# Discovery Reports Excellent Recoveries from Metallurgical Test Work on Cordero

**September 7, 2021, Toronto, Ontario - Discovery Silver Corp.** (TSX-V: DSV, OTCQX: DSVSF) ("Discovery" or the "Company") is pleased to announce results from its metallurgical test program on representative samples from the Cordero deposit. This program represents the most comprehensive test work completed on Cordero to date. Tests were completed at the Blue Coast Research Ltd. ("Blue Coast") laboratory located in Parksville, BC, Canada. Highlights from the test work include:

# Sulphide flotation test work

- Silver recoveries of 80-89%, lead recoveries of 83-91% and zinc recoveries of 81-90% from locked cycle tests.
- Test work completed on all major rock types at Cordero.
- Higher recoveries were achieved at coarser grind sizes.
- Saleable concentrate grades confirmed and levels of penalty elements for concentrates were insignificant.

### Oxide & transition cyanidation test work

- Silver recoveries of 54-80% & gold recoveries of 61-75% at coarse crush / grind sizes from coarse bottle roll testing.
- Results represent the first indication that a heap leach on the oxide & transition material at Cordero may be economic.
- Follow-up column leach test work is currently underway.

Taj Singh, President and CEO, states: "The results from this metallurgical test work program represent a major de-risking step for Cordero. All major rock types hosting sulphide ore returned excellent recoveries via conventional flotation processes to generate clean, highly saleable concentrates.

In addition, there were two new positive developments that also emerged from the test work. Firstly, the highest recoveries were achieved at coarse grind sizes of 175-200 microns, which should help reduce capital and operating costs for the project. Secondly, mineralized oxide and mixed oxide-sulphide (transition) "pre-strip" material that sits at surface above the large sulphide ore body responded very well to cyanidation introducing the potential to heap leach this material at the start of the mine life. Both developments should have a positive impact on the overall project economics that will be outlined in our PEA due for release next quarter."

### **SULPHIDE FLOTATION:**

Differential lead-zinc flotation test work was completed on medium-grade sulphide samples representing the four different rock types at Cordero. Samples were sourced from across the deposit in both the North and South Corridor. Test work confirmed excellent recoveries for silver, lead and zinc via conventional flotation processes to generate separate lead and zinc concentrates. Saleable concentrate grades were achieved and levels of penalty elements for both concentrates were insignificant. Significantly, close to 90% of the recovered silver reports to the lead concentrate where the highest payabilities are applicable.

Test	Rock Type	Head Grade					Lead + Zinc Circuit			
							Recovery to Concentrate			
		Ag	Au	Pb	Zn	AgEq	Ag	Au	Pb	Zn
		(g/t)	(g/t)	(%)	(%)	(g/t)	(%)	(%)	(%)	(%)
LCT-1	Breccia - Volcanic	35	0.23	0.55	0.83	108	89	19	91	90
LCT-2	Breccia - Sedimentary	37	0.21	0.46	0.55	93	84	16	89	86
LCT-3	Volcanic	34	0.11	0.43	0.67	86	83	19	85	81
LCT-4	Sedimentary	27	0.12	0.43	0.73	82	80	18	83	89

### Sample selection:

- Samples of the four major rock types were sourced from locations spatially throughout the
  entire deposit including the Pozo de Plata and NE Extension zones in the North Corridor
  and from along the central and southwest parts of the South Corridor.
- Given the low variability in the rougher test results based on sample location master composites were created based on the four rock types for cleaner and locked cycle tests.

#### Comminution:

- Bond abrasion index (Ai) ranged from 0.142 to 0.351 g for each rock type; this corresponds to a categorization of Slightly Abrasive to Medium.
- Bond ball work index (BWI) ranged from 17.6 to 19.5 kWh/tonne (metric); this corresponds to a categorization of a Hard ore.
- Higher recoveries were achieved at coarser grind sizes; a targeted coarse grind size of 80% passing 175-200 microns will be assumed for process design purposes.

### Locked cycle tests:

- Locked cycle tests were completed on each of the four major rock types at a targeted grind size of 200 microns.
- Excellent recoveries were achieved for silver (80-89%), lead (83-91%) and zinc (81-90%).

- Close to 90% of silver reports to the lead concentrate this is highly significant to the
  potential economics of an operation at Cordero, as the highest silver payability is received
  for silver in the lead concentrate.
- Low recoveries for gold were in-line with previous test work; the majority of gold is associated with pyrite that gets rejected during the concentrate cleaning process.

Test	Lead Circuit						Zinc Circuit					
	Recovery to Conc.			Concentrate Grade			Recovery to Conc.			Concentrate Grade		
	Ag	Au	Pb	Ag	Au	Pb	Ag	Au	Zn	Ag	Au	Zn
	(%)	(%)	(%)	(g/t)	(g/t)	(%)	(%)	(%)	(%)	(g/t)	(g/t)	(%)
LCT-1	79	13	91	2,923	3.1	53.0	11	7	90	237	1.0	46.3
LCT-2	75	12	89	3,774	3.4	55.7	9	4	86	397	0.9	54.6
LCT-3	70	13	85	3,318	1.9	50.1	13	6	81	400	0.7	50.9
LCT-4	70	13	83	2,886	2.3	54.0	10	5	89	213	0.4	51.4

# **Concentrate analysis:**

- Saleable concentrate grades for both lead and zinc concentrates were readily achieved as highlighted in the table above
- Level of penalty elements was low confirming excellent saleability of both concentrates as outlined in the table below

Element	Average Grade <sup>1</sup>	Penalty Threshold <sup>2</sup>					
Lead Concentrate:							
As	0.38%	0.50%					
Sb	0.54%	0.50%					
Hg	11 ppm	100 ppm					
F	50 ppm	500 ppm					
Zinc Concentrate:							
As	0.21%	0.30%					
Fe	8.87%	8.00%					
Cd	0.48%	0.30%					
SiO <sub>2</sub>	1.32%	3.50%					
Hg	15 ppm	100 ppm					
F+Cl	300 ppm	500 ppm					
Se	22 ppm	300 ppm					
Mn	0.91%	0.50%					

<sup>&</sup>lt;sup>1</sup>Average grade was calculated as an arithmetic average of the concentrates from the four locked cycle tests

<sup>&</sup>lt;sup>2</sup> Penalty thresholds vary between smelters; the thresholds listed above are representative of common thresholds typically applied on lead and zinc concentrates

#### Planned additional test work:

 Testing of low-grade sulphide material representative of potential stockpile material recently commenced and is ongoing; results are expected to be incorporated in the upcoming preliminary economic assessment ("PEA") of the Cordero project scheduled for completion in 4Q 2021

### **TESTWORK ON OXIDE/TRANSITION:**

Cyanidation test work was completed on the oxide and mixed oxide-sulphide ("transition") material at Cordero. The oxide and transition material in aggregate represents approximately 5-10% of the total ore body. Test work consisted of coarse bottle roll test work at different crush / grind sizes. Based on the excellent results from these initial tests, column leach test work commenced in July 2021 with McClelland Laboratories, Inc. ("McClelland") based in Reno, Nevada. This will be the first column leach test work conducted on oxide and transition material and if successful, it offers the potential that a commercial heap leach operation could be included in the processing plan in the early years of the project life. Such a heap leach operation would recover silver and gold from "pre-strip" material that would typically be regarded as waste rock. Preliminary results from the column leach test work are expected to be received in 4Q 2021, in time to be included in the upcoming PEA.

#### Coarse Bottle Roll tests:

- Oxide and transition samples were selected from widespread locations in both the North and South Corridor. The level of oxidation in the transition samples varied from 20% to 80%.
- Tests were completed at different crush / grind sizes on both oxide and transition material.
- Results confirmed the potential for oxide / transition material to be recovered via heap leach processing.

		Head	Grade	Recoveries		
Crush / Grind Size	Material	Ag	Au	Ag	Au	
		(g/t)	(g/t)	(%)	(%)	
0.15 mm (150 microns)	Oxide	44	0.07	80	63	
0.30 mm (300 microns)	Oxide	44	0.07	77	62	
3.4 mm (1/8 in)	Oxide	44	0.07	65	61	
6.7 mm (1/4 in)	Oxide	58	0.10	59	71	
12.7 mm (1/2 in)	Oxide	44	0.07	54	61	
6.7 mm (1/4 in)	Transition	52	0.07	63	75	
12.7 mm (1/2 in)	Transition	52	0.07	54	72	

<sup>1</sup>All crush and grind size test work was completed by Blue Coast at a target NaCN dosage of 1.0 g/L except for the ½ inch oxide sample which was completed by McClelland at NaCN dosages of 1.0 g/L and 2.0 g/L (the average of these two test results is shown in the table)

#### Planned test work

- Agglomeration, load-permeability and column leach test work has recently commenced with McClelland;
- If results from this test work are positive, a commercial heap leach operation will be included in the upcoming PEA

# **About Discovery**

Discovery's flagship project is its 100%-owned Cordero project, one of the few silver projects globally that offers margin, size and scaleability. Cordero is located close to infrastructure in a prolific mining belt in Chihuahua State, Mexico, and is supported by an industry leading balance sheet with over C\$80 million available for aggressive exploration, resource expansion and future development. Discovery was a recipient of the 2020 TSX Venture 50 award and the 2021 OTCQX Best 50 award.

On Behalf of the Board of Directors,

# Taj Singh, M.Eng, P.Eng, CPA,

President, Chief Executive Officer and Director

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#### **Qualified Person**

The scientific and technical content of this press release was reviewed and approved by Tommaso Roberto Raponi, P.Eng. who is a "Qualified Person" as defined by *National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI 43-101")*. Data verification consisted of ensuring that the samples selected came from within the area where the Mineral Resource was estimated. The QP checked that the sampling protocol used was applicable for the planned test work. In the QP's opinion, the test work conducted was completed by a reputable metallurgical testing facility and used industry-standard methods. Mr. Raponi is a consultant to Ausenco Engineering Canada Inc. ("Ausenco") and is considered to be "independent" of Discovery for purposes of section 1.5 of NI 43-101.

### **About Ausenco**

Ausenco is a global diversified engineering, construction and project management company providing consulting, project delivery and asset management solutions to the resources,

energy and infrastructure sectors. Ausenco's experience in gold projects ranges from conceptual, pre-feasibility and feasibility studies for new project developments to project execution with EPCM and EPC delivery.

### **About Blue Coast**

Blue Coast, founded in 2009, owns and operates a 12,000 square-foot laboratory in Parksville, BC, Canada, and has a team of minerals engineers, scientists and technicians with experience that spans decades. Blue Coast provides high-quality metallurgical testing, analytical services, flowsheet development, consulting and operational support and are a well-known and trusted partner in the global minerals industry.

### **TECHNICAL NOTES & FORWARD-LOOKING STATEMENTS:**

The most recent technical report for the Cordero Project is the 2018 Preliminary Economic Assessment (PEA) authored by M3 Engineering and Technology Corp and includes the most recent resource estimate, completed by Independent Mining Consultants, Inc. It is available on Discovery's website and on SEDAR under Levon Resources Ltd, a wholly owned subsidiary of Discovery.

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