GOLD DISCOVERY GROUP LLC

A REPORT BY GOLD DISCOVERY GROUP LLC

MINE RECLAMATION PLAN FOR THE PERSISTENCE MINE

SUBMITTED TO COUNTY OF SAN BERNARDINO

Land Use Services

385 North Arrowhead Avenue, 1st Floor

San Bernardino, California 92415

November 2023, Rev August 2025

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1. MINE OPERATIONS

Gold Discovery Group LLC (GDG) is submitting this application for a Reclamation Plan (Plan) for the Persistence Mine. The Persistence Mine (project, project site or mine site) has been part of broader exploration and mining intermittently since the late 1800s and is located on unpatented (public) lands under management by the Bureau of Land Management (BLM). The area, more broadly known as the Historic Rand Mining District, was a major silver, gold, and tungsten source in the County of San Bernardino (County) for both placer and lode style mineralization and mining.

The proposed project site is located adjacent to U.S. Route 395 (eastern side) and is approximately 3.6 miles south of Red Mountain and approximately 0.6 miles south of the historical township of Atolia (see Figure 1-1). The footprint of the project covers Placer Mining Claims issued from the BLM to GDG with the following serial numbers:

- CA101921235 (Tux 18);
- CA101921234 (Tux 5);
- CA101921231 (Tux 20); and
- CA101921236 (Tux 25).

Detailed location plan is outlined in Figure 1-2. GDG is the owner of the unpatented placer claims. Planned access for workers to the site will be from the existing U.S. Route 395 and along existing BLM tracks into the mine site area.

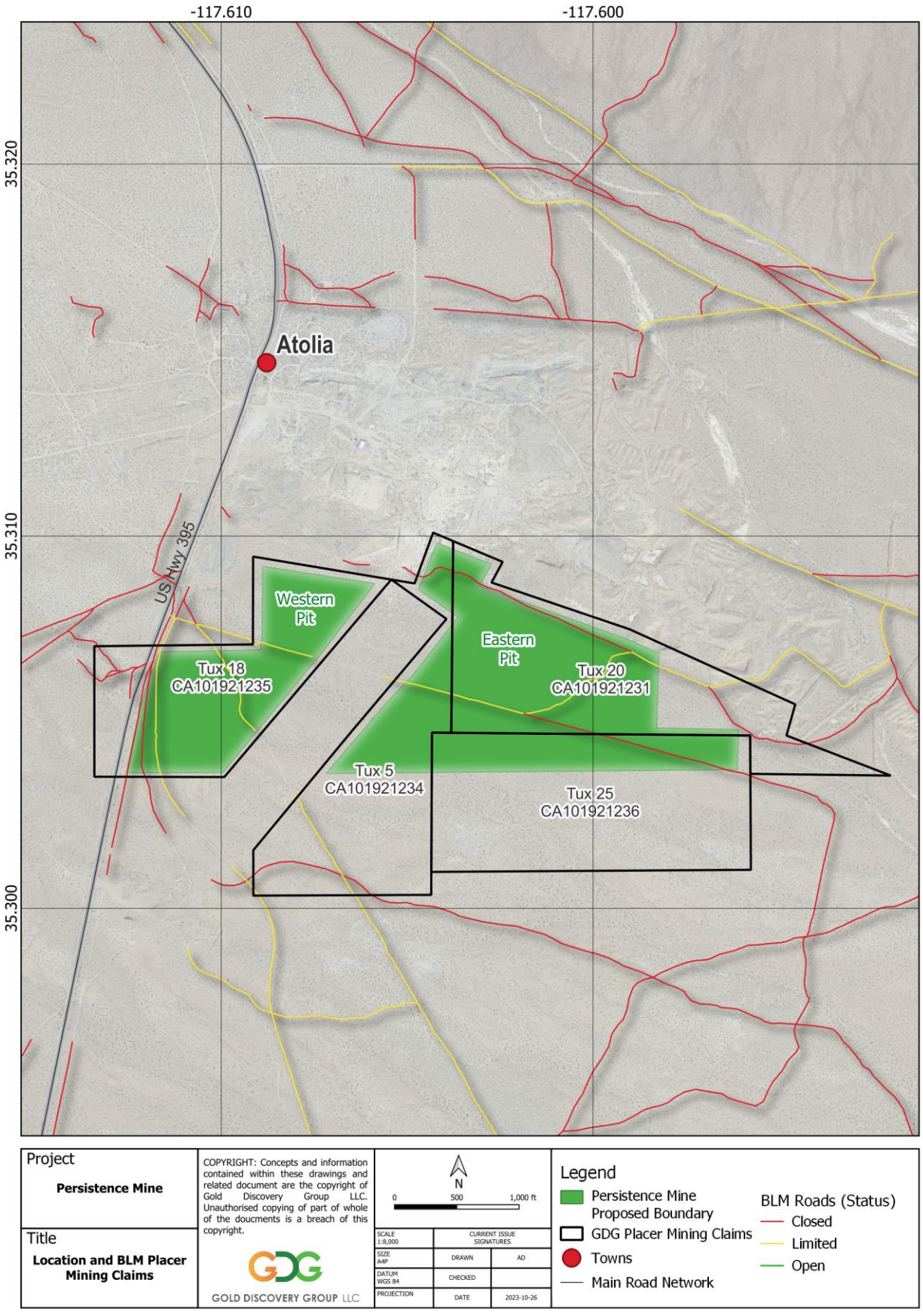
GDG is planning to extract desert placer style gold from semi to unconsolidated gravels, sands and silts (sediments) from the placer mining claims defined above. These sediments have been sufficiently tested and show economic gold grades for surface mining extraction down to a tested depth of 24' covering an area of ~126 acres across two non-contiguous pits. These two pits are known as the Western and Eastern and are shown in Figure 1-2. The operation capacity proposed is to support up to a 96,400 Cu Yds/month processing operation.

Mining will be by surface pit extraction with a single excavator and wheel loader. Excavation passes will be in 12' increments with a total of two passes to extract to 24' depth or to bedrock, whichever comes first. Batter angles on pit walls will be targeting 30 degrees but reduced if pit crests are not stable based on GDG site inspections. Considering the low depth of pit floor (and passes), it is expected that a more aggressive pit wall can be achieved but will be regularly assessed during mining operations. GDG's experience of the areas historical mining voids shows excavation walls up to +80 degrees still standing (see Figure 1-5).

The operation will be excavator mined and wheel loaded straight into a skid mounted gravity concentrator unit. All oversize reject material will be wheel loaded back into the pit void as backfill to the mining sequence. Some initial out of pit dumping will be required to open up sufficient void space to allow the start of mining, onsite water storage ponds and tailings backfilling. The GDG placer claims cover areas to the south and east of the proposed Persistence Mine footprint to allow some out of pit dumping capacity as required. Note that the design of the Persistence Mine is offset from the boundary of the placer claims on all sides giving additional buffer room.

Figure 1-1 Persistence Mine Regional Location

Figure 1-2 Persistence Mine Local Location



This proposed Reclamation Plan was prepared with the following objectives:

- To open a precious ore placer mine to produce gold that can be economically processed with current gravity separation and water processing methods;
- To develop the precious metal resource in compliance with the State's and County's SMARA requirements;
- To utilize oversize and tailings rock/material to produce secondary products including construction aggregate and decorative rock (where appropriate and can be economically proven once in operation);
- To operate the mine in a safe and environmentally friendly manner with respect to open desert resources;
- To provide reclamation in the form of backfilling the pits with tailings and revegetation to the disturbed areas to reduce visual, biological, and safety impacts; and
- To reclaim the site for open space end use.

The following information is listed as required by SMARA:

Mineral Rights Owner and Operator:

Gold Discovery Group LLC

2549 Eastbluff Drive

Suite B-499

Newport Beach, CA 92660

Representative:

Sean P. Tucker, Manager

Gold Discovery Group LLC

2549 Eastbluff Drive

Suite B-499

Newport Beach, CA 92660

Reclamation Plan No: To be assigned by County

Minerals to be Mined: Gold, silver and aggregate

County Wide Policy Plan (November 2020) Land Use Category (LUC): RLM (Resource/Land Management)

County Wide Policy Plan (November 2020) Zoning: RC (Resource Conservation)

Estimated Start Date: December 2025 (pending approvals)

Estimated Operating Life: 33 months

Estimated Mining Termination Date: 33 months from approval and commencement of works

Property Area: 267 acres (Tux 5, Tux 18, Tux 20, and Tux 25)

Reclamation Area: 126 acres

Area to be Reclaimed: 126 acres

Estimated Reclamation Completion: December, 2029 (followed by revegetation monitoring until success criteria achieved).

Reclaimed End Use: RLM/RC

1.1 MINING OPERATIONS

The Persistence Mine will consist of two pit areas. A ~41 acre Western Pit and a ~85 acre Eastern Pit. The mine is estimated to contain approximately 2.86 million cubic yards of ore with no overburden. For start-up months 1 to 4, the site will be mined at an average rate of 25,000 cubic yards per month to establish a routine, plant performance, water usage, and optimal pit development. For month 5 through to life of mine (LOM), excavations and processing are planned at an average rate of approximately 96,400 cubic yards per month. GDG is planning a 2.75 year operating plan based on ore volumes, economic conditions, and overall annual production. Therefore, GDG is requesting a 3-year (rounded up) reclamation plan. The planned mining is single excavator operating a working face and wheel loader tramming ore to the wash plant. GDG will utilize pit progression to advance the wash plant with mining to optimizing tramming times and relocation downtime. While the LOM pit shells encompass the full pit extents, GDG will be working the areas in blocks or strips. The operation can be considered in two phases. Phase 1 would an initial box cut and stockpile of material around the SD600 wash plant pad site. This material would be stockpiled for processing once the pit is excavated to bedrock, and the void filled with water for tailings management, settling pond, and freshwater circulation. A graphical representation of this is shown in Figure 1-3. This location is likely to remain as presented as these areas were the richest from the GDG trenching programme.

Phase 2 (shown here in Figure 1-4), is a representation of the sequential block or strip mining and relocation of the active water storage and wash plant pad. Figure 1-4 shows that the original box cut is depleted and back filled and that the new water storage is progressing with active mining. Land bridges will be left to ensure the stability of active water and tailings storage. The ability to scavenge these land bridges once the backfill is dried will be undertaken to ensure maximum resource recovery. The progression and development of Phase 2 will be evaluated and refined during GDG's ramp up phase.

Figure 1-3 Phase 1 site layout diagram

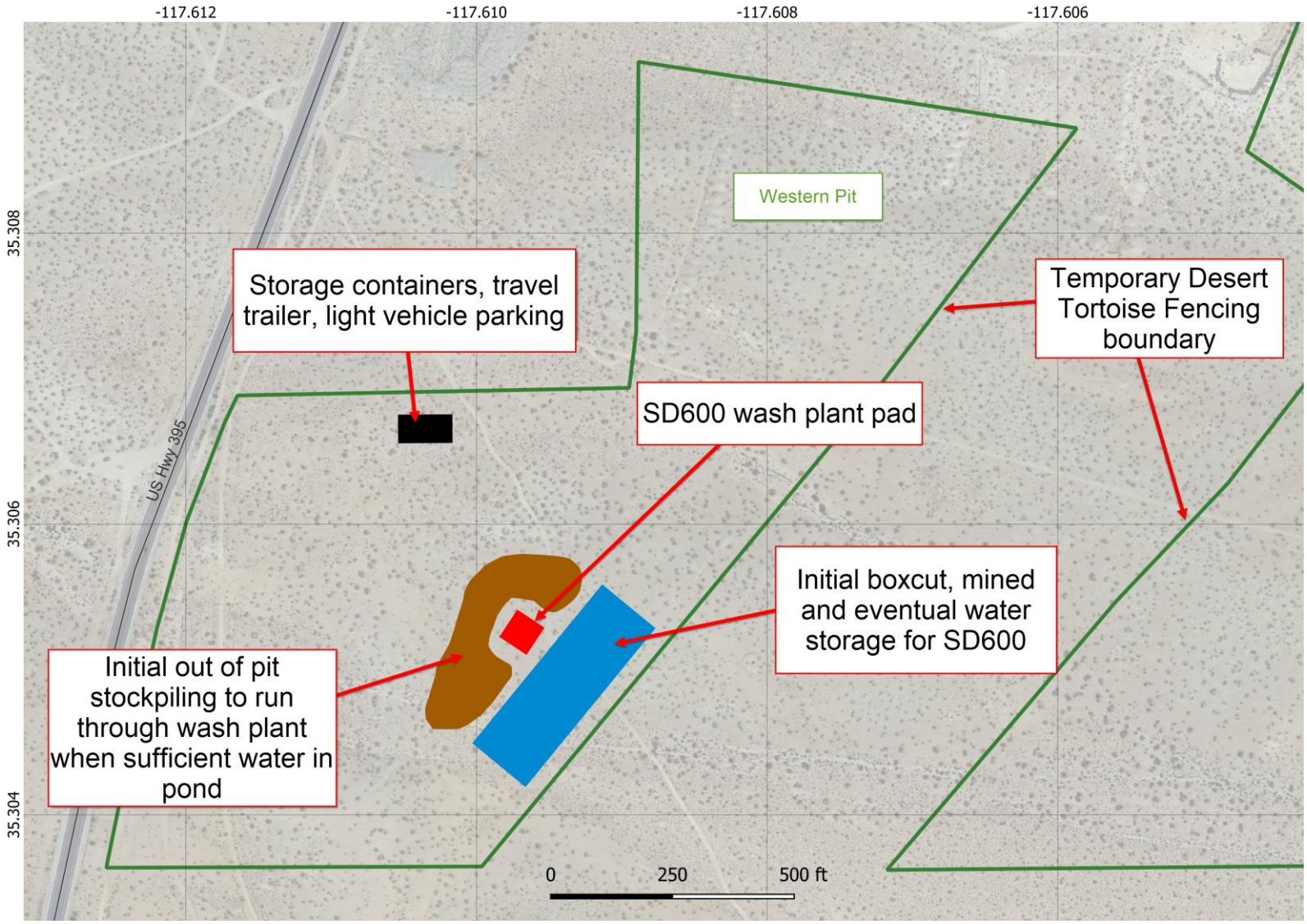
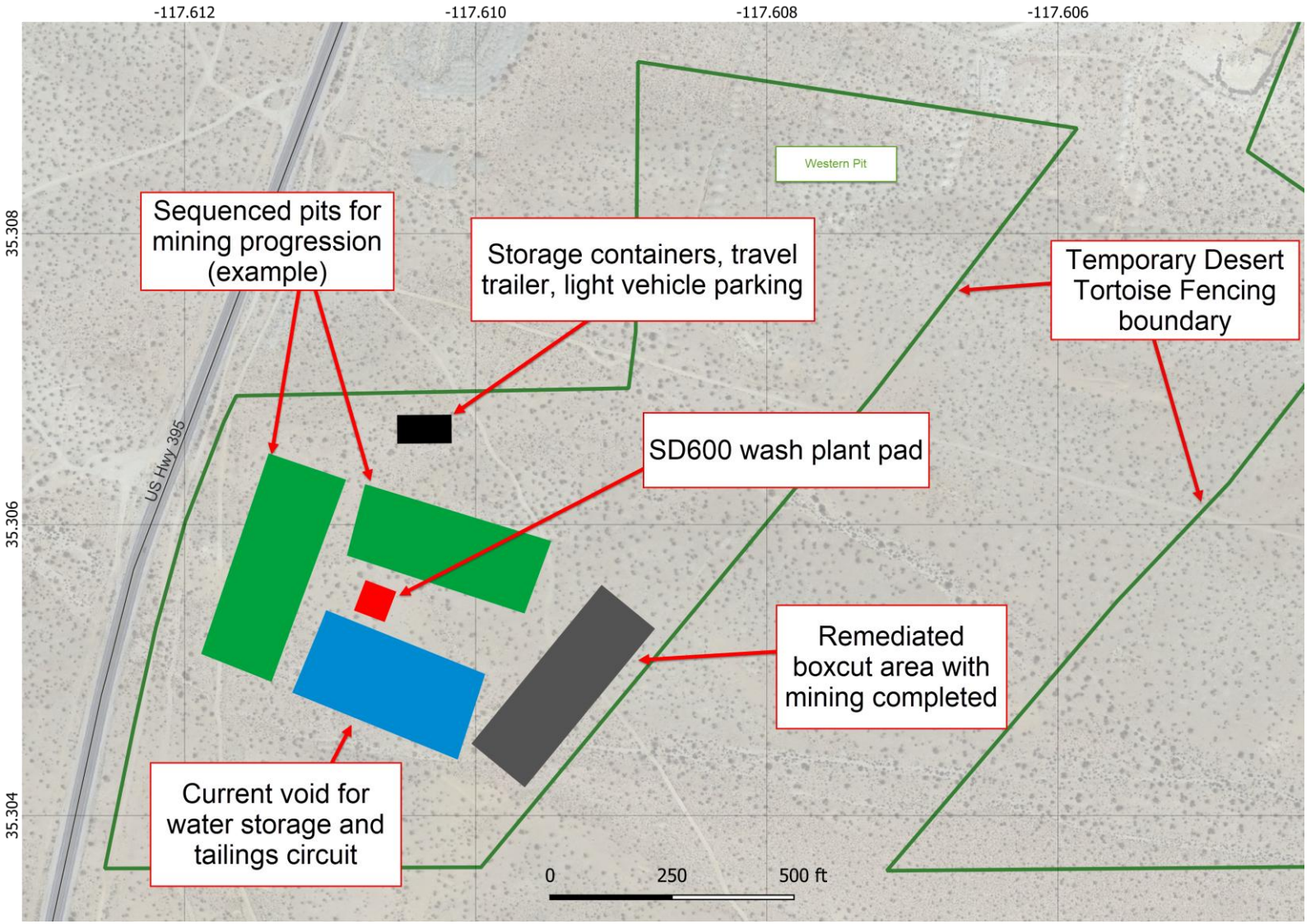


Figure 1-4 Phase 2 site layout diagram (ideal)



1.1.1 SITE PREPARATION PRIOR TO CLEARING

The following activities will be conducted prior to opening new areas for mining and overburden stockpile development to limit disturbed areas to within the mine plan boundaries and to facilitate ongoing and future reclamation and revegetation:

- A pre-construction fence line clearance survey will be conducted to install the Temporary Desert Tortoise Fencing;
- Installation of the Temporary Desert Tortoise Fencing and standard Desert Tortoise guards (for access into fenced area) (further details in Section 2.4.3.1);
- Once fencing is installed, conduct an interior clearance survey to ensure no Desert Tortoises, Kit Fox, or Mojave Ground Squirrels (or other wildlife) are not present prior to the clearing of surface for commencement of mining.
- Excavation and other disturbance limits will be located and marked inside fencing;
- Seeds of specified plants will be collected to the extent feasible and either used for revegetation or stored appropriately for future seeding;
- Scraping and mulching the vegetation to retain for use as re-seeding (effective seed capture); and
- Salvageable “topsoil” or growth media up to 0.5 feet typically will be placed in a separate identified topsoil stockpile(s). These will be sprayed with water to create a crust to reduce wind blowing.

1.1.2 SLOPE STABILITY

Considering the depth of the total mine pit, the conditions of walls in the immediate area, the nature of the material, and the exposure time of pit walls, GDG does not consider slope stability to be a risk factor to the operation or safety. An example of these walls is shown in Figure 1-5 which are estimated to be at least 90 years old since the processing of the Spud Patch mining area. GDG plans to design pit walls to 30 degrees (batter angles) to be cautious and laying the walls even further down (<30 degrees) as required if running sands are intercepted.

The desert environment and lack of surface or ground water (no ground water intersected to date) up to 24’, has created ideal friction surfaces within the sediments to support these proposed wall heights and batter angles (if not more aggressive). Given the 12’ passes for mining, any movement in the walls or spilling can be easily managed and cleaned up with the onsite mining equipment. Cross section layout for the pit walls is shown in Figure 1-6 through Figure 1-8. It should be noted that only the Eastern Pit and minor parts of the Western Pit will reach the fully designed 24’. All other areas are intercept bedrock at a shallower depth. A contour maps of depth to bedrock is shown in Figure 1-9.

Figure 1-5 Example photos of pit walls in the immediate northern (adjacent) area to the Persistence Mine

Figure 1-6 Cross section pit wall layout

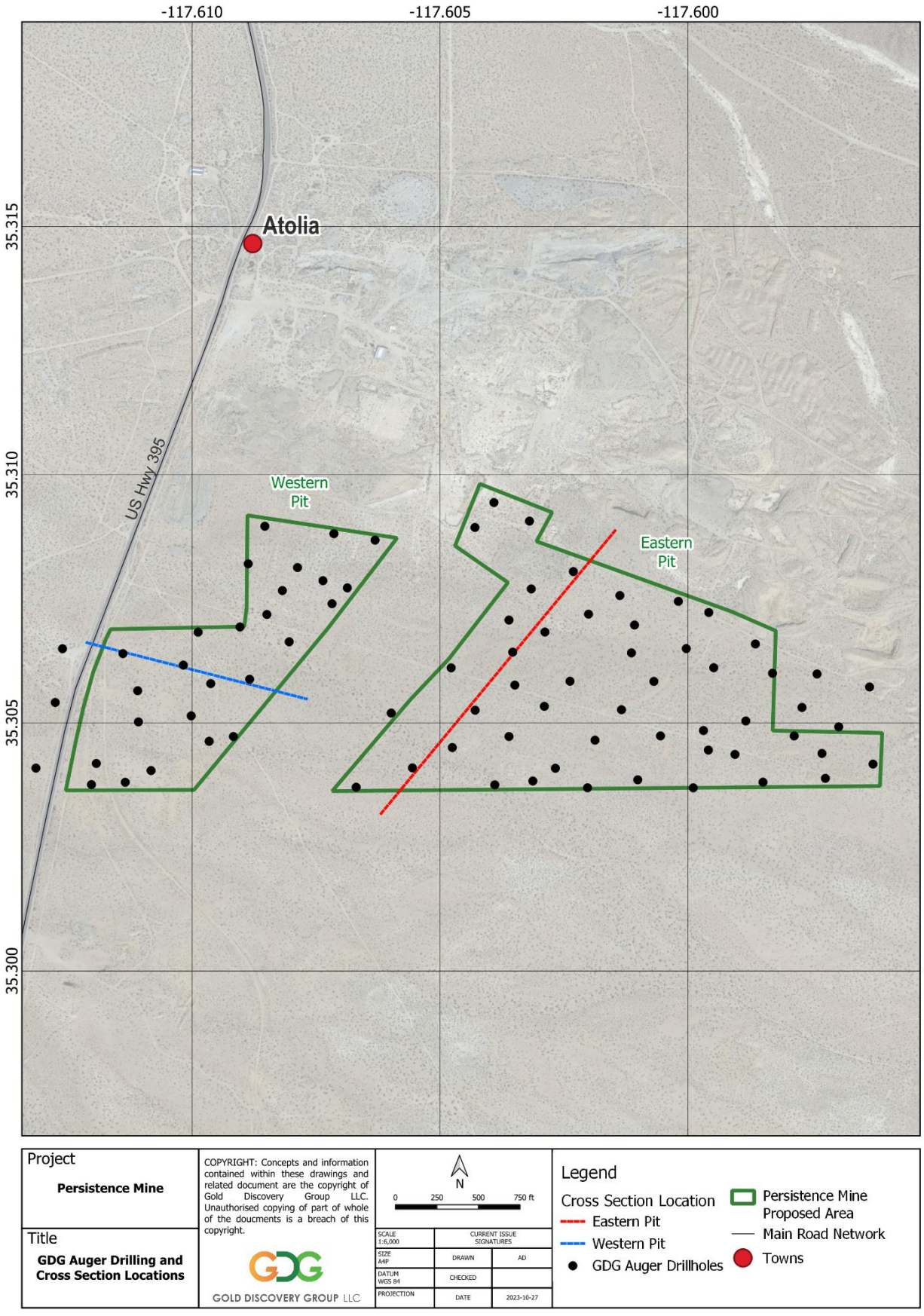


Figure 1-7 Western Pit model cross section

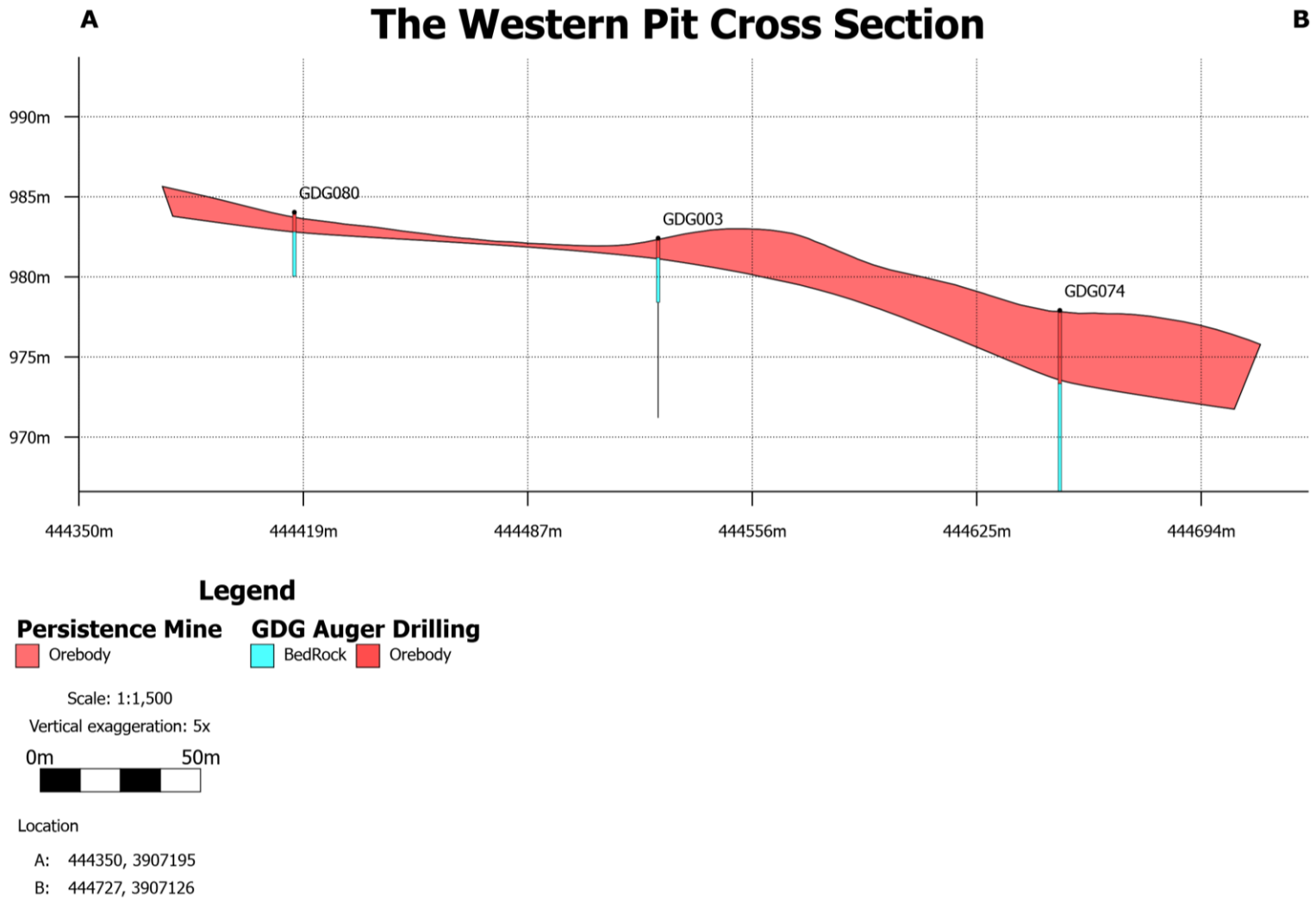
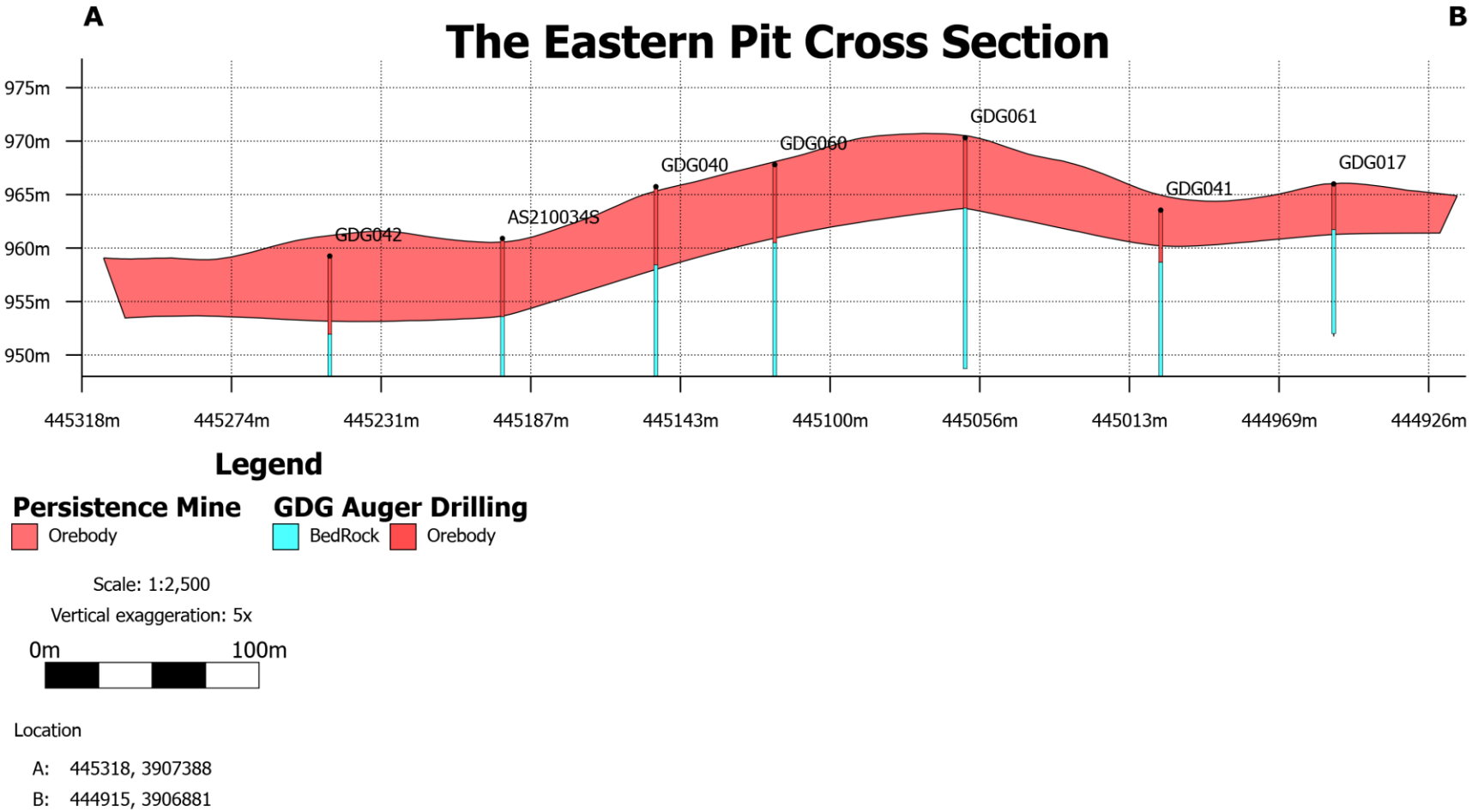
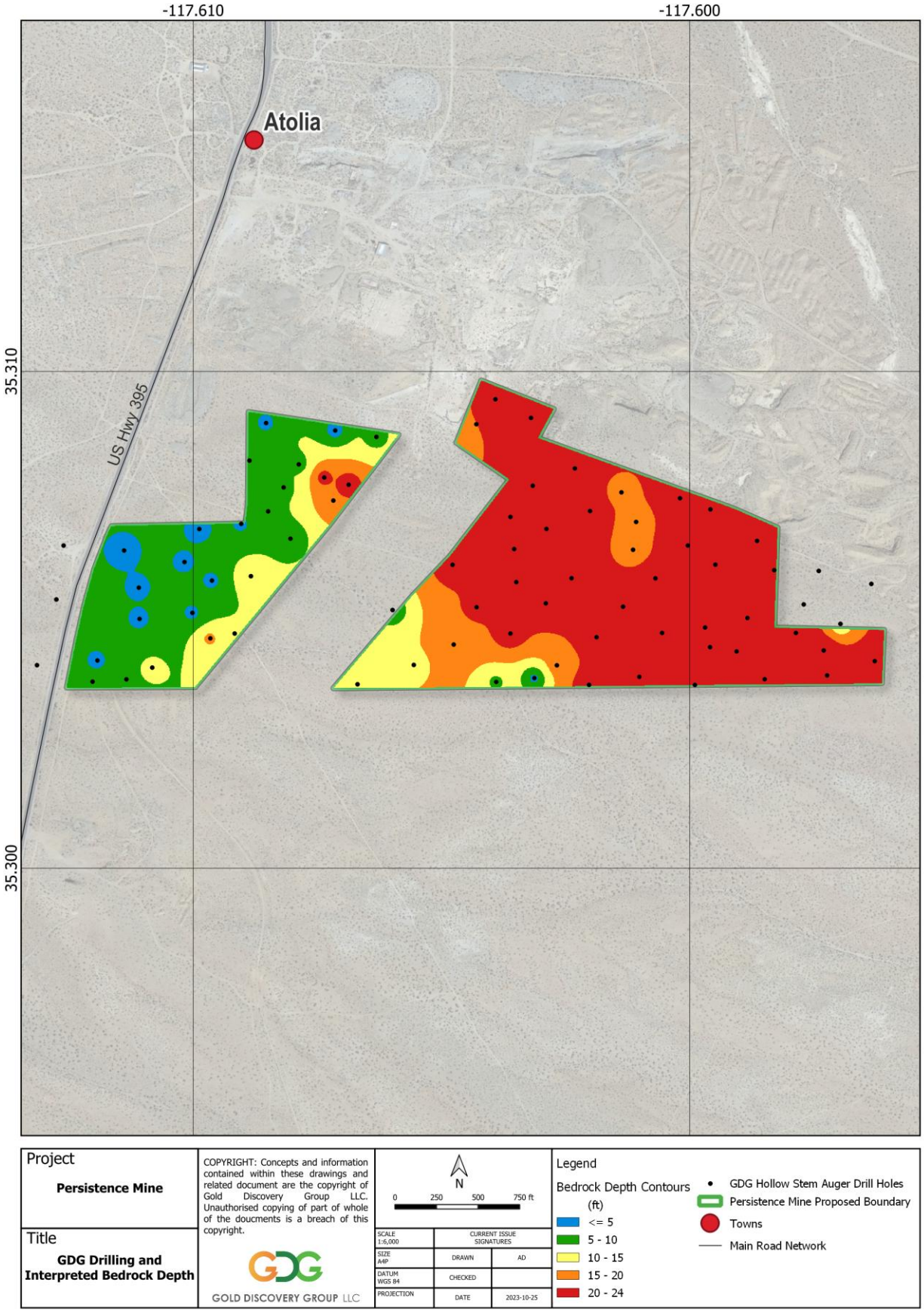


Figure 1-8 Eastern Pit model cross section



GOLD DISCOVERY GROUP LLC

Figure 1-9 Proposed Persistence Mine depth to bedrock contours



1.1.3 ONGOING EXPLORATION

Based on the exploration to date, bedrock has not been fully intercepted across the proposed project area. While the material above bedrock has been shown to host sufficient qualities of gold for economic extraction, additional exploration (and possible amendments to approvals as required) will be reviewed over the Persistence Mine. Over the life of the Reclamation Plan, GDG will continue to evaluate its onsite resources with exploratory boreholes and trenching based on geologic information within the mine area, primarily on the 24' pit floor and for sequenced areas of mining in the current 24' pit floor. This exploration will mainly be within or on past disturbed areas and graded roads and will comply with operational and environmental protection conditions set out under a Notice of Assessment as required by the BLM. It is expected that no new disturbance will occur to support the additional exploration.

1.1.4 PLANT AND MOBILE EQUIPMENT

The typical mine equipment listed in Table 1-1 will be utilized for mining, processing, and mine site maintenance activities. As operations progress over time, replacement equipment may be required to optimize operations and to meet equipment emissions' standards. The replacement equipment types would not substantively change over time. Excavators, wheel loaders, and diesel equipment will meet all requirements of the Mojave Desert Air Quality Management District (MDAQMD) and the California Air Resources Board's (CARB) for off-road diesel vehicles regulations to reduce diesel pollutants.

Scheduled equipment maintenance will take place onsite with portable maintenance/fuel trucks with appropriate environmental safeguards. Any used oil generated at the mine site will be collected and transported for off-site recycling or disposal by approved methods and by properly trained and licensed personnel. No storage of fuels will be established on site. All fuel will be transported in as required in field maintenance trucks or within fuel cells in utility vehicles. The development of the site will incorporate Best Management Practices (BMPs) and a Storm Water Pollution Prevention Plan (SWPPP).

Table 1-1 Typical Mine Equipment for Persistence Mine

Equipment	Typical Number	Planned Days/Year	Planned Hours/Day	Purpose
Cat 326FL Excavator	1	250	16	Excavation of pits, ore and waste handling
Cat 938M Wheel loader	1	250	16	Tramming material to and from plant. Feeding wash plant
Cat D8 Dozer	1	30	10	Used on site for initial clearing and moving wash plant as required
Mulcher	1	20	8	For mulching scraped vegetation to stockpile for seed capture and revegetation
Lighting plants	1	250	10	Lighting for night shift and low light times
Utility truck	1	250	8	Service vehicle and fuelling. Other miscellaneous uses.
Pickup truck	1	300	20	Transport and fuelling. Other miscellaneous uses.
Water truck	1	250	12	Transporting water, dust suppression, and plant feed.
Macon SD600 Wash plant	1	250	20	Gravity and water wash plant for processing material
Water pumps	5	300	24	Various pumps as needed on site for water management.
Dirtrich D-120 Auger Drill Rig	1	100	12	Grade control and exploration drilling purposes for the Persistence Mine.

List outlined in Table 1-1 is typical equipment to be used onsite. Equipment types are not expected to vary. Specific equipment will change during the life of the project due to replacement of aging equipment and updated equipment and fleet emission standards.

1.1.5 DUST CONTROL

Dust control measures must be in compliance with MDAQMD Rules 401 (limiting visible emissions); 402 (avoid nuisance emissions to people or businesses or property); and 403 (prohibits visible dust from crossing property lines and controlling fugitive dust). The main dust control method is the water spraying of roads, operational mine areas, and any active stockpiles. A water truck equipped with sprayers will be used for dust control as required. Water for dust control will be obtained from sources in the Randsburg area, which includes purchasing from the Rand Communities Water District, pumping from well(s) currently owned by GDG, or drilled in the future on their existing Mill Site Claims in Kern County.

Haul roads to the plant from the active pit will be compacted with general wheel loader and machinery use and will reduce dust and erosion. This will be complimented with water spraying from the water truck as required. No chemical dust control is proposed to ensure a low contamination site is maintained.

In addition, any portable crushing/screening plants occasionally used onsite by outside contractors will be required to be permitted by the MDAQMD and to implement applicable dust control measures.

1.1.6 SANITATION

A travel trailer (including bathroom and kitchen) used for breakroom, security, and site office to be moved around site as required.

1.1.7 EMPLOYEE SAFETY

Approximately 10 employees are expected to be employed by the site, with up to 5 employees onsite at any one time. Active mining areas will comply with all federal (MSHA) and state (Cal-OSHA) mine safety regulations. Workers, including contractor labor, will be trained in mine safety and first aid. Access and haulage roads will be designed with safety berms per MSHA requirements, the pit will have benches with berms as required, and inactive ramps and roads in mining areas will be blocked to prevent access.

No blasting is proposed for the Persistence Mine and the tailings and water storage ponds will be surrounded with berms as appropriate.

1.1.8 SITE ACCESS AND PUBLIC SAFETY

The site is accessed from U.S. Route 395 via a proposed unpaved Persistence Mine access track which utilizes an existing BLM managed roads. This road is shown in Figure 1-2. Currently the road is classified as Closed by the BLM. GDG has been using this access road for the past 2 years as part of their approved Notice of Assessment field work programs. All access entry and exit points to the mine will be appropriately signed for public warning.

Only road registered trucks and utility vehicles will be ferrying to and from site. This includes utility vehicles for access for mine workers and the transport of sluice concentrate, as well as float ('low boy') trucks needed to transport mining equipment to and the from site. The site will be fenced with security fencing around the perimeter of both pits and include appropriate Desert Tortoise fencing.

Mine areas will have warning signs every 500 feet and safety berms six feet in height will be constructed along the pit rims where the public could access. Any unauthorized roads will be blocked or closed until the LOM is complete, including all reclamation at the property boundary and will be specifically guided by the BLM.

1.2 MINE WASTE

Mine waste produced at the Persistence Mine will be in the form of oversize and sluice tailings material. Both are the product of the in-situ material that has simply been size split and washed in run of mine (ROM) water to extract gold from the sediments. Mine waste will be used as back fill into the void space created by advancement of mining. There is no overburden at the site, all material is ROM ore to be processed through the wash plant.

1.2.1 HAZARDOUS MATERIALS AND WASTE

No hazardous materials will be used onsite with the exception of fuel and oil for mobile equipment. Equipment maintenance and re-fuelling will take place utilizing mobile maintenance trucks and vehicle mounted fuel cells. Both maintenance and re-fuelling will be conducted at the mine with

appropriate required safeguards and best management practices (BMPs). Any used oil generated at the mine site will be collected and transported for off-site recycling or disposal by approved methods and by properly trained and licensed personnel.

The Hazardous Materials Division of the San Bernardino County Fire Department is designated as the Certified Unified Program Agency (CUPA) for the County to focus the management of specific environmental programs at the local government level. GDG will prepare a Business Emergency/ Contingency Plan to include operations for the site. The Business Plan includes a hazardous materials inventory and Spill Prevention Control and Countermeasure Plan (SPCC Plan) to ensure that on site materials are stored appropriately and contained in the event of uncontrolled release utilizing BMPs.

Fuel storage specifications apply to all above ground fuel containers. A Hazardous Materials Business Plan (HMBP) for the mine site that addresses any hazardous materials stored and used at these facilities will be prepared. The HMBP describes methods and procedures to minimize the potential for hazardous material and waste releases including an emergency response and contingency and spill response procedures.

1.3 ORE PROCESSING AND PRODUCTION WATER

Ore processing is a simple gravity separation and water wash plant. The equipment consists of a feed hopper, screen deck, and sluice runs. No hazardous chemicals are anticipated to be used during operation. Production water will be stored in on-site dams developed in existing pit voids/tailings ponds. These production water storage ponds will be used for sediment settling and constructed in a manner for recirculation to the plant feed. The use of flocculants may be required and GDG will use natural, biodegradable flocculants in the event that these additives are required.

Make up water will be expected to be required due to general water loss/consumption, evaporation, and loss though pond walls. This make up water will potentially come from multiple sources such as pumped from an on-site well that currently exists on GDG's Two Dr Peppers Mill Site, or potentially a future well to be drilled on GDG's existing Two Dr Peppers Mill Site, or Root Beer Float Mill Site, which will need to be permitted with the BLM (and/or the county as required) and/or purchased from the Rand Communities Water District as needed.

1.4 EROSION AND SEDIMENTATION CONTROL

Given the low annual rainfall at the site, it is expected to have low erosion and sedimentation outside of the newly excavated pit areas. Regardless, control of surface drainage, erosion, and sedimentation of the operations involves the following primary components:

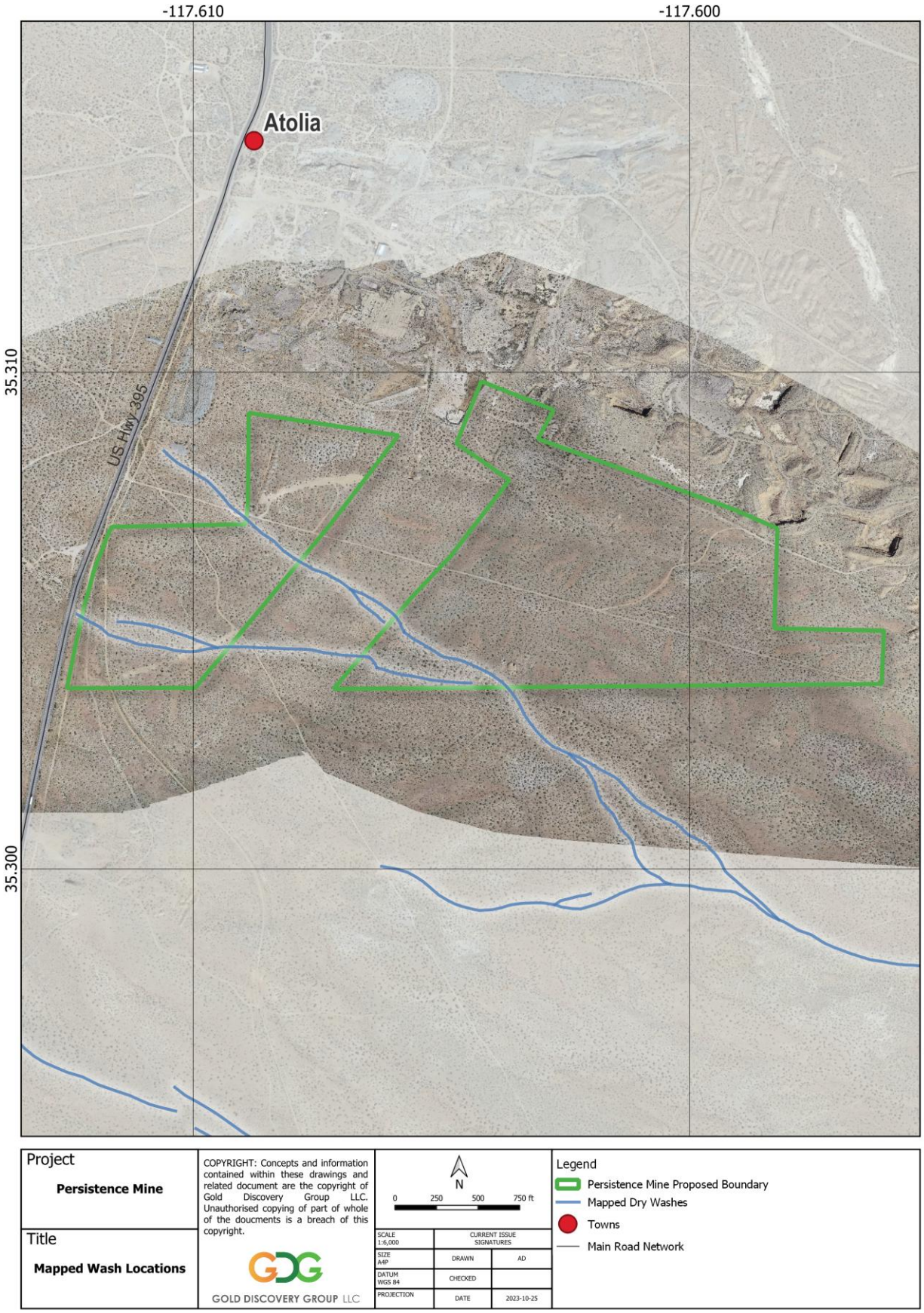
- Limiting surface disturbance to the minimum area required for active operations up to 10 acres at any one time prior to revegetation;
- Allowing drainages and runoff to flow into the mine pit and not into natural drainages down gradient (GDG will utilize this water run-off for processing); and
- Stabilizing disturbed areas through backfilling, regrading, replacement of soils, revegetation, re-establishing drainages, and erosion control practices.

All operations onsite will comply with a Storm Water Pollution Prevention Plan (SWPPP) to be updated periodically with mine site development and implementation of storm water BMPs. The mine's progress down to bedrock and precipitation falling within the mine will be allowed to flow into the mine pit floor and percolate or evaporate during operations within the overlying sediments. After backfilling the pit, drainages will be re-established to flow through the site to natural drainages down gradient. The planned control practices are described below.

A plan map outlining the undisturbed site mapped drainages (washes) is shown in Figure 1-10. Given the local topographic high of the Western Pit, these mapped washes are believed to be potential small catchment headwaters and GDG has not seen significant water storage or flow on these washes in their 4 years of operating (exploration) in the area.

GOLD DISCOVERY GROUP LLC

Figure 1-10 Persistence Mine observed existing creek beds and washes across the site



1.4.1 LIMITING SURFACE DISTURBANCE

The pit and any required out of pit stockpiles will be developed as needed to limit surface disturbances. Surface disturbance areas which will be subject to potential erosion and sediment loss will be limited through long-range planning, phased development of expansion areas, and final reclamation of disturbed areas. GDG plans to disturb up to 10 acres at any one time. The process of backfilling and starting revegetation (if able to commence in prime success season) is then not considered in GDG's 10-acre active disturbance footprint (irrespective if the revegetation achieved successful criteria or not).

1.4.2 DIVERTING RUNOFF

Within the pits, run-off from onsite precipitation will be allowed to flow into the pits. A safety berm 6 feet high will be constructed around the pits during operations which will also serve to restrict any run-off from flowing down out of the excavation areas. While there are two small washes that cross the Western and Eastern pit areas (Figure 1-10), these are considered low risk as per the FEMA flood zone mapping (i.e. area identified as minimal flood hazard). There will be no diverting of these washes, they will be allowed to flow into the pit in sufficient rain events and the water utilized by GDG. GDG will ensure that no water from the active pit will overflow from the high rain events. They will be pumped into on-site water storages.

1.4.3 STABILIZATION OF DISTURBED AREAS

The site will be visually inspected after major precipitation events to determine if any substantial erosion is evident such as sheet, rill or gully erosion or any surficial instability. Appropriate erosion control measures will be implemented where erosion is observed. In active pit areas, drainage control generally will not be a significant concern since essentially all disturbed area drainage flows will be retained within the basin created by the active pit excavation and seep into the sediments if not pumped into onsite storage.

Long-term stabilization, or reclamation, will generally involve backfilling the two pits, grading or reshaping disturbed areas, re-establishing preexisting drainage, placement of the stockpiled desert top-soil, and revegetation. A map showing the current (undisturbed creek beds/wash zones is outlined in Figure 1-10). Surface stabilization of backfilled pit areas will consist of ripping compacted areas, soil/alluvium replacement and revegetation.

Acid mine drainage refers to the outflow of acidic water from metal mines or coal mines; typically, those that are abandoned. The Persistence Mine pits will be backfilled with the native rock material and tailings. This material does not contain any sulphides and will not create acid mine drainage. In addition, given the arid and low rainfall environment, no water outflow is expected.

1.5 BLASTING

No blasting is proposed for the Persistence Mine. Material is classed as 'free-dig' and GDG have experience excavating this material through two remediated trenches completed as bulk sample studies.

2. RECLAMATION PLAN

2.1 LAND USE

The Persistence Mine is located entirely on unpatented (public) lands under management by the BLM. The County Wide Policy Plan (November 2020) land use category for the site is Resource/Land Management (RLM) with zoning of Resource Conservation (RC). The area consists of vacant desert lands within the historic Atolia Mining District with numerous historical mine workings and former town site (ghost town). There are no adjacent or nearby sensitive land uses with the nearest residences located in Red Mountain (town) 4 miles to the north. The project is situated in the foothills of the Red Mountain, in the western extents of the Mojave Desert at an elevation averaging 3,000 feet above mean sea level (amsl).

2.2 VISIBILITY

There are no surrounding residences to the mine site area. The mine will be on the eastern side to U.S. Route 395. The site is not part of a scenic viewshed or visible from a scenic highway including Old Route 66, which is approximately 40 miles to the south. The eventual reclamation and revegetation of the site will aid in blending the site with the surrounding topography and vegetation.

2.3 VEGETATION

During biological field investigations for the Project, one plant community was observed within the boundary of the project site: creosote bush scrub.

2.3.1 PLANT COMMUNITIES

The entire study area was characterized by Creosote Bush Scrub (Larrea tridentata Shrubland Alliance) that was dominated by mature (3-5 feet tall) creosote bush (Larrea tridentata) that are typically sparse with considerable area between the shrubs. Another prominent shrub species was white bursage (Ambrosia dumosa) and other shrubs observed were cheesebush (Ambrosia salsola), Anderson's thornbush (Lycium andersonii), Mojave indigo bush (Psorothamnus arborescens), and silver cholla (Cylindropuntia echinocarpa). Important annuals observed were red brome (Bromus rubens), red-stemmed filaree (Erodium cicutarium), bristly fiddleneck (Amsinckia tessellata), small ray goldfields (Lasthenia microglossa), lacy phacelia (Phacelia tanacetifolia), Arabian grass (Schismus arabicus), and desert woollystar (Eriastrum eremicum). The red brome, Arabian grass, and red-stemmed filaree were important non-native forbs at the ground level.

2.3.2 SPECIAL-STATUS SPECIES - VEGETATION

Botanical field surveys were conducted for the Project area and resulted in the identification of 40 plant taxon made up primarily of shrubs and annual herbs. Of the 40 plants identified, none of these were assessed as special-status (listed or BLM-sensitive) plants and therefore are not protected as threatened or endangered under the U.S. or California ESA. No BLM-sensitive or state or federal threatened or endangered plant species were identified.

2.4 WILDLIFE

The wildlife observed in the project area during focused surveys are listed below in Table 2-1. Numerous other animals are expected to occur at the site but were not observed during the surveys.

Table 2-1 Summary of wildlife observed in the Project area

Scientific name	Common name	Status
	Birds	
Cathartes aura	Turkey vulture	None
Buteo jamaicensis	Red-tailed hawk	None
Corvus corax	Common raven	None
Amphispiza bilineata	Black-throated sparrow	None
Zenaida macroura	Mourning dove	None
Eremophila alpestris	Horned Lark	None
Zonotrichia leucophrys	White-crowned sparrow	None
	Reptiles	
Dipsosaurus dorsalis dorsalis	Desert Iguana	None
Callisaurus draconoides rhodostictus	Zebra-tailed lizard	None
Uta stansburiana elegans	Western side-blotched lizard	None
Aspidoscelis tigris	Great basin whiptail	None
	Mammals	
Ammospermophilus leucurus	White-tailed antelope ground squirrel	None
Lepus californicus	Black-tailed jackrabbit	None
Vulpes macrotis	Desert kit fox	None
Perognathus longimembris	Little pocket mouse	None
Chaetodipus formosus	Long-tailed pocked mouse	None
Dipodomys panamintinus	Panamint kangaroo rat	None

2.4.1 WILDLIFE CORRIDORS AND LINKAGES

The project site does not form part of a federal or state designated wildlife movement corridor or habitat linkage. Furthermore, it is not located within a habitat “Landscape Block” or “Linkage Design” as established by the SC Wildlands (SC Wildlands 2008).

2.4.2 STATE AND FEDERAL JURISDICTIONAL WATERS

The project site is within the Coyote-Cuddeback Lakes Hyrdologic Unit and the Town of Atolia sub-watershed. Based on the literature search and reconnaissance there are water resources on the project site classified as a “Riverine, intermittent, streambed, intermittently flooded (R4SBJ)”.

The water resource is characterized as channelized streambeds that are flooded from time to time (i.e., ephemeral) (USFWS 2022b). During the field visits by South Environmental several areas with shallow, dry, ephemeral stream channels were observed. These water resources originate on the site and end at Cuddeback Lake, a dry lake 6-miles east of the project site.

Cuddeback Lake is not waters of the US because it is an isolated basin with no connection to the Mojave or Colorado Rivers. Therefore, the dry, ephemeral washes on the project site lack

downstream connection to a federal water of the US. No federally protected jurisdictional features occur on the project site.

2.4.3 SPECIAL-STATUS SPECIES – WILDLIFE

There are six special-status wildlife species known to occur in the region of the project site. Based on focused surveys conducted on the project site and immediate areas, federally threatened desert tortoise (Gopherus agassizii) has one active burrow outside the project site (note that GDG removed this area from the application due to the discovery).

In addition, Mojave ground squirrel (Xerospermophilus mohavensis) is known to occur near the project area. The BLM sensitive prairie falcon (Falco mexicanus) has been observed within one-mile of the site and could potentially forage in the area. Since it requires cliffs for breeding and there are no cliffs on the site, it is highly unlikely the species would nest there (CDFW 2022a).

2.4.3.1 Desert Tortoise

The desert tortoise is listed as a threatened species at a federal and state level. According to the CNDDB, the species is “most common in desert scrub, desert wash, and Joshua tree habitats; occurs in almost every desert habitat. Requires friable soil for burrow and nest construction. Creosote bush habitat with large annual wildflower blooms preferred” (CDFW 2022a, CDFW 2022b).

The northern portions of the project site were surveyed for desert tortoise in October of 2021 and the southern portions in late-April and early-May of 2022. Desert tortoise surveys were again conducted in the Project area in April of 2024. The data from the surveys indicated no live desert tortoises, potential desert tortoise burrows, or signs of desert tortoises observed within the Project area.

A pre-construction desert tortoise clearance survey will be conducted and temporary desert tortoise fencing will be installed prior to ground disturbing activities for Project activities to ensure no Desert Tortoises occur within the limits of disturbance. Pre-construction surveys will be conducted by a qualified biologist and will follow USFWS clearance survey protocols for the Mojave Desert Tortoise. Other Desert Tortoise protection measures will be implemented for the project that include:

- Desert Tortoise fencing to be installed into two phases that will encompass the Western pit and the Eastern pit:
    - A pre-construction fence line clearance survey will be conducted to install the Temporary Desert Tortoise Fencing (this will be classed as the first disturbance);
    - Installation of the Temporary Desert Tortoise Fencing and standard Desert Tortoise guards (for access into fenced area) will be completed within 2 weeks of the pre-construction fencing survey. This Temporary Desert Tortoise Fencing design will follow the fencing design recommendations by the U.S Fish and Wildlife Service in the Desert Tortoise (Mojave Population) Field Manual (December 2009). An example of the Temporary Desert Tortoise Fencing and Desert Tortoise Guard is shown in Figure 2-1 (standard exclusion fencing) and Figure 2-2 (for impenetrable substrate, if encountered), respectively; and

- Once fencing is installed, conduct an interior clearance survey to ensure no Desert Tortoises, Kit Fox, Mojave Ground Squirrels, nesting birds (or other wildlife) are present prior to the clearing of surface for commencement of mining.

- Worker/employee desert tortoise education program provided prior to working onsite;
- Disturbance shall be confined to the smallest practical areas;
- Vehicle speeds shall not exceed 25 miles per hour onsite;
- Cross-country travel with motorized vehicles outside of the project area by project personnel is prohibited;
- Vehicles and equipment parked shall be inspected immediately prior to being moved;
- To the extent possible, new disturbances on undisturbed areas shall be scheduled when tortoises are inactive (most active from April to May and September to October);
- All trash and food items shall be promptly contained within closed, common raven-proofed containers; and
- Dogs or other pets shall be prohibited at the work site.

GDG will be regularly monitoring the interior and exterior of the fence line to ensure no wildlife become trapped in the fencing. Further, GDG's biological consulting firm will be conducting regular site reviews and advise to ensure GDG is compliant to all Federal, State, and County biological monitoring guidelines.

Figure 2-1 Desert Tortoise guard design (Standard)

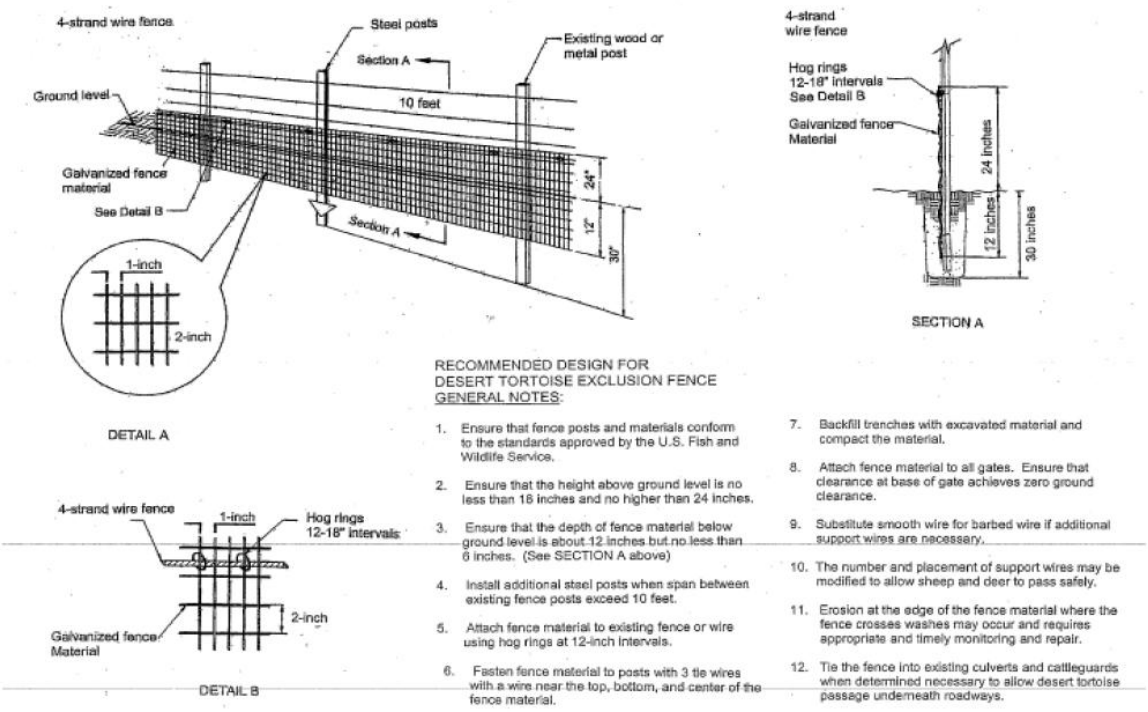
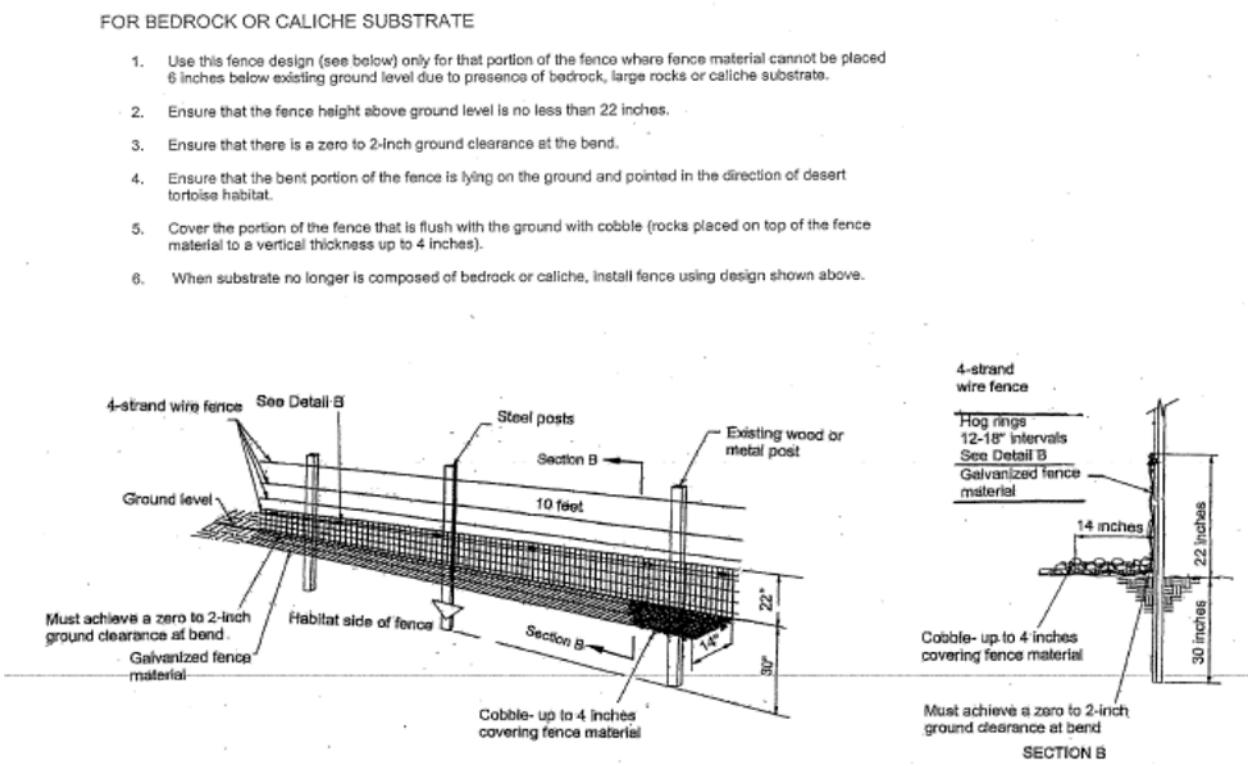


Figure 2-2 Example Desert Tortoise guard design for Impenetrable Substrates



2.4.3.2 Mohave Ground Squirrel

The Mohave ground squirrel (MGS) is a BLM-sensitive species that is listed as threatened at the state but not the federal level. According to the CNDDB, the species inhabits ”open desert scrub, alkali scrub and Joshua tree woodland. Also feeds in annual grasslands. Restricted to Mojave Desert. Prefers sandy to gravelly soils, avoids rocky areas. Uses burrows at base of shrubs for cover. Nests are in burrows” (CDFW 2022a; CDFW 2022b).

A protocol-level survey was conducted for the MGS on the northern portion of the in 2021 and in the southern portion of the site in April 2022. Both surveys included live-trapping and wildlife camera trapping. No MGSs were trapped within the Project site during the protocol survey conducted in 2021 and 2022.

One MGS ground squirrel was live-trapped on April 15, 2022 off the project site, on private property, where the biologists appear to have inadvertently trespassed on private property between the Eastern and Western proposed pits, confirming presence of the species near the project site. A habitat assessment showed that the Project site and surrounding environment has numerous food plants and substrates suitable for MGS.

2.4.4 CRITICAL HABITAT

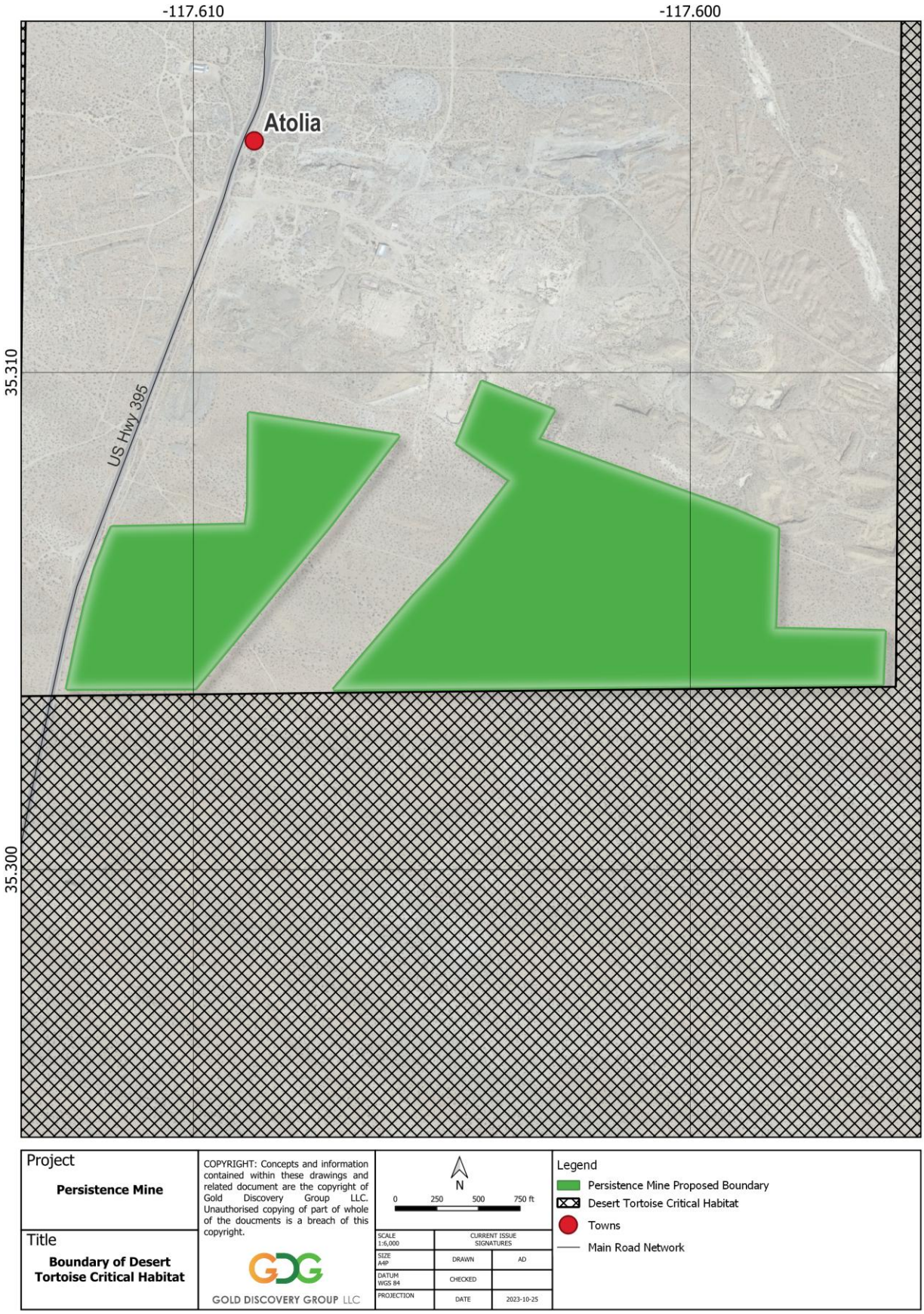
Under the federal Endangered Species Act, “Critical Habitat” can be designated and refers to specific areas within the geographical range of a species at the time it is listed that include the

physical or biological features that are essential to the survival and eventual recovery of that species.

The project site is not located within federally designated Critical Habitat. The closest Critical Habitat designation is located south of the proposed mine footprints for Mojave desert tortoise. Therefore, no loss or adverse modification of federally designated Critical Habitat will occur from execution of the proposed project. A map showing the location of the project to the Desert Tortoise Critical Habitat is outlined in Figure 2-3 below.

GOLD DISCOVERY GROUP LLC

Figure 2-3 Project area relative to Desert Tortoise Habitat



2.5 RECLAMATION

GDG proposes to reclaim the Persistence Mine to meet SMARA requirements implemented by the County that will minimize impacts to the surrounding environment and provide public safety. The objectives of this Reclamation Plan are to:

- Reduce environmental impacts from mining operations;
- Reclaim to a usable condition for post-mining end uses which will include Open Space and Resource Conservation;
- Backfill pit with available material and revegetate disturbed areas to return biological productivity and to minimize aesthetic impacts; and
- Reclaim the site as necessary to eliminate hazards to public health and safety.

Because of the phased nature of the mining development, reclamation concurrent with mining only can occur to a limited degree for safety and logistical reasons. Concurrent reclamation starts with the initiation of mining and development of new mine areas, access or new stockpiles and includes the following:

- Pre-development plant surveys to mark specific plants for salvaging;
- Salvaging seeds and scraping surface flora for mulching and stockpiling;
- Stockpile available surface soil/sediments for future revegetation in separate identified stockpiles, water sprayed to create a crust;
- Using a portion of the mine pit footprint for out of pit stockpiling;
- During operations, sloping and grading of mine and stockpile slopes for safety, slope stability, and erosion control as required by visual inspection;
- Treating the pit as a typical strip mine. As the depth of the mineralization is up to 24’ or bedrock (whichever is first), this lateral expanse of target mining allows for effective backfill (low wall) while progressing the mining face (highwall);
- Ripping of any compacted areas and roads developed by GDG that are to be reclaimed prior to revegetation;
- Covering disturbed areas with salvaged soil and sediment and previously mulched vegetation to aid in revegetation where available;
- Revegetation – imprinting seeds and broadcast seeding followed by covering seed with layer of soil or sediment by pulling rakes, chains or screens over the broad cast seeded area;
- Upon completion of mining, remaining equipment, any structures, and internal roads not needed for site access will be reclaimed; and
- Monitoring and remediation until success criteria achieved.

Reclamation will include the removal of all equipment, any structures, and debris from the site. Any remaining stockpiles will be backfilled into the pit and graded for positive drainage where possible. Compacted surfaces will be loosened by mechanical means and the entire site, onsite roads, stockpile areas, and the pit footprint, will be reseeded with stored mulch, scavenged seeds or native plant species.

The Persistence Mine will cover approximately 126 disturbed acres which will be reclaimed except for the access road, drainage channel, and internal mine roads needed for access for revegetation and site maintenance (about 5 acres not to be revegetated).

Because the pit will be backfilled, there will be no steep slopes remaining. If the pit is not completely backfilled, any perimeter slopes will be filled to 2H:1V. If needed, a protective berm will be maintained around the pit rim and shall be posted with warning signs of steep slope hazard.

The stockpiles and any remaining tailings or ore will be pushed back into the pit. The stockpile areas graded and ripped as needed, covered with salvaged soil, mulch, and revegetated.

The access roads will be left onsite for use during revegetation and monitoring activities and for overall future site access and public safety as shown on the Reclamation Plan. Roads not needed for site and mine access will have the surface ripped and covered with available soil and revegetated unless this road was a pre-existing BLM road (Figure 1-2).

2.6 REVEGETATION

2.6.1 REVEGETATION

To implement revegetation, it is recommended that all native seeds be used during the revegetation effort. Therefore, native seed should be collected onsite or from similar areas of undisturbed Mojavean Desert scrub habitat located adjacent to the active mine site. If needed to augment seed collection, native seeds may be purchased from commercial suppliers. GDG plans to scrape and mulch the vegetation to keep this mulch material for effective seed capture and can be stockpiled.

The following procedures will be implemented prior to an area being cleared or developed:

- Salvage re-locatable plants and cuttings for re-planting to available reclamation areas;
- Scrape and mulch trees for effective seed capture; and
- Stockpile available surface material for use as a seed bed and bank in separate identified stockpiles seeded.

It should be noted that GDG currently employs a local former landscaper who is familiar with the practices of desert landscaping and specifics on propagating the Creosote bushes.

2.6.2 PLANT PALETTE

The seeds to be used for revegetation purposes include species that are either present on the site already (from mulch) or are present in the surrounding area as part of the creosote bush plant community. The proposed plant palette is based on native species found in this plant community in the area, not just the species identified in the plant transects. The list may be revised based on the information collected from the reference site at the time of revegetation. While the shrubs will eventually dominate a habitat type, the forbs and annuals provide early successional species that stabilize the soil and help shelter slower-growing woody shrubs. See Table 2-1 for proposed species to be seeded onsite.

Table 2-1 Proposed native plant species for seeding

Scientific name	Common name	Pounds Per Acre
Ambrosia dumosa	White bursage	2.50
Ambrosia salsola	Cheesebush	2.50
Amsinckia tessellate	Fiddleneck	0.25
Larrea tridentata	Creosote bush	3.00
Phacelia distans	Phacelia	0.25
	Total pounds per acre	**8.50**

2.6.3 SITE PREPARATION

The following procedures will be implemented for site preparation and seeding:

- Secure the site from unauthorized impacts;
- Remove trash, equipment, and debris;
- Remove non-native invasive plant species;
- Rip or scarify compacted areas including closed roads to a 0.5-foot minimum depth with surface rills and furrows left to aid in water and wind-blown seed collection;
- Place soils that have been stockpiled partially mixed with underlying sediment material;
- Seed with locally native species either collected (mulched) or purchased commercially as needed and revegetate per methods described below and as listed in Table 2-1;
- Stake or flag reclaimed areas to eliminate additional disturbance;
- Monitoring and maintenance; and
- Application of remedial activities, if necessary, including but not limited to additional seeding and planting with mycorrhizal, plant protection and change of seed mix.

2.6.4 SEEDING

Seeds will be distributed throughout an area scheduled for revegetation during the rainy season, generally between October 1 and January 30, or during a suitable period based on weather forecasts and rainfall.

Broadcasting of seeds will be conducted by hand and therefore should not occur when there are detectable winds that might carry seed away from its intended location. Seed should be broadcast twice: first, half of the seed should be spread while moving in one direction, and then the other half of the seed should be spread while moving perpendicular to the original direction. Seeds will be hand raked or mechanically covered by a tractor with a chain attachment.

Seed can be mixed with wheat bran or another approved substitute to aid in application and the prevention of seed segregation. In addition, mycorrhizal fungi can be applied to the seeds where necessary, particularly in highly disturbed areas where plants may otherwise have difficulty growing. The appropriate mixing ratio of the seed to the binder and/or mycorrhizae will be determined as needed and if used.

2.6.5 IRRIGATION

The revegetation planned for the site utilizes native seeds. The average precipitation in the area should be sufficient for seed germination and root establishment of native species. Irrigation will

be only conducted by hand as needed (up to 3 years) to allow the salvaged plants to receive adequate moisture to become established but to not create a dependence on artificial irrigation.

2.6.6 FERTILIZATION

All revegetation will utilize native seeds tolerant to existing soil conditions and no fertilization will be used.

2.6.7 NON-NATIVE INVASIVE WEED CONTROL

The purpose of the non-native invasive species control plan is to reduce or limit the occurrence of non-native invasive plant species that may invade the site where active and natural revegetation is taking place. Non-native invasive species (weeds) can compete with native plant species for available moisture and nutrients and consequently interfere with revegetation of the site.

All non-native populations, if they become established, should be removed prior to revegetation. Manual clearing would be the suggested method. All efforts to remove non-native species will be overseen by a qualified Biologist to ensure the level effort addresses the issue. The Biologist will ensure all non-native, exotic, or invasive plant material is gathered into appropriate storage containers (drawstring plastic trash bags are acceptable), removed from the Site, and deposited at an approved disposal facility (a landfill is acceptable) to prevent the introduction and establishment of those species to new areas.

The occurrence of non-native species onsite after revegetation shall be monitored by visual inspection semi-annually for the first two years and then annually thereafter. The goal is to prevent non-native invasive species from becoming established and depositing seeds in revegetated areas. Reports of inspections and weed control implementation shall be part of the revegetation monitoring as detailed and kept on file by the GDG.

2.6.8 SUCCESS CRITERIA

Composition of the native Creosote scrub plant community will be determined in a vegetation baseline study prior to ground disturbing works. From this, vegetation composition data will define a series of performance standards or success criteria. Success criteria for native perennial shrub cover will be based on 45% of baseline values, while species density and species diversity will be based on 40% of baselines values.

Fulfillment of the performance standards is expected to indicate that revegetated areas are progressing toward the long-term goal of becoming a functioning, self-sustaining creosote scrub plant community.

2.6.9 REVEGETATION MONITORING AND REMEDIATION

Revegetation monitoring will be conducted for three purposes: 1) to ensure that the site preparation, seeding and weed eradication follows the Revegetation Plan (implementation monitoring), 2) to evaluate native plant establishment and vigor, and to identify and make recommendations for correcting problems (qualitative monitoring) and 3) to quantitatively

measure development of the Creosote bush scrub habitat (quantitative monitoring) to determine its progress with respect to the established success criteria.

The success of the revegetation effort will be measured primarily by the analysis of the quantitatively collected data compared to the success criteria. The Annual Revegetation Report will be prepared to summarize revegetation and monitoring efforts over the past year and to assess the results of revegetation on the disturbed areas of the site. Monitoring will continue until success criteria have been achieved.

2.7 CLEANUP

At the completion of mining activities, clean-up, backfilling, and revegetation will be conducted within three years of the termination of mining. All equipment and structures will be removed within one year and will be recycled, and/or disposed of at an appropriate landfill site (e.g., Johannesburg or Ridgecrest Landfill). Excess material stockpiles will be used for backfilling and regraded for positive drainage (where possible), scarified, and revegetated. Upon completion of successful criteria, the perimeter fencing and Desert Tortoise fencing will then be removed.

There are currently no wells onsite to be closed. If any developed on-site wells, portals, shafts, tunnels or openings remain on the reclamation site after mining and backfilling, they will be either closed, or gated and protected from public entry but preserved for bat and other wildlife if appropriate with County consultation.

2.8 POST RECLAMATION AND FUTURE MINING

The reclaimed site will allow for future exploration and development of additional resources located on unpatented claims beneath and outside of the backfilled pits. The reclaimed site will not preclude or necessitate any future mining activities or surface modification.

2.9 PONDS AND WASTES

Tailing waste (which will be washed sediments) will be backfilled into the pits. Any development of ponds required for onsite water storage ponds will be allowed to drain naturally (or pumped dry if lined), lining removed (if used), and remediated as if it was a mining pit. The are no toxins or hazardous chemicals used in the sediment washing process proposed.

2.10 SOILS

No soils information from the Natural Resources Conservation Service is available for this location of San Bernardino County. However, the soils observed during biological surveys were sandy and friable. Geological investigations from surface to bedrock show the material to be geological the same. Therefore, the backfill material is anticipated to act the same as the current surface material.

2.11 DRAINAGE AND EROSION CONTROL

Due to the sediments material and low rainfall (less than 8 inches/year – source: https://www.bestplaces.net/climate/zip-code/california/red_mountain/93558) the site has little

potential for erosion and sedimentation. Control of surface drainage, erosion, and sedimentation of the operations involves the following primary components:

- Limiting surface disturbance to the minimum area required for active operations;
- Diverting drainages and runoff from flowing into the mine pit and into natural drainages down gradient; and
- Stabilizing disturbed areas through backfilling, regrading, replacement of soils, revegetation, re-establishing drainages, and erosion control practices.

All operations onsite will comply with a SWPPP to be updated periodically with mine site development and implementation of storm water BMPs. The mine will be cut down to bedrock and precipitation falling within the mine will be allowed to flow into the mine and percolate or evaporate during operations. After backfilling the pit, drainages will be re-established to flow through the site to natural drainages down gradient which are already established onsite. The diversion channel will be left in place.

Long-term stabilization or reclamation will generally involve final backfilling of the pit, grading disturbed areas, establishing effective drainage, placement of soil, and revegetation. Following reclamation, surface runoff will flow into natural drainages.

2.12 PUBLIC SAFETY

All equipment and debris will be removed from the site upon project completion. Access to the site will be controlled with locked gates, signage, and blocked secondary access roads. The pit will be backfilled and stockpiles removed for the backfill material; therefore, no steep slopes will remain onsite.

Mine areas will have warning signs every 500 feet, dirt roads not used will be blocked or closed, and safety berms six feet in height will be constructed along any remaining pit rims where the public could access. Any unauthorized roads will be blocked or closed permanently at the property boundary pending BLM approval and guidance.

Numerous portals, shafts, tunnels or openings located in the planned operations area will be “mined” out reducing public safety concerns. Any portals, shafts, tunnels or openings that remain on the mining site after mining and backfilling, will be either closed or gated and protected from public entry but preserved for bat and other wildlife if appropriate with County consultation.

2.13 MONITORING AND MAINTENANCE

Monitoring will include both site monitoring of access control, trash dumping and other forms of human disturbances, as well as biological monitoring of revegetation progress. Site monitoring of human use (access and off-road vehicle use) includes quarterly inspection by GDG personal to check access control and signs. Biological monitoring will be conducted to qualitatively and quantitatively evaluate overall conditions of the revegetated site with respect to native plant conditions, weed growth and control effectiveness as detailed in Section 2.6 above.

SMARA requires annual reporting of Mining and Reclamation activities and an annual inspection by the County, the lead agency. The reports are filed with the State Division of Mine Reclamation and the County. Revegetated areas will be monitored over a 3-year period or until success criteria

is achieved following initial seeding and/or planting. Data on plant species diversity, cover, survival and vigor will be collected on revegetated sites and compared to baseline data from undisturbed sites to evaluate project success and documented in an annual report.

Monitoring and maintenance of reclamation is an ongoing responsibility of GOG. The project site will be inspected annually by the County.

In addition, CEQA requires adoption of a reporting and monitoring program for the conditions of approval of a project that are intended to mitigate or avoid significant adverse environmental effects. The County program is intended to ensure compliance with mitigation measures throughout the life of the approved Project. The program will identify the conditions of approval that act as mitigation measures and will outline who is responsible for implementation and verification for each measure.

2.14 RECLAMATION FINANCIAL ASSURANCE

Once the proposed reclamation plan is approved by San Bernardino County, GOG will post a reclamation financial assurance in an amount sufficient to pay for the cost of reclamation for the first year of planned operations and estimated area disturbance as outlined in Section 2. The reclamation financial assurance shall be reviewed by the County annually as required by SMARA. San Bernardino County is the lead agency for SMARA compliance and will review the Reclamation Assurance and inspect the mine site annually.

STATEMENT OF RESPONSIBILITY

The statement of responsibility for the reclamation of the site (below) will be signed by GDG's representative and will be included as a separate form upon project approval.

I, the undersigned, hereby agree to accept full responsibility for reclamation of all mined lands as described and submitted herein and in conformance with the applicable requirements of Articles 1 and 9 (commencing with Sections 3500 et. seq. and 3700 et. seq., respectively) of Chapter 8 of Division 2 of Title 14 of the California Code of Regulations, the Surface Mining and Reclamation Act commencing with Section 2710 et. seq., and with any modifications requested by the administering agency as conditions of approval.

Signed this 6 day of November, 2023 by:

Signature: Sean P. Tucker Title: MANAGER

Printed Name: SEAN P. TUCKER

3. GEOLOGY

3.1 GEOLOGY

The Randsburg area is located in the Mojave Desert of southern California, within the Rand Mountains. The region is part of the Mojave-Sonora Megashear, a major tectonic boundary that separates the North American Plate from the Pacific Plate. The Megashear is characterized by a complex system of faults and shear zones that have been active since the Mesozoic Era.

More locally, the Randsburg area is situated along the Garlock Fault, a major east-west trending fault that marks the boundary between the Mojave Desert and the Transverse Ranges. The Garlock Fault is a right-lateral strike-slip fault that has been active since the Late Jurassic. It is part of a larger system of faults that extends from the Gulf of California to the San Andreas Fault. The fault has a total displacement of over 100 km and has been responsible for the formation of the Rand Mountains.

The Rand Mountains are part of the Transverse Ranges, a series of mountain ranges that run perpendicular to the California coastline. The Rand Mountains are composed of a sequence of metamorphic and igneous rocks that have been subjected to intense deformation and metamorphism. The oldest rocks in the area are the Rand Schist, a sequence of metasedimentary rocks that have been intruded by granitic rocks of the Rand Pluton.

The Rand Schist is a complex sequence of rocks that includes phyllite, schist, quartzite, and marble. The schistosity in the Rand Schist is the result of intense deformation and metamorphism that occurred during the Late Jurassic. The Rand Pluton is a large granitic intrusion that was emplaced during the Late Jurassic. The pluton is composed of biotite granite, quartz monzonite, and granodiorite. The Rand Pluton is part of a larger suite of granitic rocks that intruded the Rand Schist and other rocks in the area.

The granitic rocks are thought to have formed as a result of magmatic activity associated with the subduction of the Farallon Plate beneath the North American Plate. The Atolia Formation is a sequence of volcanic and sedimentary rocks that overlies the Rand Schist and other rocks in the area. The Atolia Formation includes rhyolite, andesite, tuff, and sandstone. The Atolia Formation is intruded by a series of granitic plutons, including the Atolia Pluton and the Quartz Monzonite Pluton. These plutons are thought to have formed during the Late Cretaceous as a result of magmatic activity associated with the subduction of the Farallon Plate beneath the North American Plate.

The Randsburg area has a complex structural history that is intimately related to the tectonic stresses associated with the Mojave-Sonora Megashear. The area has been subjected to a series of deformational events that have resulted in the development of a complex system of faults and shear zones. These faults and shear zones have played a major role in the formation of the mineral deposits in the area. The uplift and down thrown bedrock elevations due these major structural events has developed microbasins for sediment infill. These infills have developed known mineralized sediment traps (placer) such as Atolia Moore, Spud Patch, Johannesburg, and now the Persistence Mine.

3.2 MINERALIZATION

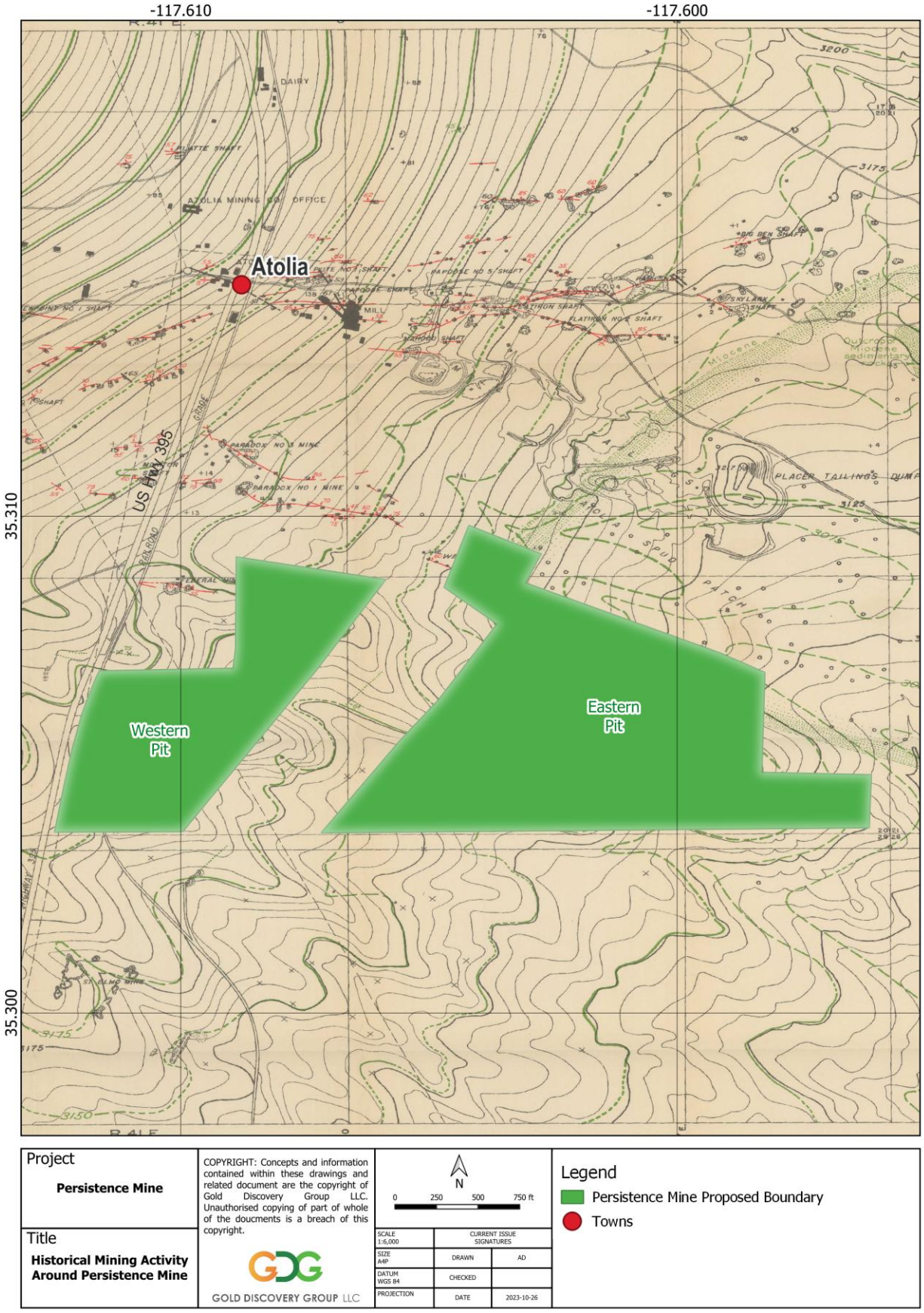
Gold is interpreted to shed primarily from the sub-cropping units of the historical Atolia tungsten-gold bearing veins. Influence of gold from Yellow Aster, Baltic, Lamont, and Kelly lodes which reside along the Rand Range is also likely to be contributing the gold content within these sediments. The mine area encompasses sediment accumulating depressions at the foothills of these elevated zones, immediately downhill of the basement high of the historical Papoose Mine in Atolia. A graphical representation of this is outlined in Figure 3-1.

Moderately developed alluvial horizons are evident in the walls of historical workings with duricrust/calcrete zones indicating variation in the sedimentary source feed energy environment. This is ideal targeting for the recharging of alluvial gold in the stratigraphic sequence and targeting higher energy event horizons synonymous with gold deposition. However, observations of mineralization is dominated by low influence of concentration mechanisms such as water, which is typical of desert placer mineralization.

Gold is present as free gold and amenable to recovery with traditional gravity concentration methods. GDG's work on testing recovery shows that gold is over 90% recoverable from the host sediments using water only.

GOLD DISCOVERY GROUP LLC

Figure 3-1 Persistence Mine and historical map showing extent of workings in the Atolia area



4. HYDROGEOLOGY

Water in the project area is managed by the Mojave Water Agency and water is available for purchase from the Rand Communities Water District. Two historical hydrogeological studies on Cuddeback (dry) Lake note the presence of water at depth amenable to pumping and use for processing. Several historical wells are known in the area with increasing depth of water westward towards the project and away from Cuddyback Lake.

4.1 IN-SITU HYDROLOGY

On site drilling has not intercepted water in the sediments above bedrock to date. The maximum drilling depth is 135' in an area immediately east of the project area which continued to return dry cuttings. There is anticipated to be no influence on any water table from the proposed mining considering the water table has not be intersected within the 24' range.

4.2 METEORIC HYDROLOGY

The project area experiences less than 8 inches of rainfall per year. Within the pits, run-off from onsite precipitation will be allowed to flow into the pits and will be pumped into GDG's water storage ponds for use in operation. While there are two small washes that cross the Western and Eastern pit areas, these are considered low risk as per the FEMA flood zone mapping (i.e. minimal flood hazard). There will be no diverting of these washes, they will be allowed to flow into the pit in sufficient rain events and provide additional water for GDG's sediment processing wash plant.

4.3 WATER SOURCES AND LOSS

All processing of sediments and dust suppression will be using site/storage water. This water does not need to be processed or any additives added for use in recovering the gold from the sediments. Water will be sourced from a well that currently exists on GDG's Two Dr Peppers Mill Site, or potentially a future well to be drilled on GDG's existing Two Dr Peppers Mill Site, or Root Beer Float Mill Site, which will need to be permitted with the BLM (and/or the county as required) and/or purchased from the Rand Communities Water District as needed.

Losses from water storage ponds or processing will be allowed to seep back into the sediments and return to ground in the area (which is its origin). This process of loss will also act as a filter of any fine sediment suspended in water.

5. REFERENCES, ACRONYMS, AND GLOSSARY

5.1 REFERENCES

San Bernardino County Wide Policy Plan (November 2020).

Surface Mining and Reclamation Act (SMARA); California Department of Conservation, State Mines and Geology Board, January 2020.

5.2 ACRONYMS

AMSL- above mean sea level

BLM - Bureau of Land Management

BMP - Best Management Practices

CARB - California Air Resources Board's

CUPA - Certified Unified Program Agency

GDG - Gold Discovery Group LLC

HMBP - Hazardous Materials Business Plan

LOM - life of mine

MDAQMD - Mojave Desert Air Quality Management District

MGS - Mojave ground squirrel

SPCC Plan - Spill Prevention Control and Countermeasure Plan

SWPPP - Storm Water Pollution Prevention Plan

5.3 GLOSSARY OF TERMS

Bench: Terrace or levelled area breaking the continuity of a slope. For the Persistence Mine, the benches will be 25 feet wide inter-bench slope of approximately 50°.

Berm: An elongated earthen structure which acts as a barrier; e.g., to make it difficult for a vehicle or ORV to cross along the rim of a quarry/pit or along a haul road, or to redirect the flow of water.

California Environmental Quality Act (CEQA): Policies enacted in 1970, and subsequently amended, the intent of which is the maintenance of a quality environment for the people of California now and in the future.

Endangered species: A species whose prospects of survival and reproduction in the wild are in immediate jeopardy from one or more causes.

Hazardous material: Substance which, because of its potential for corrosivity, toxicity, ignitability, chemical reactivity, or explosiveness, may cause injury to persons or damage to property.

Hazardous waste: Defined in Section 1004(5) of the federal Resource Conservation and Recovery Act (RCRA) as, "…a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may: (a) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (b) pose a substantial present or potential hazard to human health or the environmental when improperly treated, stored, transported, or disposed of, or otherwise managed."

Hydrogeology: The study of surface and subsurface water.

Ore body: A generally continuous mass of ore distinct from the surrounding rock.

Overburden: Material which does not meet quality specifications and other rock types encountered during excavations which will be hauled directly to overburden stockpiles.

Rare species: A species, which, although not presently threatened with extinction, is in such small numbers throughout its range that it may become endangered if its present environment worsens.

Reclamation: The combined process of land treatment that minimizes water degradation, air pollution, damage to aquatic or wildlife habitat, flooding, erosion, and other adverse effects from surface mining operations (SMARA).

Reclamation Plan: A restoration plan for the stabilization and recovery of a mine site after cessation of mining operations for another use; generally open space or other low intensity use.

Revegetation: Establishment of native vegetation on lands that have been disturbed.

Regional Water Quality Control Board (RWQCB): Agency which administers the requirements of the California Administrative Code, Title 23, Division 3, Chapter 15 to ensure the highest possible water quality consistent with all demands.

Sensitive species: A plant or animal species, which is recognized by the government or by a conservation group, as being depleted, rare, threatened, or endangered.

Threatened species: Species, which, although not presently threatened with extinction, are likely to become endangered in the foreseeable future in the absence of special protection and management efforts.

Water table: The upper water level of a body of groundwater.

6. SMARA CROSS REFERENCE MATRIX

Persistence Mine Reclamation Plan

Including reference to:

- ARTICLE 1. GENERAL PROVISIONS. SECTION 2710 et seq.
- ARTICLE 2. DEFINITIONS. SECTION 2725 et seq.
- ARTICLE 3. DISTRICT COMMITTEES. SECTION 2740 – 2741
- ARTICLE 4. STATE POLICY FOR THE RECLAMATION OF MINED LANDS. SECTION 2755 et seq. ARTICLE 5. RECLAMATION PLANS AND THE CONDUCT OF SURFACE MINING OPERATIONS.
- SECTION 2770 et seq., as amended
- CCR TITLE 14 (REGISTER 85, No. 18-5-4-83) CHAPTER 8. MINING AND GEOLOGY
- SUBCHAPTER 1. STATE MINING AND GEOLOGY BOARD
- ARTICLE 1. SURFACE MINING AND RECLAMATION PRACTIVE. SECTION 3500 et seq. ARTICLE 9. RECLAMATION STANDARDS. SECTION 3700 et seq.

SMARA/CCR SECTION	DESCRIPTION	N/A	PAGE(S)	SECTION(S)
MINING OPERATIONS AND CLOSURE				
SMARA 2770.5	100-year flood, Caltrans contact	X		
SMARA 2772 (c) (1)	Name and Address of operator/agent.		1	1.0
SMARA 2772 (c) (2)	Quantity & type of minerals to be mined.		5	1.0, 1.1
SMARA 2772 (c) (3)	Initiation and termination date.		1	1.0
SMARA 2772 (c) (4)	Maximum anticipated depth of mining.		1	1.1.2
SMARA 2772 (c) (5)	Description, including map with boundaries, topographic details, geology, streams, roads, utilities.		1-5, 25	1.0, 1.1, 1.4, 3.0
SMARA 2772 (c) (6)	Mining plan and time, schedule for reclamation (concurrent or phased reclamation).		1-5, 18, 23	1.0, 1.1, 2.5, 2.13
SMARA 2772 (c) (7)	Proposed subsequent use.		22	2.8
SMARA 2772 (c) (8)	Description of reclamation measures adequate for proposed end use.		18, 21	2.5, 2.6.8
SMARA 2772 (c) (8) (a)	Description of containment control and mine waste disposal.		4	1.2
SMARA 2772 (c) (8) (b)	Rehabilitation of stream banks/beds to minimize erosion		5	1.4
SMARA 2772 (c) (9)	Impact of reclamation on future mining.		22	2.8
SMARA 2772 (c) (10)	Applicant statement accepting responsibility for reclamation per the reclamation plan.		24	2.14

SMARA 2773 (a)	Water quality monitoring plan specific to property.		22, 23	2.9, 2.13
SMARA 2773 (a)	Sediment and erosion control monitoring plan specific to property.		5	1.4
SMARA 2773 (a)	Revegetation plan specific to property. Monitoring Plan.		19	2.6
SMARA 2773.1	Performance (financial) assurances.		24	2.14
SMARA 2777	Amended reclamation plans required prior to substantial deviations to approved plans.	X		
CCR 3502 (b) (1)	Environmental setting and impact of reclamation on surrounding land uses. (Identify sensitive species, wildlife habitat, sensitive natural communities, e.g., wetlands, riparian zones, etc.).		9, 10-16	2.3, 2.4
CCR 3502 (b) (2)	Public health and safety (exposure).		23	2.12
CCR 3502 (b) (3)	Slopes: critical gradient, consider physical properties and landscaping.		1, 18	1.1.2, 2.5
CCR 3502 (b) (4)	Fill materials in conformance with current engineering practice.	X		
CCR 3502 (b) (5)	Disposition of old equipment		22	2.7
CCR 3502 (b) (6)	Temporary stream and water diversions shown.		5	1.4
CCR 3503 (a) (1)	Removal of vegetation and overburden preceding mining kept to a minimum.		5, 19	1.1, 2.6
CCR 3503 (a) (2)	Overburden stockpiles managed to minimize water and wind erosion.	X		
CCR 3503 (a) (3)	Erosion control facilities (dikes, ditches, etc.) as necessary.	X		
CCR 3503 (b) (1)	Settling ponds (sedimentation and water quality).		22	2.9
CCR 3503 (b) (2)	Prevent siltation of groundwater recharge areas.		22, 28	2.9, 4.0
CCR 3503 (c)	Protection of fish and wildlife habitat (all reasonable measures).		10-16	2.4; App. A
CCR 3503 (d)	Disposal of mine waste and overburden (stable-no natural drainage restrictions without suitable provisions for diversion).	X		
CCR 3503 (e)	Erosion and drainage (grading to drain to natural courses or interior basins).		18	2.5
CCR 3503 (f)	Resoiling (fine material on top plus mulches).		19	2.6
CCR 3503 (g)	Revegetation and plant survival (use available research).		19	2.6
CCR 3703 (a)	Sensitive species conserved or mitigated		9-16	2.3, 2.4
CCR 3703 (b)	Wildlife habitat at least as good as pre-project, if approved end use is habitat.		9-16	2.3, 2.4
CCR 3703 (c)	Wetlands avoided or mitigated at 1:1 minimum	X		

CCR 3704 (a)	For urban use, fill compacted in accordance with UBC or local grading ordinance.	X		
CCR 3704 (b)	For resource conservation, compare to standard for that end use		18-21	2.5, 2.6
CCR 3704 (c)	Mine waste stockpiled to facilitate phased reclamation and separate from growth media.	X		
CCR 3704 (d)	Final reclamation fill slopes not exceed 2:1, except when engineering and revegetation analysis allow.		18	2.5
CCR 3704 (e)	Final landforms or fills conform with surrounding topography or end use.		18, 22, 23	2.5, 2.9, 2.13
CCR 3704 (f)	Cut slopes have minimum factor of safety for end use and conform with surrounding topography.	X		
CCR 3704 (g)	Piles or dumps not placed in wetlands without mitigation.	X		
CCR 3705 (a)	Vegetative cover, suitable to end use, self-sustaining. Baseline studies documenting cover, density and species richness.		19-21	2.6
CCR 3705 (b)	Test plots if success has not been proven previously	X		
CCR 3705 (c)	Decompaction of site.		18-21	2.5, 2.6
CCR 3705 (d)	Roads stripped of road base materials, resoiled and revegetated, unless exempted.		18-21	2.5, 2.6
CCR 3705 (e)	Soil altered or other than native topsoil, required soil analysis. Amend if necessary.		19-21	2.6
CCR 3705 (f)	Temporary access not bladed. Barriers installed.	X		
CCR 3705 (g)	Use native plant species, unless exotic species meet end use.		19-21	2.6
CCR 3705 (h)	Plant during correct season.		19-21	2.6
CCR 3705 (i)	Erosion control and irrigation, when necessary.		19-21	2.6
CCR 3705 (j)	If irrigated, demonstrate self-sustaining without for two- year minimum.	X		
CCR 3705 (k)	Weeds managed.		21	2.6.7
CCR 3705 (l)	Plant protection measures, fencing, caging.	X		
CCR 3705 (m)	Success quantified by cover, density and species-richness. Standards proposed in plan. Sample method set forth in plan and sample size provides 80 percent confidence level, as minimum.		21	2.6.8
CCR 3706 (a)	Mining and reclamation to protect downstream beneficial uses.		9, 23	2.1, 2.2, 2.12
CCR 3706 (b)	Water quality, recharge, and groundwater storage shall not be diminished, except as allowed by plan.		5	1.3

CCR 3706 (c)	Erosion and sedimentation controlled during all phases as per RWQCB/SWRCB.		5	1.4
CCR 3706 (d)	Surface runoff and drainage controlled and methods designed for not less than 20 year/1 hour intensity storm event.		8	1.4.1, 1.4.2
CCR 3706 (e)	Altered drainages shall not cause increased erosion or sedimentation.		5	1.4
CCR 3706 (f)	Stream diversions constructed in accordance with DFG 1603, EPA 404, Sec. 10 Rivers and Harbors.	X		
CCR 3706 (g)	All temporary diversions eventually removed.		18	2.5
CCR 3707 (a)	Return prime ag to prime ag, unless exempted.	X		
CCR 3707 (b)	Segregate and replace topsoil by horizon.	X		
CCR 3707 (c)	Productivity rates equal pre- project or similar site for two consecutive years. Rates set forth in plan.	X		
CCR 3707 (d)	Fertilizers and amendments not contaminate water.	X		
CCR 3708	Other ag capable of sustaining crops of area.	X		
CCR 3709 (a)	Equipment stored in designated area and waste disposed of according to ordinance.		4, 22	1.2, 2.7
CCR 3709 (b)	Structures and equipment dismantled and removed.		22	2.7
CCR 3710 (a)	Surface and groundwater protected.		5, 22, 28	1.4, 2.9, 2.11, 4.0
CCR 3710 (a)	Surface and groundwater projected in accordance with Porter Cologne and Clean Water Acts (RWQCB/SWRCB).	X		
CCR 3710 (b)	In-stream in accordance with CFG 1600, EPA 404, and Sec. 10 Rivers and Harbors.	X		
CCR 3710 (c)	In-stream channel elevations and bank erosion evaluated annually using extraction quantities, cross-sections, and aerial photos.	X		
CCR 3710 (d)	In-stream mining activities shall not cause fish to become entrapped in pools or in off- channel pits. California Fish and Game Code section 1600.	X		
CCR 3711(a)	All salvageable topsoil removed. Topsoil and vegetation removal not proceed mining by more than one year.		19-21	2.6
CCR 3711 (b)	Topsoil resources mapped prior to stripping, location of stockpiles on map. Topsoil and growth media in separate stockpiles.		19-21	2.6

CCR 3711 (c)	Soil salvage and phases set forth in plan, minimize disturbance, designed to achieve revegetation success.		19-21	2.6
CCR 3711 (d)	Topsoiling phased ASAP. Stockpiles not to be disturbed until needed. Stockpiles clearly identified and planted with vegetation or otherwise protected.	X		
CCR 3711 (e)	Topsoil redistributed in stable		19-21	2.6
CCR 3712	Waste and tailings, and waste disposal governed by SWRCB (Article 7, Chapter 15, Title 23, CCR).		4, 5, 22	1.2, 1.3, 1.4, 2.9
CCR 3713 (a)	Drill holes, water wells, monitoring wells abandoned in accordance with laws.		22	2.7
CCR 3713 (b)	All portals, shafts, tunnels or openings, gated or protected from public entry, but preserve access for wildlife.		22	2.7