
Gold Recovered	<b>13.1 million oz.</b>	<b>26.4 million oz.</b>
Mine Life	<b>27 years</b>	<b>59 years</b>
10 Year Cash Cost (net of gold credits)	0.45 cents/lb	0.44 cents/lb.
Initial Capital (excluding sunk costs)	US\$4.617 billion	US\$4.617 billion
NPV (8%) After Tax	<b>US\$4.536 billion</b>	<b>US\$5.614 billion</b>
IRR After Tax	16.33%	16.73%
Payback Period	6.32 years	6.22 years



NPV based on copper \$2.00/lb, gold \$850/oz.

# IDP-10 a significant upgrade from 2005 IDP

Description	2005 Life-of-Mine Sensitivity Case	2010 Life-of-Mine Sensitivity Case	
Inventory	Inferred Resources	Mineral Reserve plus Inferred Resources	
Production Rate	51 million tonnes/yr	58 million tonnes/yr	+14%
Total Processed ore	1.552 billion tonnes	3.013 billion tonnes	+94%
Copper Recovered	35.2 billion lb.	52.5 billion lb.	+49%
Gold Recovered	11.3 million oz.	26.4 million oz.	+134%
Mine Life	35 years	59 years	+69%

# Total resources, Oyu Tolgoi Project

March 2010\*

Oyu Tolgoi (All Deposits)	Resources (tonnes)	Cu (%)	Au (g/t)	Mo (ppm)	Cu Eq. (%)	CONTAINED METAL		
						Copper (‘000 lbs)	Gold (ounces)	Cu. Eq. (‘000 lbs)
<b>Total Measured &amp; Indicated</b>	1,387,430,000	1.33	0.47	-	1.63	40,680,000	20,970,000	49,860,000
<b>Total Inferred</b>	2,367,130,000	0.78	0.33	50	1.02	40,610,000	25,390,000	53,280,000

\* This table includes estimated resources on the Hugo North Extension Deposit and the Heruga Deposit. These deposits are located on mineral licences owned by Entrée but subject to the Entrée Joint Venture. These resources consist of indicated resources of 117,000,000 tonnes grading 1.8% copper and 0.61 g/t gold and inferred resources of 910,000,000 tonnes grading 0.48% copper and 0.49 g/t gold and a 141ppm molybdenum at a 0.6% cut-off grade on the combined Hugo North Extension and Heruga Deposits.

Estimates by AMEC Americas March 2007 and Ivanhoe Mines March 31, 2010 technical report.  
See full details of resource estimates at [www.ivanhoemines.com](http://www.ivanhoemines.com)



# Oyu Tolgoi Net Present Value at today's metal prices

**US\$ 15,252,590,146**

**Life-of-Mine Sensitivity Case**

**Pricing as at 10 May 2010**

**Copper - \$3.23/lb**

**Gold - \$1,200/oz**

**Discount Rate 8%**



# The 18 independent firms behind the 2010 IDP

**2010 Integrated Development Plan,  
compliant with NI 43-101 standards,  
was produced by:**

- AMEC Minproc Ltd. (Australia)
- Stantec Engineering (US)
- Golders Associates (Canada)
- SRK Consulting (Canada)
- Rio Tinto Technology & Innovation (Australia)
- Quantitative Geoscience (Australia)
- Ernst & Young LLP (Canada)
- Fluor Corporation (US)
- SGS Lakefield (Canada)
- MinnovEx Technologies (Canada)
- Klohn Crippen Berger (Canada)
- Knight Piesold (Australia)
- Aquaterra Consulting (Australia)
- Eco-Trade Co. (Mongolia)
- Sustainability (Australia)
- Teshmont LP (Canada)
- Mongolian Academy of Sciences (Mongolia)
- AMMTEC (Australia)





## Summary

# IDP-10 Reserve Case

# Reserve Case establishes initial Oyu Tolgoi Development Plan

- Mining of Southern Oyu and Hugo North Lift 1 are foundation of long-term development plans.
- Concentrator has initial 36.5 million tonnes per annum (MTPA) capacity.
- Initial production primarily from Southern Oyu open-pit mine.
- Expansion of concentrator to 58 MTPA in Year 6 as 85,000 tonne per day Hugo North Block Cave Lift 1 reaches full production.



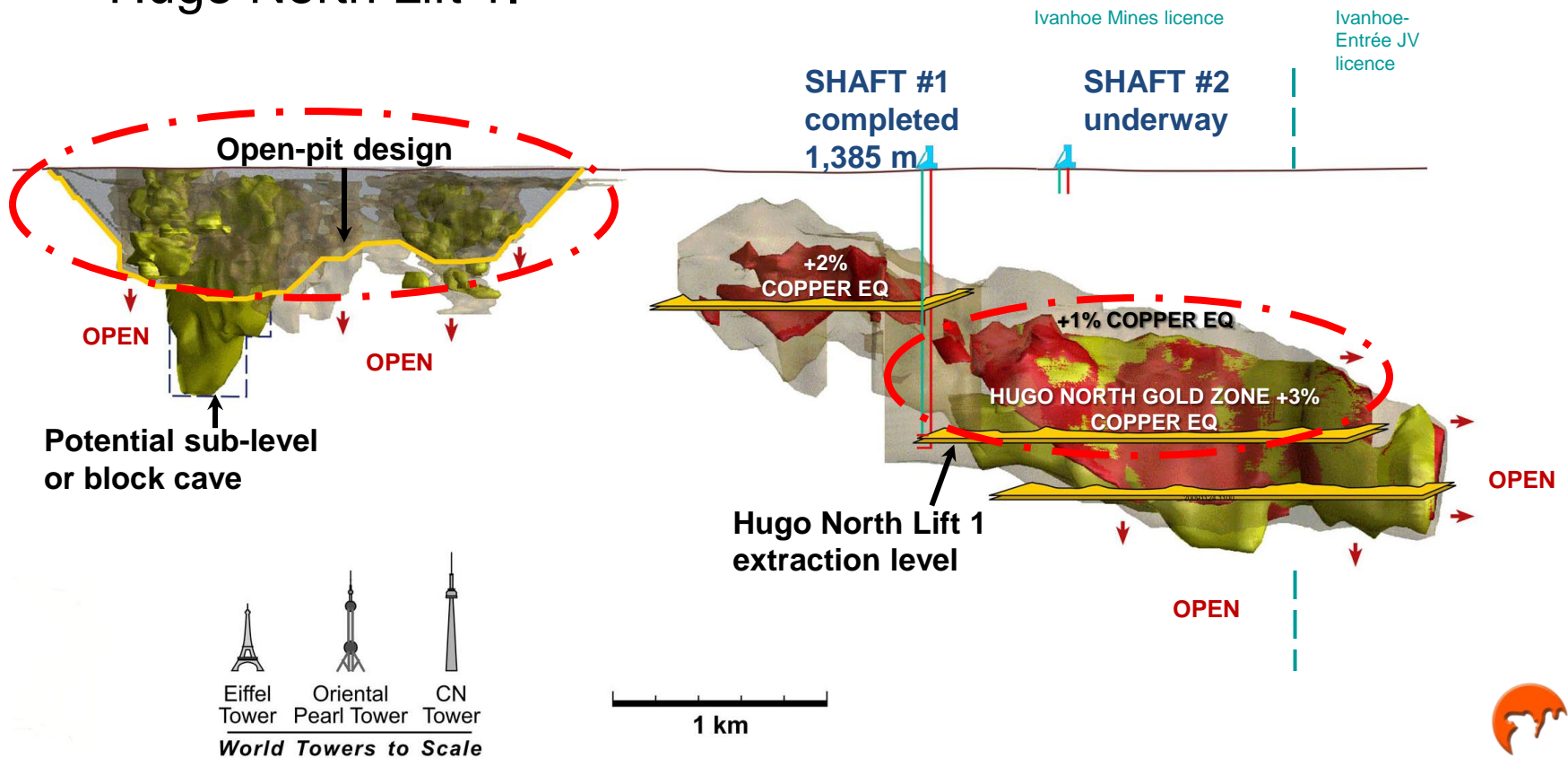


# Reserve Case

Essential building blocks for Oyu Tolgoi, utilizing reserves only, include:

- Southern Oyu Open Pit.
- Hugo North Lift 1.

**Recoverable metal**  
25 billion pounds copper  
13 million ounces gold



# 1.4-billion-tonne Mining Reserve

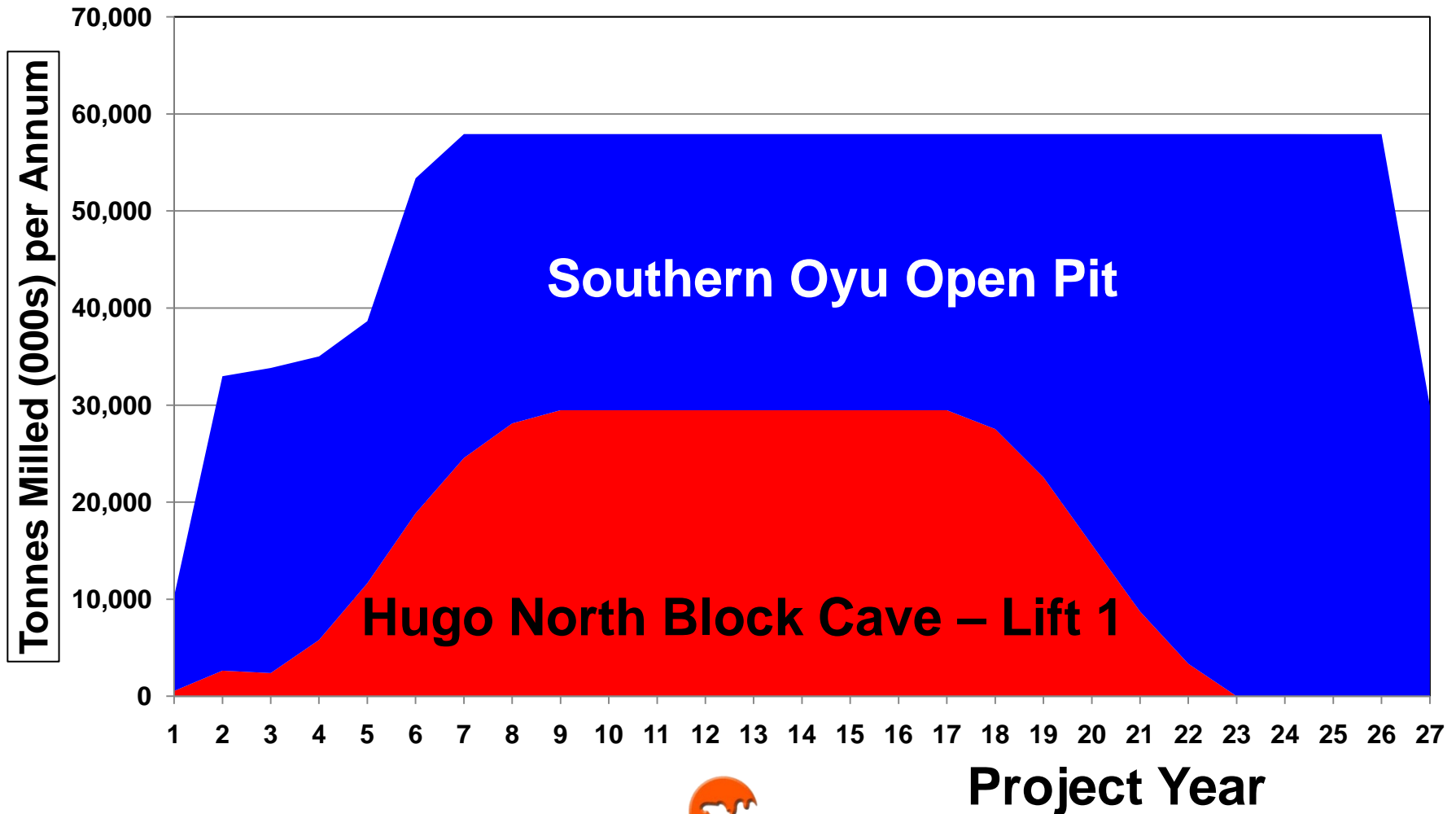
IDP-10 confirms 2006 open pit reserves  
and declares underground reserves for the first time

Total Oyu Tolgoi Project Mineral Reserve, May 2010						
Deposit	Ore (Mt)	NSR (\$/t)	Cu (%)	Au (g/t)	Recovered Metal	
					Copper (Mlb)	Gold (koz)
<b>Southern Oyu Deposits (open pit)</b>						
Proven	127	21.38	0.58	0.93	1 399	2 994
Probable	828	10.81	0.48	0.27	6 980	5 229
<b>Mineral Reserve (Proven + Probable)</b>	<b>955</b>	<b>12.21</b>	<b>0.49</b>	<b>0.35</b>	<b>8 380</b>	<b>8 223</b>
<b>Hugo Dummett Deposits (underground)</b>						
Probable (Hugo North – Ivanhoe)	410	51.12	1.90	0.40	15 823	4 368
Probable (Hugo North – Shivee JV)	27	55.57	1.85	0.72	1 032	531
<b>Mineral Reserve (Probable) (All Hugo North)</b>	<b>437</b>	<b>51.40</b>	<b>1.90</b>	<b>0.42</b>	<b>16 855</b>	<b>4 899</b>
<b>Oyu Tolgoi Project Mineral Reserve</b>						
Proven	127	21.38	0.58	0.93	1 399	2 994
Probable	1 266	24.84	0.97	0.32	23 835	10 127
<b>Mineral Reserve (Proven + Probable)</b>	<b>1 393</b>	<b>24.52</b>	<b>0.93</b>	<b>0.37</b>	<b>25 234</b>	<b>13 121</b>



# Reserve Case production

- Mines only Hugo North Lift 1 and Southern Oyu Open Pit
- 27-year Mine Life



# Reserve Case production

<b>Reserve Case mining production statistics</b>	
<b>Mining source</b>	<b>Tonnes mined ('000s)</b>
<b>Southern Oyu open pit ore mined</b>	<b>955,064</b>
<b>Total open pit material mined</b>	<b>3,130,657</b>
<b>Strip ratio</b>	<b>2.28</b>
<b>Hugo North Lift 1 ore mined</b>	<b>437,489</b>
<b>Total underground ore mined</b>	<b>437,489</b>
<b>Total ore mined</b>	<b>1,392,553</b>



# Reserve Case production

## Reserve Case mining production statistics

		Life of Mine	5 Year Avg	10 Year Avg	Life of Mine Avg
<b>Ore Treated</b>	<b>000 t</b>	<b>1,392,553</b>	<b>38,766</b>	<b>48,346</b>	<b>53,560</b>
<b>Copper Feed Grade</b>	<b>%</b>	<b>0.93</b>	<b>0.95</b>	<b>1.25</b>	
<b>Gold Feed Grade</b>	<b>g/t</b>	<b>0.37</b>	<b>0.60</b>	<b>0.51</b>	
<b>Copper Recoveries</b>	<b>%</b>	<b>88%</b>	<b>86%</b>	<b>87%</b>	
<b>Gold Recoveries</b>	<b>%</b>	<b>79%</b>	<b>79%</b>	<b>80%</b>	
<b>Copper Concentrate</b>	<b>000 dmt</b>	<b>37,432</b>	<b>1,001</b>	<b>1,620</b>	<b>1,440</b>
<b>Copper Concentrate Grade</b>	<b>%</b>	<b>31%</b>	<b>33%</b>	<b>33%</b>	
<b>Contained Metal in Concentrate</b>					
<b>Copper</b>	<b>000 t</b>	<b>11,446</b>	<b>328</b>	<b>542</b>	<b>440</b>
<b>Copper</b>	<b>M lb</b>	<b>25,235</b>	<b>724</b>	<b>1,194</b>	<b>971</b>
<b>Gold</b>	<b>000 oz</b>	<b>13,121</b>	<b>594</b>	<b>646</b>	<b>505</b>
<b>Silver</b>	<b>000 oz</b>	<b>77,593</b>	<b>2,306</b>	<b>3,532</b>	<b>2,984</b>



# Reserve Case sensitivities

## Project Net Present Value at 8% discount (US\$M)

### Metal Price Sensitivity – Reserve Case

After-tax values	Gold price/oz						
Copper price/lb	\$750	\$850 (Base)	\$1,000	\$1,200 (Current)	\$1,500	\$1,750	\$2,000
\$1.50	1,346	1,680	2,173	2,824	3,784	4,580	5,377
\$2.00 (Base)	4,218	4,536	5,011	5,648	6,602	7,391	8,188
\$2.50	7,035	7,353	7,826	8,460	9,416	10,210	11,000
\$3.23 (Current)	11,145	11,464	11,937	12,569	13,516	14,309	15,100
\$3.50	12,663	12,979	13,452	14,109	15,037	15,827	16,617
\$4.00	15,469	15,788	16,265	16,924	17,847	18,638	19,428
\$5.00	21,097	21,413	21,887	22,545	23,464	24,250	25,039
\$6.00	26,715	27,029	27,502	28,160	29,083	29,870	30,654



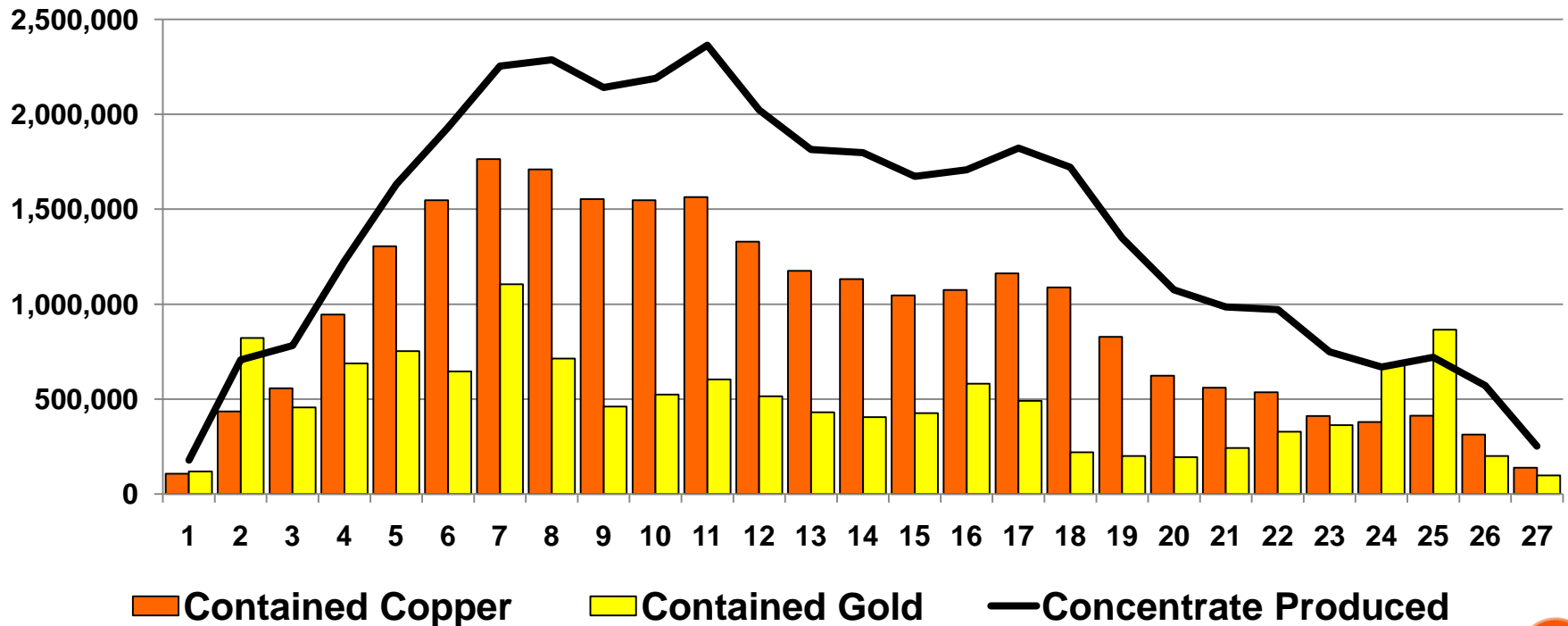
# Reserve Case production

## ■ 25.2 billion pounds of copper produced

- Average 1.2 billion pounds annually for first 10 years

## ■ 13.1 million ounces of gold produced

- Average 650,000 ounces annually for first 10 years



# Reserve Case costs

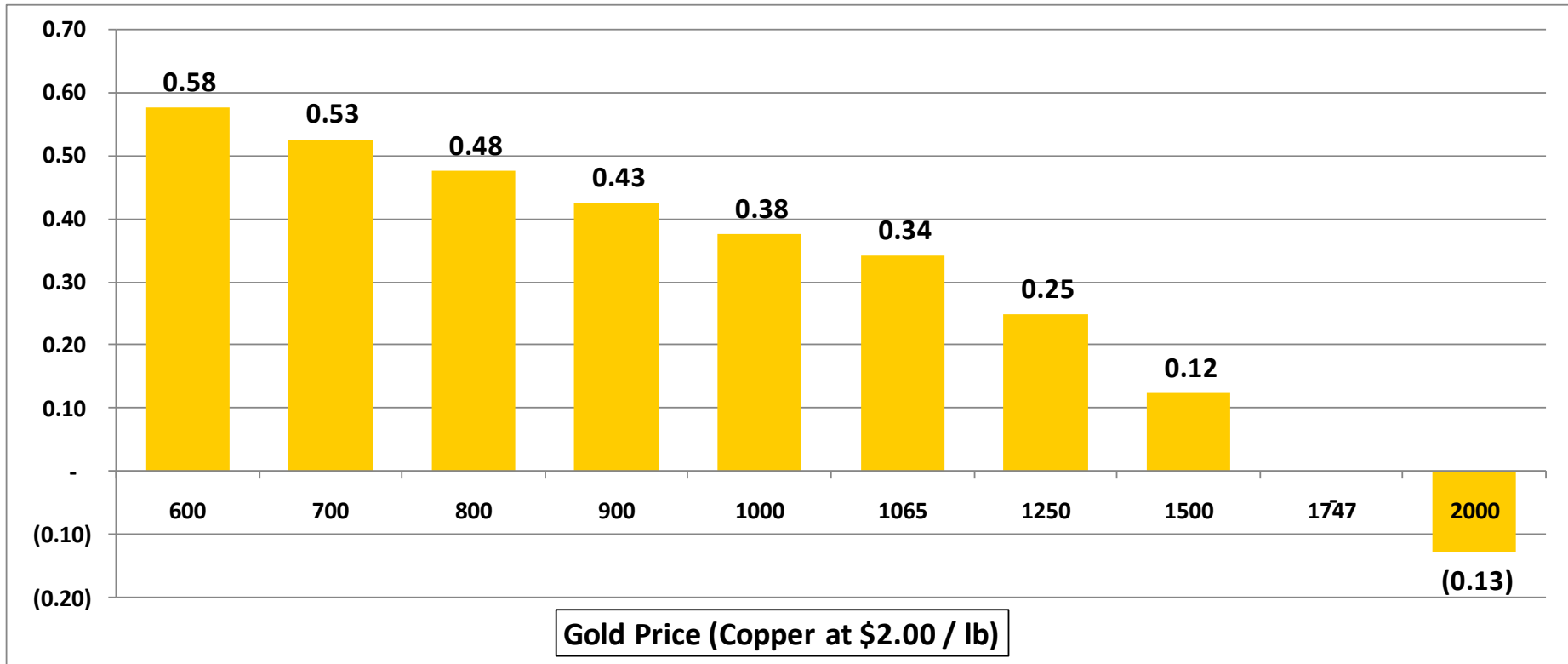
- 27-year life of mine cash costs (after gold credits) \$0.62/lb
- First 10 years' cash cost \$0.45/lb

<b>Unit Operating Costs – Reserve Case</b>			
	<b>\$/lb payable copper</b>		
	<b>Life of mine</b>	<b>First 5 years</b>	<b>First 10 years</b>
Mine site cash cost	0.75	0.86	0.54
Royalties and transport cash costs	0.34	0.40	0.38
<b>Total cash costs before gold credits</b>	<b>1.09</b>	<b>1.26</b>	<b>0.91</b>
Gold credits (\$850/oz)	(0.47)	(0.70)	(0.46)
<b>Total cash costs after gold credits</b>	<b>0.62</b>	<b>0.56</b>	<b>0.45</b>





# 10-year cash cost after gold credits





## Summary

# Life-of-Mine Sensitivity Case

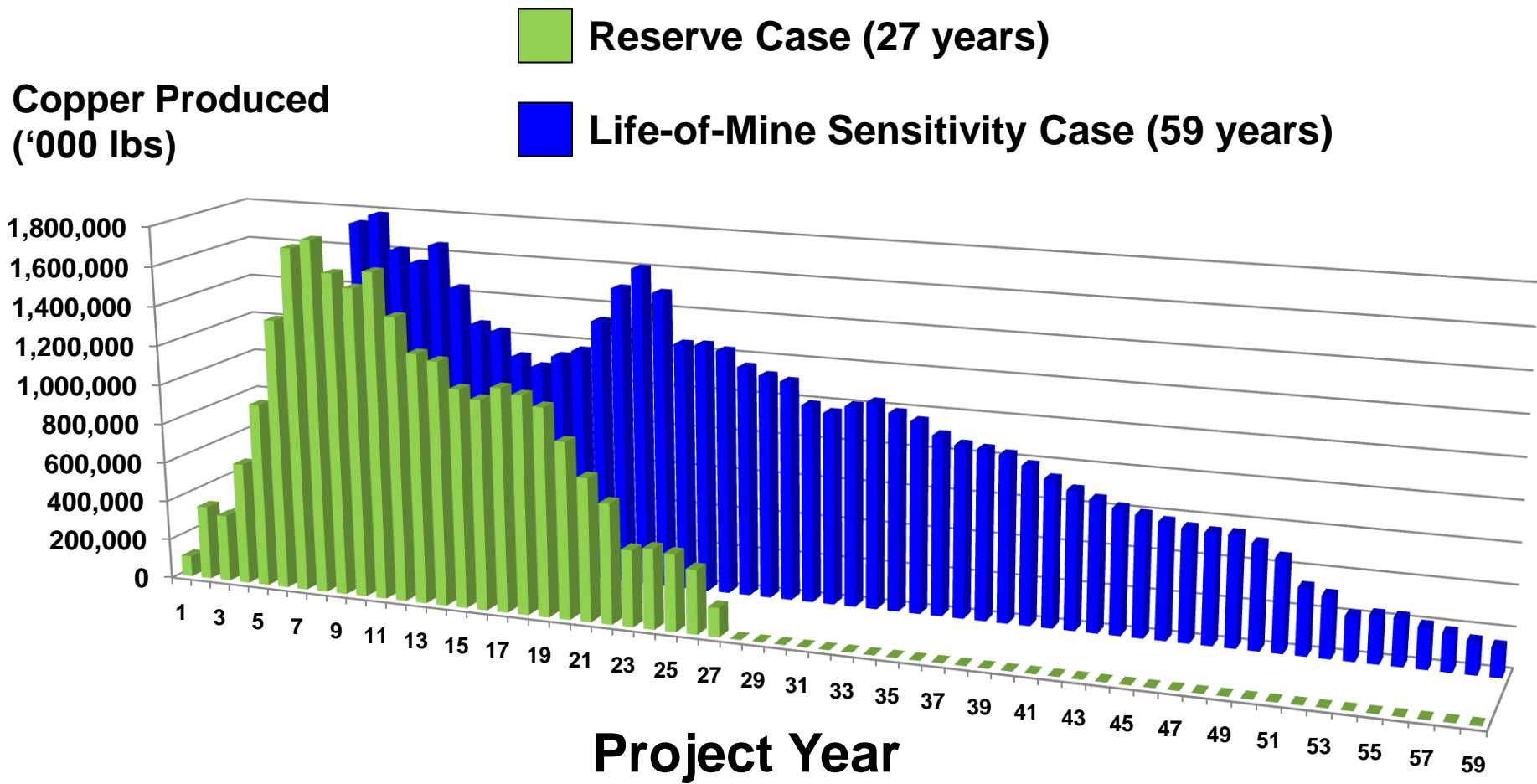
Incorporates all known deposits to date

# Life-of-Mine Sensitivity Case extends mine life and adds value

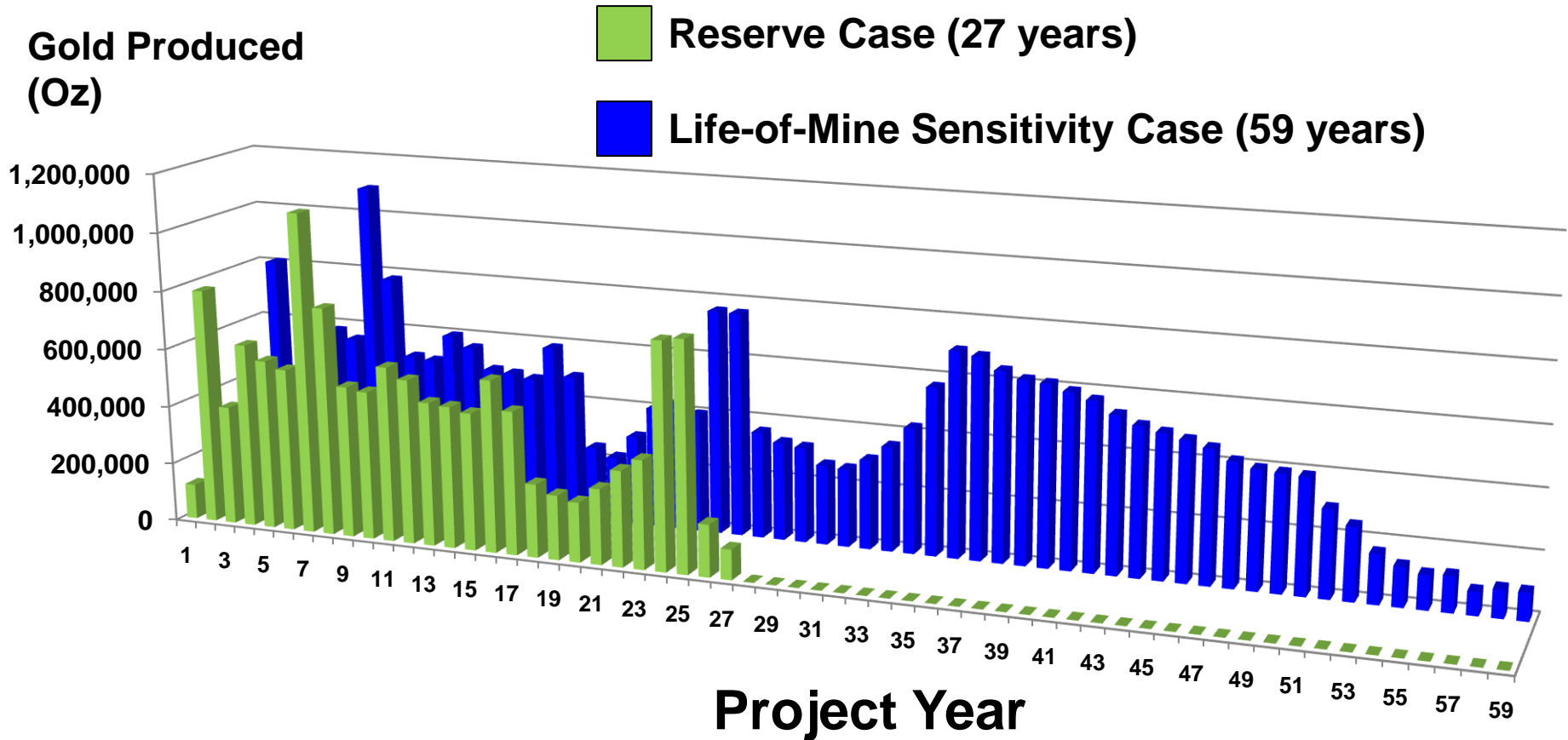
- Builds on foundation of the Reserve Case with addition of inferred resources.
  - Introduces Lift 2 in Hugo North.
  - Introduces Hugo South block cave.
  - Introduces Heruga block cave.
  - Does not address any ongoing exploration.
  - Does not address lifting production rate beyond 160,000 tonnes per day.
- Represents Ivanhoe's current strategy on life-of-mine resource development.



# Life-of-Mine Sensitivity Case produces **TWICE** as much **COPPER** as the Reserve Case



# Life-of-Mine Sensitivity Case produces over **TWO TIMES** more **GOLD** than the Reserve Case



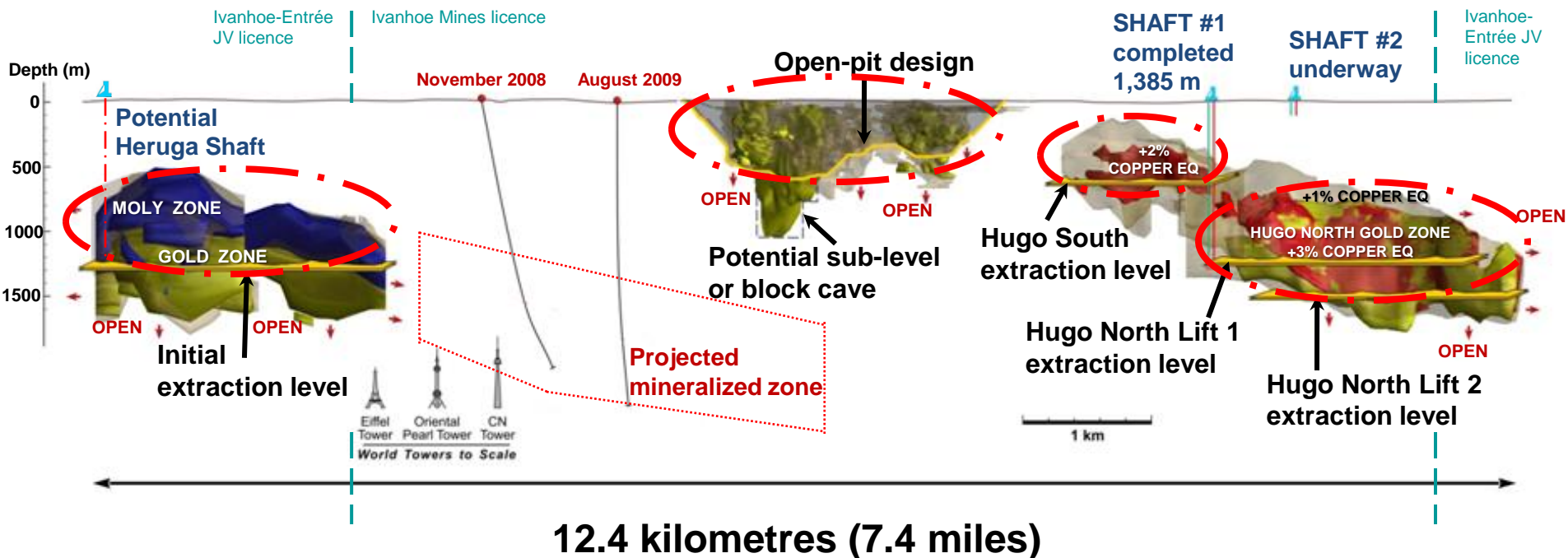
# Life-of-Mine Sensitivity Case



■ Long-term model develops all drill-proven deposits (reserves plus Inferred Resources) includes:

- Southern Oyu Open-Pit Mine
- Hugo North Lifts 1 and 2
- Hugo South Lift 1
- Heruga Lift 1

**Recoverable metal**  
52 billion pounds copper  
26 million ounces gold



# Case draws production from entire resource

Oyu Tolgoi Mineral Resource Summary, as contained in the March 31, 2010 technical report							
Deposit	Tonnage (t)	Cu (%)	Au (g/t)	CuEq (%)	Contained Metal		
					Cu (000 lb)	Au (oz)	CuEq (000 lb)
<b>Southern Oyu Deposits</b>							
Measured + Indicated	567 230 000	0.62	0.55	0.97	7 750 000	10 030 000	12 130 000
Inferred	88 500 000	0.47	0.41	0.73	920 000	1 170 000	1 420 000
<b>Hugo Dummett Deposits</b>							
Indicated (All Hugo North)	820 200 000	1.82	0.42	2.08	32 910 000	11 080 000	37 610 000
Inferred (All Hugo North)	818 300 000	1.00	0.30	1.19	18 040 000	7 890 000	21 470 000
Inferred (Hugo South)	490 330 000	1.05	0.09	1.11	11 350 000	1 420 000	12 000 000
<b>Heruga Deposit</b>							
Inferred (Javkhlant)	970 000 000	0.48	0.48	0.86	10 240 000	15 000 000	18 480 000
<b>Oyu Tolgoi Project Grand Total</b>							
Measured	101 590 000	0.64	1.10	1.34	1 430 000	3 590 000	3 000 000
Indicated	1 285 840 000	1.38	0.42	1.65	39 120 000	17 360 000	46 770 000
<b>Measured + Indicated</b>	<b>1 387 430 000</b>	<b>1.33</b>	<b>0.47</b>	<b>1.63</b>	<b>40 680 000</b>	<b>20 970 000</b>	<b>49 860 000</b>
<b>Inferred</b>	<b>2 367 130 000</b>	<b>0.78</b>	<b>0.33</b>	<b>1.02</b>	<b>40 610 000</b>	<b>25 390 000</b>	<b>53 280 000</b>

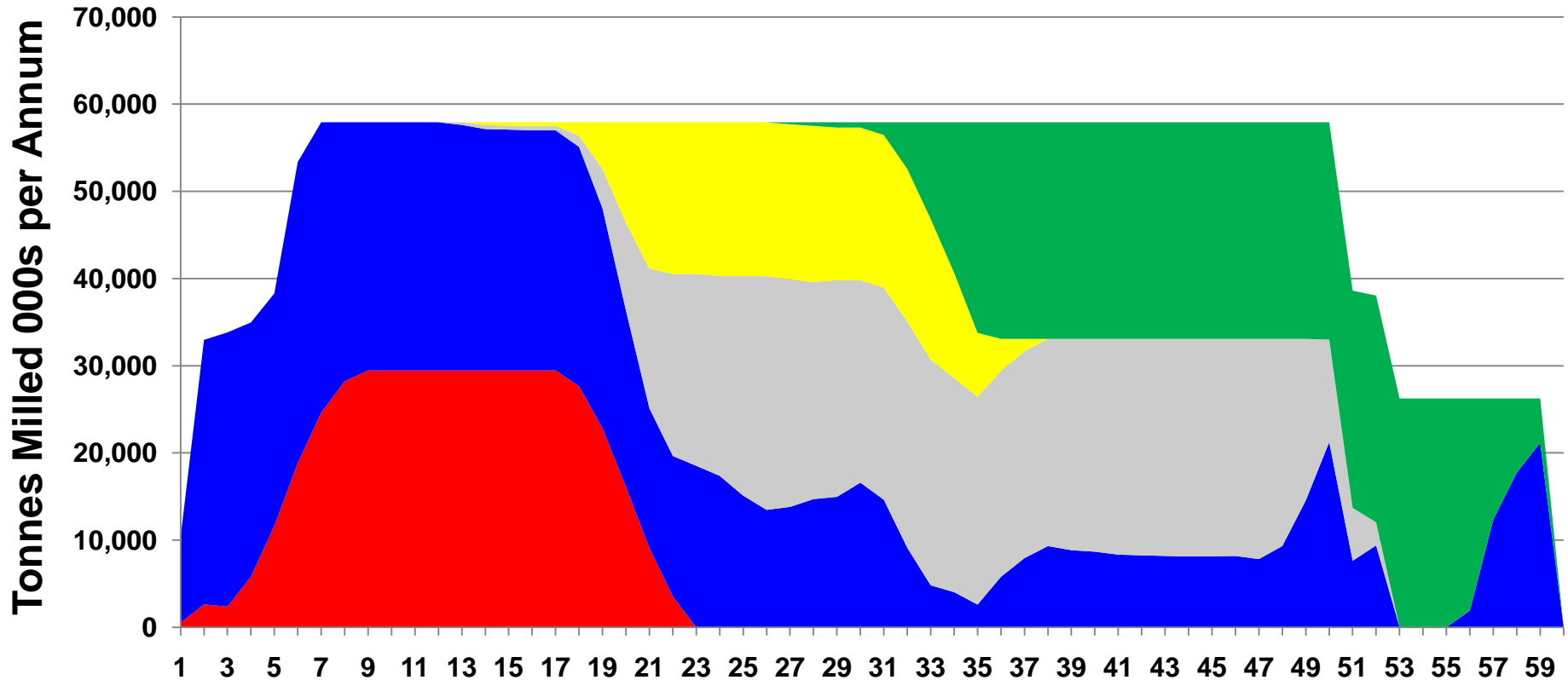
❖ **1.4 billion tonnes Measured and Indicated**

❖ **2.4 billion tonnes Inferred**



# Life-of-Mine Sensitivity Case production

Includes ore from all sources over a 59-year mine life



■ Hugo North Block Cave - Lift 1  
■ Hugo North Block Cave - Lift 2

■ Southern Oyu Open Pit  
■ Hugo South Block Cave





# Total ore mined

<b>Life-of-Mine Sensitivity Case Mining Production</b>	
<b>Mining Source</b>	<b>Tonnes Mined ('000s)</b>
<b>Southern Oyu Ore Mined</b>	<b>955,064</b>
<b>Total Material Mined</b>	<b>3,130,657</b>
Strip Ratio	2.28
Hugo North Lift 1 Ore Mined	439,167
Hugo North Lift 2 Ore Mined	732,500
Hugo South Ore Mined	270,763
Heruga Ore Mined	615,388
<b>Total Underground Ore Mined</b>	<b>2,057,818</b>
<b>Total Ore Mined</b>	<b>3,012,882</b>



# Metal production rates

Life-of-Mine Sensitivity Case Process Production					
		Life of Mine	5 Year Avg	10 Year Avg	Life of Mine Avg
Quantity Ore Treated	000 t	3,012,882	38,685	48,305	51,946
Copper Feed Grade	%	0.89	0.98	1.27	
Gold Feed Grade	g/t	0.35	0.60	0.52	
Copper Recoveries	%	88%	86%	87%	
Gold Recoveries	%	78%	79%	80%	
Copper Concentrate	000 dmt	84,262	1,023	1,633	1,453
Copper Concentrate Grade	%	28%	33%	34%	
Molybdenum Concentrate	000 dmt	145	0	0	2
Molybdenum Concentrate Grade	%	50%	0%	0%	
Contained Metal in Concentrate					
Copper	000 t	<b>23,791</b>	<b>338</b>	<b>548</b>	<b>410</b>
Copper	M lb	<b>52,451</b>	<b>746</b>	<b>1,208</b>	<b>904</b>
Gold	000 oz	<b>26,365</b>	<b>599</b>	<b>650</b>	<b>455</b>
Silver	000 oz	179,179	2,373	3,579	3,089
Molybdenum	M lb	160	0	0	3



# Metal price sensitivities

Project Net Present Value at 8% discount (\$M)

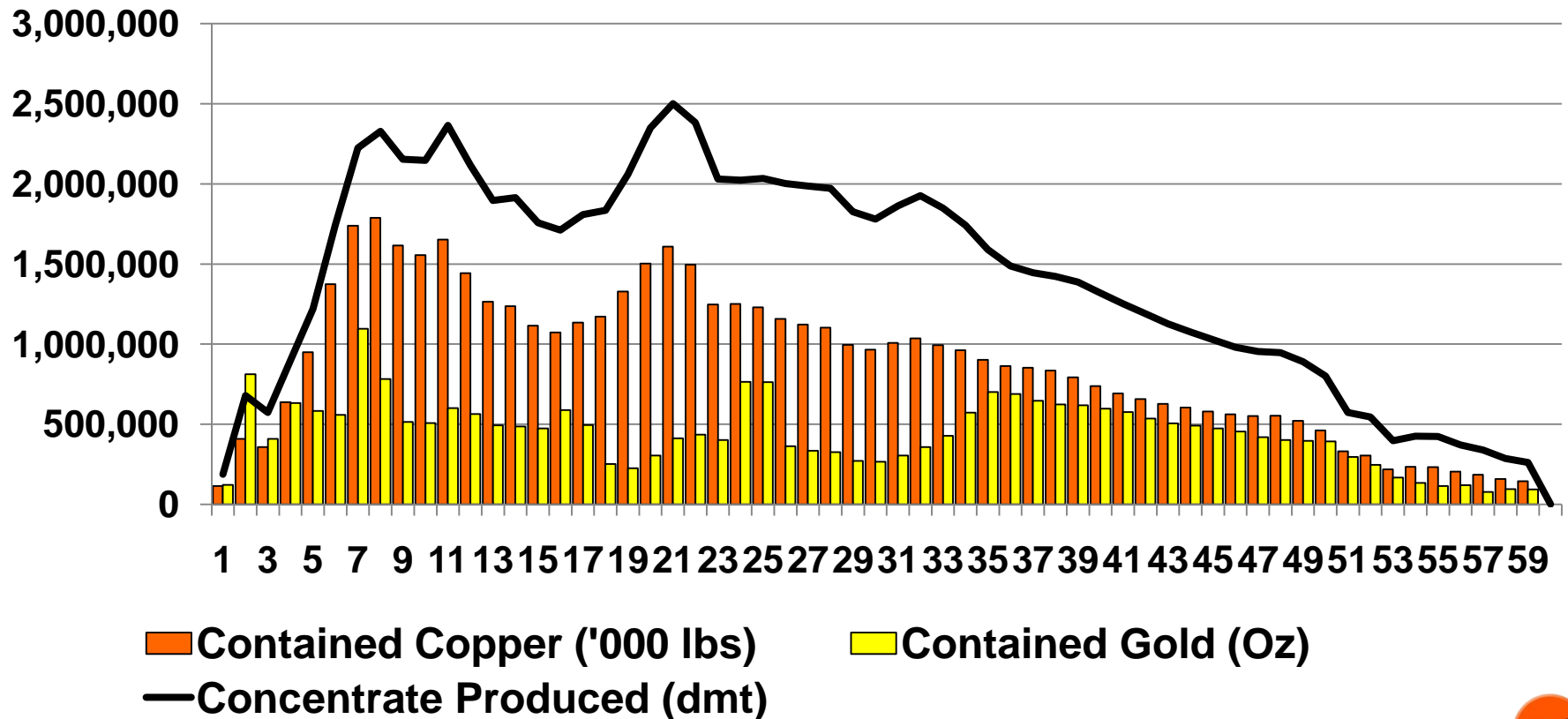
## Metal Price Sensitivity – Life-of-Mine Sensitivity Case

After-tax values	Gold price/oz						
Copper price/lb	\$750	\$850 (Base)	\$1,000	\$1,200 (Current)	\$1,500	\$1,750	\$2,000
\$1.50	1,777	2,137	2,671	3,377	4,412	5,269	6,126
\$2.00 (Base)	5,268	5,614	6,127	6,815	7,840	8,698	9,559
\$2.50	8,703	9,043	9,556	10,244	11,277	12,131	12,986
\$3.23 (Current)	13,715	14,056	14,568	15,253	16,287	17,143	17,999
\$3.50	15,563	15,905	16,422	17,139	18,140	18,996	19,852
\$4.00	19,002	19,346	19,859	20,571	21,571	22,427	23,285
\$5.00	25,865	26,208	26,725	27,439	28,442	29,300	30,155
\$6.00	32,740	33,083	33,597	34,307	35,305	36,158	37,014



# Annual production rates

- 52.5 billion pounds of copper produced
  - Average over 1.2 billion pounds annual production in first 30 years
- 26.4 million ounces of gold produced
  - Average over 650,000 ounces annually in first 10 years



# CAPITAL COST: Life-of-Mine Sensitivity Case

Oyu Tolgoi Pre Production Capital Program					
Initial Capital Program (Definitive Estimate Due 4th Qtr 2010)				Expansion Program (Definitive Estimate Due 2nd Qtr 2012)	Total Pre Production Capital (2013)
Sunk Costs	100 ktpd Open Pit Mine, Plant & Infrastructure	Expansion Program	Total Initial Capital Program		

MINING	197,179	234,902	691,272	1,123,353	258,632	1,381,985
PROCESSING & INFRASTRUCTURE	113,718	1,660,077		1,773,795		1,773,795
INDIRECT COSTS	203,113	413,167		616,280		616,280
OWNERS COST	354,445	847,904		1,202,349		1,202,349
<b>CAPITAL EXPENDITURE BEFORE CONTINGENCY &amp; ESCALATION</b>	<b>868,455</b>	<b>3,156,050</b>	<b>691,272</b>	<b>4,715,777</b>	<b>258,632</b>	<b>4,974,409</b>
Contingency		273,933		273,933	38,220	312,153
Escalation						
<b>CAPITAL EXPENDITURE AFTER CONTINGENCY &amp; ESCALATION</b>	<b>868,455</b>	<b>3,429,983</b>	<b>691,272</b>	<b>4,989,710</b>	<b>296,852</b>	<b>5,286,561</b>
Other Costs Sunk to 31 December 2009	137,953			137,953		137,953
T Bills & Tax Prepayments	100,000	146,581		246,581		246,581
Working Capital		64,315		64,315		64,315
Sustaining Capex		59,679		59,679		59,679
Ramp Up Revenue Offset		(86,010)		(86,010)		(86,010)
<b>TOTAL MONGOLIAN INVESTMENT</b>	<b>1,106,408</b>	<b>3,614,548</b>	<b>691,272</b>	<b>5,412,227</b>	<b>296,852</b>	<b>5,709,079</b>
Total Mongolian Investment to 31 Dec 2009	(1,106,408)			(1,106,408)		(1,106,408)
<b>TOTAL MONGOLIAN INVESTMENT TO GO</b>		<b>3,614,548</b>	<b>691,272</b>	<b>4,305,819</b>	<b>296,852</b>	<b>4,602,671</b>

All Figures \$USD 000s



# Life-of-Mine Sensitivity Case production costs

- 59-year life of mine cash costs (after gold credits): \$0.73 / lb

<b>Unit operating costs – Life-of-Mine Sensitivity Case</b>			
	<b>\$/lb payable copper</b>		
	<b>Life-of-Mine</b>	<b>First 5 years</b>	<b>First 10 years</b>
Minesite cash cost	0.80	0.83	0.53
TC/RC, royalties & transport cash cost	0.36	0.40	0.37
<b>Total cash costs before gold credits</b>	<b>1.16</b>	<b>1.23</b>	<b>0.90</b>
Gold credits (\$850/oz)	(0.43)	(0.69)	(0.46)
<b>Total cash costs after gold credits*</b>	<b>0.73</b>	<b>0.54</b>	<b>0.44</b>

\*Cash costs include amounts payable by the project to Ivanhoe Mines Ltd.

Cash costs exclusive of IVN payments are \$0.62, \$0.39, and \$0.35

# Ivanhoe Mines parent-level NPV



## Ivanhoe Mines – Parent Level NPV @ 8% – Life-of-Mine Sensitivity Case

After-tax values	Gold price/oz						
Copper price/lb	\$750	\$850 (Base)	\$1,000	\$1,200 (Current)	\$1,500	\$1,750	\$2,000
\$1.50	2,486	2,632	2,926	3,334	3,948	4,477	5,018
\$2.00 (Base)	4,592	4,801	5,109	5,532	6,177	6,721	7,273
\$2.50	6,802	7,015	7,340	7,775	8,434	8,987	9,540
\$3.23 (Current)	10,083	10,306	10,636	11,079	11,746	12,303	12,866
\$3.50	11,307	11,527	11,861	12,306	12,973	13,536	14,102
\$4.00	13,578	13,799	14,130	14,579	15,257	15,821	16,383
\$5.00	18,133	18,359	18,698	19,148	19,823	20,391	20,964
\$6.00	22,700	22,924	23,265	23,722	24,404	24,971	25,539

Includes equity plus project cost paid directly to Ivanhoe



# **Future development flexibility**



# Future development flexibility

- Mining of pit stages 1 to 6 of Southern Oyu and Hugo North Lift 1 are foundation for long-term Development Plans.
- Numerous mining options provide management with future flexibility.
  - Size and timing of Open Pit pushbacks 7, 8 & 9.
  - Size of Hugo North Lifts 1 & 2.
  - Production rates of Hugo North (100+ktpd?).
  - Size and timing of Heruga block cave.
  - Mine Hugo South as open pit, instead of block cave.
- Each is a separate investment decision.



# Multiple options to enhance value

- IDP-10 recognizes flexibility for management in developing Oyu Tolgoi deposits:
  - The size and timing of future concentrator expansions.
  - The size and timing of the block-cave mines.
- IDP-10 recommends further study on ultimate milling capacity as trade-off work indicates positive results for two key areas:
  - Operating Hugo South as a block cave or an open pit.
  - Operating Heruga at 75,000 tpd or at 25,000 tpd.



# Options for Hugo South & Heruga

- A smaller Heruga block cave mine:
  - Higher grade.
  - Lower capital investment.
  - Deposit independent from Hugo Dummett Underground.
- A Hugo South open pit:
  - Simple expansion to Southern Oyu surface fleet.
  - Reduces capital development timeframe to 2 years from 5.
  - Can be matched with Heruga deposit to support further mill expansion around Year 10.



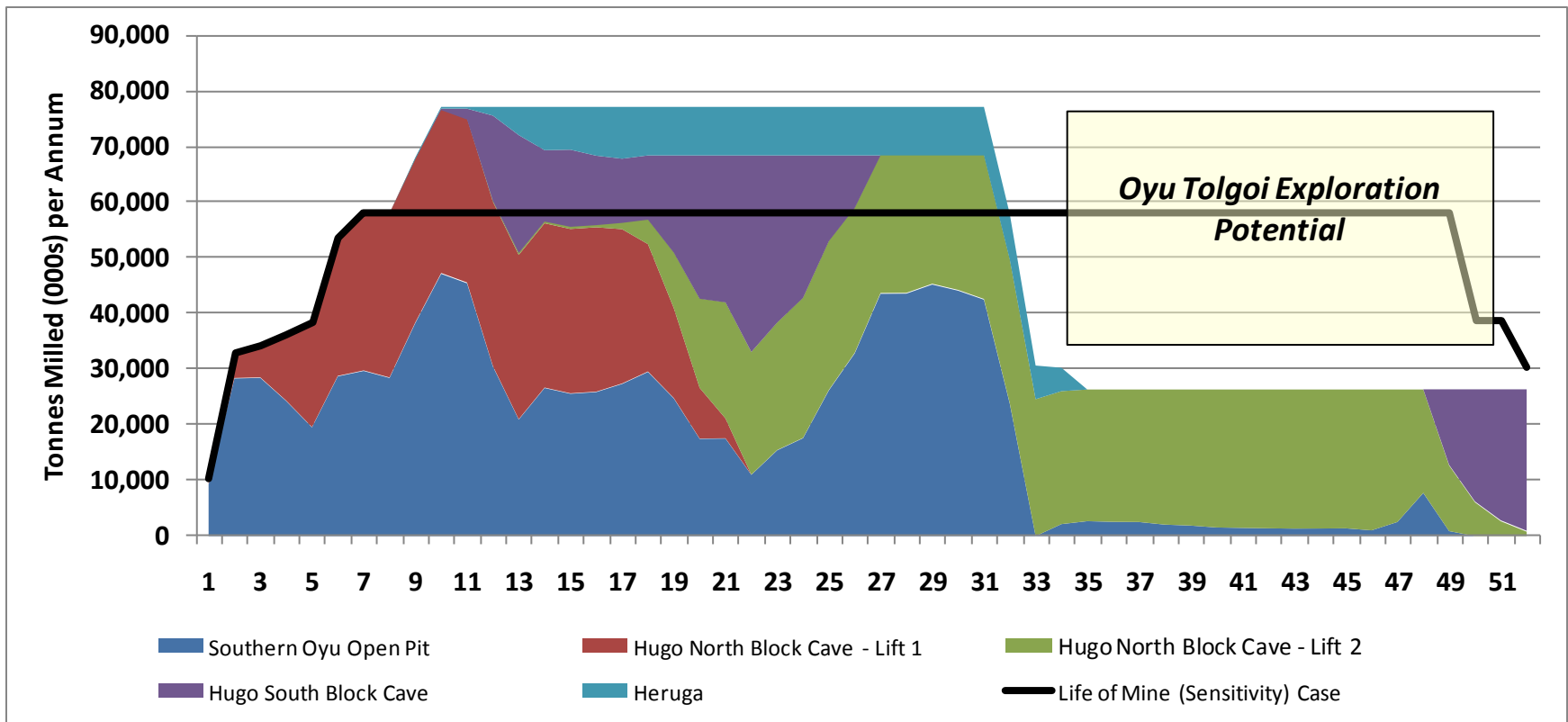
# Two cases of development flexibility

- Develop Heruga as a 25,000 tpd mine and mine Hugo South as an open pit.
- Develop Heruga as a 75,000 tpd mine and mine Hugo South as an open pit.
- Both would see an expansion to the concentrator around year 10 to accommodate 200,000+ tpd of ore.
- Both have limited work completed to date but can be considered alternatives to examine.



# First conceptual case production schedule

- Develop Heruga as a 25,000 tpd mine and mine Hugo South as an open pit.
- Mill expanded to 213,000 tonnes per day

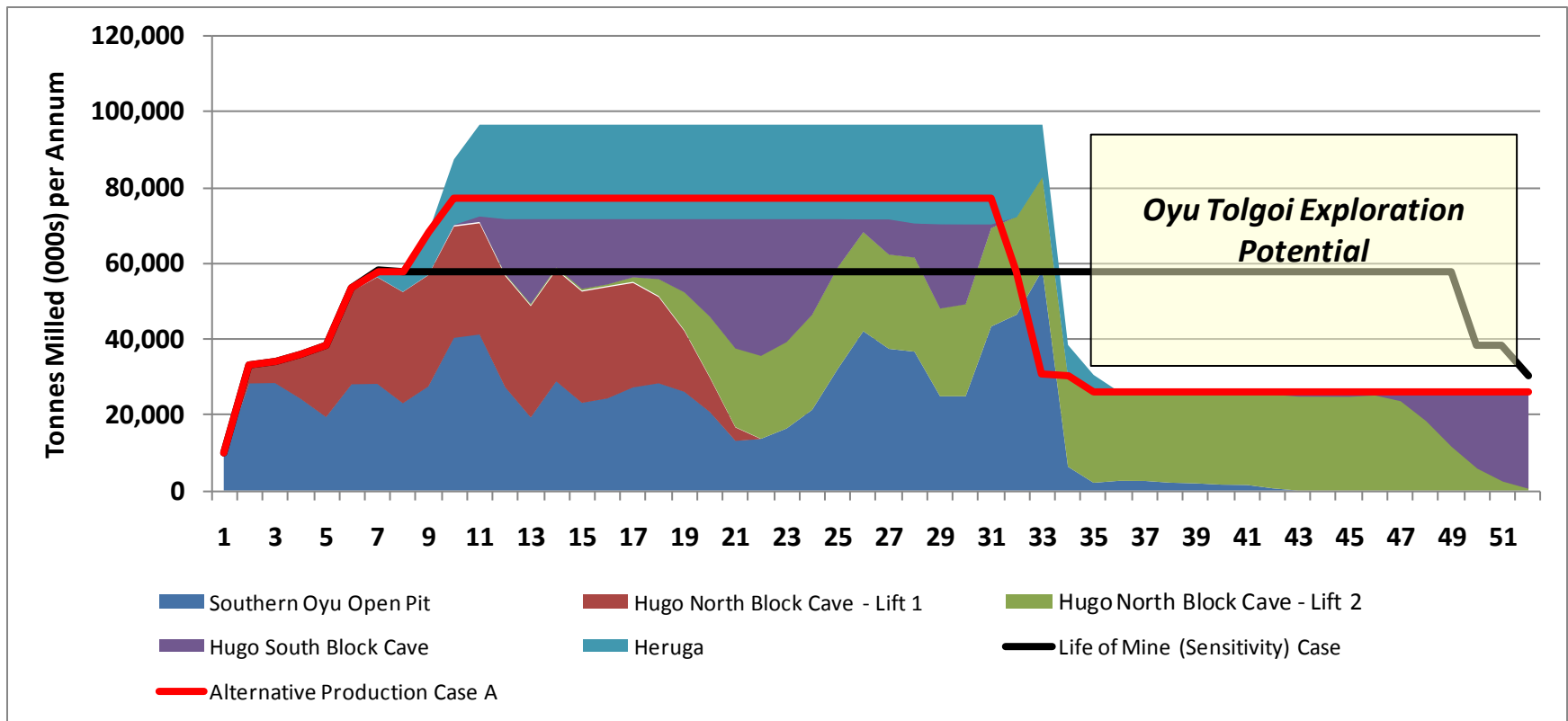


Based on the Life-of-Mine Sensitivity Case; economic analysis has not been conducted on this conceptual schedule and there is no certainty that it will be realized.



# Second conceptual production schedule

- Develop Heruga as a 75,000 tpd mine and mine Hugo South as an open pit.
- Mill expanded to 265,000 tonnes per day



Based on Life-of-Mine Sensitivity Case; economic analysis has not been conducted on this conceptual schedule and there is no certainty that it will be realized.





# Real Options Analysis

# Real Options Analysis

## An alternative method of calculating discounted cash flow Net Present Value

- The Life-of-Mine Sensitivity Case adds 100% more production but only 25% more value. Why?
- The most widely used valuation method is Discounted Cash Flow (DCF).
- DCF is not the only method of calculating NPV.
- Ernst & Young LLP was engaged to assist with the development of a Real Options model of Oyu Tolgoi based on the Life-of-Mine Sensitivity Case.





# Real Options Analysis

- A key step in the calculation of Net Present Value is discounting cash flow for the effect of project uncertainty and time **at a given metal value**.
- Under the Discounted Cash Flow approach, this is done by using a single aggregate risk-adjusted discount rate.
- The Real Option method starts with the same quantitative cash flow model projections as the DCF.
  - However, it identifies and explicitly models the primary sources of cash-flow uncertainty, such **as variations in metal price**, input and output prices.



# Real Options Analysis

- In the Oyu Tolgoi Real Options model, the main difference to the DCF model is the impact of metal price uncertainty.
  - The project production and cost input parameters and long-range forecast metal prices are the same in both models.
- Uncertainty in copper pricing was modelled to exhibit price reversion.
  - That is, if prices become much higher or lower than the long-term equilibrium price, supply & demand forces in the economy move metal prices back into alignment.
- Econometric Analysis supports this assumption.



# Real Options analysis

Cash flow	NPV or cumulative net cash flow (\$ million)	
	Cumulative net cash flow	38,435
Time-discounted net cash flow	19,634	
Risk-adjustment method	DCF	Real Options
Net present value	5,973	7,550

- The Ivanhoe Life-of-Mine Sensitivity case calculates a project DCF NPV of \$5,614 million.
- The Real Options model produces a higher DCF result at \$5,973 million.
  - Using copper and molybdenum spot prices on December 31, 2009, as starting prices for the stochastic simulation.
- Real Options NPV is \$7,550 million.
  - Real Options assumes price reversion in copper and molybdenum prices.
- The Real Option method recognizes price reversion and its impact on project NPV; the DCF method does not.





**Today,**

**Oyu Tolgoi is firmly on track  
to become one of the world's  
top three copper-gold mines**

