

# Silver One Provides Update On Metallurgical Test Results Using Innovative Separation And Leaching Technologies At Its Candelaria Silver Mine

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## *NON-TOXIC, CYANIDE-FREE TECHNOLOGY POTENTIALLY DOUBLES SILVER RECOVERIES AND SIGNIFICANTLY CUTS LEACHING TIMES*

VANCOUVER, Feb. 26, 2025 - [Silver One Resources Inc.](#) (TSXV: SVE); (OTCQX: SLVRF); (FSE: BRK1) - ("Silver One" or the "Company") announces results of additional (phase 2) metallurgical testing using a novel, cyanide-free leaching process from the Company's 100% owned, past-producing Candelaria Silver Mine in Nevada (Figure 1). Results confirm that the new technology can potentially double silver recoveries of leach pad material and cut leaching times. The tests were conducted on representative samples from the two heap-leach pads (LP1 and LP2), as well as from the in-ground mineralization marginal to the two main open-pits in the project. The developer of the process, Extrakt Processing Solutions ("EPS" or "Extrakt"), has a strategic global alliance with Bechtel Energy Technologies & Solutions, Inc. ("Bechtel") to commercialize Extrakt's TNS&TRADE; technology (<https://www.bechtel.com/newsroom/press-releases/extrakt-and-bechtel-partner-to-commercialize-groundbreaking-sol>

This cyanide-free process is also being tested by other major and junior resource companies in the US and Canada (see CJK Milling news release of December 9, 2024, International Mining News, December 12, 2024 and Fulcrum Metals news release of December 18, 2024).

Although no commercial metal-leach operations using these proprietary leach solutions exist at this time, the test results from Candelaria mineralization are very promising, and indicate significant potential for reducing costs and improving metal recoveries in the near future. An upcoming Preliminary Economic Assessment ("PEA") level study on the entire project (Leach pad 1 "LP1", Leach pad 2 "LP2" and fresh in-situ mineralization) will examine the potential benefits of using these solutions in comparison to more traditional cyanide leaching techniques. The PEA may be followed by a Pre-Feasibility Study on the Leach Pads by themselves, and eventually on combining the leach pads with the fresh in-situ mineralization.

### Highlights

- The test results show that EPS' technology works well both in agitated and column leaching processes. The technology is especially effective in extracting silver from low-grade, processed material from Candelaria's heap-leach pads LP1 and LP2, with significantly reduced leach times compared with cyanide leaching (see Company's news release of April 2, 2024).
- Column non-cyanide leaching has the potential to recover 63% and up to 69% of the silver from LP1 and LP2 respectively, compared with column cyanide leaching recoveries of 29% and 40% from LP1 and LP2, respectively (See Table 1, and Company's news release of May 21, 2019).
- Agitated non-cyanide leaching silver recoveries of LP1 reached 59.1% improving the 49.1% reported in the Company's news release of April 2, 2024. These recoveries exceed the silver recoveries achieved by agitated cyanide leaching in earlier tests done by EPS, and in reported historic cyanide-leach recoveries (See Company's news releases of April 19, 2018, May 21, 2019, July 20, 2023, and April 2, 2024).
- EPS' agitated and column non-cyanide leach tests results on fresh (not previously leached) material, suggest the innovative technology may match or slightly exceed the silver recoveries achieved by cyanide leaching. (See Table 1 and Company's news releases of July 20, 2023, June 14, 2023, and December 13, 2022).

Gregory Crowe, President and CEO commented: "The results from the new testing confirm that EPS' non-cyanide leach technology is effective at recovering silver, and can potentially be a substitute to cyanide leaching. We are particularly pleased with the results of the column tests which simulate heap leaching

extraction methods versus the more expensive agitated leaching techniques. The column tests show that over 60% of the silver in Candelaria's old heap-leach pads may be recovered by using this innovative technology applied to heap leaching methods, compared with previous studies that show only 29% to 40% silver recoveries using cyanide leaching (Cyanide leach recoveries were documented in Kappes Cassiday & Associates "KCA" Candelaria Project HPGR Test Work, June 2019 unpublished report). These improved silver recoveries may positively impact the overall economics of the project as significant resources are contained in the leach pads (over 30 million ounces of silver in the indicated mineral resource category and over 15 million ounces of silver in the inferred mineral resource category, see Company's news releases of August 16, 2022 and August 18, 2020). EPS's leaching agents not only improve silver extraction but are also more environmentally friendly and save water by assisting in the dewatering of waste products. The extraction process is simpler and potentially less costly. Furthermore, we are optimistic about this innovative technology as it is backed up by EPS' years of research and development and by EPS' partnership with Bechtel."

Table 1. Silver recovery comparison of results between Extrakt non-cyanide tests and Kappes Cassiday & Associates ("KCA") - McClelland lab tests (See Company's news releases of April 2, 2024, July 20, 2023, June 14, 2023, December 13, 2022 and May 21, 2019). Head grades for tests are reported and discussed in Testing and Leach Results section below.

Candelaria - Metallurgical Testing Silver One Samples						
Silver Recovery Comparison Extract - KCA - McClelland						
( Extracted % Silver)						
Sample type & size fraction	Extrakt Phase 2 Agitated Non-Cyanide Leach Tests	Extrakt Phase 1 Agitated Non-Cyanide Leach Tests	Extrakt Column Non-Cyanide Tests	KCA Agitated Cyanide Leach (BRT) Tests	KCA Column Cyanide Tests	McClelland Agitated Cyanide Leach (BRT) Tests
Oxide 1.1-1.7mm	68.2 <sup>1</sup>		NA		52-70 <sup>4</sup>	
Oxide 500 µm	68					
Oxide 250 µm	71					
Oxide 106 µm				60-76 <sup>3</sup>		
Sulfide 1.1-1.7mm	59.4 <sup>1</sup>		66		60-60 <sup>4</sup>	
Sulfide 500 µm	26					
Sulfide 250 µm	38					
Sulfide 106 µm				44-51 <sup>3</sup>		
Mixed 1.1-1.7mm	80.4 <sup>1</sup>		NA		71-71 <sup>4</sup>	
Mixed 500 µm	78					
Mixed 250 µm	81					
Mixed 106 µm				70-77 <sup>3</sup>		
LP1 1.1-1.7mm	59.1 <sup>1</sup>	49.1	63		29 <sup>5</sup>	20.9
LP1 500 µm	51	59.9				
LP1 250 µm						







LP1 212 µm				32.5
LP1 150 µm		64.4	41-45 <sup>2</sup>	
LP1 75 µm		71.2		42.9
LP2 1.1-1.7mm	51.1 <sup>1</sup>		69.4	40 <sup>5</sup> 27.9
LP2 500 µm	48			
LP2 250 µm	55			
LP2 212 µm				41.9
LP2 150 µm			54-60 <sup>2</sup>	
LP2 75 µm				52.3

1 Optimized recovery after 4 tests

2 The numbers indicate silver extraction at a low CN concentration (1% CN) and at higher CN concentration (2% CN)

3 The numbers indicate silver extraction of two different samples tested (KCA tested 2 samples of each oxide, sulfide and mixed material)

Leach Pad Samples 4 KCA columns HPGR crush 1.7mm - CN Leach 158 days

5 KCA columns HPGR crush 1.7mm - CN Leach 120 days

Bulk samples representative of leach pad 1 (LP1) and leach pad 2 (LP2) weighing 228 kg and 263 kg respectively, composited from sonic drill holes drilled and analyzed by Silver One in 2017 and 2018, were entirely crushed to &le;2 mm (<2000 microns) with a Vertical Shaft Impact crusher at CEMCO's facilities in Belen, NM, and shipped to the EPS laboratory in Kentucky for metallurgical testing. The material consisted of leached oxide and partially refractory material with silver head grade of 51.3 g/t and 50.1 g/t for LP1 and LP2 respectively.

Representative portions of the bulk samples were weighed and sieved to separate two fractions. Material smaller than 2 mm was used for testing. The tests were conducted on 1 to 2 kg splits of the sieved (<2 mm) material. Splits tested were prepared according to acceptable industry standard practices (homogenized, coned and quartered several times). The minus 2 mm size was selected because of economic reasons, as it is a size fraction that can be achieved with one single stage of HPGR crushing. This is less expensive than milling to a much finer size and yields better silver recoveries than those obtained by historical leaching of the coarser (1 inch = 25.4 mm) material existing in Candelaria's leach pads (see the Company's news release of April 19, 2018 and National Instrument 43-101 ("NI 43-101") technical report filed on SEDAR+ by the Company in 2020 titled "Technical Report on the Heap Leach Pads within the Candelaria Property").

The current optimized agitated-leach silver recoveries using EPS' proprietary solutions average 59.1% for LP1, and 51.1% for LP2 on samples as received at the lab (<2 mm = 2000 microns), which significantly exceed the 20.9% and 27.9% silver recoveries achieved with cyanide leaching from bottle roll tests using material of similar size of LP1 and LP2 respectively (See Table 1 and the Company's news release dated May 21, 2019). Phase 1 leaching results of samples tested at different particle sizes, show that the silver recoveries increase with decreasing particle size which warrants additional testing to optimize silver recoveries at finer grind sizes and trade-off analysis to evaluate the economic benefits of finer grinding. EPS' leach times during phase 2 testing were between 6 and 7 hours further reducing the leach times of 48 hours or more used for cyanide leaching.

EPS' column leach tests were done on minus 2 mm material for both LP1 and LP2. The reported silver recoveries were 63% and 69% for LP1 and LP2 respectively, which bode well for the prospects of heap-leaching. These results above highlight the potential to use EPS' technology in heap-leach scenarios (at crush sizes of 2 mm), which may positively impact the economics of the project.

## In-Ground Fresh Material Samples

Three drill-core samples from holes 132, 135 and 136 (see Figure 2 for location) crushed to 1.7 mm with HPGR by KCA, weighing 9.52 kg, 9.6 kg, and 37.1 kg respectively, were shipped to EPS laboratory in Kentucky for metallurgical testing. The samples consisted of oxide (drill hole 135), sulfide (drill hole 132) and mixed (drill hole 136) mineralization with silver head-grades of 147 g/t, 419 g/t, and 115 g/t, respectively. These materials are representative of the in-ground fresh mineralization extending below the Mount Diablo pit (see Figure 1).

The samples were prepared in a similar manner as the LP samples above. A split of the <2 mm fraction was tested as is, and 1 to 2 kg splits were further ground to 500 µm and 250 µm for agitated leach testing. Column testing was performed on the sulfide sample only due to insufficient oxide and mixed material.

The optimized silver recoveries of agitated leaching tests using EPS' proprietary solutions are 68.2%, 59.4% and 80.4% for the oxide, sulfide and mixed material as received at the lab (<2 mm = 2000 microns) respectively. These recoveries are higher than the silver recoveries reported by KCA with cyanide leaching from bottle roll tests done at smaller particle size material (See Table 1 and the Company's news release dated May 21, 2019). However, the column cyanide-leach silver average recoveries obtained by KCA of 61%, 60% and 71% in the same oxide, sulfide and mixed material crushed with HPGR to 1.7 mm (See Table 1 and the Company's news release dated June 14, 2023) suggest that cyanide leaching of fresh material may reach similar range of recoveries so far achieved by EPS' proprietary solutions.

## Next Steps

The metallurgical test results reported here will be included and evaluated in a Preliminary Economic Assessment ("PEA") level study of the Candelaria project scheduled for 2025. The PEA will cover the entire project (heap leach pads, stockpiles and in-ground fresh mineralization). A Pre-Feasibility Study on the heap leach pads is also being contemplated.

## Analytical and QA/QC

Samples were assayed by American Assay Laboratories ("AAL") in Sparks, NV, USA., (IAS accredited Laboratory, ISO/IEC 17025:2005). AAL inserts blanks, standards and includes duplicate analyses to ensure proper sample preparation and equipment calibration. AAL analyzed heads, tails and pregnant solution samples for silver by ICP-Ultra Trace (ICP-AES+ICP-MS analyses). Solids were digested in acid (hydrofluoric, hydrochloric and nitric acid) using teflon beakers. AAL is independent of both Silver One and Extrakt.

## Qualified Person

The technical content of this news release has been reviewed and approved by Robert M. Cann, P. Geo, a Qualified Person as defined by National Instrument 43-101 and an independent consultant to the Company.

## About Silver One

Silver One is focused on the exploration and development of quality silver projects. The Company owns a 100%-interest in its flagship project, the past-producing Candelaria Mine located in Nevada. Potential reprocessing of silver from the historic leach pads at Candelaria provides an opportunity for possible near-term production. Additional opportunities lie in unmined historic resources as well as in previously identified high-grade silver intercepts down-dip, which can potentially increase the substantive silver mineralization along-strike from the two past-producing open pits.

The Company owns 636 lode claims and five patented claims on its Cherokee project located in Lincoln County, Nevada, host to multiple silver-copper-gold vein systems, traced to date for over 11 km along-strike.

Silver One also owns a 100% interest in the Silver Phoenix Project. The Silver Phoenix Project is a very

high-grade native silver prospect, recently permitted for drilling, which lies within the "Arizona Silver Belt," immediately adjacent to the prolific copper producing area of Globe, Arizona.

#### About Extrakt

Extrakt Process Solutions is a technology company that is focused on separation technologies for recovering precious metals, hydrocarbon separation as well as dewatering of mine waste and other related processes. The company has a global patent portfolio and continues to develop new processes and technologies.

See [www.extraktps.com](http://www.extraktps.com)

#### About Bechtel

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#### Extrakt Partnership with Bechtel

Extrakt Process Solutions, LLC (Extrakt) and Bechtel Energy Technologies & Solutions, Inc. (BETS) have formed a strategic global technology alliance, to commercialize Extrakt's novel, leaching technology and solid-liquid separation technology, known as TNS&TRADE;. TNS addresses the difficult challenges of mine tailings, dewatering, and product recovery in a sustainable, effective manner (see <https://www.bechtel.com/newsroom/press-releases/extrakt-and-bechtel-partner-to-commercialize-groundbreaking-solid>)

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#### Forward-Looking Statements

Information set forth in this news release contains forward-looking statements that are based on assumptions as of the date of this news release. These statements reflect management's current estimates, beliefs, intentions and expectations. They are not guarantees of future performance. Silver One cautions that all forward-looking statements are inherently uncertain, and that actual performance may be affected by a number of material factors, many of which are beyond Silver One's control. Such factors include, among other things: risks and uncertainties relating to Silver One's limited operating history, ability to obtain sufficient financing to carry out its exploration and development objectives on the Candelaria Project, obtaining the necessary permits to carry out its activities and the need to comply with environmental and governmental regulations. Accordingly, actual and future events, conditions and results may differ materially from the estimates, beliefs, intentions and expectations expressed or implied in the forward-looking information. Except as required under applicable securities legislation, Silver One undertakes no obligation to publicly update or revise forward-looking information.

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