

Memorandum

To: Mark Thompson, Vice President of Environmental Affairs, Montana Resources

From: Independent Review Panel (IRP), Yankee Doodle Tailings Impoundment
Dr. Peter Robertson, P.Eng.,
Dr. Leslie Smith, P.Geo.,
Mr. James Swaisgood, P.E.,
Dr. Dirk van Zyl, P.E.

Cc: Mr. Dan Fontaine, Knight Piesold (Vancouver), EOR for YDTI

Subject: Horseshoe Bend Rock Disposal Site: Stage 1 Drainage System Report
(Knight Piesold, December 6, 2021)

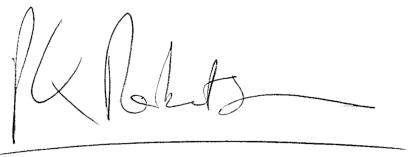
Date: December 17 2021

On November 23, 2021, the Independent Review Panel (IRP) for the YDTI participated in a meeting with Montana Resources (MR) and Knight Piesold (KP) to discuss the design of the Stage 1 Drainage System for the Horseshoe Bend Rock Disposal Site. The intent of the drainage system is to manage both surface water runoff in the Horseshoe Bend (HsB) area and groundwater discharge into the foundation of the Rock Disposal System (RDS). Initial design concepts were discussed with the IRP at meetings in June and September 2021. Prior to the November 23 meeting, the IRP received a draft copy of the Stage 1 Design Report. Following the November meeting the IRP received a copy of the final design report, dated December 6 2021, that addressed several questions discussed during the November meeting.

The IRP highlights the following observations:

- The IRP has previously expressed strong support of eventual placement of waste rock in the Horseshoe Bend area as a risk reduction measure to augment the stability of the YDTI embankment in the central pedestal area and to support eventual reclamation activities. Excess waste rock becomes available in 2023 and this is projected to continue through 2031. Basal drains to control the elevation of the phreatic surface within the foundation of the RDS and to collect contaminated seepage in the area are an essential component of the RDS.
- Foundation conditions in the HsB area are known in sufficient detail to support the design concept at this stage of the project.
- The RDS foundation layer is to be constructed of selectively sourced coarse, fresh to moderately weathered rock from the Continental Pit. Rock from Pipestone Quarry is to be used to construct the rock drains placed within the foundation layer. This material selection is considered appropriate.

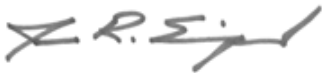
- The layout and design capacity of the surface water diversion ditches to direct flow around the RDS is considered reasonable.
- The estimates of flow volumes that will enter the HsB area following construction of the RDS are based on sound assumptions, and the values reported appear reasonable.
- The overall design concept, incorporating six independent rock drains within the Stage 1 footprint, and the proposed construction sequence presented by KP, are considered by the IRP to be well suited to site conditions.
- A reasonable basis has been adopted for determination of the drain flow capacity requirement. The design is considered appropriately conservative. Redundancy has been incorporated in the design, given the long-term performance requirement following mine closure. The impact of a potential decline in drain conductance has been considered
- Montana Resources has considerable experience in the construction of the proposed rock drains, as the drains are based on a very similar design implemented within the WED on the west side of YDTI. To date, the WED drains have functioned according to design.



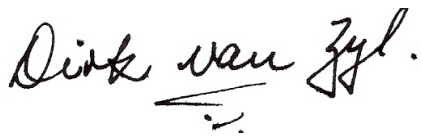
Peter Robertson



Leslie Smith



James Swaisgood



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