

**APPENDIX D – PLAN OF OPERATIONS FOR MINERAL
EXPLORATION**

**Big Sandy Inc
Sandy Valley Exploration Project (Phase 3)**

PLAN OF OPERATIONS FOR MINERAL EXPLORATION

**Wikieup, Arizona
AZA-037487**

Prepared for:

**Big Sandy Inc
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Big Sandy Inc
Sandy Valley Exploration Project (Phase 3)

PLAN OF OPERATIONS FOR MINERAL EXPLORATION

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Date: _____

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Executive Summary

Big Sandy Inc (Big Sandy) is seeking regulatory agency authorization to conduct a third phase of federal lithium and poly metal minerals exploration at the previously explored Sandy Valley Exploration Project. A Plan of Operations application, as required by the Bureau of Land Management (BLM), and authorization, is required for plan implementation. This plan is intended to provide details for completion of National Environmental Policy Act (NEPA) analysis and resulting project approval. Details of the affected environment are not being provided at this time but rather will be incorporated once ongoing cultural and biological clearance survey work and NEPA analysis is completed.

Lithium and other metals are believed to be present as determined by two prior phases of core hole exploration within the project area. Lithium is the lightest alkali metal and the least dense solid element, with a density about half that of water. Among other uses, lithium is used in medicine, as a heat transfer agent, for making alloys, and for batteries and electronic devices. Other poly metals of economic interest are likely to occur within the same geologic environment and are likely to be found during the exploration effort.

Big Sandy is not proposing any mining activities associated with this plan but rather seeking to conduct further exploration activities to determine the quantity and quality of lithium and other poly metals within the Sandy Valley Project Area. This exploration phase is relatively short in duration, encompasses 26.156 acres of new disturbance and is designed to have minimal natural resource impact to the area with existing disturbance utilized to the extent reasonable. Many project attributes further the commitment to minimal natural resource impacts to include onsite water use, equipment selection overall minimal surface disturbance during the exploration phase. A successful exploration phase may provide economic details for a future commercial mining operation that would be applied for under a separate application following this exploration phase.

This plan has been prepared to detail proposed drilling and bulk sampling operations with associated infrastructure to obtain maximum results while minimizing overall disturbance and impacts to natural resources within the project area. Upon completion of the exploration project, the entire disturbance will be reclaimed as detailed within this document.

1. General Information

1.1 Name of Project

The Sandy Valley Exploration Project (Phase 3) is proposed by Big Sandy, Inc. to the Bureau of Land Management – Kingman Field Office, Kingman, Arizona.

1.2 Type of Operation

Mineral Exploration Activities to include 145 additional prospecting drill-holes and a bulk sampling site with associated access, staging areas and water facilities on federal surface and mineral.

1.3 Is This a New/Continuing Operation

Big Sandy has previously completed two phases of prospecting core hole exploration that identified lithium resources within the Sandy Valley Exploration Project area near Wikieup, Arizona. The two successful federal exploration phases (AZA-037487) have consolidated the larger project area into two smaller exploration areas requiring further detailed exploration focused in a concentrated array drilling pattern while focusing on reducing resource impacts. The project is designed to obtain the quantity and quality of lithium deposits within the project area (Sandy Valley Exploration Project Phase 3). The Phase 3 exploration project will further assess the greater project area and will provide resource details for a future commercial mining operation that would be applied for under a separate application following this exploration phase, if feasible.

The Sandy Valley Exploration Project (Phase 1) project consisted of 16 proposed holes of which 12 were accessed, drilled and reclaimed.

The Sandy Valley Exploration Project (Phase 2) project consisted of 37 proposed holes of which 37 were accessed, drilled and reclaimed. This application will focus on the Phase 3 application but reference the drilling and disturbance from the Phase 1 and 2 applications as one composite project consisting of 49 total holes.

1.4 Proposed Start-up Date of Operation

January 15, 2020 or pending approval of this Plan of Operations.

1.5 Expected Duration of Operation

Activities are anticipated to be completed during summer 2021 and conclude with reclamation when surface conditions warrant during the fall and winter 2021. Exploration activities will commence upon official receipt of the plan approval and bonding adjudication and will continue for a period of approximately eighteen months during 2020 and 2021. Activities include drilling, coring, core analysis then plugging, and the excavation, sampling and backfilling of one bulk sampling location (600 square feet). Drill-hole plugging will be completed to Arizona State Department of Water Resources specifications. Plugging, bulk sample site backfill and surface reclamation will occur concurrently in intervals during the remaining drilling program as weather permits to minimize erosion potential. Final reclamation of access roads and ancillary facilities will be completed concurrent with the final hole abandonment and reclamation.

2. Operator/Claimant Information

2.1 Operator / Claimant Contact

Big Sandy Inc
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Moab, Utah 84532
Greg Smith – President/ Director
greg.smith354@gmail.com
Tax ID: 32-0494441

2.2 Authorized Field Representatives Contact

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435-260-1787

Charlie Knowles
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970-245-4415

2.3 Permitting Contact

Star Point Enterprises, Inc
2580 Creekview Road
Moab UT 84532
Don Hamilton - President
starpoint@etv.net
435-650-3866

2.4 Surface Owner Contact

Bureau of Land Management - Kingman Field Office
Paul Misiaszek - Geologist
2755 Mission Blvd
Kingman, AZ 86401
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2.5 Claim names and BLM Serial Numbers of unpatented mining claims where disturbance has or will occur

WIK Claim Group Lode Claims (Table 2).

2.6 Primary Commodity

Lithium and poly-metals

3. INTRODUCTION

Big Sandy is proposing 145 additional prospecting drill-holes and a bulk sampling site with associated access, staging areas and water well and water storage facilities on federal surface and mineral, under the management of the Bureau of Land Management - Kingman Field Office (BLM), centered approximately two miles east of Wikieup, Mohave County, Arizona. The exploration area is divided within a northern area (NM and NZ prospecting core holes) and a southern area (SM and SZ core holes) as outlined in the following pages and with generalized legal descriptions within **Table 1** below.

Table 1 – Exploration Drilling Areas Summary

Drilling Area	Proposed Core holes	Generalized Legal Description
NM	61	S/2, Section 24 & N/2, Section 25, T16N, R13W, GSRB&M
NZ	39	SE/4, Section 25 & N/2, Section 36, T16N, R13W, GSRB&M
SM	14	N/2, Section 18, T15N, R12W, GSRB&M
NZ	31	E/2, Section 18, T15N, R12W, GSRB&M

The 145 proposed Phase 3 drill-holes are additional to the two existing phases of exploration. The Phase 1 authorization consisted of 16 proposed holes of which 12 were accessed, drilled and reclaimed with the remaining 4 drill-holes with associated disturbance being reclaimed. The Phase 2 authorization consisted of 37 proposed holes of which 37 were accessed, drilled and reclaimed. This application will focus on the Phase 3 application but reference the drilling and disturbance from the Phase 1 and 2 applications as one composite project consisting of 49 total holes (5 total acres).

This Operations Plan also addresses required ancillary disturbance to include use of four staging areas, an existing water well site and a new site for a 12,000-gallon stand fresh-water storage tank site that coupled together reduce overall project travel for necessary water and reduces the overall footprint of the individual exploration sites (prospecting core holes and a bulk sample site). These ancillary facilities have been located to make the best use of existing project area disturbance while remaining centrally located and reducing overall project travel within the Sandy Valley Exploration Project Phase 3 area (**see Figure 1 attached**).

4. ACTIVITY SUMMARY

This Phase 3 Operations Plan is for an exploratory coring and bulk sampling project with no mining, milling, processing or classifying proposed. This Operations Plan specifically addresses exploration as the following components:

- a) Use of existing roads with no improvements proposed;
- b) Multiple pass ingress and egress (10-foot width) of 66,045 feet (12.51 miles) of exploration site access road (15.162 acres of estimated additional disturbance);

- c) Disturbance for 145 additional 80-foot by 40-foot exploration drill-hole sites (10.652 acres of estimated disturbance);
- d) Disturbance for one 30-foot by 20-foot bulk sample site (0.014 acres);
- e) Disturbance for four 240-foot by 40-foot staging areas (0.220 acres);
- f) Use of existing 80-foot by 40-foot water well pad (0.073 acres);
- g) Disturbance for one 50-foot by 30-foot 12,000-gallon stand water storage tank site (0.034 acres);
- h) Construction of a fifteen-foot by ten-foot by four-foot deep inboard drilling sump on each drill-hole pad;
- i) Concentrated vertical coring of the claims to determine the quality and quantity of federal lithium reserves within the project area and better understand the underground geologic strata to a depth of 360 feet (110 meters);
- j) Excavation and transportation of up to 50 tons of material from the bulk sampling site;
- k) Concurrent interval plugging of the drill-holes to Arizona State Department of Water Resources specifications;
- l) Concurrent interval backfill of the sump and pad reclamation at each prospecting core hole site;
- m) Backfill and compaction of the bulk sampling site with reject material; and
- n) Reclamation of all new disturbance as discussed in detail within this plan.

Coring and analysis of the 145 core holes by rubber track-mounted drilling and coring equipment would account for most of the work to be completed in the project area and is anticipated to take up to eighteen months to complete. Plugging and reclamation of the completed core hole sites, associated access roads and excavation of the single bulk sample site would be completed concurrent with the drilling operations with a total anticipated project occupancy of eighteen months encompassing 26.156 acres of new disturbance. The ancillary staging areas, water well site and stand tank site will be developed during initial project implementation and be reclaimed with the final core hole reclamation within the project. Activities are anticipated to be completed during summer 2021 and conclude with reclamation when surface conditions warrant during the fall and winter 2021.

The 145-prospecting drill-holes are proposed to a depth of 360 feet (110 meters) within a compressed array concentrated where exploration efforts from an earlier Phase 1 and Phase 2 program was completed while minimizing overall surface disturbance. In accordance with applicable BLM regulations Big Sandy is submitting this Plan of Operations to conduct exploration activities with bulk sampling, that upon implementation, is designed to further demonstrate the existence of a valuable lithium and metals deposit within the Sandy Valley Exploration Project area.

5. PROJECT LOCATION

Big Sandy Inc (Big Sandy) is proposing additional exploration drilling and bulk sampling (up to 50 tons). 145 prospecting drill-holes and one bulk sampling site (50 tons of material to be removed for sampling) with associated access and ancillary facilities on federal surface and mineral, under the management of the Bureau of Land Management - Kingman Field Office (BLM), centered approximately two miles east of Wikieup, Mohave County, Arizona is proposed. The proposed exploration is concentrated within a northern and southern area and further broken down into four exploration areas.

Exploration coring activities will be conducted on federal surface and mineral lands, under the management of the Bureau of Land Management - Kingman Field Office (BLM), as and summarized within **Table 1** and further detailed with legal descriptions within **Table 2**.

Access to the Sandy Valley Exploration Project (Phase 3) northern and southern areas is from US Route 93 to the Cholla Canyon Ranch Road, approximately 3.5 miles south of Wikieup. Follow the Cholla Canyon Ranch Road going north for 2.9 miles, then continue north on the Lower Trout Creek Rd for 2 miles until it intersects the Powerline Rd. From this intersection, turn right (south) on the Powerline Rd to the unimproved two-track (BG1278) and travel 0.25 miles to various drill-hole points along the unimproved access road for the Phase 3 program (**Figure 1**).

Existing two-track roads and previously reclaimed Phase 1 and Phase 2 exploration roads will be utilized to the extent possible to minimize new project surface disturbance.

Table 2 – Phase 2 Drill-hole Details

Hole_ID	Latitude	Longitude	Elev_ft	TD_ft	County	State	Township	Range	Section	QQ	Claim	Serial#
NM1	34.69874420	-113.57326336	2142	360	Mohave	AZ	16N	13W	25	SENW	WIK 79	AMC439739
NM2	34.69872114	-113.57435414	2136	360	Mohave	AZ	16N	13W	25	SENW	WIK 79	AMC439739
NM3	34.69870500	-113.57511768	2146	360	Mohave	AZ	16N	13W	25	SENW	WIK 79	AMC439739
NM4	34.69867501	-113.57653569	2106	360	Mohave	AZ	16N	13W	25	SENW	WIK 78	AMC439738
NM5	34.69865193	-113.57762647	2178	360	Mohave	AZ	16N	13W	25	SWNW	WIK 78	AMC439738
NM6	34.69862883	-113.57871724	2185	360	Mohave	AZ	16N	13W	25	SWNW	WIK 78	AMC439738
NM7	34.69860573	-113.57980802	2182	360	Mohave	AZ	16N	13W	25	SWNW	WIK 78	AMC439738
NM8	34.69950660	-113.57983599	2169	360	Mohave	AZ	16N	13W	25	SWNW	WIK 66	AMC439726
NM9	34.69952971	-113.57874521	2215	360	Mohave	AZ	16N	13W	25	SWNW	WIK 67	AMC439727
NM10	34.69955280	-113.57765442	2182	360	Mohave	AZ	16N	13W	25	SWNW	WIK 67	AMC439727
NM11	34.69957588	-113.57656364	2208	360	Mohave	AZ	16N	13W	25	SENW	WIK 68	AMC439728
NM12	34.69959896	-113.57547285	2221	360	Mohave	AZ	16N	13W	25	SENW	WIK 68	AMC439728
NM13	34.69962202	-113.57438206	2188	360	Mohave	AZ	16N	13W	25	SENW	WIK 69	AMC439729
NM14	34.69964507	-113.57329127	2152	360	Mohave	AZ	16N	13W	25	SENW	WIK 69	AMC439729
NM15	34.70052289	-113.57440998	2221	360	Mohave	AZ	16N	13W	25	SENW	WIK 69	AMC439729
NM16	34.70031966	-113.57549519	2224	360	Mohave	AZ	16N	13W	25	SENW	WIK 68	AMC439728
NM17	34.70043171	-113.57659018	2165	360	Mohave	AZ	16N	13W	25	SENW	WIK 68	AMC439728
NM18	34.70040863	-113.57768098	2162	360	Mohave	AZ	16N	13W	25	SENW	WIK 67	AMC439727
NM19	34.70043058	-113.57877318	2175	360	Mohave	AZ	16N	13W	25	SENW	WIK 66	AMC439726
NM20	34.70040748	-113.57986397	2136	360	Mohave	AZ	16N	13W	25	SENW	WIK 66	AMC439726
NM21	34.70130835	-113.57989195	2103	360	Mohave	AZ	16N	13W	25	SENW	WIK 66	AMC439726
NM22	34.70123674	-113.57901651	2096	360	Mohave	AZ	16N	13W	25	SENW	WIK 66	AMC439726
NM23	34.70135455	-113.57771034	2080	360	Mohave	AZ	16N	13W	25	SENW	WIK 67	AMC439727
NM24	34.70151276	-113.57662372	2103	360	Mohave	AZ	16N	13W	25	NENW	WIK 68	AMC439728
NM25	34.70158088	-113.57553430	2126	360	Mohave	AZ	16N	13W	25	NENW	WIK 68	AMC439728
NM26	34.70160395	-113.57444348	2119	360	Mohave	AZ	16N	13W	25	NENW	WIK 69	AMC439729
NM27	34.70144683	-113.57334709	2188	360	Mohave	AZ	16N	13W	25	NENW	WIK 69	AMC439729
NM28	34.70146987	-113.57225627	2208	360	Mohave	AZ	16N	13W	25	SWNE	WIK 70	AMC439730
NM29	34.70149291	-113.57116545	2188	360	Mohave	AZ	16N	13W	25	SWNE	WIK 70	AMC439730
NM30	34.70151593	-113.57007464	2182	360	Mohave	AZ	16N	13W	25	SWNE	WIK 70	AMC439730
NM31	34.70153895	-113.56898382	2178	360	Mohave	AZ	16N	13W	25	SWNE	WIK 70	AMC439730
NM32	34.70241681	-113.57010251	2228	360	Mohave	AZ	16N	13W	25	NWNE	WIK 64	AMC439724
NM33	34.70239378	-113.57119334	2208	360	Mohave	AZ	16N	13W	25	NWNE	WIK 64	AMC439724
NM34	34.70237075	-113.57228417	2178	360	Mohave	AZ	16N	13W	25	NWNE	WIK 64	AMC439724
NM35	34.70239390	-113.57332185	2142	360	Mohave	AZ	16N	13W	25	NENW	WIK 69	AMC439729
NM36	34.70246669	-113.57414276	2152	360	Mohave	AZ	16N	13W	25	NENW	WIK 69	AMC439729
NM37	34.70239167	-113.57555944	2162	360	Mohave	AZ	16N	13W	25	NENW	WIK 68	AMC439728
NM38	34.70227850	-113.57664747	2162	360	Mohave	AZ	16N	13W	25	NENW	WIK 68	AMC439728
NM39	34.70225542	-113.57773829	2136	360	Mohave	AZ	16N	13W	25	NWNW	WIK 67	AMC439727
NM40	34.70245754	-113.57883611	2129	360	Mohave	AZ	16N	13W	25	NWNW	WIK 66	AMC439726
NM41	34.70302000	-113.57994512	2123	360	Mohave	AZ	16N	13W	25	NWNW	WIK 66	AMC439726
NM42	34.70313320	-113.57885709	2129	360	Mohave	AZ	16N	13W	25	NWNW	WIK 66	AMC439726
NM43	34.70315629	-113.57776625	2146	360	Mohave	AZ	16N	13W	25	NWNW	WIK 67	AMC439727
NM44	34.70317938	-113.57667542	2133	360	Mohave	AZ	16N	13W	25	NENW	WIK 68	AMC439728
NM45	34.70320245	-113.57558458	2156	360	Mohave	AZ	16N	13W	25	NENW	WIK 68	AMC439728

Hole_ID	Latitude	Longitude	Elev_ft	TD_ft	County	State	Township	Range	Section	QQ	Claim	Serial#
NM46	34.70322552	-113.57449375	2165	360	Mohave	AZ	16N	13W	25	NENW	WIK 69	AMC439729
NM47	34.70324858	-113.57340291	2162	360	Mohave	AZ	16N	13W	25	NENW	WIK 69	AMC439729
NM48	34.70327162	-113.57231207	2156	360	Mohave	AZ	16N	13W	25	NWNE	WIK 64	AMC439724
NM49	34.70329466	-113.57122123	2185	360	Mohave	AZ	16N	13W	25	NWNE	WIK 64	AMC439724
NM50	34.70376813	-113.57014433	2215	360	Mohave	AZ	16N	13W	25	NWNE	WIK 57	AMC439717
NM51	34.70419554	-113.57124912	2188	360	Mohave	AZ	16N	13W	25	NWNE	WIK 57	AMC439717
NM52	34.70417250	-113.57233997	2169	360	Mohave	AZ	16N	13W	25	NWNE	WIK 57	AMC439717
NM53	34.70414945	-113.57343082	2185	360	Mohave	AZ	16N	13W	25	NENW	WIK 56	AMC439716
NM54	34.70412640	-113.57452167	2178	360	Mohave	AZ	16N	13W	25	NENW	WIK 56	AMC439716
NM55	34.70401324	-113.57560973	2175	360	Mohave	AZ	16N	13W	25	NENW	WIK 55	AMC439715
NM56	34.70505033	-113.57345874	2198	360	Mohave	AZ	16N	13W	25	NENW	WIK 56	AMC439716
NM57	34.70507338	-113.57236787	2182	360	Mohave	AZ	16N	13W	25	NWNE	WIK 57	AMC439717
NM58	34.70509642	-113.57127701	2185	360	Mohave	AZ	16N	13W	25	NWNE	WIK 57	AMC439717
NM59	34.70599729	-113.57130490	2211	360	Mohave	AZ	16N	13W	24	SWSE	BSL 145	AMC448931
NM60	34.70597425	-113.57239578	2211	360	Mohave	AZ	16N	13W	24	SWSE	BSL 145	AMC448931
NM61	34.70595120	-113.57348665	2234	360	Mohave	AZ	16N	13W	24	SESW	WIK 56	AMC439716
NZ1	34 69572922	-113.56662124	1969	360	Mohave	AZ	16N	13W	25	NESE	WIK 83	AMC439743
NZ2	34 69615667	-113.56772591	2060	360	Mohave	AZ	16N	13W	25	NESE	WIK 83	AMC439743
NZ3	34 69527878	-113.56660733	1959	360	Mohave	AZ	16N	13W	25	NESE	WIK 85	AMC439745
NZ4	34 69525579	-113.56769807	2008	360	Mohave	AZ	16N	13W	25	NESE	WIK 85	AMC439745
NZ5	34 69523279	-113.56878881	2034	360	Mohave	AZ	16N	13W	25	NWSE	WIK 84	AMC439744
NZ6	34 69430890	-113.56985168	1988	360	Mohave	AZ	16N	13W	25	SWSE	WIK 84	AMC439744
NZ7	34 69456058	-113.56860431	2001	360	Mohave	AZ	16N	13W	25	NWSE	WIK 84	AMC439744
NZ8	34 69435491	-113.56767023	1982	360	Mohave	AZ	16N	13W	25	SESE	WIK 85	AMC439745
NZ9	34 69344253	-113.56818774	1942	360	Mohave	AZ	16N	13W	25	SESE	WIK 86	AMC439746
NZ10	34 69355466	-113.56928264	1959	360	Mohave	AZ	16N	13W	25	SWSE	WIK 86	AMC439746
NZ11	34 69346187	-113.57026205	1949	360	Mohave	AZ	16N	13W	25	SWSE	WIK 86	AMC439746
NZ12	34 69337349	-113.57145988	1962	360	Mohave	AZ	16N	13W	25	SWSE	WIK 86	AMC439746
NZ13	34 69247261	-113.57143200	1988	360	Mohave	AZ	16N	13W	25	SWSE	WIK 86	AMC439746
NZ14	34 69179580	-113.57146562	1965	360	Mohave	AZ	16N	13W	25	SWSE	WIK 88	AMC439748
NZ15	34 69154870	-113.57249481	1988	360	Mohave	AZ	16N	13W	25	SWSE	WIK 88	AMC439748
NZ16	34 69245220	-113.57026356	2024	360	Mohave	AZ	16N	13W	25	SWSE	WIK 86	AMC439746
NZ17	34 69251864	-113.56925060	2028	360	Mohave	AZ	16N	13W	25	SWSE	WIK 86	AMC439746
NZ18	34 69254165	-113.56815990	2028	360	Mohave	AZ	16N	13W	25	SESE	WIK 86	AMC439746
NZ19	34 69164077	-113.56813205	2018	360	Mohave	AZ	16N	13W	25	SESE	WIK 88	AMC439748
NZ20	34 69161776	-113.56922274	2018	360	Mohave	AZ	16N	13W	25	SWSE	WIK 88	AMC439748
NZ21	34 69159475	-113.57031343	2011	360	Mohave	AZ	16N	13W	25	SWSE	WIK 88	AMC439748
NZ22	34 69071688	-113.56919489	2011	360	Mohave	AZ	16N	13W	36	NWNE	WIK 88	AMC439748
NZ23	34 69069387	-113.57028557	2008	360	Mohave	AZ	16N	13W	36	NWNE	WIK 88	AMC439748
NZ24	34 69067085	-113.57137624	1998	360	Mohave	AZ	16N	13W	36	NWNE	WIK 88	AMC439748
NZ25	34 69073675	-113.57252424	2037	360	Mohave	AZ	16N	13W	25	SWSE	WIK 88	AMC439748
NZ26	34 68970085	-113.57462035	2021	360	Mohave	AZ	16N	13W	36	NENW	WIK 90	AMC439750
NZ27	34 68972390	-113.57352969	2005	360	Mohave	AZ	16N	13W	36	NENW	WIK 90	AMC439750
NZ28	34 68974694	-113.57243903	1982	360	Mohave	AZ	16N	13W	36	NWNE	WIK 91	AMC439751
NZ29	34 68976997	-113.57134836	1995	360	Mohave	AZ	16N	13W	36	NWNE	WIK 91	AMC439751
NZ30	34 68979184	-113.57031223	1998	360	Mohave	AZ	16N	13W	36	NWNE	WIK 92	AMC439752
NZ31	34 68886909	-113.57132049	1985	360	Mohave	AZ	16N	13W	36	NWNE	WIK 91	AMC439751
NZ32	34 68884491	-113.57246567	1969	360	Mohave	AZ	16N	13W	36	NWNE	WIK 91	AMC439751
NZ33	34 68882302	-113.57350179	1975	360	Mohave	AZ	16N	13W	36	NENW	WIK 90	AMC439750

Hole_ID	Latitude	Longitude	Elev_ft	TD_ft	County	State	Township	Range	Section	QQ	Claim	Serial#
NZ34	34.68866369	-113.57464278	2011	360	Mohave	AZ	16N	13W	36	NENW	WIK 90	AMC439750
NZ35	34.68789909	-113.57456453	1962	360	Mohave	AZ	16N	13W	36	NENW	WIK 90	AMC439750
NZ36	34.68792214	-113.57347389	1969	360	Mohave	AZ	16N	13W	36	NENW	WIK 90	AMC439750
NZ37	34.68794518	-113.57238325	1962	360	Mohave	AZ	16N	13W	36	NWNE	WIK 91	AMC439751
NZ38	34.68711135	-113.57344878	1952	360	Mohave	AZ	16N	13W	36	NENW	WIK 90	AMC439750
NZ39	34.68699822	-113.57453662	1955	360	Mohave	AZ	16N	13W	36	NENW	WIK 90	AMC439750
SM1	34.64661365	-113.54874354	1988	360	Mohave	AZ	15N	12W	18	NENE	BSL 112	AMC448898
SM2	34.64650076	-113.54983090	1982	360	Mohave	AZ	15N	12W	18	NENE	BSL 110	AMC448896
SM3	34.64625272	-113.55091411	1969	360	Mohave	AZ	15N	12W	18	NENE	BSL 108	AMC448894
SM4	34.64645512	-113.55201113	1959	360	Mohave	AZ	15N	12W	18	NWNE	BSL 108	AMC448894
SM5	34.64624526	-113.55342274	1932	360	Mohave	AZ	15N	12W	18	NWNE	BSL 106	AMC448892
SM6	34.64609413	-113.55418167	1926	360	Mohave	AZ	15N	12W	18	NWNE	BSL 106	AMC448892
SM7	34.64589110	-113.55526625	1923	360	Mohave	AZ	15N	12W	18	NWNE	BSL 104	AMC448890
SM8	34.64564301	-113.55634943	1909	360	Mohave	AZ	15N	12W	18	NENW	BSL 104	AMC448890
SM9	34.64529018	-113.55382976	1952	360	Mohave	AZ	15N	12W	18	NWNE	BSL 106	AMC448892
SM10	34.64553139	-113.55307360	1952	360	Mohave	AZ	15N	12W	18	NWNE	BSL 106	AMC448892
SM11	34.64591458	-113.55199455	1972	360	Mohave	AZ	15N	12W	18	NWNE	BSL 108	AMC448894
SM12	34.64557704	-113.55089340	1991	360	Mohave	AZ	15N	12W	18	NENE	BSL 108	AMC448894
SM13	34.64465332	-113.55195588	1972	360	Mohave	AZ	15N	12W	18	NWNE	BSL 108	AMC448894
SM14	34.64427013	-113.55303492	1955	360	Mohave	AZ	15N	12W	18	NWNE	BSL 106	AMC448892
SZ1	34.63573551	-113.54731985	1909	360	Mohave	AZ	15N	12W	18	SESE	BSL 119	AMC448905
SZ2	34.63571273	-113.54840983	1896	360	Mohave	AZ	15N	12W	18	SESE	BSL 119	AMC448905
SZ3	34.63568993	-113.54949980	1909	360	Mohave	AZ	15N	12W	18	SESE	BSL 117	AMC448903
SZ4	34.63575722	-113.55059253	1883	360	Mohave	AZ	15N	12W	18	SESE	BSL 117	AMC448903
SZ5	34.63564431	-113.55167975	1926	360	Mohave	AZ	15N	12W	18	SESE	BSL 115	AMC448901
SZ6	34.63659026	-113.55170873	1909	360	Mohave	AZ	15N	12W	18	SESE	BSL 115	AMC448901
SZ7	34.63656803	-113.55061737	1946	360	Mohave	AZ	15N	12W	18	SESE	BSL 117	AMC448903
SZ8	34.63659084	-113.54952739	1965	360	Mohave	AZ	15N	12W	18	SESE	BSL 117	AMC448903
SZ9	34.63674877	-113.54844154	1982	360	Mohave	AZ	15N	12W	18	SESE	BSL 119	AMC448905
SZ10	34.63704182	-113.54735982	2001	360	Mohave	AZ	15N	12W	18	SESE	BSL 119	AMC448905
SZ11	34.63753732	-113.54737498	1978	360	Mohave	AZ	15N	12W	18	NESE	BSL 119	AMC448905
SZ12	34.63769471	-113.54847049	1946	360	Mohave	AZ	15N	12W	18	NESE	BSL 119	AMC448905
SZ13	34.63767192	-113.54956049	1936	360	Mohave	AZ	15N	12W	18	NESE	BSL 117	AMC448903
SZ14	34.63742389	-113.55064359	1923	360	Mohave	AZ	15N	12W	18	NESE	BSL 117	AMC448903
SZ15	34.63744612	-113.55173496	1932	360	Mohave	AZ	15N	12W	18	NESE	BSL 115	AMC448901
SZ16	34.63834702	-113.55176257	1936	360	Mohave	AZ	15N	12W	18	NESE	BSL 115	AMC448901
SZ17	34.63836983	-113.55067257	1903	360	Mohave	AZ	15N	12W	18	NESE	BSL 117	AMC448903
SZ18	34.63848273	-113.54958532	1923	360	Mohave	AZ	15N	12W	18	NESE	BSL 117	AMC448903
SZ19	34.63841544	-113.54849255	1962	360	Mohave	AZ	15N	12W	18	NESE	BSL 119	AMC448905
SZ20	34.63843822	-113.54740254	1991	360	Mohave	AZ	15N	12W	18	NESE	BSL 119	AMC448905
SZ21	34.63933913	-113.54743010	1955	360	Mohave	AZ	15N	12W	18	NESE	BSL 113	AMC448899
SZ22	34.63931634	-113.54852013	1962	360	Mohave	AZ	15N	12W	18	NESE	BSL 113	AMC448899
SZ23	34.63929354	-113.54961015	1955	360	Mohave	AZ	15N	12W	18	NESE	BSL 111	AMC448897
SZ24	34.63927074	-113.55070017	1962	360	Mohave	AZ	15N	12W	18	NESE	BSL 111	AMC448897
SZ25	34.63906774	-113.55178466	1965	360	Mohave	AZ	15N	12W	18	NESE	BSL 109	AMC448895
SZ26	34.64012599	-113.55290783	1909	360	Mohave	AZ	15N	12W	18	SWNE	BSL 107	AMC448893
SZ27	34.64023891	-113.55182056	1949	360	Mohave	AZ	15N	12W	18	SENE	BSL 109	AMC448895
SZ28	34.64030677	-113.55073191	1946	360	Mohave	AZ	15N	12W	18	SENE	BSL 111	AMC448897
SZ29	34.64037463	-113.54964326	1969	360	Mohave	AZ	15N	12W	18	SENE	BSL 111	AMC448897
SZ30	34.64066769	-113.54856149	1985	360	Mohave	AZ	15N	12W	18	SENE	BSL 113	AMC448899
SZ31	34.64024003	-113.54745767	1975	360	Mohave	AZ	15N	12W	18	SENE	BSL 113	AMC448899

6. PROPOSED ACTION

Big Sandy Inc proposes to conduct additional prospect exploration drill coring and bulk sampling of active federal mining claims within the Sandy Valley Prospect of Mohave County, Arizona. The project would utilize existing Mohave Electric Cooperative, Inc., BLM, and Mohave County maintained roads across private and BLM managed federal surface to new and unimproved roads where proposed access begins to the project area. Existing roads proposed for use have been delineated within the map package that accompanies this plan. Minor upgrades to the existing access roads has previously been accomplished with the Phase 1 and Phase 2 exploration plans with no additional existing road upgrade proposed with this application.

New surface disturbance within the project area is minimal for the access, individual exploration sites and ancillary support sites (staging and water sites). Access disturbance will be for the multiple pass ingress and egress of the exploration equipment with support equipment along 66,045 feet of 10 feet wide new access (15.162 acres). The 145 drill sites would measure 80 feet in length by 40 feet in width (10.652 acres) include a small sump (measures fifteen feet by ten feet by four feet deep) and accommodates a rubber track-mounted 3-1/2-inch (HQ) core drilling unit with support trucks and trailers entirely within each site. The single bulk sample site would measure 30 feet in length and 20 feet in width (0.014 acres) and accommodate a single 320 class excavator and 10-wheel dump truck for the project bulk sampling and backfill entirely within the site. Backfill will be obtained as reject material from a nearby gravel pit under private ownership through a volume-based contract. Backfill will be compacted in stages and left with a positive slope away from the backfill to minimize future subsidence and surface water ponding at the bulk sampling site. No sump, drilling parking or staging is proposed within the bulk sampling site. Additional ancillary disturbance will include four required staging areas that measure 240 feet by 40 feet (0.220 acres), a single water well pad that measures 80 feet by 40 feet (0.073 acres) and a 12,000-gallon stand water tank storage site that measure 50 feet by 30 feet (0.034 acres). The ancillary disturbance is proposed and located to reduce overall traffic and resource impacts within the project area by reducing overall project vehicular travel.

Existing access roads and proposed access makes the best use of existing disturbance and wash bottoms within the project area. Existing roads and proposed access would provide necessary access for equipment, personnel, water and supplies to the exploration sites with minimal cuts, and fills constructed, and no turnouts or parking areas proposed. The exploration pad areas would accommodate the intended exploration equipment, water storage, drilling and coring supplies and support trucks and trailers. Temporary truck and trailer parking and equipment storage may also occur along the existing BLM and county-maintained road disturbance with no new disturbance proposed but would be minimized to the extent possible. No staging would occur on the previously reclaimed Phase 1 or Phase 2 pads. The prospecting program has been designed to maximize data recovery while minimizing overall surface disturbance within the project area with minimal vegetation and topsoil removal anticipated.

The proposed exploration project coupled with existing data from past exploration phases would facilitate further development of a detailed 3D image of the geologic structure and stratigraphy underlying the Big Sandy Project focus area and estimates of reserve quantity and quality. Coring depths would be a maximum of 360 feet (110 meters) utilizing the diesel-powered rotary coring equipment with fresh water and biodegradable polymer for coring. The proposed exploration drill-holes and the bulk sampling site are proposed to gain maximum information while minimizing surface disturbance and occupation. The drill-holes and bulk sampling site are located where metals reserves are more likely to be encountered or where sub-surface information is less understood and where geologic anomalies may be present. Access roads are configured to minimize surface disturbance, minimize drainage crossings and best utilize the existing disturbance and topography in the area.

Table 3 (a and b) details the lengths, and estimated disturbance for new road construction and existing road improvements associated with the Sandy Valley Project – Phase 3 project.

Table 3a: Phase 3 (Northern Area) Access Road Details

Hole ID	Length (ft)	Width (ft)	Area (ft ²)	Area (acres)	Description
NM1	329	10	3,290	0.076	Proposed Access To NM1
NM2	333	10	3,330	0.076	Proposed Access To NM2
NM3	231	10	2,310	0.053	Proposed Access To NM3
NM4	304	10	3,040	0.070	Proposed Access To NM4
NM5	342	10	3,420	0.079	Proposed Access To NM5
NM6	356	10	3,560	0.082	Proposed Access To NM6
NM7	336	10	3,360	0.077	Proposed Access To NM7
NM8	338	10	3,380	0.078	Proposed Access To NM8
NM9	334	10	3,340	0.077	Proposed Access To NM9
NM10	340	10	3,400	0.078	Proposed Access To NM10
NM11	357	10	3,570	0.082	Proposed Access To NM11
NM12	331	10	3,310	0.076	Proposed Access To NM12
NM13	335	10	3,350	0.077	Proposed Access To NM13
NM14	333	10	3,330	0.076	Proposed Access To NM14
NM15	336	10	3,360	0.077	Proposed Access To NM15
NM16	265	10	2,650	0.061	Proposed Access To NM16
NM17	338	10	3,380	0.078	Proposed Access To NM17
NM18	321	10	3,210	0.074	Proposed Access To NM18
NM20	331	10	3,310	0.076	Proposed Access To NM19
NM19	335	10	3,350	0.077	Proposed Access To NM20
NM21	335	10	3,350	0.077	Proposed Access To NM21
NM22	267	10	2,670	0.061	Proposed Access To NM22
NM23	406	10	4,060	0.093	Proposed Access To NM23
NM24	333	10	3,330	0.076	Proposed Access To NM24
NM25	365	10	3,650	0.084	Proposed Access To NM25
NM26	349	10	3,490	0.080	Proposed Access To NM26
NM27	339	10	3,390	0.078	Proposed Access To NM27
NM28	331	10	3,310	0.076	Proposed Access To NM28
NM28-alt	341	10	3,410	0.078	Proposed Access To NM28-alternative
NM29	330	10	3,300	0.076	Proposed Access To NM29
NM30	333	10	3,330	0.076	Proposed Access To NM30
NM31	330	10	3,300	0.076	Proposed Access To NM31
NM32	332	10	3,320	0.076	Proposed Access To NM32
NM32-alt	300	10	3,000	0.069	Proposed Access To NM32-alternative
NM33	331	10	3,310	0.076	Proposed Access To NM33
NM34	466	10	4,660	0.107	Proposed Access To NM34
NM34-alt	329	10	3,290	0.076	Proposed Access To NM34-alternative
NM35	316	10	3,160	0.073	Proposed Access To NM35
NM36	251	10	2,510	0.058	Proposed Access To NM36
NM37	332	10	3,320	0.076	Proposed Access To NM37
NM38	329	10	3,290	0.076	Proposed Access To NM38
NM39	332	10	3,320	0.076	Proposed Access To NM39
NM40	249	10	2,490	0.057	Proposed Access To NM40
NM41	336	10	3,360	0.077	Proposed Access To NM41
NM42	329	10	3,290	0.076	Proposed Access To NM42
NM43	329	10	3,290	0.076	Proposed Access To NM43
NM44	329	10	3,290	0.076	Proposed Access To NM44
NM45	316	10	3,160	0.073	Proposed Access To NM45
NM46	329	10	3,290	0.076	Proposed Access To NM46
NM47	332	10	3,320	0.076	Proposed Access To NM47
NM48	331	10	3,310	0.076	Proposed Access To NM48
NM49	331	10	3,310	0.076	Proposed Access To NM49
NM50	248	10	2,480	0.057	Proposed Access To NM50
NM51	376	10	3,760	0.086	Proposed Access To NM51
NM52	331	10	3,310	0.076	Proposed Access To NM52
NM53	329	10	3,290	0.076	Proposed Access To NM53
NM54	329	10	3,290	0.076	Proposed Access To NM54
NM55	332	10	3,320	0.076	Proposed Access To NM55
NM56	334	10	3,340	0.077	Proposed Access To NM56
NM57	320	10	3,200	0.073	Proposed Access To NM57
NM58	326	10	3,260	0.075	Proposed Access To NM58
NM59	454	10	4,540	0.104	Proposed Access To NM59
NM60	329	10	3,290	0.076	Proposed Access To NM60
NM61	332	10	3,320	0.076	Proposed Access To NM61
NM Area	4,251	10	42,510	0.976	Proposed Access To NM Area

Hole ID	Length (ft)	Width (ft)	Area (ft ²)	Area (acres)	Description
NZ1	186	10	1,860	0.043	Proposed Access To NZ1
NZ2	329	10	3,290	0.076	Proposed Access To NZ2
NZ3	208	10	2,080	0.048	Proposed Access To NZ3
NZ3-alt	164	10	1,640	0.038	Proposed Access To NZ3-alternative
NZ4	328	10	3,280	0.075	Proposed Access To NZ4
NZ4-alt	328	10	3,280	0.075	Proposed Access To NZ4-alternative
NZ5	335	10	3,350	0.077	Proposed Access To NZ5
NZ6	344	10	3,440	0.079	Proposed Access To NZ6
NZ7	255	10	2,550	0.059	Proposed Access To NZ7
NZ8	329	10	3,290	0.076	Proposed Access To NZ8
NZ9	298	10	2,980	0.068	Proposed Access To NZ9
NZ10	298	10	2,980	0.068	Proposed Access To NZ10
NZ11	384	10	3,840	0.088	Proposed Access To NZ11
NZ12	255	10	2,550	0.059	Proposed Access To NZ12
NZ13	354	10	3,540	0.081	Proposed Access To NZ13
NZ14	263	10	2,630	0.060	Proposed Access To NZ14
NZ15	172	10	1,720	0.039	Proposed Access To NZ15
NZ16	332	10	3,320	0.076	Proposed Access To NZ16
NZ17	332	10	3,320	0.076	Proposed Access To NZ17
NZ18	222	10	2,220	0.051	Proposed Access To NZ18
NZ19	329	10	3,290	0.076	Proposed Access To NZ19
NZ19-alt	90	10	900	0.021	Proposed Access To NZ19-alternative
NZ20	331	10	3,310	0.076	Proposed Access To NZ20
NZ21	365	10	3,650	0.084	Proposed Access To NZ21
NZ22	331	10	3,310	0.076	Proposed Access To NZ22
NZ22-alt	125	10	1,250	0.029	Proposed Access To NZ22-alternative
NZ22-alt	329	10	3,290	0.076	Proposed Access To NZ22-alternative
NZ23	338	10	3,380	0.078	Proposed Access To NZ23
NZ24	348	10	3,480	0.080	Proposed Access To NZ24
NZ25	299	10	2,990	0.069	Proposed Access To NZ25
NZ26	386	10	3,860	0.089	Proposed Access To NZ26
NZ27	410	10	4,100	0.094	Proposed Access To NZ27
NZ28	330	10	3,300	0.076	Proposed Access To NZ28
NZ29	315	10	3,150	0.072	Proposed Access To NZ29
NZ30	329	10	3,290	0.076	Proposed Access To NZ30
NZ30-alt	54	10	540	0.012	Proposed Access To NZ30-alternative
NZ31	145	10	1,450	0.033	Proposed Access To NZ31
NZ32	204	10	2,040	0.047	Proposed Access To NZ32
NZ33	577	10	5,770	0.132	Proposed Access To NZ33
NZ34	343	10	3,430	0.079	Proposed Access To NZ34
NZ35	329	10	3,290	0.076	Proposed Access To NZ35
NZ36	318	10	3,180	0.073	Proposed Access To NZ36
NZ36-alt	338	10	3,380	0.078	Proposed Access To NZ36-alternative
NZ37	25	10	250	0.006	Proposed Access To NZ37
NZ38	117	10	1,170	0.027	Proposed Access To NZ38
NZ39	331	10	3,310	0.076	Proposed Access To NZ39
NZ Area	7,802	10	78,020	1.791	Proposed Access To NZ Area

Note: Disturbed acreage estimates assumed at a 10-foot wide access corridor.

Table 3b: Phase 3 (Southern Area) Access Road Details

Hole ID	Length (ft)	Width (ft)	Area (ft ²)	Area (acres)	Description
SM1	632	10	6,320	0.145	Proposed Access To SM1
SM2	332	10	3,320	0.076	Proposed Access To SM2
SM3	340	10	3,400	0.078	Proposed Access To SM3
SM4	340	10	3,400	0.078	Proposed Access To SM4
SM5	493	10	4,930	0.113	Proposed Access To SM5
SM6	238	10	2,380	0.055	Proposed Access To SM6
SM7	345	10	3,450	0.079	Proposed Access To SM7
SM8	339	10	3,390	0.078	Proposed Access To SM8
SM9	245	10	2,450	0.056	Proposed Access To SM9
SM10	355	10	3,550	0.081	Proposed Access To SM10
SM11	200	10	2,000	0.046	Proposed Access To SM11
SM12	474	10	4,740	0.109	Proposed Access To SM12
SM12-alt	134	10	1,340	0.031	Proposed Access To SM12-alternative
SM13	465	10	4,650	0.107	Proposed Access To SM13
SM14	354	10	3,540	0.081	Proposed Access To SM14
SZ Area	1,776	10	17,760	0.408	Proposed Access To SZ Area
SZ1	226	10	2,260	0.052	Proposed Access To SZ1
SZ2	328	10	3,280	0.075	Proposed Access To SZ2
SZ3	328	10	3,280	0.075	Proposed Access To SZ3
SZ4	330	10	3,300	0.076	Proposed Access To SZ4
SZ4-alt	875	10	8,750	0.201	Proposed Access To SZ4-alternative
SZ5	790	10	7,900	0.181	Proposed Access To SZ5
SZ6	481	10	4,810	0.110	Proposed Access To SZ6
SZ7	333	10	3,330	0.076	Proposed Access To SZ7
SZ8	329	10	3,290	0.076	Proposed Access To SZ8
SZ9	332	10	3,320	0.076	Proposed Access To SZ9
SZ10	343	10	3,430	0.079	Proposed Access To SZ10
SZ11	184	10	1,840	0.042	Proposed Access To SZ11
SZ12	340	10	3,400	0.078	Proposed Access To SZ12
SZ13	329	10	3,290	0.076	Proposed Access To SZ13
SZ14	339	10	3,390	0.078	Proposed Access To SZ14
SZ15	329	10	3,290	0.076	Proposed Access To SZ15
SZ16	330	10	3,300	0.076	Proposed Access To SZ16
SZ17	348	10	3,480	0.080	Proposed Access To SZ17
SZ18	331	10	3,310	0.076	Proposed Access To SZ18
SZ19	331	10	3,310	0.076	Proposed Access To SZ19
SZ20	372	10	3,720	0.085	Proposed Access To SZ20
SZ21	335	10	3,350	0.077	Proposed Access To SZ21
SZ22	497	10	4,970	0.114	Proposed Access To SZ22
SZ23	331	10	3,310	0.076	Proposed Access To SZ23
SZ24	329	10	3,290	0.076	Proposed Access To SZ24
SZ25	341	10	3,410	0.078	Proposed Access To SZ25
SZ26	331	10	3,310	0.076	Proposed Access To SZ26
SZ27	332	10	3,320	0.076	Proposed Access To SZ27
SZ28	329	10	3,290	0.076	Proposed Access To SZ28
SZ29	545	10	5,450	0.125	Proposed Access To SZ29
SZ30	350	10	3,500	0.080	Proposed Access To SZ30
SZ31	370	10	3,700	0.085	Proposed Access To SZ31
SZ31-alt	236	10	2,360	0.054	Proposed Access To SZ31-alternative

Note: Disturbed acreage estimates assumed at a 10-foot wide access corridor.

Proposed construction of the new access segments and existing road maintenance would require the use of a skid-loader, water trucks and pick-up trucks. The standard methodology for building new access involves the use of a skid-loader to windrow vegetation to one side of the access, remove topsoil to the other side of the access (estimated at 6-inches), and rough-in the roadway. This is followed by the use of a skid-loader to establish a minimal barrow ditch and single road slope towards the ditch according to standard practices. **Table 4** reflects the dimensions and estimated disturbance for pad construction associated with the Sandy Valley project.

Table 4: Phase 3 Proposed Drill Pads

Number of Pads	Length (ft)	Width (ft)	Area (ft ²)	Area (acres)
145	80	40	464,000	10.652

Note: includes sump (estimated at fifteen-foot by ten-foot and four feet deep).

6.1 Exploration Equipment – type, size and quantity to be utilized

One (1) skid-loader
 One (1) track-mounted 320 class excavator
 One (1) track-mounted core drill rig and pipe sloop with support truck
 One (1) 1000-gallon 4x4 water truck
 Three (3) 4x4 pick-up trucks
 One (1) ATV

6.2 Operating practices

A 180-horsepower or less diesel-powered rubber track-mounted drilling rig with 3-1/2-inch (HQ) coring unit would be moved onto each of the 145 drill-hole sites with necessary analysis, water and hole plugging materials. Fresh water with biodegradable polymer would be utilized as the coring medium with the drill-hole requiring 1 to 12 hours to drill and retrieve the 3-1/2-inch (HQ) core (**Figure 2**).

The proposed drill-hole would target formations containing metals potential. No shallow water or hydrocarbon zones are anticipated but, if encountered, would be isolated utilizing bentonite chips following the drilling and coring process.

Each core hole is anticipated to be dry and will be abandoned in compliance with Arizona R-12-15-816 prior to site reclamation. If confirmed dry, the core hole will be backfilled within twenty feet of surface then filled from twenty feet to surface with concrete. Should water be encountered the entire hole would be backfilled with bentonite chips then filled from twenty feet to surface with concrete (**Figure 3**).

A 320-class diesel-powered excavator with 10-wheel dump truck would access the bulk sampling site and excavate the contents of the 30-foot long by 20-foot wide site to a maximum depth of 16 feet while loading the adjacent 10-wheel dump truck with material for transportation to off-site milling and classification.

The proposed bulk sample site would remove up to 50-tons of material and would target formations containing metals potential. No shallow water or hydrocarbon zones are anticipated but, if encountered, would bring a halt to deeper excavation and immediate notification to the BLM – Kingman Field Office. Excavation of the bulk sampling site would ensure that no unsafe highwalls exist and that a ramped approach always be maintained to protect personnel and wildlife that may be in the area of the excavation and provide a safe egress in the unlikely event they fall into the excavation. Further, if any potentially unsafe conditions exist the entire bulk sampling site would be immediately fenced with temporary panels or steel wire fence.

6.3 Measures taken to prevent unnecessary or undue degradation

Surface disturbances will be limited to the minimum amount as practically and safely possible.

Pad and access disturbances will be relocated to avoid historic cultural resources and suitable buffer within the project area.

Any scientifically important archaeological or paleontological resources will not be knowingly disturbed, altered, injured, or destroyed nor will any historical or cultural site, structure, building, or object. Guidelines in the BLM's Cultural Resources (Archaeology) Standard Stipulations for Mining Operations will be followed. The discovery of any cultural or paleontological resource that might be altered or destroyed by operations will be reported to the authorized BLM officer and the discovery will be left intact.

All personnel will be advised of the possibility of encountering desert tortoises and will be trained in the BLM's Guidelines for Handling Desert Tortoise On Roads and Vehicle Ways.

Staging will occur within four centrally located sites to reduce overall project traffic (**Table 5**).

Any survey and reference monuments will be protected to the extent economically feasible.

Public safety will be protected while the project is in operation. All equipment will be operated and maintained in a safe and orderly manner.

Solid wastes will be disposed of in a state, federal, or local designated site.

All reasonable steps will be taken to prevent fires in the project area. Appropriate fire suppression equipment will be kept on site. All state and federal fire laws and regulations that are applicable will be complied with.

Best Management Practices will be followed. Noxious weed controls will be utilized throughout the project life to prevent or minimize the introduction of noxious weed species into the project

area. Only BLM approved, certified weed-free seed will be used during reseeding. Reclaimed areas will be monitored for infestations of noxious weeds.

Surface disturbances will be as limited as practically as possible through interval reclamation during the drilling process. Reclamation and re-vegetation will include recontouring and seeding with the transplanting of plants not anticipated. All areas of off-road travel and surface disturbance will be raked out at the completion of surface disturbance activities.

6.4 Road Repairs

No road repairs were required during the Phase 1 and Phase 2 projects with no existing road improvements or road repairs proposed for Phase 3. Should a significant road repair be required the appropriate agency authorization will be in place prior to completing the repair.

6.5 Water Source Development

Minimal fresh-water consumption is proposed with the Sandy Valley Exploration Project (Phase 3) but is required to ensure cuttings removal during the drilling process and for as-needed dust-suppression on the existing and proposed access roads during use. Fresh-water use is anticipated at 1,000 gallons or less per core hole totaling up to 145,000 gallons of fresh-water use for the Phase 3 exploration project. Prior Phase 1 and Phase 2 operations have relied on water being trucked from the Wikieup, Arizona municipal system by water truck or pick-up truck but efforts to reduce overall truck traffic within the project area have proposed use of an existing water well site and use of a separate 12,000-gallon stand water tank storage site within the project area (**Table 5**). The stand tank also provides additional fire suppression capability within the project area.

Fresh-water ancillary facilities would likely only utilize the water well site or the 12,000-gallon stand water tank storage site and not both but both are proposed with this operations plan not knowing the condition of the water well or the ability to use the water well until project implementation. A final decision on the source of water would be determined following a pump test at the water well site and approval to utilize the water the BLM – Kingman Field Office during initial project implementation. No water well drilling, or deepening is proposed but rather a pump test and minimal water well rehabilitation and pump installation is proposed at this time. Any improvements to the actual well would remain part of the well following project use with the water well not being plugged or made incapable of future production following project use. The existing water well on the site is presumed useable with an electric submersible pump and 10 kW generator anticipated to operate the well. If the water well is utilized the site would be reclaimed with the final core hole reclamation with the pump and generator removed from the site and the water well left in place and functional.

The water well would not be connected to the 12,000-gallon stand water tank storage site by pipeline but rather a large truck would fill the tank multiple times during project operations from either the functional water well or from Wikieup, Arizona municipal water under a volume based

direct purchase agreement with the City of Wikieup. Water from the tank would then be transported from the stand tank to the northern and southern exploration core holes and access roads on an as-needed basis utilizing the smaller project water truck or pickup trucks. The stand tank would be transported to the stand tank site, raised to a height near 14 feet during project implementation then lowered and removed from the site and the site reclaimed at the conclusion of the project. The stand tank is raised and lowered with a self-contained hydraulic system then water pumped by truck to the tank and allowed to gravity flow from the tank for project use with no generator or engine required for daily use of the tank.

Table 5: Phase 3 Ancillary Facilities Disturbance and Locations

Exploration Plan Proposed Staging Areas							
Area ID	Length (ft)	Width (ft)	Area (ft ²)	Area (acres)	Description	XY Coords-NAD83 12N	
#1 NM & NZ Areas	80	40	3,200	0.073	Proposed Staging Area for NM & NZ Areas	264998, 3842788	
#2 Existing Runway	0	0	0	0.000	Proposed Staging Area on Existing Runway	264433, 3842239	
#3 SM Area	80	40	3,200	0.073	Proposed Staging Area for SM Area	266501, 3836866	
#4 SZ Area	80	40	3,200	0.073	Proposed Staging Area for SM Area	266570, 3835330	
Exploration Plan Proposed Bulk Sample Site							
Area ID	Length (ft)	Width (ft)	Area (ft ²)	Area (acres)	Description	XY Coords-NAD83 12N	
Bulk Sample Site	20	30	600	0.014	Proposed Bulk Sample Site (10x13x6.5ft) - 50 tons max	264540, 3841987	
Bulk Sample Site Rd	371	10	3,710	0.085	Proposed Access To Bulk Sample Site		
Exploration Plan Proposed Use of Existing Water Well							
Area ID	Length (ft)	Width (ft)	Area (ft ²)	Area (acres)	Description	XY Coords-NAD83 12N	
Existing Water Well Pad	80	40	3,200	0.073	Proposed Bulk Sample Site (10x13x6.5ft) - 50 tons max	264414, 3842334	
Existing Water Well Rd	0	0	0	0.000	Proposed Access To Water Well on Existing 2 Track		
Exploration Plan Proposed 12,000 Gallon Lifted Water Tank Storage Site							
Area ID	Length (ft)	Width (ft)	Area (ft ²)	Area (acres)	Description	XY Coords-NAD83 12N	
Water Tank Storage Site	50	30	1,500	0.034	Proposed 12,000 Gallon Lifted Water Tank Storage Site	263069, 3843275	
Access to Water Tank Site	0	0	0	0.000	Proposed Access To Water Well on Cholla Cyn Ranch Rd.		

7. SPILL CONTROL PLAN

This spill control plan addresses general requirements for handling spills and discharges of hazardous or controlled materials during exploratory drilling and bulk sampling activities at the Sandy Valley Exploration Project (Phase 3) exploration project.

Spills and leaks are common occurrences on drilling exploration sites. However, based on the regulatory requirements of 40 CFR §112.1(d)(2), a full Spill Prevention Control and Countermeasures (SPCC) Plan is not needed because the site conditions for this exploratory effort do not meet the requirements of an SPCC facility; i.e., there is no buried storage capacity for this effort, and there is no aboveground storage capacity of the facility greater than or equal to 1,320 gallons of oil/oil products.

The development, implementation and use of a spill control plan is essential so that spills and leaks can be quickly contained and cleaned up. As a rule, the following approach to spill cleanup is to first contain the spill by securing the spill source and deploying spill containment materials, including sorbent pillows, socks, sheets and granules. Small spills are responded to by the

operator involved in the spill. Clean up of residues managed as hazardous or solid waste will be disposed of accordingly.

7.1 Types and Properties of Hazardous Material

Hazardous materials are chemicals (such as paints, oils, and fuels), biological agents (such as disease-causing materials), or physical agents (such as radioactive materials) that are dangerous to humans or to animals and plants. The most likely hazardous materials with mineral exploratory drilling activities that could possibly be released to the environment consist of diesel, gasoline, motor oil and hydraulic oil stored and used by drilling contractors. All petroleum fuels are flammables. The physical and chemical properties for diesel fuel, gasoline and other petroleum products are included in Material Safety Data Sheets (MSDS) that will always be maintained.

Diesel fuel, gasoline, and lubricating grease in small quantities, will be temporarily stored at the project. Approximately 100 gallons of diesel fuel and gasoline will be stored in fuel delivery systems on the drill rig, excavator and support vehicles. Approximately 5 gallons of lubricating oil and 50 pounds of lubricating grease will be stored at the drill rig or transported by support vehicles. The drilling process will only use nontoxic polymer drilling fluids transported in Department of Transportation (DOT)-approved 55-gallon drums and will be stored on a support truck.

Measures will be taken to control any spills immediately after they occur, and any resulting waste will be transferred off site in accordance with all applicable local, state, and federal regulations. If a spill occurs, the BLM and/or Arizona Department of Environmental Quality will be notified immediately as required. Underwriters Laboratories (UL) approved tanks and safety cans will be used to contain all flammable liquids.

Work practices employed for spill prevention and control include good housekeeping, use of drip pans under tanks and connections at the transfer and lube area, capping fuel containers when not in use and immediate containment of spills, leaks and drips that may occur during fueling and lubrication operations.

7.2 Categories of Levels of Spills and Discharges

Fuel spills from diesel and gasoline storage required by the exploration equipment can be categorized as “major accidental” or “minor incidental” spills. A major accidental spill could result from breach of the fuel storage drums, from a vehicle collision or an unattended open valve. Minor incidental spills could result from careless operator handling of transfer equipment during fueling, broken hydraulic lines or engines which leak oil.

7.3 Spill Control Procedures

Fuels and oils will be stored in containers on site for fueling of equipment. Fuels and oils kept on site for drilling equipment will be stored in drums equipped with secondary containment systems. Drum contents typically include petroleum fuels and oils. Container storage includes 55-gallon drums and containers 5-gallons or less on a support vehicle. Drums and/or containers will not be stored where a leak or spill could enter a stormwater conveyance or arroyo.

Secondary containment for drum and container storage will consist of prefabricated spill control pallets, or constructed tanks with secondary containment mounted on the support vehicle. For drums or containers used for dispensing or transferring materials, drip pans should be placed under the dispensing area. Secondary containment must be large enough to hold the volume of the largest container or 10 percent of the volume of all containers, whichever is greater. No storage of containers will occur outdoors. This will preclude exposure to precipitation and extremes in temperature.

Spilled materials will be collected and placed in drums for disposal. Drums of spilled material will be stored on the support vehicle and will be conspicuously identified. Absorbent pads, booms, and containment berms, as well as an emergency spill kit will always be kept on-site to absorb any spills. Drums will be available for the storage of used absorbent.

Emergency spill containment and cleanup kits including such items as lined drums, absorbent pads, portable containment berms, and granular absorbent will be stored and available at the work site. Equipment operators will be under constant supervision and will not be allowed to congest the work area, thus limiting the potential for accidents. Drivers making fuel deliveries or removing waste material from the site will be instructed to travel directly to their destination, limiting opportunities for accidents. Drilling personnel will monitor fuel storage, delivery and construction equipment for leaks. Any leaks will be immediately addressed and repaired. Any leaks and leak repair procedures will be documented.

During spill cleanup operations, the Supervisor will be responsible for all spill containment and cleanup activities. If a spill occurs on-site, will respond and immediately contain and return the contaminated material to a secure container, work area, or truck. The cause of any spill will be determined, and corrective action will be taken. Complete details of the cause of the spill and how it was responded to will be documented.

Should a spill occur off-site, the delivery driver will immediately contact the Supervisor as well as the responsible local and/or state emergency response agencies so that a response may be made to the spill. The Supervisor will carry a mobile phone so that site personnel and delivery drivers may contact him/her at any time. Action will be taken immediately to contain and recover the spilled material. The spill will be contained so that removal equipment can clean up the spill. If a spill occurs on soil, the area will be over excavated to clean soil, to verify that all spilled material is removed. If a spill occurs on concrete or pavement, brooms or vacuums may be used to ensure that all spilled material is recovered.

All spills will be documented, documentation will contain the following information:

- Description of the material spilled (including the quantity and manifest number, if any);
- Exact time and location of spill, including a description of the area involved;
- Containment and cleanup procedures;
- Summary of any communications with government officials;
- Reason for spill; and
- Corrective action to prevent future spills.

This Spill Response Plan will be maintained in the drilling contractor's truck, where personnel will be able to quickly access and use the information to respond to spills. Emergency telephone numbers and any other relevant numbers will be kept readily available to all site personnel. In addition to the posted information, all project personnel will be briefed about spill control procedures, at their original site briefing and through daily tailgate safety meetings.

7.4 Inspections and Maintenance

Inspections of storage and containment areas should include an examination of the storage containers for leaks, corrosion, support or foundation failure and other forms of deterioration. They should also be used to ensure proper labeling and adequate security measures. Secondary containment structures should be inspected for signs of deterioration or damage. Inspections should encompass both informal observations by operating personnel and formal examinations conducted by supervisory personnel. Repairs should be conducted as soon as practical.

Supervisors should note the following, at a minimum, on their daily logs when inspections and maintenance take place:

- When inspections were done;
- Who conducted the inspection;
- What areas were inspected;
- What problems were found;
- What steps were taken to correct problems;
- Who was notified with issues and concerns.

7.5 Hydraulic Equipment

Hydraulic equipment is defined as any equipment that uses hydraulic fluids for its operation or maintenance. Such equipment includes forklifts, earth moving equipment, and various tools. When not in use, non-stationary equipment should be stored in areas that prevent or minimize contact with stormwater. Stationary hydraulic equipment should be protected with covering or secondary containment to prevent contact with stormwater. Spills kits should be available near storage areas. Kits should contain materials adequate for a minor spill.

The purpose of secondary containment is to contain spilled material for appropriate cleanup and prevent contact with stormwater outside the contained area. Secondary containment for hydraulic equipment storage areas may consist of curbing, temporary or permanent berms, drip pans or sorbent material. Drip pans and sorbent material are most often used with stationary indoor equipment.

Stormwater released from hydraulic equipment storage areas will be contained and managed in 55-gallon drums. No releases of contaminated storm water will be allowed at the drilling site. Regular inspections of the hydraulic equipment storage areas should be performed in conjunction with, and contain the same information as, inspections of fuel and fluid containment areas.

7.6 Support Equipment

Support equipment includes all trucks, trailers, tools and related equipment that may contain fuels and lubricating oils. Consideration should be made for secondary containment for this equipment where fluid transfer or high potential for spills exists. This containment may include, but is not limited to, curbing, temporary or permanent berms, drip pans, or sorbent material. Drip pans and sorbent material are most often used with indoor equipment. When located outdoors, the secondary containment volume should also account for the volume of a 3- inch rainfall event.

Inspections should include an examination of equipment for leaks, corrosion, soil staining, and equipment and other forms of deterioration or damage. They should also be used to ensure proper labeling and adequate safety and security measures. Regular inspections of equipment storage areas should be performed in conjunction with and contain the same information as inspections of fuel and fluid, salvage and hydraulic equipment containment areas.

8. RECLAMATION

All disturbances will be reclaimed according to the standards described in 43 CFR 3809.420. All garbage and other waste materials would be removed from the sump and exploration pad areas. Debris would be removed from the sumps and the sumps would then be backfilled with native surface materials. Drill pads, sumps, and constructed roads will be re-contoured to blend with original contours and to ensure future erosion concerns are minimized. A skid-loader, or equivalent, will be used for all earthwork including backfilling sumps, ripping and re-contouring drill access roads and drill sites. Disturbed areas and area of overland travel will be scarified then reseeded by a manual broadcast method and raked by hand to reduce disturbance to the extent possible

Existing roads and ways will not be reclaimed but may be scarified to reduce soil compaction and allowed to naturally revegetate. All off-road travel surfaces will be raked out by hand at the completion of surface disturbance. Any soils removed for construction of drill sites, including sumps, will be stockpiled and returned to their original location. As required by the BLM, access roads and exploration sites will be ripped prior to reseeded. If required, BLM approved seed mix will then be applied at the appropriate time of year for optimum seed sprouting and plant growth. Manual broadcasting and hand raking will be utilized in the reseeded process. The reclaimed surfaces will be left in a textured or rough condition. The broadcast seed application rate will vary based on the shrub, forb, and grass species selected. Native seed will be used when available. Only certified weed-free seed will be used for reclamation seeding. Any cacti in the areas to be disturbed will be transplanted to a nursery (with proper orientation to north) and will be replanted after re-contouring of disturbed areas. Post-reclamation maintenance will consist of remedial dirt work and reseeded, if required. The following sections outline additional details of the reclamation plan for the exploration project.

8.1 Reclamation Cost Estimate

A reclamation cost estimate (**Figure 3**), as required by 43 CFR 3809.552, is attached to this Plan. The Arizona BLM 2018 Reclamation Cost Estimator was used to estimate the cost of reclamation. Drill-hole footage bonded at any one time is 360 feet (one drill-hole) and requires that only one drill-hole be open at a time.

Phase 3 surface disturbance would include clearing of approximately 10.652 acres for the construction of 145 pads (80 feet in length and 40 feet in width) with sumps, 0.014 acres for the bulk sampling site (30 feet in length and 20 feet in width) and approximately 15.162 acres for required exploration access (10-foot wide). Disturbance also includes ancillary facilities totaling 0.328 acres and includes the four staging areas, existing water well site and 12,000-gallon stand water tank storage site.

If more than one drill-hole is required to remain open at any time, a bond increase must first be supplied to and approved by the BLM. [REDACTED]

8.2 Financial Guarantee

A financial guarantee consisting of a Cashier's Check [REDACTED] will be reviewed and accepted by the BLM – Arizona State Office prior to any additional surface disturbing activities.

8.3 Additional Permits

Big Sandy Inc will obtain all necessary federal and state environmental permits, pursuant to 43 CFR 3715.5(b) and 43 CFR 3809.420.

9. CONCLUSIONS

Big Sandy, Inc is proposing to prospect exploration drill coring and bulk sampling of active federal mining claims within the Sandy Valley Prospect of Mohave County, Arizona and prepared this plan to detail project activities and preventative measures planned to be implemented to ensure habitat, groundwater, and other natural resources are not adversely impacted as a result of the proposed exploration project. The project encompasses 26.156 acres of new disturbance and an occupancy of up to eighteen months in the project area.

Drill-hole plugging will be completed to Arizona State Department of Water Resources specifications. Plugging, bulk sample site backfill and surface reclamation will occur concurrently in intervals during the remaining drilling program as weather permits to minimize erosion potential. Final reclamation of access roads and ancillary facilities will be completed concurrent with the final hole abandonment and reclamation. Final reclamation of the ancillary facilities will be completed concurrent with the final hole abandonment and reclamation. The goal of this project is to conduct exploration of lithium and poly-metals and evaluate potential for future mining activity while minimizing occupancy and overall surface disturbance in the project area. This document considers exploration activities only and focuses attention towards meeting these goals.

CERTIFICATION

I certify that the reclamation of all areas disturbed under this Plan will be completed to 43 CFR 3809 standards and that reasonable measures will be taken to prevent undue and unnecessary degradation of federal lands during the pre-described operations.

Signature: _____

Date: _____

FIGURES

Figure 3: Core Hole Plugging Diagram (dry or wet)

