LMS/ULP/Y00502



DOE Uranium Leasing Program Annual Status and Activities Report for Calendar Year 2020

March 2021

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This document has been designed for online viewing.

Cover Photo: Golden Cycle Headframe and Associated Reclaimed Waste Rock Pile. Located on Lease Tract C-AM-19 atop Atkinson Mesa, Montrose County, Colorado.

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Table

Table 1. DOE Uranium Lease Tracts and Lessees	•••	1
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Abbreviations

ANIA	American Nuclear Infrastructure Act
ANL	Argonne National Laboratory
BLM	U.S. Bureau of Land Management
CFR	Code of Federal Regulations
DOC	U.S. Department of Commerce
DOE	U.S. Department of Energy
DRMS	Colorado Division of Reclamation, Mining, and Safety
DRRP	Dolores River Restoration Partnership
DRUM	Defense-Related Uranium Mines
EA	Environmental Assessment
EFR	Energy Fuels Resources Colorado Plateau LLC
GEMI	Gold Eagle Mining Inc.
GEU	Golden Eagle Uranium LLC
LM	Office of Legacy Management
LMS	Legacy Management Support
MAP	Mitigation Action Plan
NEPA	National Environmental Policy Act
PgMP	Program Management Plan
SHPO	State Historic Preservation Office
TRFO	Tres Rios Field Office
ULP	Uranium Leasing Program
U_3O_8	uranium oxide
USC	United States Code
V&V	verification and validation

Executive Summary

This report provides a detailed summary of the U.S. Department of Energy (DOE) Office of Legacy Management (LM) Uranium Leasing Program's (ULP) activities from January 1 through December 31, 2020.

The DOE ULP administers 31 lease tracts, 29 of which are actively held under lease:

- Highbury Resources Inc. (Highbury) (a subsidiary of Anfield Energy Inc.), controls nine lease tracts: C-CM-25, C-JD-6, C-JD-7, C-JD-8, C-JD-9, C-LP-21, C-SM-18, CSR-11, and C-SR-13A. The former lessee, Cotter Corporation, executed new 10-year lease agreements on July 6, 2020, and subsequently assigned them to Highbury. Highbury continues to perform routine maintenance activities on these lease tracts, as necessary.
- Gold Eagle Mining Inc. (GEMI) controls three lease tracts: C-JD-5, C-SR-13, and C-SR-15. During 2020, GEMI maintained its mining operations on tracts C-JD-5 and C-SR-13 in standby status while performing routine maintenance activities, as necessary. GEMI signed new lease agreements on January 6, 2020.
- Golden Eagle Uranium LLC (GEU) controls nine lease tracts: C-JD-5A, C-LP-22, C-LP-22A, C-LP-23, C-SR-10, C-SR-11A, C-SR-15A, C-SR-16, and C-WM-17. During 2020, GEU conducted noxious weed treatments on its lease tracts as no active mining operations are located thereon. GEU signed new lease agreements on January 6, 2020.
- Energy Fuels Resources Colorado Plateau LLC (EFR) controls seven lease tracts: C-AM-19, C-AM-19A, C-AM-20, C-CM-24, C-G-26, C-G-27, and C-SR-16A. EFR, through its wholly owned subsidiary Colorado Plateau Partners, also controls Lease Tract C-SR-12. During 2020, EFR conducted noxious weed treatments on its lease tracts as no active mining operations are located thereon. EFR signed new lease agreements on January 6, 2020.

Lease tracts C-JD-8A and C-SR-14 are inactive and will remain so indefinitely.

The president's budget (February 10, 2020) for fiscal year 2021 established a "Uranium Reserve for the United States." The president's budget seeks an appropriation of \$150 million, as the appropriation for the first year of a 10-year program. On November 16, 2020, the American Nuclear Infrastructure Act (ANIA) was introduced into the U.S. Senate. The ANIA, among other things, would require DOE to purchase only uranium recovered from facilities licensed by the U.S. Nuclear Regulatory Commission or equivalent Agreement State agencies.

In November 2019, several vanadium interests submitted a petition to the U.S. Department of Commerce (DOC) for relief under Section 232 of the Trade Expansion Act of 1962 from imports of vanadium products. The DOC formally accepted the petition and initiated an investigation. Executive Order 13953, issued on September 30, 2020 sought to clarify which mineral development projects supporting domestic production of the U.S. Geological Survey list of critical minerals are eligible for a loan. The Executive Order also encouraged the development of abandoned mine lands for the recovery of critical minerals.

On September 25, 2019, after concluding consultation with the Colorado State Historic Preservation Office (SHPO), LM advised GEMI that the ore bin on Lease Tract C-SR-13 could be removed. This ore bin was an attractive nuisance as it was immediately adjacent to a state

highway and presented a safety hazard as it was leaning precariously downhill. On November 25, 2020, the lessee removed the ore bin from the site.

The proposed Burro Mines Reclamation Project continued to make significant progress throughout 2020 in the area of planning. In January, the preliminary Draft Environmental Assessment (EA) was prepared by Argonne National Laboratories and underwent internal LM review. Both cultural and archaeological studies were completed in support of the EA. Likewise, communication and coordination efforts continued with the Colorado SHPO to address compliance under Section 106 of the National Historic Preservation Act. The Draft EA was issued to LM in August and a 30-day public comment period occurred from August 7 to September 8, 2020. As a result of the Section 106 consultation, changes were made to the preferred alternative, which were reflected in subsequent engineering designs. In December, the Draft Final EA and the 90% engineering design plans were issued, incorporating these design changes. The EA is on schedule to be finalized in early 2021.

In September 2020, ULP personnel performed formal inspections of the existing, permitted mining operations, which included Highbury's mines on lease tracts C-CM-25, C-JD-6, C-JD-7, C-JD-8, C-JD-9, C-LP-21, C-SM-18, C-SR-11, and C-SR-13A and GEMI's mines on lease tracts C-JD-5 and C-SR-13. No major issues were noted at any of the mine sites. Some minor issues, including the presence of noxious weeds, minor erosion, repeated vandalism, and a need for better housekeeping were noted at one or more of the locations.

Throughout 2020, ULP personnel inspected reclaimed mine-related locations and fenced multiple subsidence features on various lease tracts to mitigate physical safety hazards.

The fair market value of lease tract ores per dry ton with average grades of 0.20% uranium oxide and 1.20% vanadium oxide, as calculated for production royalty purposes, began 2020 at \$218 per ton. The value fluctuated somewhat throughout the year, before settling again at \$217 per ton at year's end.

1.0 Overview

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) Uranium Leasing Program (ULP) administers 31 lease tracts (Table 1 and Figure 1), 29 of which are actively held under lease. Of the 29 lease tracts, only 11 are permitted with the Colorado Division of Reclamation, Mining, and Safety (DRMS). None of the 29 lease tracts had active mining operations in 2020. This report provides a detailed summary of ULP activities from January 1 through December 31, 2020.

Lease Tract	Lessee
C-JD-5	Gold Eagle Mining Inc.
C-JD-5A	Golden Eagle Uranium LLC
C-JD-6	Highbury Resources Inc.
C-JD-7	Highbury Resources Inc.
C-JD-8	Highbury Resources Inc.
C-JD-8A	Inactive, not leased
C-JD-9	Highbury Resources Inc.
C-SR-10	Golden Eagle Uranium LLC
C-SR-11	Highbury Resources Inc.
C-SR-11A	Golden Eagle Uranium LLC
C-SR-12	Colorado Plateau Partners
C-SR-13	Gold Eagle Mining Inc.
C-SR-13A	Highbury Resources Inc.
C-SR-14	Inactive, not leased
C-SR-15	Gold Eagle Mining Inc.
C-SR-15A	Golden Eagle Uranium LLC
C-SR-16	Golden Eagle Uranium LLC
C-SR-16A	EFR Colorado Plateau LLC
C-WM-17	Golden Eagle Uranium LLC
C-SM-18	Highbury Resources Inc.
C-AM-19	EFR Colorado Plateau LLC
C-AM-19A	EFR Colorado Plateau LLC
C-AM-20	EFR Colorado Plateau LLC
C-LP-21	Highbury Resources Inc.
C-LP-22	Golden Eagle Uranium LLC
C-LP-22A	Golden Eagle Uranium LLC
C-LP-23	Golden Eagle Uranium LLC
C-CM-24	EFR Colorado Plateau LLC
C-CM-25	Highbury Resources Inc.
C-G-26	EFR Colorado Plateau LLC
C-G-27	EFR Colorado Plateau LLC

Table 1. DOE Uranium Lease Tracts and Lessees	Table 1.	DOE	Uranium	Lease	Tracts	and	Lessees
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2.0 Administrative Operations

The following subsections summarize ULP's primary administrative activities during 2020.

2.1 Burro Mines Reclamation Project

The Burro Mines Complex is a historical mining complex located in Burro Canyon near the former town of Slick Rock, Colorado. The Burro Mines Complex comprises four mines: the Burro Tunnel, Burro No. 3, Burro No. 5, and Burro No. 7 mines. The Burro No. 7 mine has previously been reclaimed and is not part of this proposed reclamation project. The Burro Tunnel portion of this complex is immediately adjacent to a wash that feeds the Dolores River. Significant planning efforts detailed below occurred in 2020 in support of this proposed reclamation project.

2.1.1 Background

Following a series of storm events that inundated the Slick Rock, Colorado, area during the previous decade and repeatedly eroded mine waste rock materials from the Burro Tunnel mine site (on Lease Tract C-SR-13) (Figure 2) into the immediately adjacent Dolores River, ULP personnel developed a proposal to reclaim the site in March 2016. The proposal included several options. The baseline option called for the lessee's permitted portion of the Burro Tunnel mining operation to be reclaimed in place when the lessee's mining operation ceased. Option 1 called for the entire Burro Tunnel waste rock pile to be reclaimed in place, while leaving the lessee's actively permitted infrastructure intact. Option 2 called for relocating the entire Burro Tunnel mine waste rock pile to an abandoned gravel pit south of the existing mine but still within the bounds of Lease Tract C-SR-13. This option would also preserve the lessee's actively permitted infrastructure. Option 3 was additive to Option 2 and would also relocate a portion of the waste rock piles from the adjacent Burro No. 3 and Burro No. 5 mine sites to the same abandoned gravel pit and then reclaim and stabilize the remainder of the two waste rock piles to minimize the potential for future erosion.

Because the existing waste rock piles at the Burro Tunnel, Burro No. 3, and Burro No. 5 mines are considered "pre-law" they do not fall under the jurisdiction of the *Uranium Leasing Program Mitigation Action Plan for the Final Uranium Leasing Program Programmatic Environmental Impact Statement DOE/PEIS-0472* (DOE 2014) (Mitigation Action Plan [MAP]).

2.1.2 2020 Activities

Due to funding constraints and wildlife restrictions in the area of the Burro Mines Complex, the schedule of planning activities associated with the proposed Burro Mines Reclamation Project was somewhat expedited during 2020. To this end, the following planning activities were conducted in support of this proposed project:

- Environmental Assessment (EA)
- Coordination with the U.S. Bureau of Land Management (BLM) for archeological survey
- Historical Property Survey Report

- Section 106 of the National Historic Preservation Act (Title 54 *United States Code* Section 300101 et seq. [54 USC 300101 et seq.]) consultation with the Colorado State Historic Preservation Office (SHPO)
- Subject matter expert report on the implications of waste rock
- Engineering design (30%, 60%, 70%, and 90% iterations)
- Gamma radiation survey
- Ordinary highwater mark delineation of Burro Canyon Creek

These activities are described below.

2.1.2.1 National Environmental Policy Act (NEPA)

As required by the NEPA, a preliminary draft EA for the proposed Burro Mines Reclamation Project, prepared by Argonne National Laboratory (ANL) was received for LM/LMS internal review in January 2020. As part of the preliminary draft EA, scoping letters were issued to various agencies, tribal governments, and other stakeholders to solicit input on the scope of the EA. The archaeological portion of the EA was delayed as a result of concerns from the BLM Tres Rios Field Office (TRFO). TRFO staff were seeking guidance from the BLM Colorado State Office as to TRFO's role in this project. Both BLM TRFO and Colorado DRMS agreed to be cooperating agencies for the EA. The archaeological portion was completed in April 2020.

Responses were received and responses to the comments were prepared. The Draft EA, issued for public review in late July, was updated to address applicable comments.

The initial draft EA was issued in May and addressed relevant scoping comments received in January. The draft EA subsequently underwent LM/LMS internal review to ensure the necessary changes were incorporated. In August, public notices were published in local newspapers to solicit public input during the 30-day public comment period that lasted from August 7 through September 8.

As part of the NEPA process, consultation under Section 106 of the National Historic Preservation Act consultation with Colorado SHPO was initiated in May. In July 2020, LM submitted a Section 106 consultation request letter to SHPO including the Historical Property Survey Report prepared jointly by the LMS contractor and BLM. LM continued its consultation with SHPO on October 1 with the 60% design. SHPO responded in October, suggesting that the 60% design could result in adverse effects on the Burro Mining District and recommending LM consult with a subject matter expert concerning the proposed reclamation activities. Eric Twitty with Mountain States Historical, an expert in historic mining, was consulted to determine potential adverse effects that could occur from the movement and regrading of waste materials during the reclamation process. A subsequent site visit occurred on November 18, which resulted in a report dated December 17. On December 23, the report was submitted to SHPO, including the necessary changes to the engineering design (70% iteration), a revised preferred alternative, a 1970s-era map depicting the original waste rock pile, and a representation of the area of potential effect. SHPO responded with a letter on December 30 concurring that the revised design would result in no adverse effects to the historical integrity of the Burro Mines Complex. As a result of the coordination effort with SHPO, the engineering design and the preferred alternative in the EA were subsequently revised. The final EA will be issued in early 2021, and a public availability period will occur between February 17 and March 18, 2021.



Figure 2. Burro Tunnel Mine Site, Lease Tract C-SR-13, Slick Rock, Colorado (with Burro No. 3 Waste Rock Pile in the Background)

2.1.2.2 Special Use Permit

In March 2020, LM submitted a letter to San Miguel County requesting clarification on construction permit requirements. The County responded that the project required a special use permit and recommended submittal before October 9 because filing after that date would require undergoing the County's new two-step approval process.

A pre-application conference was held August 4, 2020 with LM, the LMS contractor, and the San Miguel County Planning Department to discuss the requirements and details pertaining to the project. Upon completion of the 60% engineering design, LM submitted the special use permit application to the San Miguel County Planning Department on October 6, 2020. The application required LM to issue notification letters to surrounding property owners, and these letters were sent on October 20. On the same day, San Miguel County issued comments regarding the special use permit and 60% engineering design. Public notice signage required by

San Miguel County was posted at the project site on October 21. A site visit was held October 29, with LM, a representative from Gold Eagle Mining Inc. (GEMI), and representatives from San Miguel County's Planning Department to review the project scope, engineering designs, and stormwater control measures, and to record visual aids for the upcoming planning meeting. At the Planning Commission's regular meeting on November 10, the Commission voted unanimously to approve the special use permit. San Miguel County issued a resolution with conditional approval of the special use permit on November 18, 2020.

The San Miguel County Planning Department was notified on November 23 of likely changes to the design following the ongoing Section 106 consultation with SHPO. The LMS contractor submitted draft documentation to the planning director on November 24, 2020. Upon review of the information provide, the planning director replied that, due to the nature of the changes, it would be necessary for LM to present the changes to the Planning Commission at their next meeting, which occurred January 13, 2021; the changes again received unanimous approval.

2.1.2.3 Engineering Design

In June, the 30% engineering design for the Burro Mines Reclamation Project was completed and was followed in September with the 60% design. In support of the 60% engineering design, a draft "Gamma Radiation Survey Report" of the Burro Mines Complex was submitted to LM. The draft "Gamma Radiation Survey Report" and a U.S. Department of Transportation shipping evaluation was provided to ANL on September 23 in support of the Draft EA. On September 28, the 60% engineering design was submitted to SHPO.

In July, supplemental topographical surveying was completed around the proposed affected area. On August 18 and 19, a gamma radiation survey of the proposed affected area was conducted to determine the baseline dose rate across the proposed disturbance. Several geotechnical samples were also collected from different locations around the proposed affected area for testing to determine the engineering parameters of the material. In December, LMS ecologists and surveyors visited Burro Canyon Wash immediately adjacent to the Burro Tunnel mine waste rock pile to delineate and map the ordinary highwater mark for the final design.

2.2 National Historic Preservation Act Section 106 Consultation

2.2.1 Hawkeye Ore Bin

In October 2018, LM initiated consultation with Colorado SHPO concerning the status of a metal ore bin on the Hawkeye patented mining claim on Lease Tract C-SR-13. The ore bin was erected circa 1952 as part of the ore handling system established for the Hawkeye uranium mine, which operated from 1952–1953 and again briefly in the mid-1970s. In the early 2000s, the entire mine site was reclaimed by the lessee, except for the mine portal, which was gated to conserve the mine workings for potential bat habitat, and the ore bin, which was left in place for its historic value. Eventually, storm-water runoff from several major storm events eroded the ground surface below the ore bin, causing it to lean precariously downslope and become a physical safety hazard (Figure 3). As a result, LM proposed to SHPO that the lessee be allowed to remove the ore bin to eliminate the safety hazard. As part of the consultation, the ore bin was documented. Because of its loss of historic integrity, the ore bin was determined not to be eligible for listing on the National Register of Historic Places. In response to LM's request, SHPO recommended that the

structure be reconsidered within the realm of a larger historic district. In a letter to SHPO dated April 11, 2019, LM reiterated its position that the Hawkeye ore bin was not eligible for listing under any criteria and that it should be taken down and removed to mitigate the safety hazard. LM also informed SHPO that LM would coordinate with BLM and other interested stakeholders to investigate the potential for documenting the Slick Rock Area as being historically significant.

On September 25, 2019, during consultation with SHPO for the removal of the Hawkeye ore bin, LM advised SHPO that the Hawkeye ore bin would be taken down to eliminate the physical safety hazard and that work would be scheduled to begin as soon as logistically possible. SHPO did not object.



Figure 3. Ore Bin at the Hawkeye Mine Before Removal, Lease Tract C-SR-13, Slick Rock, Colorado

The Hawkeye ore bin was removed from the site by the lessee on November 25, 2020, in accordance with the lessee's reclamation requirements (Figure 4).



Figure 4. Hawkeye Mine Site After Removal of the Metal Ore Bin, Lease Tract C-SR-13, Slick Rock, Colorado

2.2.2 Burro Mines Reclamation Project

As described above, LM coordinated closely with SHPO regarding Section 106 consultation throughout 2020. Changes were made to the proposed Burro Mines Reclamation Project to strike a balance between preserving the historical integrity of the site and protecting the Dolores River.

2.3 MAP

In accordance with the *Uranium Leasing Program Mitigation Action Plan for the Final Uranium Leasing Program Programmatic Environmental Impact Statement DOE/PEIS-0472*, LM is required to submit an annual summary report of mitigation activities completed by ULP lessees. On February 26, 2020, the MAP activity summary report for 2019 was transmitted to the DOE Headquarters Office of NEPA Policy and Compliance. The document recorded that no activity had occurred during 2019.

2.4 Other Administrative Activities

2.4.1 Section 232 Investigation and Other Legislation

The president's budget (February 10, 2020) for fiscal year 2021 establishes a "Uranium Reserve for the United States to provide additional assurances of availability of uranium in the event of a market disruption" (OMB 2020). The president's budget seeks an appropriation of

\$150 million, "to remain available until expended," as the appropriation for the first year of a 10-year program. The American Nuclear Infrastructure Act (S. 4897) (ANIA), introduced into the U.S. Senate on November 16, 2020, would, among other items, require DOE to purchase only uranium recovered from facilities licensed by the U.S. Nuclear Regulatory Commission or equivalent Agreement State agencies. Section 402 of the ANIA specifies that the secretary of energy shall establish a program to operate a uranium reserve within the authority outlined in the Atomic Energy Act (42 USC 2011 et seq.).

Executive Order (EO) 13953

Issued on September 30, 2020, this Order utilizes and builds upon the framework of the Defense Production Act (50 USC Chapter 55) to bolster the domestic mining industry. The Order seeks to clarify which projects supporting domestic production of the U.S. Geological Survey list of critical minerals are eligible for a loan program. The Order also states that the U.S. Department of the Interior and DOE should encourage the development of abandoned mine lands for the recovery of critical minerals.

Vanadium Section 232

In November 2019, U.S. Vanadium LLC and AMG Vanadium LLC jointly submitted the *Petition for Relief Under Section 232* to the U.S. Department of Commerce (DOC) for relief under Section 232 of the Trade Expansion Act (as amended) (19 USC 1862) from imports of vanadium products that threaten national security. On May 28, 2020, DOC formally accepted the petition, initiated an investigation into the effects of vanadium imports on national security, and invited interested parties to submit written comments, data, analysis, or other information pertinent to the investigation. Public comment into the investigation was initially closed on August 17 but was reopened on September 25 with final public comments due October 9. No official notification of the investigation's outcome has been released.

2.4.2 Program Outreach

- On January 22, 2020, LM personnel participated in a radio interview with KOTO out of Telluride, Colorado. The interview covered the recently released public Draft EA of the Burro Mines Reclamation Project. LM gave a project overview and answered several questions concerning the reason for its undertaking and its scope.
- In February, ULP personnel met with uranium industry representatives concerning a uranium mill west of Green River, Utah. The representatives were seeking guidance and clarification about the proposed uranium buying provisions of the new legislation.
- In March, the Pueblo of San Filipe requested a site visit to the Burro Mines Complex in response to the notification letter that had been sent out earlier in support of the EA. Due to concerns related to coronavirus disease, the site visit has not yet occurred.
- On April 1, LM participated in a virtual meeting with the San Miguel County commissioners regarding ULP and its effect on the county. LM addressed county commissioners' and residents' questions and comments.
- In July, ULP provided input to LM in response to a request from Congressman Tom O'Halleran of Arizona for information regarding uranium mines.
- In June, an updated fact sheet, approved by LM, was posted to the ULP public website.

- The final, outward-facing *DOE Uranium Leasing Program Annual Status and Activities Report for Calendar Year 2019* (DOE 2020c) was posted to the ULP public website.
- In August, LM issued a press release concerning the execution of the new lease agreements.

2.4.3 Program Coordination with BLM

The BLM TRFO is a cooperating agency for the EA for the proposed Burro Mines Reclamation Project.

2.4.4 Defense-Related Uranium Mines (DRUM) Work

Starting on May 28, 2020, the DRUM Program's field teams started verification and validation (V&V) work at abandoned uranium mines on 12 ULP lease tracts. V&V work consists of inventorying mine features, environmental sampling, and radiological mapping. In the 2020 field season, V&V activities were completed at 87 DRUM Program mines on the ULP lease tracts: C-G-26, C-G-27, C-AM-19, C-CM-24, C-CM-25, C-LP-22A, C-LP-22, C-LP-21, C-LP-23, C-JD-6, C-JD-7, and C-JD-9. ULP personnel provided inventory data and institutional knowledge about the tracts visited by DRUM personnel as well as meeting teams in the field for inventory consultation and noxious weed management. The DRUM field teams located several small hazards that ULP personnel were unaware of; safety hazards at these sites were temporarily mitigated and will be monitored in the future. The DRUM field teams also located several larger hazards that were added to a list for future reclamation and maintenance activities.

2.4.5 Lease Agreement Execution

On October 8 and 9, 2019, LM and LMS personnel met individually with each of the ULP lessees to review and discuss the proposed updated lease template in preparation for the execution of new 10-year lease agreements, and the lessees voiced no significant issues or concerns. On November 22, 2019, new lease agreements were forwarded to each of the four lessees for review and execution. The transmittal letter requested that the lessees return the signed lease agreements (two copies) to LM with the goal of having all leases fully executed by January 6, 2020.

On January 6, 2020, three lessees signed 10-year lease agreements for 20 of their respective lease tracts. On July 6, 2020, the remaining lessee signed 10-year lease agreements for their nine lease tracts.

2.4.6 Program Management Plan

On August 11, 2020, ULP finalized the *Uranium Leasing Program, Program Management Plan* (LM-Plan-3-23-2.0, LMS/ULP/Y00487) (PgMP). The PgMP is the program's primary planning document and outlines the structure and basis of LM/LMS implementation strategy for ULP. The plan addresses the scope, administration, and approach involved in conducting the program and describes how LM, the LMS contractor, and partner agencies will work as an efficient and cohesive team to execute the ULP. The PgMP was posted to the ULP website on December 4.

2.5 Market Prices

The fair market value of lease tract ores per dry ton began 2020 at \$218 per ton with average grades of 0.20% uranium oxide (U₃O₈) and 1.20% vanadium oxide, as calculated for production royalty purposes. The value fluctuated somewhat throughout the year before settling at \$217 per ton at year's end.

3.0 Field Operations

3.1 Lessee Operations

On March 18, 2019, the U.S. District Court for the District of Colorado (Court) ruled in favor of DOE and dissolved an 8-year injunction against DOE and ULP. On March 25, 2019, the four lessees were advised of the Court's ruling. During the next 4 months, LM devised a path forward for the implementation of its preferred alternative as defined in the Programmatic Environmental Impact Statement and associated Record of Decision, including the lease agreement review and execution process noted above.

On January 6, 2020, three of the four lessees (Energy Fuels Resources Colorado Plateau LLC [EFR], GEMI, and Golden Eagle Uranium LLC [GEU]) signed 10-year lease agreements for their respective twenty lease tracts. The final lessee, Cotter Corporation (Cotter), signed 10-year lease agreements on July 6, 2020, for its nine lease tracts. Cotter immediately assigned its leases to Highbury Resources Inc. (Highbury), a wholly owned subsidiary of Anfield Energy Inc. (Anfield).

In 2019, a subsidence opened on the Grass Roots patented claim owned by Cotter adjacent to Lease Tract C-SM-18. In the fall of that year, Cotter backfilled the feature with boulders and soil scavenged from the immediate area. ULP staff inspected the backfill and noticed a possible trespass onto the immediately adjacent C-SM-18 lease tract held by Cotter. After consultation with BLM, it was determined that the lease boundary was in error and Cotter had not disturbed the adjacent lease tract. The erroneous boundary was the result of an incorrect depiction of the Grass Roots patented claim shape. This prompted ULP personnel to check the other lease tract boundaries immediately adjacent to patented claim corners. This resulted in the identification of six other boundary discrepancies, which amounted to approximately 10 acres of private land mistakenly included within adjacent lease tracts. ULP personnel began relocating or establishing boundary monuments to correct the discrepancies. Subsequently, the leases will be amended to reflect the true boundaries of the lease tracts.

3.1.1 Cotter/Highbury

On January 8, 2019, Anfield announced by press release that it had signed an asset purchase agreement with Cotter to acquire various uranium and vanadium properties, including the West Slope Project, which consists of the nine DOE lease tracts held by Cotter, along with the adjacent lode mining claims. On March 1, 2019, Anfield announced (again by press release) that it had closed on its previously announced transaction to acquire certain uranium properties from Cotter. DOE advised both Cotter and Anfield that no action could be taken by either party until new 10-year leases were executed by DOE and Cotter, at which time, DOE would determine if

Anfield was qualified to be a lessee under Title 10 *Code of Federal Regulations* Section 760.1 (10 CFR 760.1); if Anfield were determined to be qualified, DOE would consider approving the lease assignments between Anfield and Cotter. As part of that process, Anfield would be required to post new reclamation bonds with DOE and coordinate with Colorado DRMS to transfer Cotter's mining permits into their name. The former support staff from Cotter's western slope operations office transitioned to similar roles with Highbury, a whole owned subsidiary of Anfield.

In a letter, dated February 3, 2020, Cotter advised Colorado DRMS that it was voluntarily placing its permitted mines into reclamation. On June 30, Cotter informed DRMS of the assignment of its leases to Highbury. This action was followed on October 26 with an official *Request for Transfer of Mineral Permit and Succession of Operators* form filed by DRMS.

Highbury currently controls nine lease tracts: C-CM-25, C-JD-6, C-JD-7, C-JD-8, C-JD-9, C-LP-21, C-SM-18, C-SR-11, and C-SR-13A. During 2020, Highbury personnel performed routine maintenance activities at various mining operations to protect its financial investments and keep the sites secured in a physically safe and environmentally sound manner. These routine activities included controlling noxious weed infestations and inspecting site features and facilities (e.g., mine portals, ventilation systems, buildings, storm-water control structures) to determine if maintenance actions were required. Personnel checked the lysimeters on the C-JD-6, C-JD-8, C-JD-9, and C-SM-18 lease tracts quarterly to determine whether water was percolating through the waste rock piles. No measurable water was detected at these lysimeters, and minimal water has been detected to date. Highbury personnel also sampled the groundwater well downgradient of the C-JD-9 lease tract each quarter and sent the samples to a lab for digestive metals analysis.

3.1.2 GEMI

GEMI currently controls three lease tracts: C-JD-5, C-SR-13, and C-SR-15. During 2020, GEMI personnel performed routine maintenance activities at its various mining operations to protect its financial investments and keep the sites secured in a physically safe and environmentally sound manner. These routine activities included the removal of debris and inspections of site features and facilities (e.g., mine portals, ventilation systems, buildings, storm-water control structures) to determine if further actions were required. GEMI personnel also conducted noxious weed control treatments throughout its lease tracts.

(See Sections 2.2.1 and 2.2.2 above for specific information on the ore bin at the Hawkeye mine and the Burro Mines Reclamation Project, both on Lease Tract C-SR-13.)

On June 1, 2020, LM issued a letter in response to GEMI's previously submitted reclamation plans. LM, DRMS, and the LMS contractor met GEMI at their actively permitted mine sites on July 22 and 23 to formally discuss the company's submitted reclamation plans. During this meeting it was determined that GEMI's reclamation plans were deficient and will need to be revised to better reflect current on the ground conditions.

3.1.3 GEU

GEU currently controls nine lease tracts: C-JD-5A, C-LP-22, C-LP-22A, C-LP-23, C-SR-10, C-SR-11A, C-SR-15A, C-SR-16, and C-WM-17. There are no active mining operations on any of the lease tracts. During 2020, GEU conducted noxious weed control treatments on most of its lease tracts.

3.1.4 EFR

EFR, a wholly owned subsidiary of Energy Fuels Resources Inc., currently controls eight lease tracts, seven of which are held directly (C-AM-19, C-AM-19A, C-AM-20, C-CM-24, C-G-26, C-G-27, and C-SR-16A), and one (C-SR-12) is held by EFR's subsidiary, Colorado Plateau Partners. EFR does not maintain mining operations on any of its lease tracts. During 2020, EFR continued to treat noxious weed infestations on its lease tracts.

3.2 Milling Operations

The White Mesa uranium mill (Mill) south of Blanding, Utah, is owned and operated by Energy Fuels Resources Inc. It is the only operating, conventional uranium processing mill in the United States. It has a licensed capacity of 2000 tons per day and can produce up to 8 million pounds of U_3O_8 per year. The facility also has a co-recovery circuit to process vanadium ores commonly found in the Colorado Plateau and an alternate feed circuit to process other uranium-bearing materials, such as those derived from uranium conversion and other metal processing.

During 2020, there was no uranium production from mining. The Mill mainly focused on uranium production from alternative feeds and vanadium from the vanadium Pond Return campaign which ended in early 2020. In 2020, the Mill produced approximately 175,000 pounds of uranium as U_3O_8 (yellowcake). The Mill is pursuing rare earth processing of monazite sands (which contain approximately 55% total rare earth oxides and 0.20% uranium). In late 2020, Energy Fuels Resources Inc. entered into a 3-year monazite supply agreement with the Chemours Company whose operations are based in Georgia. One tonne (approximately 2020 pounds) of monazite sands was successfully processed in December 2020 with an additional 2500 tons expected in 2021.

The Mill also continued to stockpile alternate feed materials for future processing. In addition, the owner of the Mill aggressively pursued involvement in the cleanup of abandoned uranium mines in the Navajo Nation and Four Corners region. The Mill offers a responsible, low-cost method of recycling material generated by the Navajo Nation and the U.S. government from cleanup activities and would recover uranium from that material that could be used to generate clean electricity. The Mill is currently licensed to process this material, and it has a 1.5 million dry ton tailings facility ready to begin accepting material immediately.

3.3 Physical Safety Hazards and Environmental Issues

3.3.1 Hazards

In 2020, new physical safety hazards were identified on five lease tracts. These new hazards primarily consisted of subsidence-related features and will continue to be monitored.

During the Court injunction, ULP personnel identified multiple physical safety hazards on several lease tracts. All known physical safety hazards have been fenced to preclude human entry and wildlife or livestock entrapment. A list of action items has been compiled, and the respective ULP lessees will likely be asked to mitigate these hazards once normal, mining-related activities resume. If possible, the lessees will address these issues through reclamation in lieu of royalties, to mitigate these hazards.

3.3.2 Noxious Weeds

ULP lessees are responsible for controlling noxious weeds on their lease tracts in accordance with state law. All lessees conducted treatments in 2020 and completed pesticide application forms to document their herbicide use. LMS licensed pesticide applicators assisted lessees on several occasions to treat large or hard to access infestations. By partnering with lessees, LMS licensed applicators can share knowledge about weed identification, effective herbicides, and treatment techniques, which benefits both parties. In 2020, LMS applicators worked with EFR, Highbury, GEMI, and GEU lessees on lease tracts C-AM-19, C-AM-19A, C-AM-20, C-JD-7, C-LP-22A, C-LP-23, C-SR-13, C-SR-15, and C-SR-15A to eradicate weeds.

Since 2011, LM has coordinated with the Dolores River Restoration Partnership (DRRP), a group of public and private entities whose main purpose is to treat and remove tamarisk and other noxious weeds along the Dolores River corridor and restore the area with native species. Approximately 4 miles of the river flow through Lease Tracts C-SR-13 and C-SR-14. ULP ecologists have overseen and monitored the success of these weed control and restoration efforts annually for the last 9 years and have noted that noxious weed cover has been significantly reduced and native species are returning to much of the treated area.

In 2020, approximately 11 acres of noxious weeds were treated on Lease Tract C-SR-13 along the Dolores River corridor. On July 7 and November 24, 2020, the 2018 and 2019 final monitoring reports for the DRRP on Lease Tract C-SR-13 (DOE 2020a; DOE 2020b) were summitted to LM. A new memorandum of understanding concerning the DRRP was sent to LM for signature on December 17. This new memorandum replaces the existing memorandum that expired on December 22. The annual DRRP report for 2020 will be submitted to LM in early 2021.

4.0 References

10 CFR 760.1. "Uranium Leases on Land Controlled by DOE," Code of Federal Regulations.

19 USC 1862. "Trade Expansion Act," United States Code.

42 USC 2011 et seq. "Atomic Energy Act," United States Code.

50 USC Chapter 55. "Defense Production Act," United States Code.

54 USC 300101 et seq. "National Historic Preservation Act," United States Code.

DOE (U.S. Department of Energy), 2014. Uranium Leasing Program Mitigation Action Plan for the Final Uranium Leasing Program Programmatic Environmental Impact Statement DOE/PEIS-0472, LMS/ULP/Y00368, Office of Legacy Management, November.

DOE (U.S. Department of Energy), 2018a. 2016 Monitoring Report, Dolores River Restoration Project on Lease Tract C–SR–13, LMS/ULP/Y00407, Office of Legacy Management, May.

DOE (U.S. Department of Energy), 2018b. 2017 Monitoring Report, Dolores River Restoration Project on Lease Tract C–SR–13, LMS/ULP/Y00410, Office of Legacy Management, May.

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DOE (U.S. Department of Energy), 2020b. 2019 Monitoring Report, Dolores River Restoration Project on Lease Tract C–SR–13, LMS/ULP/Y00495, Office of Legacy Management, November.

DOE (U.S. Department of Energy), 2020c. *DOE Uranium Leasing Program Annual Status and Activities Report for Calendar Year 2019*, LMS/ULP/Y00476, Office of Legacy Management, March.

EO (Executive Order) 13953. Addressing the Threat to the Domestic Supply Chain From Reliance on Critical Minerals From Foreign Adversaries and Supporting the Domestic Mining and Processing Industries, September 30, 2020.

OMB (U.S. Office of Management and Budget), 2020. *Budget of the United States Government, Fiscal Year 2021*, White House, Washington D.C., February 10.

Uranium Leasing Program, Program Management Plan, LM-Plan-3-23-2.0, LMS/ULP/Y00487, continually updated, prepared by Navarro Research and Engineering, Inc., for the U.S. Department of Energy Office of Legacy Management.