Developing the Cerro Las Minitas Project into the Next Major Silver Mine in Mexico



Corporate Presentation June, 2025



SSV: TSX-V SSVFF: OTCQX

Forward Looking Statements and Technical Disclosure



Some of the statements contained in this presentation may be deemed "forward-looking statements." These include estimates and statements that describe the Company's future plans, objectives or goals, and expectations of a stated condition or occurrence.

Forward-looking statements may be identified by the use of words such as "believes", "anticipates", "expects", "estimates", "may", "could", "would", "will", or "plan". Since forward-looking statements are based on assumptions and address future events and conditions, by their very nature they involve inherent risks and uncertainties.

Actual results relating to, among other things, results of exploration, reclamation, capital costs, and the Company's financial condition and prospects, could differ materially from those currently anticipated in such statements for many reasons such as but not limited to; changes in general economic conditions and conditions in the financial markets; changes in demand and prices for the minerals the Company expects to produce; litigation, legislative, environmental and other judicial, regulatory, political and competitive developments; technological and operational difficulties encountered in connection with the Company's activities; and changing foreign exchange rates and other matters discussed in this presentation.

Persons should not place undue reliance on the Company's forward-looking statements. Further information regarding these and other factors, which may cause results to differ materially from those projected in forward-looking statements, are included in the filings by the Company with securities regulatory authorities. The Company does not assume any obligation to update or revise any forward looking statement that may be made from time to time by the Company or on its behalf, except in accordance with applicable securities laws, whether as a result of new information, future events or otherwise.

The TSX Venture Exchange has not reviewed and does not accept responsibility for the adequacy or accuracy of the contents of this presentation, that has been prepared by management.

The scientific and technical content of this disclosure was reviewed and approved by Robert Macdonald, MSc. P.Geo, VP. Exploration, and is a Qualified Person as defined by National Instrument 43-101 – Standards of Disclosure for Mineral Projects.

All mineral resources have been estimated in accordance with Canadian Institute of Mining and Metallurgy and Petroleum (CIM) definitions, as required under NI43-101.

Mineral resources reported demonstrate reasonable prospect of eventual economic extraction, as required under NI43-101.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. The mineral resources may be materially affected by environmental, permitting, legal, marketing, and other relevant issues.

The PEA is preliminary in nature, it may include mineral 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 that the PEA will be realized.

An inferred mineral resource has a lower level of confidence than that applying to an indicated mineral resource and must not be converted to a mineral reserve. It is reasonably expected that most of the inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.

All-in Sustaining cost (AISC) is calculated as: Operating costs (mining, processing and G&A) + Incremental PTUs + Concentrate Transportation + Treatment & Refining Charges + Penalties + Sustaining Capital + Closure Costs + Silver Revenue Royalty and is reported on using a per tonne mined, AgEq plant feed, AgEq recovered for sale, and AgEq payable basis

PEA work completed by:

Kirkham Geosystems Ltd. (KGL): mineral resource estimate from June, 2024;

Entech Mining Limited (Entech): mine design and mine OpEx and capital;

Ausenco Engineering (Ausenco): process flowsheet, mine site design and surface OpEx, CapEx and discounted cash-flow model – reviewed and scrutinized metallurgical assumptions;

Metallurgical Process Consultants Limited (MPC): metallurgy and process flowsheet

Southern Silver Exploration Corp

Key Highlights



Focused on developing the Cerro Las Minitas (CLM) Ag-Cu-Pb-Zn project located in Durango, Mexico

One of the Largest and Highest Grade Undeveloped Silver Projects in the World



Mineral Resource Update Ind: 116Moz AgEq at 271g/t AgEq Inf: 186M oz AgEq at 248g/t AgEq

Well-established silver mining district in Durango, Mexico near several major mining companies

2024 PEA Highlights



17yr Life-of-Mine **Underground Mine** Robust Project Economics

Strongly Leveraged to Silver and Zinc prices

High Revenues/Free Cash-flow

Corporate Highlights



100% ownership and control of the CLM Project

No Royalties

Treasury to continue ESG initiatives, permitting, drilling, engineering and other Corporate objectives New Acquisition Provides Further Upside Opportunities



New Exploration Targets Identified at CLM Project

New Nazas Acquisition Opens Tremendous Exploration Potential in a World-class District

(1) Parameters for the NI 43-101 Mineral Resource Estimate are described on Slide 12 and in the SSV News Release, dated June 10th, 2024



Focused on developing the Cerro Las Minitas (CLM) Ag-Cu-Pb-Zn project located in Durango, Mexico

Capital Structure	
Ticker	TSX.V:SSV
Share Price (May 07, 2025)	C\$0.21
Current Shares Outstanding	330.3M
Options	25.0M
Warrants	55.4M
Fully Diluted Shares Outstanding	412.0M
Market Capitalization (TSM)	C\$68.2M
Cash & Cash Equiv. (Feb 25, 2024)	C\$4.6M
Enterprise Value	C\$60.1M
Enterprise Value ⁽¹⁾	US\$42.1M
EV / oz AgEq (Total Contained) ⁽¹⁾⁽²⁾	US\$0.14
P / NAV ⁽³⁾	0.18x
Shareholder Details	
Institutional	34.0%
Management & Directors	2.3%



TSX-V: SSV

OTCQX: SSVFF

(1) Based on US\$ exchange rate of C\$1.431 (as of February 12, 2025)

(2) 2024 Mineral Resource Estimate (as of March 20, 2024 using a US\$60/t NSR cut-off). The mineral resource applies commodity pricing: US\$22.50/oz Ag, US\$1.25/lb Zn, US\$0.94/lb Pb, US\$3.78/lb Cu, and US\$1,850/oz Au

(3) Based on consensus NAV

Management Team and Board

Experienced Mine Finders with a History of Success in Mexico



Lawrence Page (LL.B, KC) President, Director	 Director and Officer of a number of public prominent exploration and mining companies Major Projects and Mines involvement: Penasquito, Mexico; Hemlo and Eskay Creek, Canada
Rob MacDonald (MSc, PGeo) VP, Exploration	 VP of Geological Services for the Manex Resource Group of Companies and Exploration Manager for several publicly listed companies Overseen the exploration of many projects throughout North America including the discovery and delineation of the Homestake Ridge high-grade 1.2M oz Au-Ag deposit in northern British Columbia
Killian Ruby (CPA, CA, B. Sc.) Chief Financial Officer	 President and CEO of Malaspina Consultants & Manex Resource Group Served as an Assurance Partner at Wolrige Mahon LLP and served as Served as Senior Manager of KPMG LLP
Arie Page Corporate Secretary	 Currently serves as corporate secretary to several public resource companies in the minerals sector including Bravada Gold Corporation, Pacific Ridge Exploration Ltd., Southern Silver Exploration Corp. and Valterra Resource Corporation.
Russell Ball (CA, CPA) Director	 Managing Director of QDBS Resources Inc. and former CEO, Director and Exec. Chairman of Calibre Mining Corp Former EVP and CFO of Goldcorp Inc as well as varying capacities with Newmont Mining Corp
Peter Cheesbrough (CA) Director	 President (ret.), Exploration Division, Electrum Group Served as CFO, Echo Bay Mines
Gina Jones (CPA, CA, CF, ICD.D) Director	 Currently serves as CFO, CCO PenderFund Capital Management Ltd., Served as CFO for two Vancouver Investment Dealers and CFO, COO for an independent Vancouver brokerage firm.
Roger Scammell (BSc, PGeo) Director	 Served as President Scorpio Mining Corporation and VP Exploration of Tamaka Gold Corporation Major Projects and Mines involvement: San Nicolas, El Limon and Nuestra Senora, Mexico
Nigel Bunting Director	Served as director Suffolk Life Pensions Ltd

www.southernsilverexploration.com

Project Portfolio District Scale Exploration & Development



Cerro Las Minitas, Durango, Mexico

- 100% owned
- Silver-enriched Skarn/CRD deposits
- +US\$28M spent on acquisition and exploration since 2011
- Further Upside on both Exploration and Engineering basis

Nazas Project, Durango, Mexico

- Option to own 100%
- Adjacent to Endeavor Silver's Pitarilla Deposit
- Multiple drill-ready targets identified
- Drilling Planned for Q3-Q4 2025

Oro and Hermanas Projects, New Mexico

- 100%-owned
- Southern continues to advance two earlier stage projects in southern New Mexico, giving the shareholder additional exposure to copper, gold and silver



Cerro Las Minitas

One of the Largest and Highest Grade Undeveloped Silver Assets in the World



TSX-V: SSV OTCOX: SSVFF

The CLM project remains a leader in the Grade vs Tonnage curve among global peer deposits⁽¹⁾⁽²⁾



NOTE: Data as of September 3, 2024 from S&P Capital IQ; Based on long-term consensus pricing (as of January 23, 2025): US\$30.00/oz Ag, US\$1.20/lb Zn, US\$0.95/lb Pb, US\$4.25/lb Cu, and US\$2,430/oz Au;

- (1) Parameters for the NI 43-101 Mineral Resource Estimate are described on Slide 13 and in the SSV News Release, dated June 10, 2024
- (2) A 100% basis

(3) Silver or Zinc primary development assets in the Americas with a resource or study published since January 1, 2020 and whose primary owners have market capitalization between US\$10M - US\$1B and resources less than 120Mt



Exploration of the prop	perty	agreement for CLM and began exploration		SSV released M • '16: 110Moz A • '18: 209Moz A • '19: 272Moz A	gEq in MI&I \gEq in MI&I	SSV released	updated MRE	SSV released update and PEA • MRE: 302Moz Agl	
~1960s		2010 - 2012		2016 - 2019		2021		2024	
197	71 - 1981		2015		2020		2022		
Sma	all-scale minin	g			SSV acquired 10 through the purc Electrum's 60%	hase of	SSV released in	tial PEA	

(1) 2024 Mineral Resource Estimate (as of March 20, 2024 using a US\$60/t NSR cut-off). The mineral Resource applies commodity pricing: US\$22.50/oz Ag, US\$1.25/lb Zn, US\$0.94/lb Pb, US\$3.78/lb Cu and US\$1,850/oz Au; total may not add due to rounding

Infrastructure and Access



Well Located in an Active Exploration and Development Jurisdiction with Superior Infrastructure



- Safe jurisdiction, around non-narcotic related agriculture
- Located 70km NE of Durango (pop. ~650,000)
- The property is transected by infrastructure including two federal highways, a railway line and transmission lines
- Property is accessed via the town of Guadalupe Victoria (pop: ~35,000) located just 6km to the south

Knowledgeable and Supportive Local Community



- Exploration permits in place
- Social license initiatives: exploration access agreements in place with the local Ejido;
- Exploration/development team is embedded in the community with a local workforce

Cerro Las Minitas

Looking North from the Autopista (Highway)





Cerro Las Minitas

Site Geology and Deposit Distribution



A classic Ag-Pb-Zn CRD/Skarn system similar to major polymetallic Mexican deposits



- A Central Monzonite acts as the heat pump to the mineralizing system
- Historic Mines are localized in the skarn/hornfelsed margin of the monzonite

Seven deposits make up the current Mineral Resources



- Mineralization is localized in sub-vertical structures and on dyke margins in the Blind and El Sol deposits; and
- Semi-massive and massive sulphide lenses occur at the marble-skarn transition, adjacent to the monzonite contact in the Skarn Front, South Skarn and Mina La Bocona deposits



2024 Mineral Resource Estimate (as of March 20, 2024 using a US\$60/t NSR cut-off)

Indicated Resources		Average Grade Contained Metal					ed Metal							
Zone	Tonnes	Ag	Au	Pb	Zn	Cu	AgEq	NSR	Ag TrOz	Au TrOz	Pb	Zn		AgEq TrOz
	(Kt)	(g/t)	(g/t)	(%)	(%)	(%)	(g/t)	(US\$/t)	(000's)	(000's)	(MIbs)	(Mlbs)	(Mlbs)	(000's)
Blind Zone	2,614	92	0.04	1.8	2.0	0.10	227	113	7,751	4	106	116	6	19,108
El Sol Zone	1,252	77	0.04	2.1	1.9	0.08	214	106	3,102	2	57	54	2	8,598
Skarn Front Zone	7,626	104	0.06	0.8	4.1	0.19	298	143	25,557	15	128	692	32	73,181
La Bocona/North Felsite Zone	1,807	121	0.19	2.1	1.5	0.23	262	135	7,039	11	82	59	9	15,243
Total	13,299	102	0.07	1.3	3.1	0.17	272	132	43,449	32	374	921	49	116,130

Inferred Resources	Average Grade								Contained Metal					
Zone	Tonnes (Kt)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Cu (%)	AgEq (g/t)	NSR (US\$/t)	Ag TrOz (000's)	Au TrOz (000's)	Pb (Mlbs)	Zn (Mlbs)	Cu Lbs (Mlbs)	AgEq TrOz (000's)
Blind Zone	1,697	74	0.20	1.2	1.8	0.08	192	95	4,029	11	46	66	3	10,456
Las Victorias Zone	1,417	124	0.65	1.9	2.2	0.12	307	155	5,629	30	58	69	4	14,001
El Sol Zone	1,168	57	0.03	1.7	2.1	0.06	185	90	2,150	1	43	53	1	6,962
Skarn Front Zone	12,444	110	0.05	0.7	2.6	0.32	254	126	43,834	20	180	711	88	101,620
La Bocona/North Felsite Zone	2,666	120	0.22	1.4	1.6	0.13	243	124	10,327	19	85	95	7	20,864
South Skarn Zone	4,036	134	0.19	1.9	1.3	0.08	250	129	17,393	24	170	112	7	32,481
Total	23,428	111	0.14	1.1	2.1	0.21	247	124	83,362	104	582	1,106	111	186,384

Notes:

• The current Resource Estimate was prepared by Garth Kirkham, P.Geo., of Kirkham Geosystems Ltd.

• All mineral resources have been estimated in accordance with Canadian Institute of Mining and Metallurgy and Petroleum ("CIM") definitions, as required under National Instrument 43-101 ("NI43-101")

Mineral resources were constrained using continuous mining units demonstrating reasonable prospects of eventual economic extraction

• Silver Equivalents were calculated from the interpolated block values using relative recoveries and prices between the component metals and silver to determine a final AgEq value. Metal recoveries: 95%. silver, 75% gold, 70% copper, 87% lead and 93.2% zinc.

• Silver Equivalents and NSR\$/t values were calculated using average long-term prices of \$22.5/oz. silver, \$1,850/oz. gold, \$3.78/lb. copper, \$0.94/lb. lead and \$1.25/lb. zinc. All prices are stated in \$USD

• The formula used for NSR\$/t calculations was as follows - $NSR = (Ag g/t \times 0.55) + (Au g/t \times 34.45) + (Cu\% \times 48.68) + (Pb\% \times 13.41) + (Zn\% \times 15.59)$

• Mineral resources are not mineral reserves until they have demonstrated economic viability. Mineral resource estimates do not account for a resource's mineability, selectivity, mining loss, or dilution

• An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration

• All figures are rounded to reflect the relative accuracy of the estimate and therefore numbers may not appear to add precisely

Cerro Las Minitas

Project Economics – Production Schedule and Cash Flow







Operating Statistics	
Mine Life <i>(years)</i>	17+ years
Avg. Ag Head Grade <i>(g/t)</i>	104.1
Avg. AgEq Head Grade (g/t)	256.8
Avg. Silver Recovery (%)	93.30%
Yr 1-8 Avg. Ann. Prod. <i>(Moz AgEq)</i>	14.4
LOM Avg. Ann. Prod. <i>(Moz AgEq)</i>	11.4
Nominal Throughput <i>(tpd)</i>	5,300
AISC and Capital Costs	
LOM Average AISC (US\$/oz AgEq)	\$13.23
Initial Capex (US\$M)	\$388M
LOM Sustaining Capex (US\$M)	\$160M
Economics	
Avg. After-Tax Annual FCF ⁽³⁾ <i>(US\$M)</i>	\$78M
Pre-Tax NPV 5% <i>(US\$M)</i>	\$888M
Pre-Tax IRR (%)	30.0%
After-Tax NPV 5% <i>(US\$M)</i>	\$501M
After-Tax IRR (%)	21.2%

(1) LOM Ag/Au/Cu/Pb/Zn sales are shown on an AgEq basis based on: Ag = \$23.00/oz, Au = \$1850/oz, Cu = \$4.00/lb, Pb = \$1.00/lb and Zn = \$1.25/lb

(2) All-in Sustaining cost (AISC) is calculated as: Operating costs (mining, processing and G&A) + Concentrate Transportation + Treatment & Refining Charges + Penalties + Sustaining Capital + Closure Costs and is reported on co-byproduct basis using AgEq.

AISC

(\$US/oz AgEq)

(3) Represents FCF during production years

TSX-V: SSV OTCQX: SSVFF



Several Shallow Extensions to Existing Deposits Remain to be Tested

Drilling to Target Resource Expansion in the Eastern and Northern Deposits ⁽¹⁾

Proof of concept drilling in Q4 2024 identified thick sulphide intercepts down-dip of the main mineralized shoot in the South Skarn Deposit

Analysis indicates additional gaps within the modelled resources and the potential for further shallow extensions of the known deposits

Down-dip projections of the South Skarn, La Bocona, and North Felsite deposits remain open and have only been drilled to ~450m below surface

Exploration Potential⁽¹⁾

Modelling of the down dip projections of the Eastern deposits, to depths of 1000m below surface, suggests 15Mt to 20Mt of additional mineral inventory at or above average resource grade could be added to the resource base

These Deeper Targets are more speculative and will require more drilling but as modelled adds further value to the project





TSX-V: SSV OTCQX: SSVFF

(1) The exploration targets are conceptual in nature and rely on projections of mineralization that are beyond the standard CIM classification of mineral resources and should not be relied on as a mineral resource estimate



- SSV worked with permitting and technical experts to develop a regulatory and permitting timeline, which reflects a less than five-year pathway to a Final Investment Decisions ("FID")
- Baseline data collection and project derisking is underway



Potential Economic Updates



The PEA has modelled robust annual average cashflow particularly in the first eight years of mine-life. Further work could enhance the profitability of the project

Further Opportunities

Mine life extension:

- 25,000 metres of drilling could add 4Mt 8Mt of additional shallow (<500m depth) mineralization to the Mineral Resource
- Further deeper exploration potential

Engineering

- Increasing Production Rate
- Increasing the Mill Through-put
- Optimize the Processing Circuit
- Optimize the Mine Design

ESG and Permitting

Continuing on the Pathway to Production

- Permitting parameters established
- Baseline studies (Environmental/Hydrology) in progress
- Social engagement ongoing; inc. preparation for Exploitation Agreements
- Government engagement ongoing

Preparation for Resource Expansion

- Technical studies to assist initial drill targeting completed
- Targeting established to grow the Resource to +45Mt



The Nazas Acquisition Represents a New High-Quality Exploration Project in an Emerging Mining District

- Located on the eastern flank of the Sierra Madre Occidental mountain range in north-central Durango State, Mexico. The property is accessible by road from the City of Durango, located approximately 150km to the south.
- Project is located ~15Km east of Endeavour Silver's Pitarilla project. Nazas shares similar geology and mineralizing systems
- Project was optioned from La Cuesta International Inc.
- The claims were explored by the vendors in the mid-to-late-90s and then by Silver Standard from the early-2000s to the mid-2010s.



Nazas Project Pitarilla – Exploration Analogue



Pitarilla Deposit – Exploration Analogue

- One of the largest undeveloped Silver Resources in Mexico
- Endeavor Silver Corp. acquired the Pitarilla Project from SSR Mining Inc. in July 2022
- +800Mozs AgEq both Sulphide and Oxide resources
- Mineralization localized along structures and adjacent to quartz-feldspar intrusive
- Endeavour Silver is targeting a Ag-Pb-Zn manto deposit hosted in limestoneconglomerate at the base of the Eocene rocks
- Nazas is potentially more gold enriched than the Pitarilla mineralizing system



ENE-WSW Cross-Section Showing the Interpreted Pitarrilla Geology, Selected Faults, and Drillhole Traces View Looking NNW

PITARRILLA RESOURCES (SGS GEOLOGICAL SERVICES, 3-15-23)⁽¹⁾

Total Indicated+Inferred Mineral Resources (UG + OP) = 845 million AgEq oz.

Underground Sulfide (150 AgEq g/t cut-off) Indicated+Inferred = 279 million AgEq oz.

(1) Source: Endeavor Silver Corp. News Release dated December 8, 2022

Nazas Project New Acquisition



- 5 claims totaling 2,189ha with similar geology to the Pitarilla Mineralizing system
- High potential for significant deposits:
 - Oxide Au-Ag (bulk-tonnage) near surface
 - Structurally controlled high-grade Ag-Au-sulphide veins at depth
 - Porphyry Cu-Mo-Au target at Yescas and adjacent Au-Ag-base-metal mantos
- Comprehensive Database including:
 - Property wide mapping
 - Several thousand rock and soli samples,
 - Available Aster, Magnetic, IP , Gravimetric and Magneto-telluric data
 - Results from 18 drill holes (12 RC and 6 DDH)
- Data Compilation and interpretation underway





Multiple Exploration Targets Identified on the Nazas Property

- Widespread surface mapping/sampling and follow-up geophysical surveys have identified four separate drilling targets on the Nazas property:
 - Yescas,
 - Canonctio,
 - Dikes Estrellas,
 - Alamo Mocho
- Important targets are located at the intersection of NEand NW-trending faults sets where the most widespread alteration occurs
- Historic drilling intersected numerous +10m intervals of anomalous gold and silver
- Q4 Drilling planned



US Exploration



Southern continues to advance two earlier stage projects in southern New Mexico, giving the shareholder additional exposure to copper, gold and silver



- Oro Project Large Laramide Cu-Mo-Au Porphyry
 - 100% Owned
 - +22.4 sq. km property large zoned porphyry system
 - +\$8M Expenditures 29 Drill holes by SSV
 - New claims added
 - Permitting in progress for drilling in 2025
- Hermanas Widespread Epithermal Vein system
 - Geology Favorable for Large Epithermal Vein System with limited historic drilling
 - High-level textures suggesting good exploration potential at depth
 - Numerous Au, Ag occurrences
 - Permitting in progress for drilling in 2025

Why Southern Silver





Underground Mine in World Class Mining District

CLM is in a safe and well-established mining district surrounded by majors and mid-tiers

Infrastructure-Rich District

CLM is adjacent to the interstate highway and ~7 km from grid power

Sizable Silver-Zinc Development

CLM is one of the largest undeveloped Ag-Zn projects in the world Significant Project Upside Value enhancing opportunities identified

CLM remains open laterally and at depth

New Acquisition Creates Further Upside

New Nazas Acquisition provides shareholder exposure to a worldclass exploration district



Notes

www.southernsilverexploration.com