

Rockhaven Reports Excellent Pre-Concentration Results for the Klaza Deposit, Yukon

Bulk sample test work ~doubles potential grade by rejecting >50% of the initial feed

September 12, 2023 - Rockhaven Resources Ltd. (TSX-V:RK) (“Rockhaven”) is pleased to announce encouraging results from comprehensive pre-concentration (sorting) test work on bulk samples of material selected from within the mineral resources at its 100% owned Klaza Au-Ag-Pb-Zn deposit, Yukon¹. The test work results demonstrate the potential effectiveness of pre-concentration of Klaza mineralisation at a coarse crush size, by doubling the grade of material entering the mill and reducing the mill feed tonnage by over 50%, with only minor losses in metal. Positive impacts on potential future operations that may result from the use of pre-concentration include a material reduction in the amount of flotation tails, a significantly smaller grinding and flotation circuit and, potentially, lower overall capital and operating costs for such an operation. Once trade-off studies are completed, the revised flow sheet and cost estimates that result from the use of pre-concentration may also be employed to help in the determination of cut-off grades for the pending updated mineral resource estimation, as well as for the economics of the upcoming pre-feasibility study.

Highlights

- **Crushing to a top size of 63mm, pre-concentration has been conducted on bulk samples with grades representative of the Klaza and BRX mineral resources.**
- **The pre-concentration:**
 - **rejected greater than half of the initial feed material, while maintaining average recoveries of 93% for Au, 94% for Ag, 96% for Pb and 92% for Zn.**
 - **led to an approximate doubling of the grade of the potential feed to a mill for all metals of economic interest (Au, Ag, Pb and Zn).**
- **It is expected that the adoption of pre-concentration could lead to significantly smaller grinding and flotation circuits, with lower overall capital and operating costs.**
- **Positive environmental impacts could be expected to result from the adoption of pre-concentration due to the significant reduction in the amount of flotation tails.**
- **Incorporating pre-concentration into a process circuit could potentially lower the cut-off grades for future mineral resource estimates.**
- **Testing of a composite of material below the assumed cut-off grade for the mineral resource yielded a significant increase in grade by eliminating 65% of the feed material, while still recovering 80% of the gold and 93% of the silver. This could result in material previously assumed to be below future cut-off grades having potential value and being incorporated into the planned pre-feasibility study.**

Statement from Rockhaven’s President and CEO, Matt Turner:

¹ See Rockhaven news release dated June 21, 2018 for more information on the mineral resource estimate for the Klaza deposit.

“With high recoveries, low mass pulls and a substantial increase in the grade of the material going to a future mill, the pre-concentration results demonstrate a potentially positive shift in several economic inputs, which could significantly reduce capital and operating costs of a potential future mining operation at Klaza. Beyond cost-efficiencies related to milling fewer tonnes for similar contained metals, other advantages of using this technology may include a significant reduction in the amount of flotation tails, less haulage of material from underground operations, and lower mining cut-off grades by upgrading material that was previously expected to fall below future economic cut-off grades. Trade-off studies will begin shortly to optimize the degree to which pre-concentration could be adopted, which will help to set the stage for the upcoming mineral resource estimate and pre-feasibility study.

Pre-concentration Technology

The pre-concentration (commonly referred to as “ore sorting”) production-scale test work was done at the Saskatchewan Research Council Geoanalytical Laboratories (SRC) facility in Saskatoon and utilized TOMRA X-Ray Transmission (XRT) sensor based sorting technology to concentrate high-density sulphide minerals which are associated with gold-silver-lead-zinc mineralization at Klaza. Rocks are individually scanned while they move along a conveyor belt, and compressed air jets selectively eject mineralized material at specified densities. The low density ‘waste’ material is further subjected to additional ‘cascade’ tests to determine the mass pulls at subsequent lower density settings. The ejected material (“accepts”) from each density setting is weighed, crushed and assayed, as well as the waste material from the final run. Once the results are compiled and interpreted, the optimal density settings are determined.

Pre-concentration Test Work and Results

Phase I began with scanning 300 mineralized and unmineralized rock pieces using TOMRA XRT detection technology from split drill core samples collected at Klaza. Detection information from the XRT indicated that there was good contrast between particles which could lead to a high recovery and low yield on a bulk scale. About a third of the scanned pieces were individually assayed, and these results further confirmed the ability of the detection technology to sort mineralised material from waste.

In the second phase, some 480 kg of coarse drill core material from the Klaza and BRX zones, with mean grades designed to reasonably represent potential mill feed grades from each deposit, was gathered from site. These were split into two “life-of-mine” feed grade composites (from Klaza and BRX) and one “Low Grade” composite. The Low-Grade composite included a mix of lower grade material from the BRX and Klaza Zones and assayed below the cut-off grades used in the current Klaza Deposit mineral resource estimate (see news release dated June 21, 2018). The grades of all three composites are shown below:

Table 1: Feed Composite Assays:

	Composite assays			
	Au, g/t	Ag, g/t	Pb, %	Zn, %
BRX	2.31	88	0.87	1.04
Klaza	2.45	63	0.67	0.85
Low Grade	0.35	29	0.17	0.21

Each of the three composites was crushed to less than 63mm in size. The crusher product was screened at 9.5mm. The coarser fraction comprising the bulk of the tonnage was subjected to sorting. A subsample of the -9.5mm material was screened again at 1.2mm and the coarser fraction subjected to gravity separation testwork; the -1.2mm fines were kept aside. In practice the finest material would be delivered directly to the mill.

For each composite, a production scale TOMRA COM 1200 Tertiary XRT sorting machine was used to complete the pre-concentration of the coarse fraction, while heavy liquids were used to simulate gravity concentration of the mid-size fraction. For each composite, the resulting pre-concentrate comprised the sorting “accepts”, the heavy liquid concentrate and the sub-1.2mm fines.

Pre-concentration of the BRX and Klaza composite samples recovered, on average, 93% of the gold, 94% of the silver, 96% of the lead and 92% of the zinc, to a product comprising 47% of the original sample mass. The results are tabulated below.

Table 2: Pre-concentrate assays and Recovery of Metals to Pre-concentrate

	Pre-concentrate Assays					Recovery			
	Mass %	Au	Ag	Pb	Zn	Au	Ag	Pb	Zn
		g/t	g/t	%	%	%	%	%	%
BRX	48	4.29	169	1.71	1.99	92	94	97	92
Klaza	46	4.94	130	1.40	1.70	93	94	95	91
Low Grade	35	0.79	77	0.43	0.49	80	93	89	85

The objective of the test work on the low-grade composite was to establish if sufficient upgrading was achieved to convert below cut-off grade material to material that would potentially be economic for further processing. This potential will be assessed through both the updated mineral resource estimation and ongoing economic studies, but the more than doubling of all metal grades at high metal recovery, with just a 35% mass pull, is encouraging.

Qualified Persons

Technical information related to the metallurgical test program were provided and approved by Chris Martin, C.Eng. an independent consultant and qualified person for the purpose of National Instrument 43-101. All other technical information related to this news release has been approved by Matthew R. Dumala, P.Eng., a geological engineer with Archer, Cathro & Associates (1981) Limited and qualified person for the purpose of National Instrument 43-101.

About Rockhaven

Rockhaven Resources Ltd. is focused on advancing its 100%-owned, camp-scale Klaza Property, which hosts the Klaza Deposit and numerous lightly explored exploration targets. Rockhaven has completed a mineral resource estimate and a preliminary economic assessment on the Klaza deposit (see Klaza Property Technical Report with an effective date of July 10, 2020 and titled, “Technical Report and Preliminary Economic Assessment Update for the Klaza Property, Yukon, Canada.” which can be viewed at www.sedar.com under the Rockhaven profile or on the Rockhaven website at www.rockhavenresources.com). Rockhaven anticipates the release of a Pre-feasibility study for Klaza in the first half of 2024.

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