APPENDIX E

Mining and Verification Procedures

SUMMARY OF PHOSPHATE ORE MINING PROCEDURES, AND VOLUME AND TONNAGE VERIFICATION PROCEDURES FOR HUSKY 1 NORTH DRY RIDGE MINE PROJECT

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MINE AND RECLAMATION PLAN

FEDERAL PHOSPHATE LEASES
HUSKY 1 (I-05549)
AND
NORTH DRY RIDGE (ID-8289)
CARIBOU COUNTY,
IDAHO

June 2020

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AND
NORTH DRY RIDGE (IDI-8289)

CARIBOU COUNTY, IDAHO

June 2020

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APPENDIX E

ITAFOS CONDA: SUMMARY OF PHOSPHATE ORE MINING PROCEDURES, AND VOLUME AND TONNAGE VERIFICATION PROCEDURES

The following narrative provides a brief description of ore mining procedures, the processes whereby ore and waste rock volumes and tonnages are determined, ore shipping processes and pre-shipping ore grade sampling and analysis, and product verification reporting.

1. GENERAL MINING PROCEDURES

A description of the mining sequence of Husky 1 (H1) and North Dry Ridge (NDR) is provided in Section 6.0 Plan of Operations of the Husky 1 North Dry Ridge (H1NDR) Mine and Reclamation Plan (MRP).

The H1NDR deposits will be developed using an open pit mining method on a series of 20 to 40-foot bench cuts, utilizing a combination of in-pit retreating ramps and backfill ramps. The primary equipment for ore and waste mining will be a combination of trucks, track mounted excavators, and front-end loaders. A track-hoe excavator will also be utilized to maximize ore recovery in bottom of the pit (Pit Trough).

Development of the H1NDR deposits will proceed along the strike of the ore body by utilizing in-pit retreating and backfill ramps to access the lower pit areas. The retreating ramps will tie into the main haul roads for each respective mining area. The locations of pit ramps will be strategically placed to provide for efficient and costs effective mine scheduling.

Mining phases are illustrated within Section 6.0 of the Mine and Reclamation Plan. Ore will be transported by haul truck to the proposed H1NDR Tipple for ore stockpile placement and subsequent blending. The ore will be transported to the Itafos Conda processing plant by way of rail (approximately 18 rail miles).

2. MINE PIT AND STOCKPILE SURVEYS

Itafos Conda proposes to continue to utilize volume and tonnage verification procedures utilized at recent mining operations such as North Rasmussen Ridge and Rasmussen Valley. Although a daily tally of loads and volumes are estimated from load counts and summarized each shift, volumetric calculations for mine pit extraction and ore stockpiling will be based on detailed topographic surveys. Volumetric verification surveys of the active mining areas and the tipple stockpiles will be completed on a monthly basis and will occur as close as possible to the same day each month. A summary of this process is described below.

The total amount of material removed from the mine pit will be calculated by comparing monthly surveyed topography to a baseline topographic surface (representing final topography of the pit from the preceding year). The surveys will be compared using three-dimensional (3-D) modeling and mine planning software (i.e. Surpac) and a net volume between the two surfaces will be determined which represents in-situ or bank cubic yards (BCY).

As an example, a topographic survey completed at the end of the month will be used as a baseline surface to which the end of the following month will be compared. Total cumulative volumes (in BCY) will be calculated for each month, each year and life-of-mine. Cross sections of the active pit will be extracted from Surpac and provided to the agencies as part of an annual production verification reporting. The cross sections will illustrate the surveyed ore beds along with the permitted pit outline and beginning/end-of-year surfaces.

Near the first day of each month (dependent on weather and scheduling conditions), Itafos surveyors perform a survey of active mining areas including the tipple stockpiles. The total volume of ore on the stockpiles will be determined by comparing monthly surveyed topography to the original baseline topographic surface to extract a net volume between the two stockpile surfaces. The surveys (topographic surfaces) will be compared using Surpac to generate a value representing loose cubic yards (LCY). Ore tonnage will be calculated using an ore density (1.6875 tons/loose cubic yard [T/LCY]) that has been proven to be accurate for recent mining operations – e.g. North Rasmussen and Rasmussen Valley mines. Calculated values will represent an estimated tonnage. Calibrated scales will be used to produce an accurate value of ore mined. The scales will be located at the mine tipple and at the Itafos Conda plant and are discussed in more detail below.

3. ORE SHIPPING

Ore from the stockpiles will be loaded onto 100-ton railcars Rail cars (rated at 100-ton) by means of the proposed H1NDR tipple. Loading scales will be located at the mine tipple. However, these scales will not be used for production verification or royalty payment calculations. Their primary function will be to ensure that rail cars are loaded appropriately. In addition, these values will provide quantity guidelines to estimate the tonnage of ore that is being shipped. Checks and monthly comparisons of the tipple loading scales will be made to ensure the scales are reading correctly. These checks will consist of comparing daily totals between the Tipple reports and the Rollover reports. If unacceptable variances are indicated, the tipple loading scales will be checked recalibrated by a trained Itafos Conda employee or contract scale technician, as needed.

During the loading process, an auto-sampler will be utilized to provide a representative analytical sample of the entire train being loaded. An air cannon will remove sub-samples of the ore stream on the conveyor every couple of minutes, to ensure at least one sample per 100-ton railcar, dripping them down into a series of smaller belts and material cutters until a small stream of ore from the entire train is collected into a five-gallon bucket (this method of sampling ensures a full range of material size is collected in the sample). The volume in the bucket thus represents a composite sample of the entire train's grades. After the train is loaded, the sample bucket will be transported to Itafos Conda's lab facility at the Conda plant. The sample will be processed and analyzed for moisture (H2O), phosphate (P2O5) and other constituents by an Inductively Coupled Argon Plasma (ICAP) Spectrometer which is calibrated using the National Institute of Standards Technology Standard Reference Material 694 – Western Phosphate Rock. The calibration is validated by analysis of Western Phosphate Organization Reference Material #43. The results of the ICAP analysis will be published prior to the arrival of the rail cars at the Itafos Conda plant the following day. The results of the analysis will determine which pile the of ore from the rail cars will be stockpiled. Train samples will be sent back to the mine and made available for verification by the regulating agencies.

Prior to shipping ore from the tipple stockpile to the Itafos Conda plant, a scale calibration, performed by a third-party scale expert, will be conducted on the rollover belt scale located at the Itafos Conda plant. Federal and State agencies will be notified of calibration dates so that each agency can observe the calibration process. Due to the location of the certified scale in relation to car unloading process, the rollover belt scale is the official regulatory determination point from which all disposition tons will be officially measured and the point of royalty determination.

On a monthly basis, a trained Itafos employee will ensure the Certified Rail Scale, located at the Itafos Conda plant, is certified by the Idaho State Department of Agriculture Bureau of Weights and Measures and to calibrate with the rollover belt to within 0.5%. This comparison test is performed monthly, almost exclusively, the first Tuesday of the month. The scales at the mine are calibrated but not certified as these scales will only be used for the purpose of loading rail cars. Calibration of the mine scales are performed by a trained Itafos employee.

Ore tonnages shipped during the shipping season (approximately April 1 through October 31) will be converted back into BCY using a conversion factor of 1.627 T/BCY. This value is subtracted from pit survey volume (in BCYs) to generate a waste mined BCY volume. The surveyed ore volume will be subtracted from the overall volume of material removed from the pit. This will provide a running (monthly) total of waste rock removed from the pit.

To date, ore densities have been very consistent. Itafos Conda has utilized the density that the former owner of the Dry Valley mine used and has found that remaining end-of-shipping stockpile volumes match very closely with what was projected. Itafos Conda has also used the same Wooley Valley densities since 1998, and remaining end-of-shipping stockpile volumes have also matched very closely with what was projected. Itafos Conda's current density values of 1.6875 T/LCY (ex-situ) and 2.0 T/BCY (in-situ) will be applied to ore from the H1NDR Mine. However, if ore densities at H1NDR prove to be significantly different, then this value will be adjusted accordingly.

4. PRODUCT VERIFICATION REPORTING FORMAT

Ore volumes and tonnages calculated using the methods described above will be included in Product Verification Reports, submitted to the BLM annually. Additional information included in these reports is described in the following report outline.

I. Itafos Conda: Summary of Phosphate Ore Volume and Tonnage Verification Procedures
   a. Stockpile Topographic Survey
      i. Survey all crests and toes of all piles
      ii. Note date and time of survey
      iii. Note train number being loaded if applicable
      iv. Note any "loaded spare" railcars
      v. Note truckload of ore hauled during re-measure if applicable
   b. Calculate Stockpile Volume
      i. Using appropriate and accepted computer software
      ii. Utilize stockpile baseline survey to run volumes against
      iii. Multiply stockpile volume by density factor to calculate stockpile tonnage
      iv. Several spare railcars ("loaded spares") are occasionally loaded and staged at the tipple if railcars are out of service for maintenance or other issues. As part of the stockpile volume calculation, the "loaded spares" tonnage is added back into the stockpile volume.
         1. Railcar volume has not passed over certified scales so must be included in stockpile volume
      v. Determine if truckloads hauled during re-measure should be included in stockpile volume or pit volume and adjust accordingly
      vi. Collect tonnage of train loaded during re-measure and adjust stockpile volume as needed to represent volume on pile.
         1. If most of the train is loaded, ignore volume as tonnage will be included in certified scale reading. If survey completed before ½ of train is loaded, add ½ train tonnage back to stockpile.

2. Ultimately this is irrelevant as all ore will pass over scales. This is more a function of attempting a closer calculation of stockpile density.

c. Mine Pit Topographic Survey
    i. Survey all active areas mined from baseline survey
    ii. Identify and measure all "re-handle" material in pit.

d. Calculate mine pit volume
    i. Using appropriate and accepted computer software
    ii. Utilize pit baseline survey to run volumes against
    iii. Calculate total excavated and removed material
        1. Subtract the re-handle volume from overall volume as this material has not been removed from pit.
    iv. Subtract ore volume from total volume to calculate total waste volume.

II. Train Sample Recovery and Analysis

a. Representative sample of each train is collected and delivered to Itafos Conda plant lab for analysis
    i. Sample is collected from auto-sample system located on load-out tipple
        1. Auto-sampler is calibrated to ASTM standards to provide representative sample of complete train
    ii. Itafos Conda plant lab prepares sample
        1. sample returned to mine for agency inspection
    iii. Itafos Conda plant lab analyzes sample and provides results to mine.

III. Product Verification Documentation for Agencies

a. Provide surveyed cross sections, from pit surveys, for actively mined pit
    i. Sections on modeled interval
        1. Indicate pit design
        2. Indicate beginning survey surface and date
        3. Indicate ending survey surface and date
        4. Indicate modeled ore beds

b. Provide Itafos Conda lab train sample results for each daily train sample
    i. Includes train tonnage as reported by certified scale at Itafos Conda plant

c. Provide representative pulp samples for each daily train sample
    i. Agency representative historically has collected a random amount of the samples to check against reported grades