

**Big Sandy Inc.
Phase 3 Sandy Valley
Exploration Project**

Finding of No Significant Impacts

DOI-BLM-AZ-C010-2021-0029-EA

JUNE 2024



INTRODUCTION:

Big Sandy Inc. (Big Sandy; the Applicant) has submitted an Exploration Plan to the Bureau of Land Management (BLM) Colorado River District, Kingman Field Office (KFO) to conduct a third phase of lithium exploration drilling activities near Wikieup, Arizona. The Project site is approximately 613 acres and is located on public lands administered by the BLM KFO. The site is located within portions of Townships 16 and 15 North, Ranges 12 and 13 West, Sections 18, 25, and 36. The Applicant previously conducted two phases of prospecting core hole exploration for lithium resources within the Project site in 2019. Phase 1 of the Project consisted of drilling 16 holes encompassing approximately 1.57 acres. Twelve of these drill holes were accessed, drilled, and reclaimed (0.795 acres of reclaimed disturbance). Phase 2 of the Project consisted of drilling 37 holes, all of which were accessed, drilled, and reclaimed (4.978 acres of reclaimed disturbance).

These two successful exploration phases (AZA-037487) helped to better define the areas where lithium resources exist. The Exploration Plan submitted to the BLM provides for a more detailed plan to better define the extent of the lithium resources. The new Project area proposed for exploration would be the third phase of exploration activities conducted by the Applicant and would consist of two focused exploration areas. The Exploration Plan (Appendix D) provides for further detailed exploration focused on a concentrated array drilling pattern while aiming to reduce impacts to known sensitive resources. Drilling activities are proposed for up to 131 drill pad sites over approximately 18 months. The Project is designed to test the quantity and quality of lithium deposits within the concentrated area.

New surface disturbance within the Project area would be minimal for the access roads, individual exploration sites, and ancillary support sites (two staging areas and water storage site). Access disturbance would be for the multiple-pass ingress and egress of the exploration equipment and support equipment. In total, the Project would disturb approximately 21 acres of land.

The purpose of the Proposed Action is to provide the Applicant an opportunity to explore its valid existing mining claims on public lands managed by the BLM. The need for the Proposed Action is established by BLM's responsibility under the Mining Law of 1872; Section 302 of the Federal Land Policy Management Act of 1976, as amended; the BLM Surface Management Regulations at 43 Code of Federal Regulations (CFR) Section 3809; and the use and occupancy regulations found at 43 CFR Section 3715. Under these regulations, the BLM is required to assess to the Exploration Plan and to ensure that any exploratory activities, if approved, do not cause unnecessary or undue degradation of the public lands, and to respond to the request for occupancy as part of the Exploration Plan (signage and fencing) that is reasonably incident to the development of locatable minerals.

POTENTIALLY AFFECTED ENVIRONMENT:

The proposed Sandy Valley Exploration Project is located west of the Aquarius Mountains approximately 2 miles east of Wikieup, Mohave County, Arizona. Wikieup is the largest community within the Big Sandy Groundwater Basin. The majority of groundwater development in the basin has been in the southern portion along Big Sandy Valley. Groundwater is the primary source of water for Wikieup. The Project area is located within the Big Sandy River

Watershed. Topography for the Project area consists primarily of hilly terrain that is dissected and occasionally incised by ephemeral drainages; flat-topped ridges with steeply eroded sides are also present in the southern drill area. The northern drill area is located at elevations from 1,960 feet to 2,280 feet; the southern drill area is at elevations from 1,840 feet to 2,020 feet. The northern and southern drill areas are approximately 0.7 miles and 0.5 miles east of the Big Sandy River, respectively. Bitter Creek, Sycamore Creek, Gray Wash, and various other unnamed ephemeral washes drain west-southwest from the adjacent Aquarius Mountains into the Big Sandy River. There are floodplains within the northern zone of the project area that are associated with Bitter Creek Wash and are identified as Zone A flood zone. These floodplains are subject to inundation by the 1% annual chance flood. The wetlands/riparian zones within the project area are classified as a riverine, intermittent streambed, seasonally flooded wetland. The wetlands/riparian zones within the southern drill area include Gray Wash and another unnamed wash which are classified as a riverine, intermittent streambed, temporarily flooded wetlands.

Geologically the project area is within the Big Sandy Formation and is host to the lithium-bearing sediments targeted in the exploration program within the Project area. This geologic formation is known to contain diverse mammalian and avian fossils of Late Miocene age. Soils in the Project area include cacique family extremely gravelly loam, 1% to 7% slopes; Cave gravelly sandy loam, dry, 10% to 35% slopes; and Torriorthents, dry, 35% to 65% slopes, according to the National Resources Conservation Service.

Vegetation in the Project area consists of a variety of trees, shrubs, subshrubs, and cacti that are native to the Sonoran Desert and indicative of the Paloverde-Cacti-Mixed Scrub Series. Foothills paloverde (*Parkinsonia microphylla*) and shrubs/subshrubs, including creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), flat-top buckwheat (*Eriogonum fasciculatum*), and brittlebush (*Encelia farinosa*), are the dominant species occurring in the Project area. Succulent and cactus species that commonly occur throughout the Project area include ocotillos (*Fouquieria splendens*), prickly pears (*Opuntia spp.*), chollas (*Cylindropuntia spp.*), hedgehogs (*Echinocereus sp.*), California barrel cacti (*Ferocactus cylindraceus*), Graham's nipple cacti (*Mammillaria grahamii*), crucifixion thorn (*Canotia holacantha*), and saguaro cacti (*Carnegiea gigantea*). A sparse to moderate ground cover of desert Indianwheat (*Plantago sp.*), three-awn (*Aristida sp.*), fluffgrass (*Dasyochloa pulchella*), and big galleta (*Pleuraphis rigida*) is present between cacti, shrubs, and trees. Weedy and invasive species appear to be uncommon in the Project area, consisting primarily of red brome (*Bromus rubens*) in scattered locations throughout the Project area.

Bitter Creek, a wide and sandy-bottomed ephemeral wash, borders the southern edge of the northern drill area. Bitter Creek and the various smaller washes in the Project area are lined with xeroriparian vegetation consisting of a combination of paloverde trees, velvet mesquite (*Prosopis velutina*), catclaw acacia (*Senegalia greggii*), wolfberry (*Lycium andersonii*), white ratany (*Krameria grayi*), cheeseweed (*Hymenoclea sp.*), sweetbush (*Bebbia juncea*), desert broom (*Baccharis sarothroides*), and canyon ragweed (*Ambrosia ambrosioides*).

There are no federally Threatened or Endangered species in the Project area. Sonoran desert tortoise is a BLM sensitive species that may be present in the Project area. The area has been designated as Category III (the least valuable and protected habitat) for desert tortoise habitat. A

variety of wildlife, including many bird species, were observed (or heard) within the Project area during the site visit conducted on October 29, 2019. Birds that were observed included cactus wren (*Campylorhynchus brunneicapillus*), Gila woodpecker (*Melanerpes uropygialis*), verdins (*Auriparus flaviceps*), house finches (*Haemorhous mexicanus*), black-tailed gnatcatchers (*Poliophtila melanura*), black-throated sparrows (*Amphispiza bilineata*), and curve-billed thrashers (*Toxostoma curvirostre*). Black-tailed jackrabbits (*Lepus californicus*) were also observed; small rodent burrows and wood rat (*Neotoma spp.*) middens were the primary signs of small mammal activity within the Project limits. Signs of cattle grazing (i.e., scat, broken tree limbs) were observed throughout the Project area. Other wildlife species that are likely to occur in the Project area include birds such as mourning dove (*Zenaida asiatica*), greater roadrunner (*Geococcyx californianus*), and red-tailed hawk (*Buteo jamaicensis*); mammals such as mule deer (*Odocoileus hemionus*), javelina (*Pecari tajacu*), and coyote (*Canis latrans*); and reptiles such as western diamondback rattlesnake (*Crotalus atrox*).

DEGREE OF EFFECTS:

The degree of effects for each of the resource issues identified in the environmental assessment (EA) are described in detail in Chapter 3 of the EA. The Proposed Action would result in the disturbance of approximately 21 acres of land with exploration activities expected to occur over an 18-month period.

Short- and long-term effects of the Proposed Action alternative:

- Temporary visual effects from drilling equipment and surface disturbance.
- Temporary noise and vibration from drilling activities and vehicular travel through the area.
- Temporary disruption to cultural practices at and/or near Ha’Kamwe’.
- Impacts to native wildlife and vegetation (removal of vegetation, noise, human presence) on up to 21 acres.
- Fugitive dust and vehicle emissions from vehicles and drill rigs during exploration activities.
- There may be minor local dispersion of recreation away from active drilling and construction areas. However, access in the area would not be restricted to any recreation sites and there are other routes for travel in the area.
- New access roads would be constructed which would remove and/or crush vegetation, disturb soil structures, increase the potential for invasives, nonnatives, and noxious weeds to spread and increase potential for soil erosion from stormwater runoff.
- The Proposed Action would result in minor contributions to local communities and the local tax base due to the presence of up to 4 personnel working over the life of the project (18 months).
- The Proposed Action would result in the loss or disturbance of up to 21 acres of potential habitat and forage for wildlife, migratory birds, and special-status species. Exploration drilling noise, human presence, and vibrations would have some potential to cause wildlife to vacate from or temporarily avoid the project vicinity during the 18-month duration of the Proposed Action.
- There would be a collection and removal of core and rock chip samples from the exploration drilling.

With incorporation of the committed environmental protection measures (EPMs) and best management practices (BMPs) from Section 2.1.1 of the EA and implementation of additional

mitigation identified in Section 3.2.7 of the EA these impacts would be minimized. These measures would help limit disturbances, provide for dust control, erosion control (water truck would be used for dust suppression), reseeding disturbed areas with a BLM approved seed mix would help prevent spread of invasives, slow speed limits and wildlife awareness training to crews would help reduce impacts to wildlife. There would not be any exceedances of air quality standards and most of these impacts would cease once the drilling program is completed. Once the reclamation of disturbed areas (e.g., access roads and drill pads) is complete, disturbances would be even more minimal with no significant impacts expected. Disturbed areas would be re-contoured to blend with original contours and to mitigate future erosion. Disturbed areas and areas of overland travel would be scarified then reseeded by a manual broadcast method and raked by hand to reduce disturbance to the extent practicable as described in Chapter 3 of the EA and in the Exploration Plan.

Beneficial and adverse effects of the Proposed Action alternative:

- Similar to the description above regarding short- and long-term impacts, none of the impacts from the Proposed Action as analyzed in Chapters 3 and 4 of the EA are considered significant. The combination of socioeconomic characteristics for the area suggests that the community in the Wikieup census designated place would benefit from projects such as the proposed action as it would reduce the potential unemployment numbers for the area during implementation. Many of the adverse impacts identified would be reduced by the incorporation of the reclamation plan, and the project's committed EPMs and BMPs described in Chapter 2, Section 2.1.1. Once reclamation and revegetation of the drill sites occurs these impacts would be alleviated.

Whether and to what extent the Proposed Action alternative will affect public health and safety:

- The project is not expected to introduce any hazardous materials into the environment and protocols would be put in place to avoid spills or release of hazardous materials. Hazardous materials proposed to be used in the Project area would be properly contained in accordance with the applicant's spill prevention plan as discussed in Appendix D, Exploration Plan of Operations and any spills would be cleaned up using the best available practices and disposed of at an approved disposal facility.
- Drilling activities are not expected to hinder or alter emergency service or other access to the area.
- The project area is in attainment for all criteria pollutants. Emissions would result primarily from the operation of vehicles and drilling equipment. These emissions would result in a direct, short-term, minor, adverse effect that is not expected to affect ambient air quality or expose sensitive receptors to detrimental pollution concentrations.
- As mentioned in Section 2.1.1 of the EA, the committed environmental protection measures/BMPs implemented would ensure both resource and public health and safety from the Proposed Action.

Whether effects of the Proposed Action alternative would violate Federal, State, Tribal or local law protecting the environment.

- The project does not violate any relevant federal, state, local or tribal law or requirement imposed for the protection of the environment. Federal, State, and local interests were given the opportunity to participate in the environmental analysis process during scoping

and were provided an opportunity to comment on the EA during the public comment and review period. Comments were accepted on the Project originally for a 30-day period beginning April 12, 2021. Based on requests received during this period the BLM, Kingman Field Office extended the original comment period twice for a total of approximately 90-days and accepted comments from April 12, 2021, through July 10, 2021; although comments received in a timely manner after this date were also considered. Comments received were considered and responses can be found in Appendix E of the Final EA.

FINDING OF NO SIGNIFICANT IMPACT DETERMINATION

Based upon a review of the environmental assessment (incorporated herein by reference), and the supporting documents, I have determined that the Big Sandy Inc., Phase 3 Sandy Valley Exploration Project EA# DOI-BLM-AZ-C010-2021-0029-EA, is not a major federal action and will not significantly impact the quality of the human environment. An environmental impact statement is not needed. This finding is based on potentially affected environment and degree factors of the project, as described above.

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Date