

Board of Minerals and Environment

523 East Capitol Avenue
Pierre, South Dakota 57501-3182
(605)773-3151 Fax: (605)773-4068

Live audio of the meeting is available at <http://www.sd.net>
The board packet is available on the Boards and Commissions Portal
at <https://boardsandcommissions.sd.gov/Meetings.aspx?BoardID=67>

AGENDA

Board of Minerals and Environment
Telephone Conference Call Meeting
DANR Large Conference Room
523 East Capitol Avenue
Pierre, South Dakota

May 19, 2022
10:00 a.m. Central Time

Call to order and roll call

Approval of minutes from April 21, 2022, meeting

Mining Issues

Consent Calendar – Tom Cline

Acceptance of Post Closure Financial Assurance Increase for LAC Minerals (USA),
LLC, Large Scale Mine Permit 445 – Eric Holm

Acceptance of Financial Assurance Increase for Wharf Resources (USA), Inc., Large
Scale Mine Permits 356, 434, 435, 464, & 476 – Eric Holm

Annual update of Preliminary List of Special, Exceptional, Critical, or Unique Lands -
Eric Holm

Oral Mining Reports

LAC Minerals (USA), LLC
Homestake Mining Company
Wharf Resources (USA), Inc.

Update on Brohm EPA Superfund Site – Roberta Hudson

Public comment period in accordance with SDCL 1-25-1

Next meeting – June 16, 2022

Adjourn

Interested parties who wish to participate in the telephone conference call may do so by contacting Brenda Binegar at (605) 773-3886 no later than 4:00 p.m. Central Time on Wednesday, May 18, 2022. Interested parties may also participate in person at the DANR Large Conference Room, 523 East Capitol Avenue, Pierre, SD. If you are not feeling well, please stay home and utilize the livestream or call-in information for the meeting. Those attending in person are encouraged to follow appropriate social distancing guidelines.

Notice is given to individuals with disabilities that the meeting is being held in a physically accessible location. Please notify the Department of Agriculture and Natural Resources by calling (605) 773-5559 at least 48 hours prior to the meeting if you have a disability for which special arrangements are required.

The audio recording for this meeting is available on the South Dakota Boards and Commissions Portal at <http://boardsandcommissions.sd.gov/Meetings.aspx?BoardID=67>

Minutes of the
Board of Minerals and Environment
Matthew Training Center
523 East Capitol Avenue
Pierre, South Dakota

April 21, 2022
10:00 a.m. Central Time

CALL TO ORDER: The meeting was called to order by Vice Chairman Glenn Blumhardt. The roll was called, and a quorum was present.

Vice Chairman Blumhardt announced that the meeting was live-streaming on SD.net, a service of South Dakota Public Broadcasting.

BOARD MEMBERS PRESENT: Glenn Blumhardt, Gregg Greenfield, Doyle Karpen, Jessica Peterson, Daryl Englund, and Bob Morris participated in-person. John Scheetz participated via telephone conference call.

BOARD MEMBERS ABSENT: Rex Hagg and Dennis Landguth.

OTHERS PRESENT: Mike Lees, Roberta Hudson, Mike Erickson, DANR Minerals and Mining Program; Kent Woodmansey, Agriculture and Environmental Services; Kyrik Rombough, Rick Boddicker, Anthony Lueck, and Duncan Jakubowski, DANR Air Quality Program; Mark Tieszen and Jeff Burich, Barrick participated via telephone conference call.

APPROVAL OF MINUTES FROM MARCH 17, 2022, MEETING: Daryl Englund pointed out that on page 1 under "Mining Issues Consent Calendar" the third line in the second paragraph should be changed from "Don Driech" to "Don Kriech."

Motion by Englund, seconded by Greenfield, to approve the minutes from the March 17, 2022, Board of Minerals and Environment meeting, as amended. Motion carried.

PUBLIC HEARING TO CONSIDER THE SECOND ROUND REVIEW OF THE STATE IMPLEMENTATION PLAN FOR THE REGIONAL HAZE PROGRAM: Vice Chairman Blumhardt opened the hearing at 10:05 a.m.

In the 1990 Clean Air Act Amendments, Congress added section 169B to strengthen and reaffirm the national goal and address visibility impairment from a collection of sources whose emissions are mixed and transported over long distances to Class I Areas. South Dakota currently has two Class I Areas, Badlands National Park and Wind Cave National Park.

South Dakota's second round State Implementation Plan addresses the following:

- In accordance with 40 CFR §51.308(f), a commitment to conduct comprehensive

periodic revisions of South Dakota's State Implementation Plan for its Regional Haze Program, and the requirements for those periodic comprehensive revisions of the implementation plans;

- In accordance with 40 CFR §51.308(g), a commitment to periodically report the progress towards achieving reasonable progress goals;
- In accordance with 40 CFR §51.308(h), a commitment to determine the adequacy of the existing implementation plan; and
- In accordance with 40 CFR §51.308(i), the requirements for continued coordination with states and federal land managers.

Under the Regional Haze Program, the Federal Land Managers, which consist of the US Fish and Wildlife Service, the US Forest Service, and the National Park Service, are provided the opportunity to submit comments prior to the public hearing. During this period, the Federal Land Managers provided comments requesting South Dakota require additional emission control measures on its facilities during this second implementation plan period. The Federal Land Managers also requested South Dakota account for additional impacts to visibility from smoke due to the Federal Land Managers plan to increase the use of prescribed fires to address wildfire risks. The Federal Land Managers' specific and detailed comments can be viewed in Appendix A of the draft State Implementation Plan, which can be found on DANR's website at: <https://danr.sd.gov/Environment/AirQuality/RegionalHaze/default.aspx>

Rick Boddicker, DANR Air Quality Program, reported that the 30-day public comment period closed on April 20, 2022. DANR received additional written comments from EPA Region 8, the Sierra Club, and the National Park Service on April 20, 2022. He provided copies of the comments to the board members for their consideration.

The original State Implementation Plan was submitted in 2011. The plan was approved the EPA. The majority of that work included the controls that would be required at Big Stone Power Plant.

A five-year progress report was submitted to EPA and approved in 2016, which showed improvements that were made from those controls and other controls at facilities throughout the region.

Mr. Boddicker stated that the department is not proposing any new rules during this round.

Anthony Lueck provided a slide presentation discussing South Dakota's Regional Haze State Implementation Plan proposal. The slide presentation is available on the Boards and Commission Portal at [https://boardsandcommissions.sd.gov/bcuploads/April%202022%20BME%20Packet%20\(1\).pdf](https://boardsandcommissions.sd.gov/bcuploads/April%202022%20BME%20Packet%20(1).pdf).

In response to a question from the board members, Kyrik Rombough stated that the Regional Haze Program requires each state to conduct a full update of its Regional Haze State Implementation Plan every 10 years and to determine if additional controls need to be added to the plan.

EPA's rule requires states to establish goals that provide for reasonable progress toward achieving natural visibility conditions for each Class I area in the state by 2064. South Dakota is projected to meet the goal at Badlands by 2028 and shortly thereafter at Wind Cave.

Mr. Boddicker stated that following the staff's four factor analysis, the department determined that no additional control measures are needed at this time, and the department recommended that the board approve the Regional Haze State Implementation Plan.

Mr. Lueck and Duncan Jakubowski with the Air Quality Program read a summary of all of the comments submitted and the department's response to each comment.

Motion by Greenfield, seconded by Englund, to approve the Regional Haze State Implementation Plan, as presented. A roll call vote was taken, and the motion carried. Due to technical issues with the conference phone, Mr. Scheetz's vote was not heard.

The South Dakota Regional Haze State Implementation Plan will be submitted to EPA for approval.

MINING ISSUES CONSENT CALENDAR: Prior to the meeting, the board received a table listing the department recommendations for transfers of liability and release of surety, releases of liability, and transfer of liability. (See attachment)

Motion by Morris, seconded by Greenfield, to accept the department recommendations for transfers of liability and release of surety, releases liability, and transfer of liability, as listed on the consent calendar. Motion carried unanimously.

UPDATE OF POST CLOSURE FINANCIAL ASSURANCE FOR LAC MINERALS (USA), LLC: Roberta Hudson stated that the table that was included in the board packet had an incorrect surety amount for LAC Minerals. The correct amount is \$20,340,657.

Ms. Hudson presented a slide presentation that was prepared by Eric Holm.

The Board of Minerals and Environment approved the 100-year post-closure period in October 2015. At that time, 220.64 released, reclaimed acres and 73.33 unreclaimed acres used for water management and treatment were placed under the post-closure plan. The post-closure bond is recalculated during the five-year review.

The department is requesting approval of an update to LAC Minerals' post-closure financial assurance. The post-closure period under the bond is reduced to 94 years and ends in 2115. Credit was given for activities completed up to post-closure year six (2021). The post-closure financial assurance covers water treatment, monitoring, and maintenance of post-closure areas.

The current financial assurance is \$20,340,567, and the updated financial assurance amount is \$30,838,220, which is an additional \$10,497,653 in financial assurance.

The reasons for this increase include inflation for labor, heavy equipment and seed costs, water treatment, water sampling and analysis, and year 94 site closure costs. The increase also includes new costs for pipeline and power line removal, increase support staff, sales tax, and final closure monitoring and fence removal for five years after site closure is completed.

The post-closure financial assurance is based on perpetual water treatment calculations developed by other state and federal agencies, a present worth analysis of annual costs adjusted for inflation. The post-closure bond is calculated using the sum of the present worth. For the actual water treatment costs, staff used LAC Minerals' actual water treatment and maintenance costs for the last five years.

The following shows the annual operation and maintenance costs:

Road Maintenance	\$8,243
ATV Side-by-Side (Every 10 Years)	\$30,000
Weed Control	\$10,303
Fence Repair & Maintenance	\$3,189
Erosion Control	\$1,985
Two Vehicles (Every 10 Years)	\$64,000
Vehicle Fuel & Maintenance	\$8,872
Caretaker/Water Sampler	\$55,577
Pond Liner Maintenance/Repair	\$4,142
Pond liner Replacement (Every 25 Years)	\$1,585,660

Ms. Hudson stated that, using information provided by LAC Minerals regarding the actual costs over the last five years, staff calculated the amounts for weed control, fence repair and maintenance, erosion control, vehicle fuel and maintenance, and pond liner maintenance and repair. The road maintenance costs are for the site caretaker to use a grader at the site, as necessary. The ATV costs are for access areas around the site. The pond line replacement is currently assessed at \$2.00 per square foot for 815,000 square feet of liner in the storage and Spruce Gulch ponds.

Below are the operation and maintenance annual indirect costs:

Mobilization*	5%
Contractor Overhead	8%
State Excise Tax	2%
Contractor Profit	10%
Contingency	5%
Administration	5%
Engineering/Consulting	1%
Scope and Bid*	5%

*Applied every 10 years beginning in year 7 (adjusted year 1)

The annual water treatment costs are as follows:

Plant Reagents	\$52,338
Propane	\$14,391
Electricity	\$131,978
Diesel	\$2,217
Rental	\$2,520
Equipment Replacement Costs	\$26,855
Long-Term RO Unit Replacement (Every 25 years)	\$300,000
Long-Term Plant Replacement (Every 25 years)	\$200,000

Ms. Hudson noted that the costs listed for the first six items are based on LAC Minerals' average costs over the past five years.

The plant manager and operator costs are not addressed in the LAC post-closure bond because the water treatment plant is controlled remotely at Homestake's Blacktail Treatment Plant, so those costs are covered under Homestake's post-closure bond.

Below are the water treatment annual indirect costs:

Mobilization*	5%
Contractor Overhead	8%
State Excise Tax	2%
Contractor Profit	10%
Contingency	10%
Administration	5%
Engineering/Consulting*	3%
Scope and Bid*	

*Applied every 10 years beginning in year 7 (adjusted year 1)

The annual monitoring costs associated with the mine are listed below:

Water Sample Analysis	\$38,786
(Post-closure years 7, 12, and 17)	\$40,097
Aquatic/Biological Monitoring	\$35,000
(Post-closure years 7, 12, and 17)	
Water Sampling Equipment	Varies from \$3,376 to \$9,730
Pit Impoundment Monitoring	\$13,000

Ms. Hudson stated that these analyses are based on the required parameters for the site. This is evaluated with the lab costs with a 15% discount. The post-closure cost for years 7, 12, and 17 is based on additional parameters that are required as part of the aquatic and biological monitoring. The aquatic/biological monitoring is scheduled to end in post-closure year 17 based on current surface water discharge requirements. The yearly cost for pit impoundment monitoring is based on LAC Minerals' actual costs from 2016 to 2021.

Below are the monitoring annual indirect costs:

Mobilization*	5%
Contractor Overhead	8%
State Excise Tax	2%
Contractor Profit	10%
Contingency	5%
Administration	5%
Scope and Bid*	5%

*Applied every 10 years beginning in year 7 (adjusted year 1).

Not applied to analysis costs.

Below is a list of final closure costs for year 94:

Surveyor	\$27,592
Plug Monitoring Wells	\$99,202
Spruce Gulch Facilities/Ponds	\$163,660
South Gulch Facilities/Ponds	\$22,747
Process Area Water Treatment Facility	\$503,286
Maintenance/Geo Buildings	\$91,569
Haul Road/New Access	\$410,298
Building and Other Demolition	\$132,108
Pipeline and Powerline Removal	\$735,085
Labor	<u>\$299,671</u>
Total Base Closure Cost	\$2,413,218

This is a list of year 94 final closure indirect costs:

Base Closure Cost	<u>\$2,413,218</u>
5% Mobilization	\$120,661
1% Performance Bond	\$24,132
8% Contractor Overhead	\$193,057
2% State Excise Tax	\$48,264
10% Contractor Profit	\$241,322
10% Contingency	\$241,322
5% Administration	\$120,661
3% Engineering/Consulting	\$72,397
2% Scope and Bid	<u>\$120,661</u>
Total Closure Cost	\$3,595,695

The cost for inspection and monitoring and final fence removal five years after closure (year 99) is \$51,497.

The five-year monitoring indirect costs are shown below:

Mobilization*	5%
Contractor Overhead	8%
State Excise Tax	2%
Contractor Profit	10%
Contingency	10%
Administration	5%
Scope and Bid*	5%

*Applied in years 101 and 105 (adjusted years 95 and 99)

There are additional costs for a cap failure contingency in the amount of \$200,000 and cap failure mitigation in the amount of \$100,000.

In development of the post-closure financial assurance, staff had discussions with the State Investment Council regarding the proper inflation and discount rates. Historically, there has been

a 2% difference between the two rates, with the inflation rate at 3% and the discount rate at 5%. Those two rates are applied to all large-scale gold post-closure bonds. Each total annual cost (direct plus indirect) is first adjusted for inflation. The future value of each annual cost is calculated using the 3% inflation factor over the 100-year period.

The present worth brings the future value back to today's dollars. The present worth of each inflated value is calculated using a discount rate of 5% over the 100 years.

Year one of the adjusted post-closure period is year 7 of the project period. Escalation and present worth factors begin at year 7.

Ms. Hudson explained an example of the present worth analysis. The present value from year 1 to year 99 is \$29,369,733. The face value in 2022 is \$30,838,220.

Ms. Hudson stated that if the board approves the amount of the updated post-closure financial assurance, LAC Minerals will submit a surety bond rider with the new amount. The surety bond rider will be presented to the board for approval at its May 19, 2022, meeting.

The department recommended that the board approve the increase in LAC Minerals' post-closure financial assurance from \$20,340,567 to \$30,838,220.

Ms. Hudson answered questions from the board about the post-closure financial assurance.

Mr. Greenfield expressed concern that if LAC Minerals defaults on the post-closure requirements, the board may not be able to collect the entire amount of the financial assurance at once from the surety company.

Motion by Karpen, seconded by Morris, to increase the LAC Minerals (USA), LLC post-closure financial amount to \$30,838,220. Motion carried.

TRANSFER OF SMALL SCALE MINE PERMIT 479 FROM TIMMY R. HORN TO ROBERT W. PACE: Ms. Hudson reported that Robert W. Pace requested transfer of Small Scale Mine Permit 479 from Timmy R. Horn. The location of the permitted operation is approximately three miles east of Rochford, SD. Under SDCL 45-6B-47, any mine permit can be transferred from one operator to another with the successor operator assuming all reclamation liability.

The transfer application form was submitted and deemed complete on March 28, 2022. The \$100 transfer fee was submitted on February 28, 2022, and the \$2,500 replacement surety was submitted on March 23, 2022.

The department recommended transfer of the permit on March 28, 2022. The recommendation was published in the Rapid City Journal on April 7 and 14, 2022. Affidavits of Publication were received on April 19, 2022.

No petitions to intervene were received.

Board of Minerals and Environment
April 21, 2022, Meeting Minutes

Under SDCL 45-6B-47, the board cannot deny a mine permit transfer unless the operation is not or cannot be brought into compliance with all applicable federal, state or local laws or the successor operator is in violation of state mining laws or mine permit conditions for any mining operation in the state. The current mine permit and Robert W. Pace are in compliance with all federal, state, and local laws and regulations. Robert W. Pace also submitted a Certification of Applicant form and disclosed no violations.

Staff recommendation was to transfer Small Scale Mine Permit 479 to Robert W. Pace and release CD No. 220146644, First Interstate Bank, Gillette, Wyoming, in the amount of \$2,500 and accept CD No. 6701000601, First Interstate Bank, New Underwood, SD, in the amount of \$2,500.

In response to a question from Mr. Morris, Ms. Hudson stated that under SDCL 45-6B the bond for a small scale mine permit is capped at \$2,500.

Motion by Karpen, seconded by Peterson, to transfer Small Scale Mine Permit 479 to Robert W. Pace and release CD No. 220146644, First Interstate Bank, Gillette, Wyoming, in the amount of \$2,500 and accept CD No. 6701000601, First Interstate Bank, New Underwood, SD, in the amount of \$2,500. Motion carried.

PUBLIC COMMENT PERIOD IN ACCORDANCE WITH SDCL 1-25-1: There were no public comments.

NEXT MEETING: The next meeting will be via telephone conference call on May 19, 2022.

ADJOURN: Motion by Morris, seconded by Greenfield, to adjourn the meeting. A roll call vote was taken, and the motion carried unanimously.

Secretary

Date

Witness

Date

*Consent Calendar
South Dakota Board of Minerals & Environment*

April 21, 2022

<u>License Holder</u>	<u>License No.</u>	<u>Site No.</u>	<u>Surety Amount</u>	<u>Surety Company or Bank</u>	<u>DENR Recommendation</u>
<u>Transfer of Liability & Release of Surety:</u>					
Cannon River Ranches Inc. Miller, SD	08-860		\$1,000	The First National Bank of River Falls, River Falls, WI	Transfer liability and release \$1,000.
		860001	NW1/4 Section 11; T109N-R71W, Hyde County		
Transfer to:					
W6 Ranch Ree Heights, SD	22-1108		\$2,000	Quoin Financial Bank, Miller	
Donald Cuka Huron, SD	97-624		\$500	First National Bank, Pierre	Transfer liability and release \$500.
		624001	S1/2 Section 34; T96N-R56W, Yankton County		
Transfer to:					
Jason Fischer dba Fischer Gravel Lesterville, SD	08-862		\$500 \$2,000	First National Bank, Yankton First Dakota National Bank, Yankton	
Robert Weverstad Yankton, SD	94-533		\$2,000	First Dakota National Bank, Yankton	Transfer liability and release \$2,500.
		533001	\$500 W1/2 NE1/4 Section 25; T94N-R56W, Yankton County	Wells Fargo Bank, Yankton	
Transfer to:					
Prairie Creek Ranch LLC Yankton, SD	22-1110		\$2,500	CorTrust Bank, Yankton	

Consent Calendar
South Dakota Board of Minerals & Environment

April 21, 2022

<u>License Holder</u>	<u>License No.</u>	<u>Site No.</u>	<u>Surety Amount</u>	<u>Surety Company or Bank</u>	<u>DENR Recommendation</u>
<u>Release of Liability:</u>					
B & B Contracting Inc. Aberdeen, SD	01-716	716004	\$20,000	North American Specialty Insurance Company N1/2 Section 4; T124N-R63W, Brown County	Release liability.
Bowes Construction Inc. Brookings, SD	83-164	164031	\$20,000	Hudson Insurance Company NE1/4 Section 31; T117N-R57W, Clark County	Release liability.
Carr Towing & Construction Redfield, SD	87-349	349006	\$7,030	Heartland State Bank, Tulare Heartland State Bank, Redfield NE1/4 Section 16; T116N-R67W, Hand County	Release liability.
<u>Transfer of Liability:</u>					
WC Land, LLC Crooks, SD	18-1044	1044001	\$20,000	United Fire & Casualty Company SE1/4 Section 18; T109N-R49W, Brookings County	Transfer liability.
Transfer to:					
Winter Contracting, LLC Volga, SD	19-1049		\$20,000	United Fire & Casualty Company	

South Dakota Board of Minerals & Environment

April 21, 2022

<u>Permit Holder</u>	<u>Permit No.</u>	<u>Surety Amount</u>	<u>Surety Company or Bank</u>	<u>DENR Recommendation</u>
<u>Transfer of Small Scale Mine Permit 479:</u>				
Timmy R. Horn Aurora, CO	479	\$2,500	First Interstate Bank, Gillette, WY	Transfer liability and release CD No. 220146644, First Interstate Bank, Gillette, WY, in the amount of \$2,500. Accept CD No. 6701000601, First Interstate Bank, New Underwood, in the amount of \$2,500.
			E1/2 SE1/4 NW1/4 Section 28; T2N-R4E, Pennington County	
Transfer to:				
Robert W. Pace New Underwood, SD		\$2,500	First Interstate Bank, New Underwood	
<u>Update of Post Closure Financial Assurance for LAC Minerals (USA), LLC :</u>				
LAC Minerals (USA), LLC Central City, SD	445	\$20,340,567	Fidelity & Deposit Company of Maryland Zurich American Insurance Company	Recommend increasing the Post Closure Financial Assurance amount to \$30,838,220.

ATTENDANCE SHEET
BOARD OF MINERALS AND ENVIRONMENT
DATE 4-21-22

NAME (PLEASE PRINT)

ADDRESS

REPRESENTING

Rick Bocklicker

Pierre

DANR

Duncan Jakubowski

Pierre

DANR

Kent Woodmarsey

Pierre

DANR

Kyril Rombough

Pierre

DANR - ~~AD~~

Roberta Hudson

Pierre

DANR-mm

M. K. Lees

"

"

Anthony Weck

Pierre

"

Consent Calendar
South Dakota Board of Minerals & Environment

May 19, 2022

<u>License Holder</u>	<u>License No.</u>	<u>Site No.</u>	<u>Surety Amount</u>	<u>Surety Company or Bank</u>	<u>DENR Recommendation</u>
<u>Transfer of Liability & Release of Surety:</u>					
Theodore Wasilk Waubay, SD	20-1078		\$2,000	Minnwest Bank, Summit	Transfer liability and release \$2,000.
		1078001	NW1/4 Section 1; T123N-R53W, Day County		
		1078002	E1/2 SW1/4 Section 36; T124N-R53W, Day County		
Transfer to:					
Nick Wasilk Waubay, SD	22-1109		\$3,500	Minnwest Bank, Summit	
<u>Release of Liability:</u>					
H & H Land Company #2 LLC Rapid City, SD	20-1067		\$10,000	First Interstate Bank, Rapid City	Release liability.
		1067002	W1/2 Section 13, NE1/4 Section 24 & W1/2 Section 18, Section 19; T1S-R10E; T1S-R9E, Pennington County		
		1067003	E1/2 NE1/4 Section 26 & Section 25; T1S-R9E, Pennington County		

Consent Calendar
South Dakota Board of Minerals & Environment

May 19, 2022

<u>License Holder</u>	<u>License No.</u>	<u>Site No.</u>	<u>Surety Amount</u>	<u>Surety Company or Bank</u>	<u>DENR Recommendation</u>
<u>Release of Liability:</u>					
Morris Inc. Pierre, SD	83-2		\$20,000	United Fire & Casualty Company	Release liability.
		2017		W1/2 NW1/4 Section 3; T120N-R73W, Potter County	
		2033		Section 20; T13N-R22E, Dewey County	
		2035		W1/2 Section 6; T41N-R36W, Jackson County	
		2037		NE1/4 Section 4; T5N-R6E & SE1/4 Section 33; T6N-R6E, Meade County	
		2045		N1/2 SW1/4 Section 11; T126N-R77W, Campbell County	

South Dakota Board of Minerals & Environment

May 19, 2022

<u>Permit Holder</u>	<u>Permit No.</u>	<u>Surety Amount</u>	<u>Surety Company or Bank</u>	<u>DENR Recommendation</u>
<u>Acceptance of Post Closure Financial Assurance for LAC Minerals (USA), LLC :</u>				
LAC Minerals (USA), LLC Central City, SD	445	\$20,340,567	Fidelity & Deposit Company of Maryland Zurich American Insurance Company	Accept rider to Bond No. 09177703, Fidelity & Deposit Company of Maryland and Zurich American Insurance Company, increasing the Post Closure Financial Assurance amount to \$30,838,220.
<u>Acceptance of Financial Assurance for Wharf Resources (USA), Inc.:</u>				
Wharf Resources (USA), Inc. Lead, SD	356, 434, 435, 464, & 476	\$731,300	United States Fire Insurance Company	Accept rider to Bond No. 612408650, United States Fire Insurance Company, increasing the Financial Assurance amount to \$760,600.

BARRICK

Richmond Hill Mine

**NYSE : GOLD
TSX : ABX**

**World class mines.
World class people.**

Annual Report to the South Dakota Board of Minerals and Environment
May 19, 2022



Reclamation Acreage Overview



▪ Total Released Acres	265.94
▪ Total Remaining Affected Acres	76.34
▪ Un-reclaimed Acres (for water treatment)	73.33
▪ Reclaimed Affected Acres	0.35
▪ Acreage to be reclaimed in short-term	2.66

2021 Activities

Option Agreement with Dakota Gold



- Barrick entered into an Option Agreement with Dakota Gold Corp. (previously Dakota Territory Resource Corp.) in 2021 to acquire the Homestake and Richmond Hill Properties
- Dakota Gold may exercise the Option on or before September 7, 2024

Sludge Removal from Storage Pond

- Sludge is being removed from the sludge pond in preparation for relining in 2022
- Sludge is being deposited in the onsite sludge pond
- Approximately 3,000 yd³ were removed in 2021 with 5,000 yd³ remaining



Water Management and Treatment

Water Management and Treatment



Leach Pads and Ponds

- Biological Water Treatment Plant Operations – Se Treatment
- Operated Biological WTP with RO discharging 14.55 million gallons
- Operated Biological WTP independently over winter months during 2021 discharging 5.85 million gallons

Leach Pads and Ponds

- Approximately 12 million gallons of water are currently stored in treatment ponds
- Leach pad effluent flows averaged approximately 17.6 gpm in 2021

Leach pad effluent flows in 2021 were lower than 2020 average flows of 31.8 gpm as precipitation was below average in both 2020 and 2021, resulting in lower infiltration rates; (precipitation was 21.65 inches in 2020 and 23.57 inches in 2021)

Spruce Gulch - Reclaimed Site of Waste Rock Disposal Facility

- Water treatment - pH adjustment with sodium hydroxide as needed
- Nearby South Gulch water is pumped to Spruce Gulch Treatment Pond for treatment

Monitoring Activities

Pit Impoundment and Leach Pad Monitoring



- The 2021 Pit Backfill Monitoring/Capping System Monitoring continues to indicate that the cap is functioning to and better than design expectations
- The leach pad capping system continues to perform well limiting infiltration

Sitewide Water Quality Monitoring



- Water Quality at the site is generally stable or improving
- Cleopatra Creek water quality monitoring confirms there are no impacts from the Richmond Hill Mine
- Monitoring is continuing and site-specific performance criteria were developed in consultation with DANR and approved by the Board to ensure continued protection of the environment in postclosure

2022 Richmond Hill Mine Plans



- Replace storage pond liner
- Replace RO
- Continue Water Treatment
- Continue Monitoring Activities

Thank you

BARRICK

Homestake Mining Company

**NYSE : GOLD
TSX : ABX**

**World class mines.
World class people.**

Annual Report to the South Dakota Board of Minerals and Environment
May 19, 2022



Homestake/Richmond Hill 2021 Employment and Contributions

Yearend employment: 10 FTE's + 2 FT contract employees and 1 part-time employee

2021 Contributions: \$10,760

Homestake Mine Open Cut Review



Reclamation has been completed at the waste rock facilities.

As of the end of 2021:

- 555 acres released
- 87 remaining affected acres
- Reclamation is complete on all remaining affected acres

2021 Activities

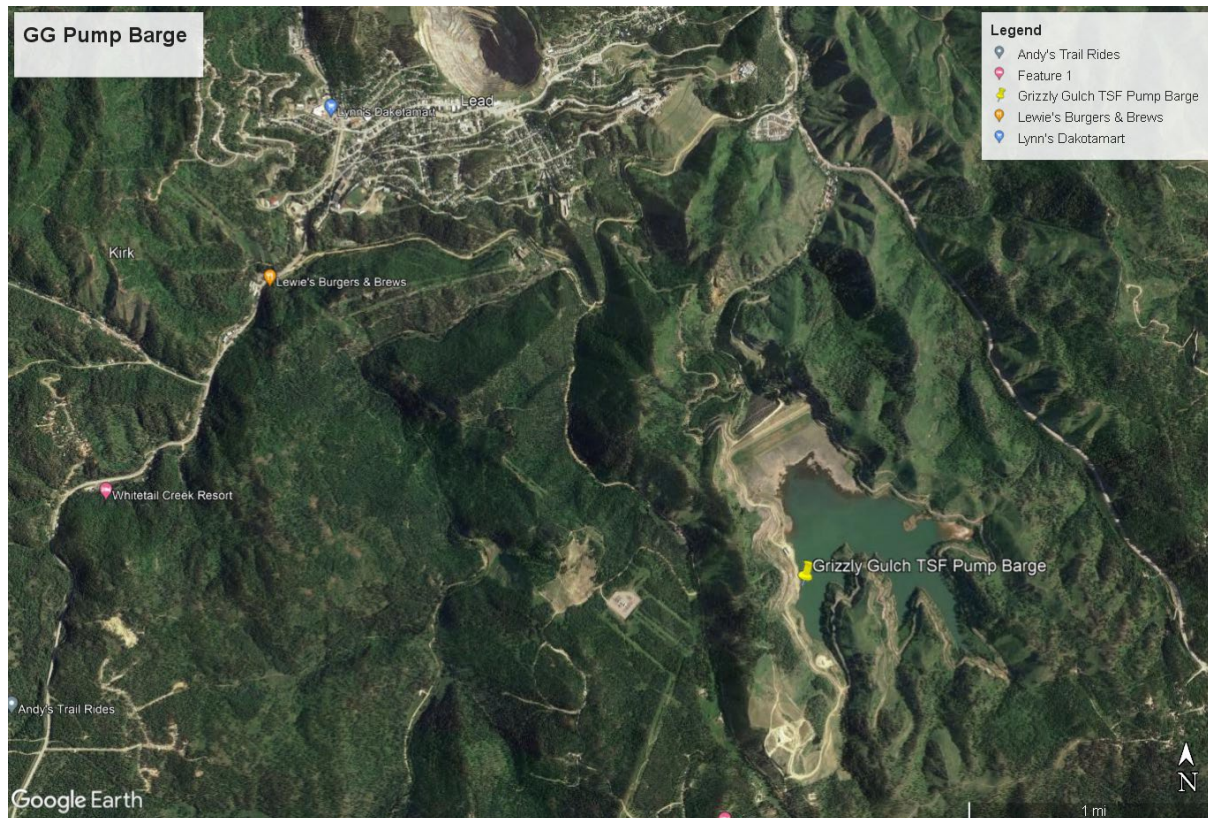
Option Agreement with Dakota Gold



- Barrick entered into an Option Agreement with Dakota Gold Corp. (previously Dakota Territory Resource Corp.) in 2021 to acquire the Homestake and Richmond Hill Properties
- Dakota Gold may exercise the Option on or before September 7, 2024

TSF Barge Landing Improvements

- The Grizzly Gulch Tailings Storage Facility barge access road and landing were extended
- Allows the barge pumps to be extended into deeper, cooler water
- Provides improved access to the pumps. Pumps can be reached with a crane for maintenance



2021 Monitoring

Water Quality Monitoring

- Monitoring in 2021 continues to show that Surface Water around the Homestake Mine site remains Excellent and meets all Water Quality Standards

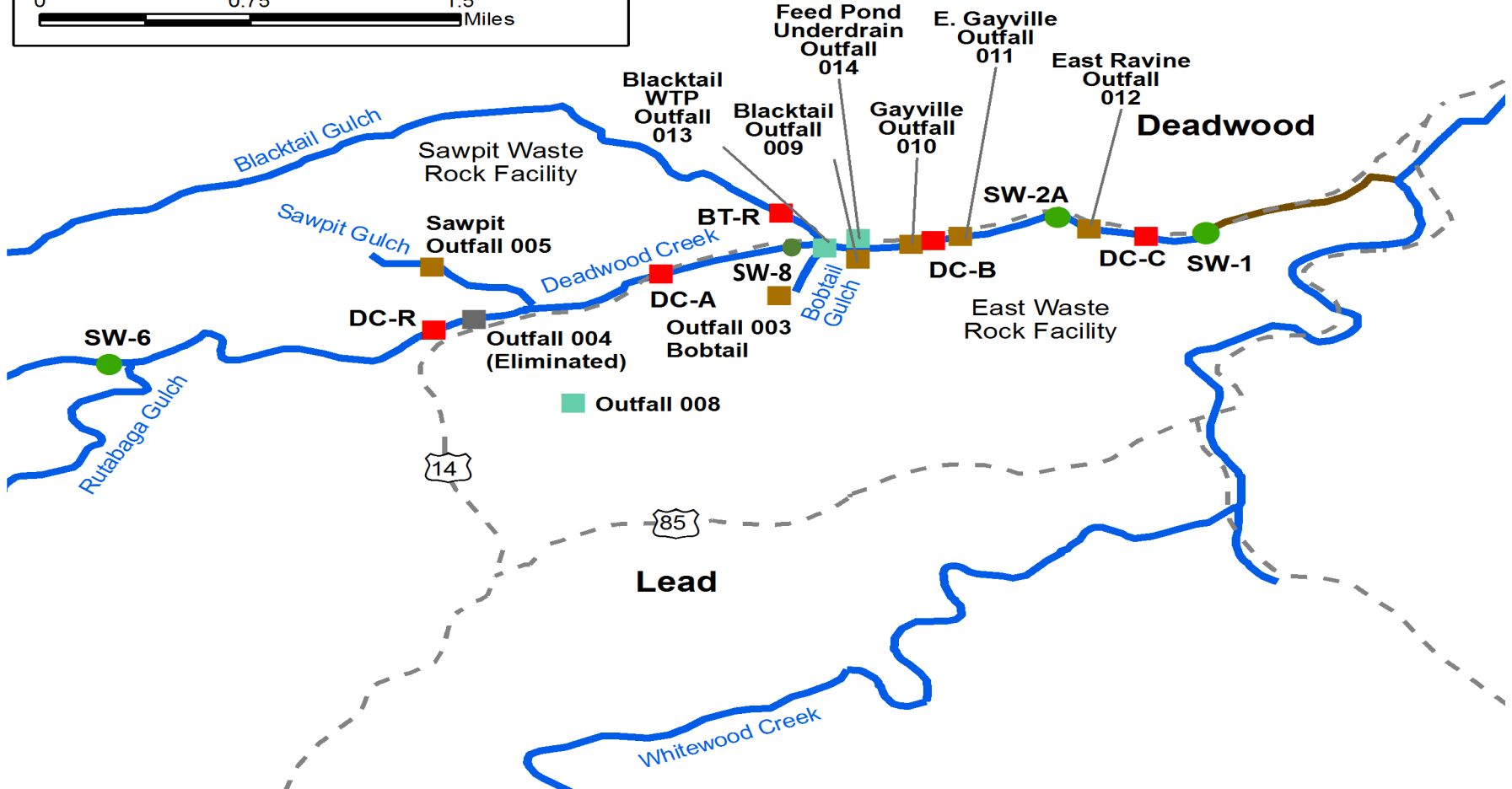
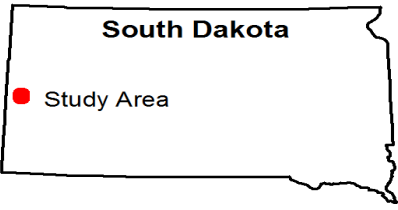
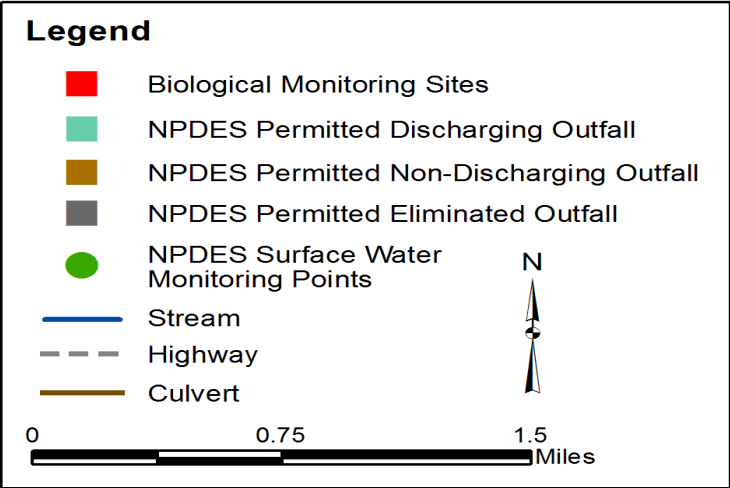
Deadwood Creek Monitoring



Aquatic Biological Monitoring – Deadwood Creek

- In 2020 fish tissue monitoring showed an isolated high selenium concentration at site DC-B along Deadwood Creek
- Unfortunately, the Fish Tissue sample taken at Site DC-C was lost in shipment
- Therefore, additional Fish Tissue Sampling was scheduled for 2021

Deadwood Creek Monitoring



Deadwood Creek Monitoring

Aquatic Biological Monitoring – Follow-up fish tissue sampling

- Fish for tissue analysis were collected from Deadwood Creek in 2021 at all Monitoring Sites
- Fish tissue sample results from this follow-up sampling in 2021:
 - Geometric mean values for sites DC-R, DC-B and BT-R in 2021 were lower than 2020 values, while upstream Site DC-A was slightly higher than in 2020
 - Values for all sites in 2021, except for site DC-A, were below the long-term geometric means
- The Fish Tissue Results from 2020 indicate a Short-term Issue in Deadwood Creek

Deadwood Creek Monitoring

- Blacktail Water Treatment Plant treats water emanating from the toes of Sawpit and East Waste Rock Facilities
- WTP system removes selenium and Total Dissolved Solids (TDS) from water prior to discharging to Deadwood Creek
- Blacktail Water Treatment Plant discharge consistently meets permitted effluent limits and surface water quality standards
- Instream selenium and TDS levels are well below surface water quality standards and have been since the Water Treatment Plant began operation in 2006

Deadwood Creek Monitoring



Construction of new culverts
along Hwy. 14A in 2019 and
2020

Located above Site DC-B

Possible Sources?



Construction of new culverts
along Hwy. 14A in 2020

Located Above Site DC-B

Geotechnical Monitoring

- Homestake employs multiple displacement monitoring techniques
 - Survey Monuments and Prisms
 - Robotic Total Station and GPS Methods
 - Piezometers
 - Inclinometers
 - Visual Inspections
 - InSAR Monitoring

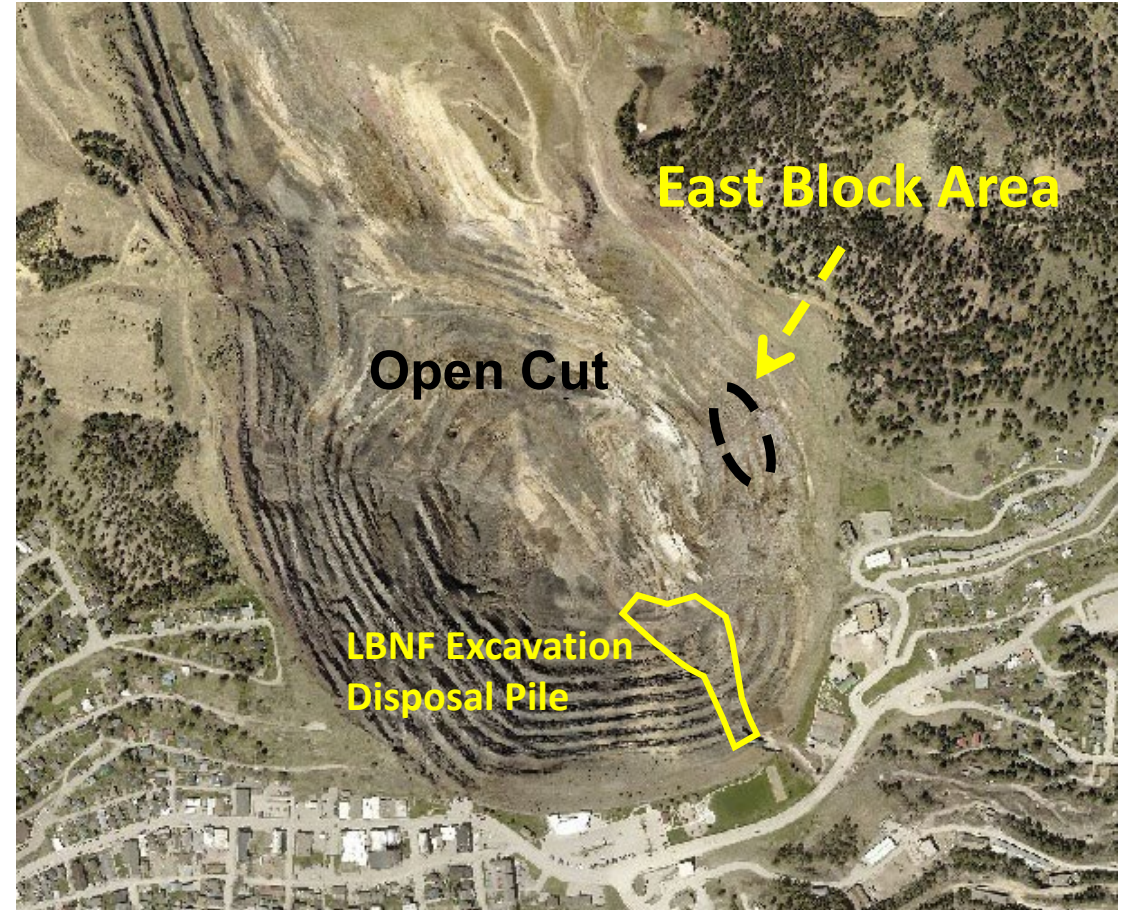
Geotechnical Monitoring



- Prisms and Survey Monuments
 - Baseline and current survey performed in SD State Plane coordinates utilizing robotic total station instruments
 - A new baseline was established with State Plane coordinates in December 2019. New trendline movement rates developed for survey monuments and prisms during the June 2021 Review indicate no significant movement from prior monitoring

Geotechnical Monitoring

- Open Cut - East Block
 - Area failed on June 14, 2019
 - Area contained within pit boundary on Homestake-controlled property
 - Measurements do not indicate a new area of instability or significant upslope enlargement of existing instability
- Open Cut – Remaining Crest
 - No indications at of other recent movements that could represent potential for substantial slope failures



Geotechnical Monitoring

- Open Cut - East Block
 - Monitoring prisms atop 2006 Failure
 - Monitoring prisms atop and behind East Block
 - Prisms for 2006 Failure and East Block are stable
 - Numerous prisms on South Wall. Prisms on either side of pile stable
- Open Cut – LBNF Excavation
 - Disposal of rock started May 2021
 - Pile approximately 560 feet vertical



Geotechnical Monitoring

- East Waste Rock Facility
 - Survey Monuments
 - A new baseline survey was taken with State Plane coordinates in 12/2019 utilizing GPS
 - New trendline movement rates for survey monuments developed during the June 2021 review indicate no significant movement from prior monitoring.
 - Piezometers
 - No significant buildup of water levels in waste rock facility



Geotechnical Monitoring

- East Waste Rock Facility
 - Inclinometers
 - Inclinometer installed in Blacktail in June 2018 has indicated less than 0.02 inches/month of northward surficial movement with no shear displacement
 - Inclinometer installed in East Ravine has indicated no significant changes since previous monitoring
 - Inclinometer installed in Gayville in June 2018 has indicated about 0.01 inches/month of shear displacement at 106-108 ft. below ground surface. The rate of shearing remains small and constant with no signs of acceleration.

Geotechnical Monitoring



- East Waste Rock Facility
 - Visual Inspections (Gayville Tension Crack at 5100 Bench)
 - Tension crack at 5100 bench at Gayville is the only surficial change observed. No significant change to crack since it was discovered in 2015
 - Tension crack appears to be associated with topsoil slumping
 - InSAR Monitoring (Interferometric Synthetic Aperture Radar)
 - Data indicates that dump is behaving as expected with no significant issues

2022 Homestake Projects



- Continue Water Treatment Agreement with SDSTA
- Continue Water Treatment
- Homestake Postclosure Bond Update
- Aquatic Biological Monitoring

Thank you



Annual Update

Wharf Resources

Matt Zietlow, Environmental Manager
May 2022



NYSE: CDE

- 2021 Mining Update
- 2021 Production
- 2021 Projects
- Community/Demographics
- 2022 plan



> Site Overview



Wharf Mining in 2021

- Portland Ridge area



General Mine stats update

- New acres affected in 2021: **8.4**
- Total affected acres since permit issuance: **1280.4**
- Acres undergoing reclamation in 2021: **44.9**
- Acres estimated for reclamation in 2022: **30**
- Currently 253 employees onsite, excluding contractors
- Approximately 84.6 MG of groundwater pumped in 2021
- Approximately 23.1 MG water treated and land applied

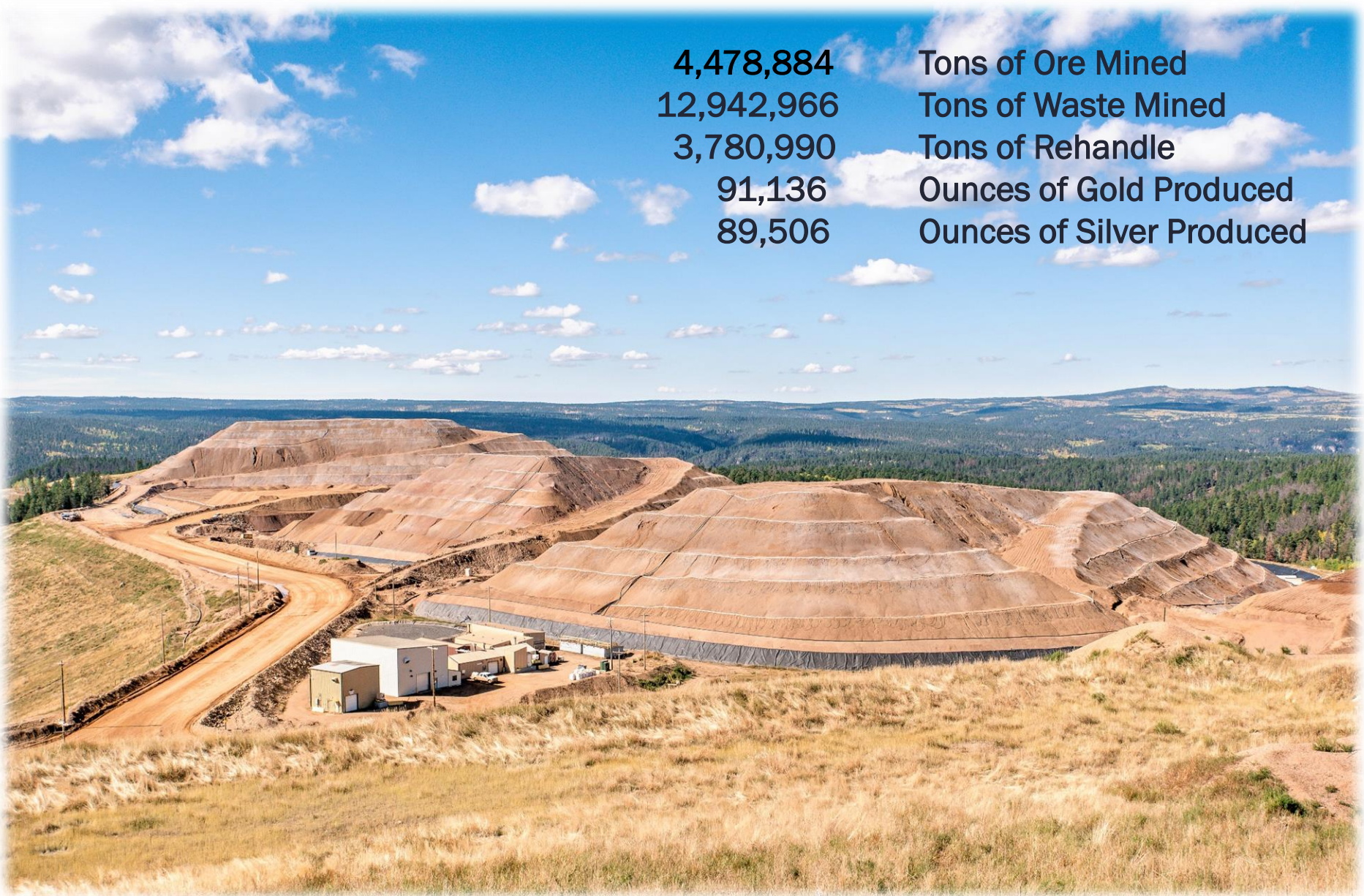
> Leach Pads Update



- Pads 3 & 5 completed denitrification and were approved for offload during cy 2021
- Pad 2 denitrification initiated late 2021
- Pads 1 & 4 continued normal leach activities during 2021

> 2021 Production

4,478,884	Tons of Ore Mined
12,942,966	Tons of Waste Mined
3,780,990	Tons of Rehandle
91,136	Ounces of Gold Produced
89,506	Ounces of Silver Produced

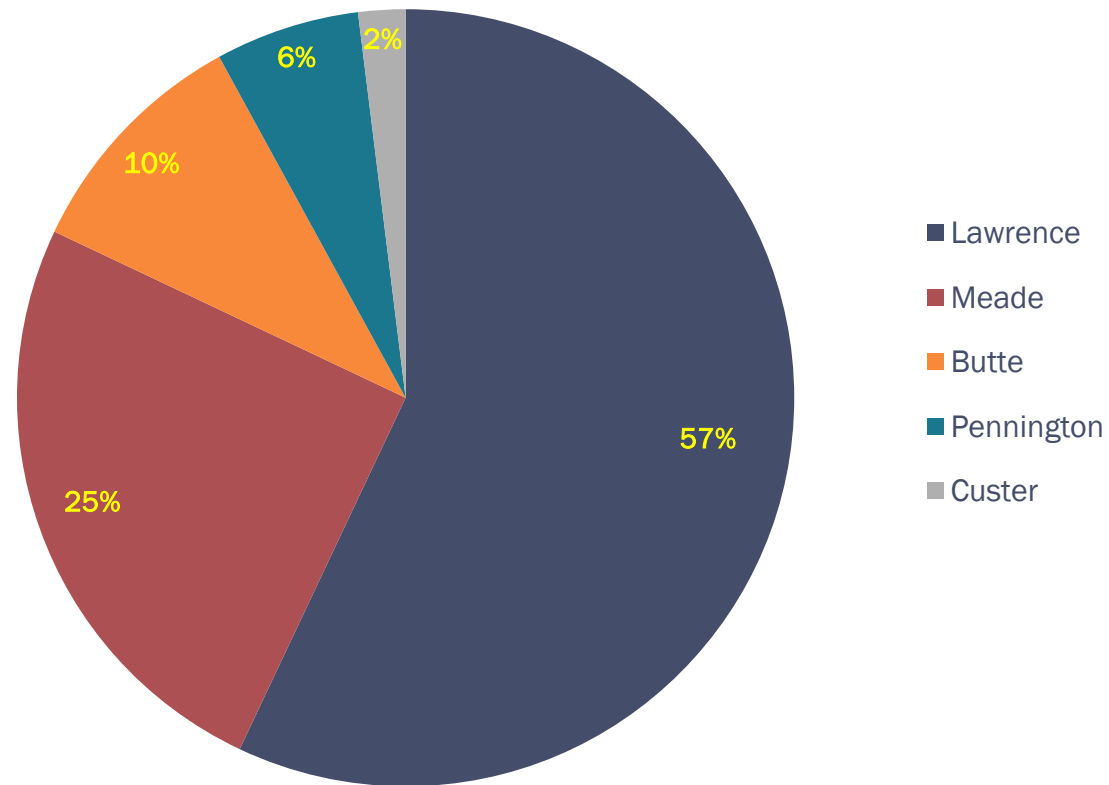


- Return to normal activities from COVID challenges
- Nearly 50% of Wharf electrical power now supplied from renewable resources in partnership with BHP
- Warehouse, lab, & administration building additions
- Final reclamation/seeding of Golden Reward mine area
- Initiated backfilling of Green Mountain Pit
- Water quality studies below Bald Mtn tails
- Baseline studies and CUP for Boston expansion permit

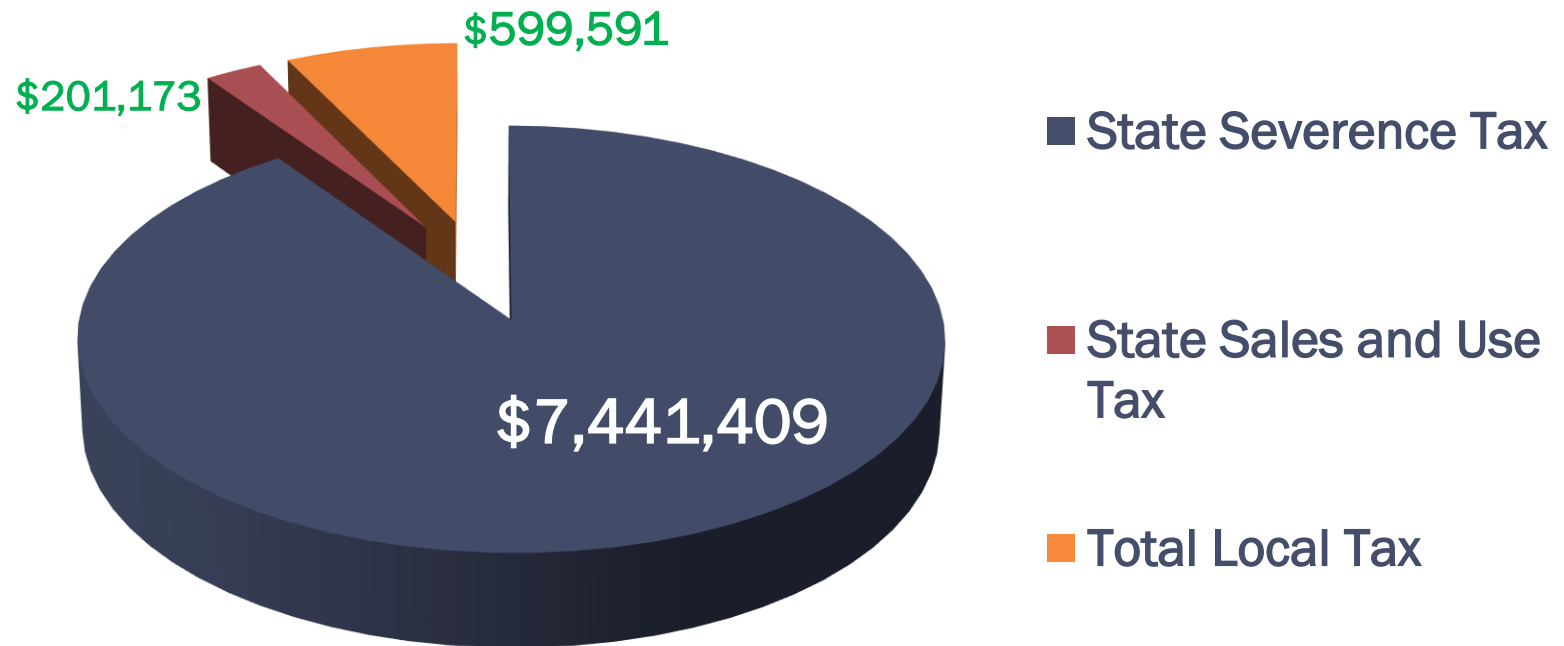
Wharf 2021 payroll was \$28.8 million with benefits

- Approximately \$20.1 million without benefits

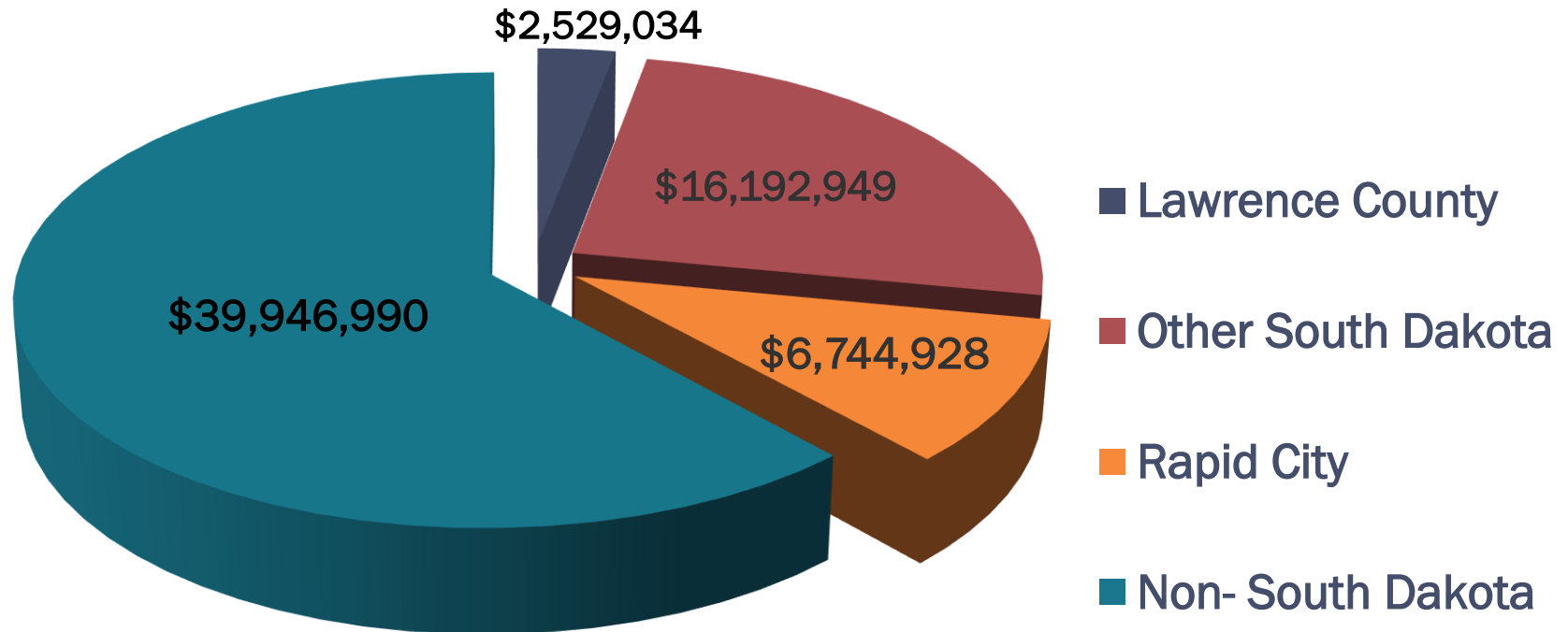
Population by County



Over \$8.2 million paid in Total Taxes in 2021



2021 Purchases over \$80 million



> Community Involvement

- Wharf donated well over \$180,000 to community groups, schools and other local charities in 2021
- Over 50 different local entities and school groups received donations from Wharf in 2021, including Lead Boys & Girls Club, the Handley Center, the Lead and Deadwood Chambers, Feeding Deadwood, Wellfully, and United Way
- Reached the 1/2 million dollar milestone in donations issued from the Wharf Sustainable Prosperity Fund since inception
- Local scholarships issued by Wharf in 2021 exceeded \$50 thousand dollars



> 2022 Plans

- Continue mining the Portland Ridge deposit
- Denitrification and offload of pads 1 and 2
- Begin moving some land app sprays from Portland Ridge to the American Eagle/Green Mountain backfill areas
- Continue backfill and concurrent reclamation of Green Mountain Pit
- Continue reclamation on lower Trojan Rock Facility
- Continue exploration around the older Juno Pit area
- Continue water quality and treatment studies below Bald Mtn tails
- Complete permitting of the Boston expansion area

Questions?

Gilt Edge Mine Superfund Site 2022 Annual Update



Agencies Involved



US Environmental Protection Agency (EPA)



US Army Corps of Engineers (USACE)

EPA's site contract manager for the Gilt Edge Superfund Site



SD Department of Agriculture and Natural Resources (DANR)

Remediation Costs

- Currently, EPA pays 90% and the State pays 10% of remediation costs
- Once Superfund cleanup is completed, the State will be responsible for 100% of the water collection, treatment and site maintenance costs

State Gilt Edge Funds

as of 3/31/2022

Forfeited bond plus interest	\$ 8,753,795
Settlement payments* plus interest	\$10,542,585
Agnico Lease Payments	\$ 6,417
	<hr/>
Total	\$19,302,797

January 2020 total \$19,096,776

*From Potential Responsible Parties (PRP)

Gilt Edge Mine Superfund Site



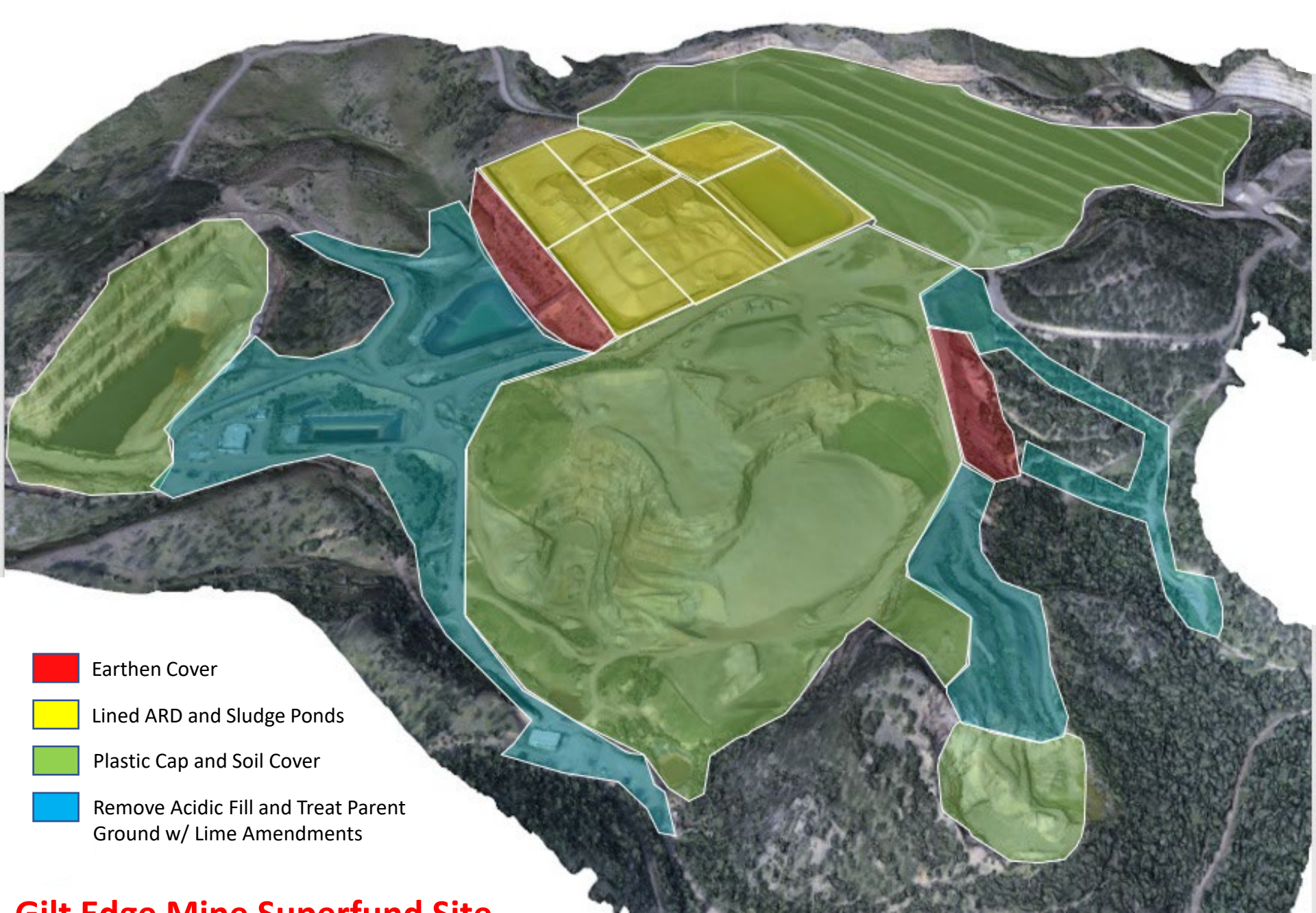
Operable Unit 1 (Acid Rock Piles and Open Pits)

Operable Unit 3 (Ruby Waste Rock Dump)

Operable Unit 2 (Water Treatment)



The boundaries, site features, and mineral survey parcels depicted on this map are a graphical representation and should not be used for legal purposes.



- Earthen Cover
- Lined ARD and Sludge Ponds
- Plastic Cap and Soil Cover
- Remove Acidic Fill and Treat Parent Ground w/ Lime Amendments

**Gilt Edge Mine Superfund Site
Surface Features of EPA's Final Site Remedy**

2021 Activities Summary

- Primary activities consisted of normal site maintenance and water treatment activities

2021 Acid Water Treatment Update – OU2



HydroGeoLogic, Inc. (HGL)

- Site contractor
- HGL has 6 employees on site
 - Manager, Mechanic, 4 Plant Operators

2021 Acid Water Treatment

Volume Treated

63.9 million gallons

134 million gallons in 2020

Water in storage
on 12/31/20

24.1 million gallons

35.1 million gallons in 2020



2021 Weather Events

- No major weather events in 2021
- Overall annual precipitation in 2021 was 25.43 inches compared to 20.88 inches in 2020

Gilt Edge Mine Conveyance Act

- Two bills have been placed before US Congress that would direct the US Forest Service to sell all property within the Gilt Edge Superfund Site to the State of South Dakota
- These bills would cover a total of 266 acres of USFS land within the Superfund boundary

Gilt Edge Mine Conveyance Act

- S 569 sponsored by Sen Thune and cosponsored by Sen Rounds
- Introduced to Senate in March 2021
- Placed before the Senate Energy and Natural Resources Committee. Bill passed through Committee January 18, 2022

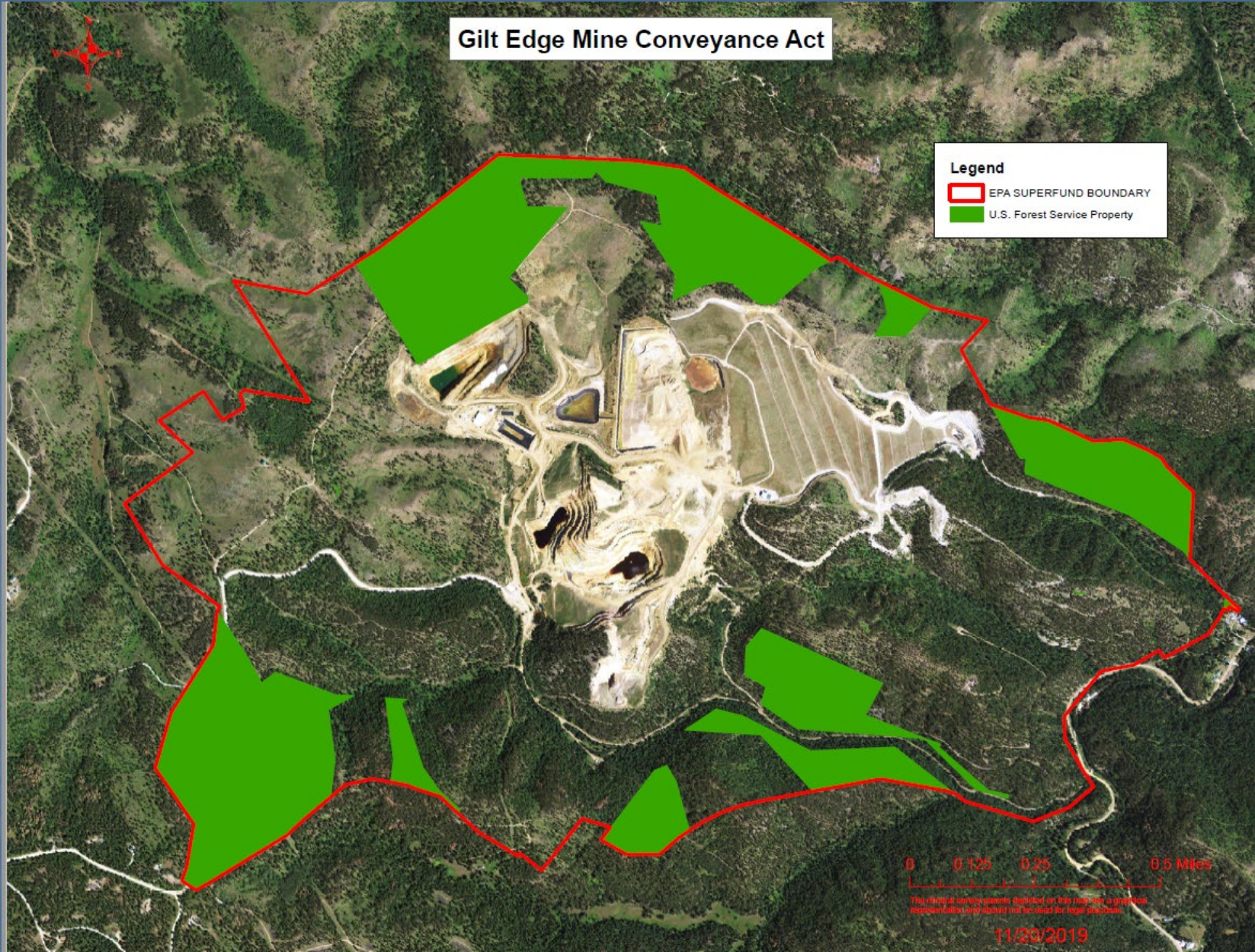
Gilt Edge Mine Conveyance Act

- HR 1638 sponsored by Rep. Johnson
- HR 1638 introduced to House in March 2021
- Placed in front of House Committee on Natural Resources in March 2022
- Secretary Roberts testified in support of the bill
- Currently under amendment

Gilt Edge Mine Conveyance Act

Legend

- EPA SUPERFUND BOUNDARY
- U.S. Forest Service Property



Agnico Project Update

- All activities under the existing EPA-SD-Agnico Administrative Order of Consent (AOC) have been completed

Agnico Project Update

- Agnico is currently in discussion with EPA to negotiate a new AOC. This AOC would allow for additional data collection at the site to determine if re-mining the site is a economically feasible option and if meets the requirements as a Superfund remedial action.

Questions?

