LAC

LAC MINERALS (USA) LLC

April 10, 2023

Carmen Rose
Sr. Reclamation Specialist
Mining and Minerals Division
Mining Act Reclamation Program
1220 S. St. Francis Drive
Santa Fe, NM 87505

RE: Cunningham Hill Pit Slope Stability Analysis Proposed Work Plan, Requirement for the Amendment to Application for Revision 20-1 and Proposed Cost Estimate, Closure/Closeout Plan Update, Cunningham Hill Mine, Permit No. FS200RE

Dear Ms. Rose,

As required in your March 10, 2023 email communication, LAC Minerals (USA) LLC hereby provides the attached Cunningham Hill Pit Slope Stability Analysis Proposed Work Plan prepared by Call & Nicholas, Inc. to the New Mexico Mining and Minerals Division.

If you have questions or comments, please contact me at (775) 934-1766 or eburch@barrick.com.

Sincerely,

Eric Burch

Eric Burch
Project Manager

ec: Holland Shepherd
Meghan McDonald
Kevin Myers
Ann Maurer
Ross Lockridge
Joseph Fox
Eric Jantz
Gabe Wade
Tom Parker
Daniel Latin
Brad Bingham
Jon Indall
Elizabeth Rudolf
Sean de Bruin

CALL & NICHOLAS, INC.

2475 N. Coyote Drive
Tucson, Arizona 85745 U.S.A.

Tel: 520.670.9774
Fax: 520.670.9251
E-Mail: cni@cnitucson.com

Principals
T. M. Ryan.
R. W. Pratt
L. R. Standridge
N. A. Asbury

2023-04-10

Mr. Eric Burch
LAC Minerals (USA) LLC
Cunningham Hill Mine Reclamation Project
582 County Road #55
Cerrillos, NM 87010

RE: Cunningham Hill Pit Slope Stability Analysis Proposed Work Plan

Dear Mr. Burch,

Call & Nicholas, Inc. (CNI) is submitting this letter to Mr. Eric Burch of LAC Minerals (USA) LLC (LAC), at the request of the New Mexico Mining & Minerals Division (MMD). LAC is seeking a long-term pit stability review for the Cunningham Hill Mine Reclamation Project (CHMRP) as part of the mine closure requirements for the state of New Mexico. This work will update and expand upon the 1994 CNI memo *Long-Term Stability of Cunningham Pit Slopes* by David Nicholas, P.E. The work activities that form the basis of this project are outlined in the following sections.

Data Review

CNI will conduct a data review of available site publications provided by LAC personnel, as well as the publicly available regional geologic and topographic data. Data to be reviewed includes the 1994 CNI memo and the 2014 report *Geology and Mineral Resources of the Ortiz Mine Grant, Santa Fe County, New Mexico*. Additional data will be sourced through the United States Geological Survey and the New Mexico Bureau of Geology & Mineral Resources.

This review will provide the background information required to accurately describe the geotechnical characteristics of the property during the site visit and will enable the creation of a custom flight plan for the drone photogrammetric survey.

Site Visit

A single day site visit will be planned for a CNI engineering geologist to conduct a full tour of the pit and a holistic geotechnical evaluation of the site. This will be accomplished through documentation of the condition of the pit walls and benches, investigation of any pit crest cracking, measurement of relevant large-scale structures and rock fabric features, and

characterization of the pit wall geology. Specific characterization systems employed will include GSI, RQD, and rock strength estimation by field-determined domains.

The site visit will be accompanied by a CNI drone pilot as well as LAC and MMD personnel and will conform to both CNI and LAC on-site health and safety requirements.

Drone Flight

CNI will conduct a drone photo scan of the mine pit during the site visit. Prior to the visit, CNI will create a drone flight plan of the Cunningham Hill pit using proprietary CNI software. This flight plan uses the site digital elevation model (DEM) provided by LAC to map out a flight route providing for full photographic coverage of the pit while keeping the drone camera gimbal at an angle perpendicular to the slope.

Drone Data Processing

Post-site visit processing will use photogrammetry software to convert the photos to a highly accurate true color 3D point cloud. The point cloud acts as a reference point against which future drone surveys can be compared, showing any surface changes or slope movement and the magnitude of such. Additionally, the point cloud will be used for in-office examination and/or accurate mapping of surface features difficult to reach on foot, such as pit crest or bench top cracking, surface water runoff pathways, and geologic structures.

Slope Stability Analysis

CNI will use information from the data review and data collected during the site visit to characterize the rock mass present on site. No rock strength testing data is available for the property so material strength estimates will be combined with field GSI and RQD domain maps to represent rock-mass strengths. A two-dimensional limit-equilibrium stability analysis using Rocscience Slide2 software will be performed through the most critical pit wall slope geometries to estimate the current factor of safety. Assumptions made during the stability analyses will be clearly notated in the memorandum.

Technical Memorandum

A technical memorandum will be completed after the data review and site visit which will be provided to LAC for review and comment prior to finalization. This memo will summarize the findings of the previous project work and the site visit, will highlight any identified stability issues present in the slopes, and will evaluate potential slope stability impacts to human safety or wildlife. Proposed mitigation strategies for any recognized potential hazards will be included. All data collected as part of this project will also be included as an appendix to the memorandum and will be provided to LAC in electronic format.

Please let me know if you have any questions or comments regarding the work plan for this project. We look forward to discussing the work further during our upcoming virtual meeting and to beginning the project after your approval. I can be contacted at the CNI office at (520) 670-9774 or at my email address below.

Best regards,

Sean M de Bruin
Geologist, AZ Registration # 69206
sdebruin@cnitucson.com