

# **Appendix C**

## **Reclamation Plan**

**RECLAMATION PLAN #179-95  
FOR  
JIMENEZ MINE  
VICINITY OF OCOTILLO  
IMPERIAL COUNTY, CALIFORNIA**

*Submitted by:*

**GRANITE CONSTRUCTION COMPANY**  
2095 Highway 111  
El Centro, California 92243

REVISED APRIL 1996  
AMENDED APRIL 2014

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Sheet number 0894-REC-001

Sheet number 0894-REC-002

## **REVEGETATION PLAN**

Ocotillo Mine Granite Construction Company; Marie Barrett, July 2013

## INTRODUCTION

This document constitutes the Reclamation Plan, as amended, for the Jimenez Mine, a shallow open pit, single bench rock and sand pit located entirely on lands administered by the Bureau of Land Management (“BLM”). The project is located approximately five miles northwest of Ocotillo in southwestern Imperial County (Figure 1).

This Reclamation Plan is designed to meet the requirements of the California Surface Mining and Reclamation Act of 1975 (“SMARA”) (Pub. Resources Code, §2710 *et seq.*). SMARA section 2733 defines reclamation as “...the combined process of land treatment that minimizes water degradation, air pollution, damage to aquatic or wildlife habitat, flooding, and erosion, and other adverse effects from surface mining operations...” According to SMARA Section 2712, the objectives of reclamation are to assure that:

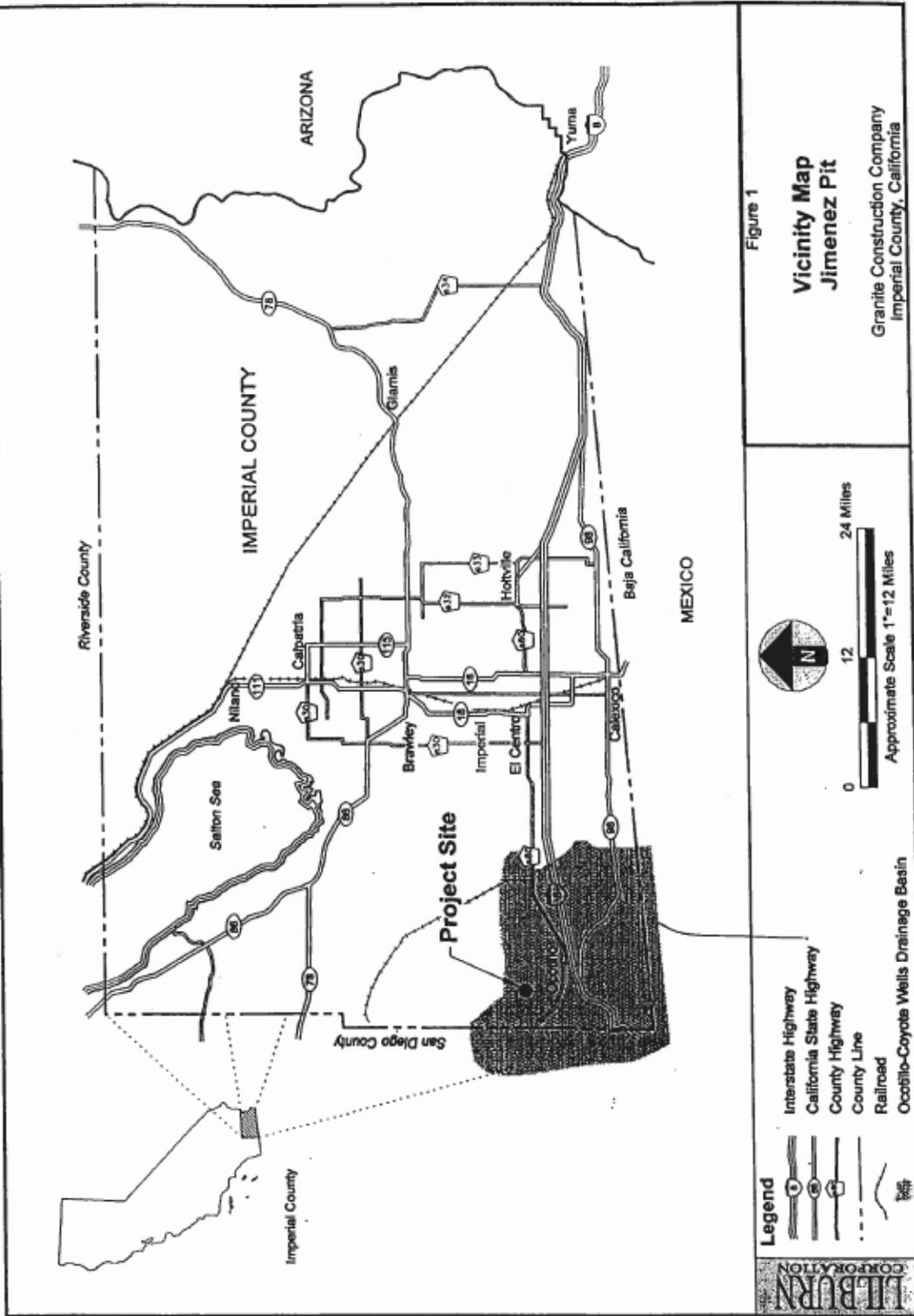
- Adverse environmental effects are prevented or minimized and mined lands are reclaimed to a usable condition which is readily adaptable for alternative lands uses.
- The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment.
- Residual hazards to the public health and safety are eliminated.

The goals of the reclamation program for the Jimenez Pit, accordingly, can be summarized as follows:

- Ensure that the reshaping and contouring of reclamation will minimize erosion and visual impacts and will not pose a hazard to public health and safety.
- Conduct a revegetation program in a manner to conserve topsoils and re-establish plant communities with species composition and densities similar to those existing on the property today.

The County of Imperial (“County”) acts as the Lead Agency as defined by SMARA. The County administers the aspects of SMARA as they relate to this project in coordination with the State Department of Conservation, Office of Mine Reclamation (“OMR”). The County’s responsibility includes approving the Reclamation Plan and any amendments thereto, conducting annual inspections, and overseeing the reclamation of the site when it occurs.

The County administers the Reclamation Plan also in coordination with BLM, which authorizes mining operations at the site under a Plan of Operations (“POO”), and in conformance with objectives and requirements of the Federal Land Policy Management Act (“FLPMA”) (CFR 3890.0-6). The Reclamation Plan is designed to meet the requirements in 43 CFR 3809 regulations for reclamation of mining activities on Federal lands.



This Reclamation Plan will be used by Granite to implement reclamation activities throughout the operation period of the project and subsequent to cessation of mining and processing activities. In turn, responsible agencies, including the BLM, will use the Plan as a basis to review and evaluate the reclamation program. In view of the fact that this project may operate for 20 years or more, it is possible that there will be changes to planned reclamation procedures over the life of the project. These changes may result from permitted alterations of project activities, and/or changes in Federal/State regulations. Granite will submit proposed revisions, if and when they occur, to the BLM and County for approval. Approved changes will then be incorporated into the Plan and implemented at the project site.

## **OWNER, OPERATOR AND AGENT**

**1. Applicant**

GRANITE CONSTRUCTION COMPANY  
2095 Highway 111  
El Centro, CA 92243  
Telephone 760-775-7500, 760-337-3030

**2. Name of Mineral Property:**

Jimenez Mine

**3. Property Owners, or Owners of Surface Rights**

(a) As to the Material Site:

United States Department of the Interior, Bureau of Land Management  
1661 South 4th Street  
El Centro, CA 92243

**4. Owners of Mineral Rights:**

(a) As to the Material Site:

Ricardo Jimenez, Jr.  
234 South 5th Street  
El Centro, CA 92243

**5. Lessee:**

Same as (1)

**6. Operator:**

Same as (1)

**7. Agent of Process:**

Wade Malone, Plant Manager

c/o Granite Construction Company

**LOCATION, ACCESS, ENVIRONMENTAL SETTING**

**8. Legal Description:**

Being portions of the northeast one quarter and the east one half of the southeast one quarter of Section 8, T 16S, R 9E, SBBM, Imperial County, California

**9. Size of the lands that will be affected by mining operation:**

Total parcel - 100 acres;

Area affected by mining - approximately 100 acres

**10. Access route to the operation site.**

Via Interstate 8 to Ocotillo exit, north to Imperial Highway (County Road S2), west three miles, then north on Granite held right-of-way access road two miles to site.

**11. Mineral commodity to be mined:**

Sand and gravel

**12. General Geological description of the area: and**

**13. Detailed description of the geology of the actual site in which surface mining to be conducted:**

The Jimenez Mine is located in the alluvial fan of the Coyote Mountains "District" in southwestern Imperial County centered about 28 miles west of El Centro. The mountains trend northwest and have elevations ranging from 400 to 2,400 feet. A great variety of mineral deposits can be found in this area including beryllium, clay, limestone, marble, nickel, quartz, sand and gravel, and silica sand.

According to the California Division of Mines and Geology Report, Geology and Mineral Resources for Imperial County California, the Jimenez Property has the characteristics for

the following geological formations: Palm Springs Formation, Imperial Formation, and Older Alluvium.

The Palm Springs Formation is defined as interbedded non marine, light gray, arkosic sandstone and reddish clay. Imperial Formation: marine sequence of light yellow-gray clay, interbedded arkosic sandstone and oyster shell reefs, and fossiliferous calcareous sandstone. Older Alluvium: partly dissected largely unconsolidated poorly, sorted silt, and gravel of alluvial fans, desert pavement areas, margins for large canyons, and terraces, including Chemihuevis Formation.

The alluvial fans northwest of Ocotillo have been mined since around the turn of the century, producing road base, asphalt aggregate, and rail road ballast. A 1986 BLM Mineral Report prepared by Mr. Kenneth C. Schulte of the BLM on the Jimenez Claims indicated that significant sand and gravel production has taken place in the area since the 1950s. Records compiled by Mr. Schulte show a minimum of 2.7 million tons produced and sold from the Ocotillo area from 1955-1985. The area continues to exhibit high levels for activity today with three to six commercial pits, in addition to the BLM community pit, Caltrans, and Imperial County Pit. Average production from 1990 to 1995, according to BLM annual material sales, averaged 540,000 tons with a peak of 790,000 tons in 1992.

**14. Brief description of the environmental setting of the site and the surrounding areas. Existing land use, soil, vegetation, ground water elevation and surface water characteristics.**

The existing environmental conditions and potential mining/reclamation impacts are discussed in the BLM's 1996 Environmental Assessment ("EA") and 2013 Supplemental Environmental Assessment ("SEA") and briefly below.

The site is located on alluvial fans emanating from the Coyote Mountains within the historic Carrizo Mountain Mining District. The generally vacant, sparsely vegetated area is currently used for several commercial aggregate pits and three government agency pits, with other uses including transportation and utility corridors, limited off-road vehicle usage and open space (natural habitat). The nearest residences are located approximately four miles to the southeast.

Vegetation onsite consists of elements of creosote bush scrub and desert dry wash woodland. A detailed biological assessment is included in the BLM's EA and SEA. Groundwater occurs at depths greater than 300 feet below the surface. Surface water is discussed in the EA.

## **PROPOSED SURFACE MINING OPERATION**

The existing mining operation is discussed in the Plan of Operations submitted to the BLM

and summarized below. The Reclamation Plan, as amended, makes only minor modifications to the operational phasing, test plot location, finished slope configuration and period of coverage. The current amendments to the Reclamation Plan are not intended to result in any change to the site acreage, perimeter boundary, or depth of mining.

**15. Proposed starting date of operations:**

The Jimenez mine has been in operation since 1991. This Reclamation Plan, as amended, makes non-significant deviations to the prior version of the Reclamation Plan approved in 1996.

**Estimated life of operation:**

The period of operation is 20 years from the date of the approval of the Reclamation Plan, as amended.

**16 and 17. Operation will be:**

The Jimenez Project will consist of two phases. Each phase will be developed utilizing conventional open pit mining methods. The materials produced during mining operations will consist of growth media, rock and sand, and some reject sand. The area of each mine phase (Phase 1 and Phase 2) is approximately 50 acres. Extraction in each of the two phases will not exceed 50 feet in depth, and finished slopes will be at a maximum steepness of 2.0H:1.0V. At least a five (5) foot separation between pit floor and actual ground water elevation shall be maintained.

The following plants are utilized on site as needed to meet local market demand for products: crushing/screening/washing plant; asphalt plant, crumb rubber plant, ready mix concrete plant, and a concrete and asphalt recycling facility. These and other major operational components are shown in the site map and discussed in the POO. The asphalt plant including the crumb rubber blend system, ready mix concrete plant, and asphalt and concrete recycle plant and ancillary facilities are addressed by BLM Right of Way number CACA-050523 and a Conditional Use Permit (“CUP”) to be issued by Imperial County. The CUP Project Description and the POO provide operational details for these processes. Typical process plant locations are included on the Reclamation Plan drawings included with this document.

A number of ancillary facilities provide support to site operations, including: portable office trailer; portable materials testing laboratory; scale house; portable truck scales; up to four (4) portable lighting plants (directed downwards and away from both the adjacent mountain slopes and the Ocotillo community); parking areas for mobile equipment (on and off-road); aboveground diesel storage tanks equipped with secondary containment; generators; areas designated for dumpsters and waste management; and chemical toilets.

Non-potable water for process make-up and dust control is stored in a lined and fenced fresh

water retention basin (lined pond). Four (4) fenced and concrete lined gravity settling basins are used to remove fines from the process water prior to recirculation and reuse of the process water. All equipment requiring Imperial County Air Pollution Control (“ICAPCD”) Permits or California Air Resources Board (“CARB”) permits will continue to be permitted prior to operation at the Site.

**18. Total Anticipated Production:**

Minerals:	Aggregate
Waste Retained Onsite:	Approximately 5% of material may be unusable and will be placed back into the pit and graded.
Waste Disposed Offsite:	None
Maximum Anticipated Depth:	50 feet
Maximum Slope:	2 Horizontal: 1 Vertical
Average Annual Production:	250,000 tons
Maximum Annual Production:	400,000 tons
Total Reserves with Plan:	7.8 million tons

**MINING METHOD**

**19. Describe Mining Method:**

Rock and sand will be scraped by a dozer (D9 Cat typical), with the raw materials fed to the movable feeder/conveyors by a loader (980 Cat typical). No blasting is proposed.

**20. Describe nature of processing and explain disposal of tailings or waste:**

The rock and sand is conveyed to the process plant, and crushed and screened for the required sizes of rock, gradation of sand, and base material. Finished products are conveyed and stockpiled by the processing plant. The finished products are picked up by a loader and placed in transport trucks. The transport trucks are weighed at the scale house as they leave the site. The finished materials will be transported to construction projects and other end users off the mine site or utilized on-site in the asphalt and concrete plants.

The locations of the aggregate processing plant, hot-mix asphalt plant, ready mix concrete plant, and recycle plants are shown on the attached drawing number 0894-REC-001. Support facilities also shown on the drawing include a portable office and platform scale. A list of typical process equipment for each of these processes is presented in Section 24 below.

Portable toilets will be utilized onsite, and will be provided and maintained by a licensed supplier. Electricity will be provided by portable generators. The generators are currently, and will continue to be, permitted with Imperial County APCD.

The composition of the raw materials on site generates about 5% in fines, unsalable sand, or tailings. These fines are stored on site; they are not hauled away for disposal off site. At the time of reclamation, these stockpiled fines will be spread over the area of reclamation prior to the return of the topsoils and will add to the growth media for revegetation.

All refuse generated by the operation will be removed on a regular basis. Refuse will be stored in covered containers, so as not to be an attraction to animals, and disposed of at a County landfill.

## **21. Cyanide or Toxic Materials Onsite:**

No cyanide or toxic materials are used in the processing of aggregate. The generators and mobile equipment use diesel fuel, which is stored onsite in above ground tanks with secondary containment as required by 40 CFR 112. The management and use of hazardous materials such as diesel fuel, gas, and oils/lubricants are required to comply with existing federal, state and local safety regulations aimed at the protection of public health and the environment. A Hazardous Business Plan is reviewed annually, as required by the local CUPA, and it includes a hazardous materials inventory, emergency procedures, an employee training program and other safety and fire procedures.

## **22. Water Supply and Use:**

Water is required for dust control, aggregate washing and mixing concrete. Water use is estimated to average between 10,000 and 30,000 gallons per day. Trucks deliver water from the West Side Main Canal, City of Imperial or other permitted source outside the sole source aquifer underlying the Site. The West Side Main Canal is located 1.5 miles east of Dunaway Road some 18 miles east of the project site. Drinking water for the site is obtained from a commercial drinking water supplier.

The one (1) fresh water basin and four (4) settling basins are surrounded by fencing. While the facility is not located within PBS critical habitat, the 2012 U.S. Fish and Wildlife Service guidance for Ponds in PBS habitat was utilized to ensure the existing fence was protective of PBS. The existing lizard barrier fencing is likewise constructed according to agency specifications. The fencing and avian deterrents will remain in place throughout the life of the basins and may be removed upon the closure of the basins. Basin closure means water features which could attract PBS, lizards, and/or migratory birds have been removed. The fencing will be maintained during the life of the basins. Fence maintenance includes but is not limited to repair of the fence, filling in of gaps under or in the fence, and removal of accumulated plant debris or sand on the exterior of the fence.

### Peninsular Bighorn Sheep Exclusion Fencing

An eight (8) foot tall, chain-link PBS exclusion fencing is installed around the fresh water basin and settling basins. Barbed wire is not placed on top of the PBS exclusion fence to avoid sheep entanglement.

### Lizard Barrier Fencing

Lizard barrier fencing is installed immediately adjacent to the PBS exclusion fence. The lizard barrier fence is constructed of 0.25-inch mesh hardware cloth and is 36-inches in height. It is buried six-inches into the ground and extends 30-inches above grade. Metal clips or wire is used to secure the mesh hardware cloth to the fence posts or t-posts. T-posts or fence posts are located at junctions between rolls of hardware cloth to discourage the formation of gaps.

### Avian Deterrents

Basins are maintained to deter migratory birds through the use of netting, armor bird balls, worlly gigs, moving flags or other appropriate means of avian deterrent. Migratory bird deterrents will be monitored and maintained to avoid wind damage.

## **23. Mine/Reclamation:**

Development of the project is described below in terms of phases of mining/reclamation reflecting how acreage will be disturbed over time.

### ***Phase 1***

Phase 1 consists of 50 acres located in the north half of the Jimenez Claims. Prior to mining in undisturbed areas, plant salvaging will be conducted and the top six inches of surface material will be graded into stockpiles along the north, east and west rim of excavation for future reclamation. This stockpiled material will act as a growth media and seed bank for the revegetation effort. In addition, if the stockpiles are composed of fine materials susceptible to wind erosion, they will be sprayed to form a surface crust.

Mining activities commenced at elevation 825 feet (above MSL) in the south side of Phase 1 and will expand progressively to the north. Slopes will be excavated and recontoured to a 2:1 or flatter slope with a maximum depth of approximately 50 feet below the existing general surface. As excavation approaches the northeast corner of the 100-acre mine site, a berm will be added to redirect storm water away from the mine. The CA Department of Fish and Wildlife will be consulted prior to disturbance in the streambed or construction of the berm. Reclamation will commence after the Phase 1 mine depth has reached the nominal 50 feet below the existing general surface. Reclamation will consist of final contouring of the slopes on the eastern, western and northern sides to a maximum 2:1 slope and the placement of growth media previously salvaged over the area to be reclaimed and spread along the contour (perpendicular to the slope) to aid in holding any available moisture and collecting windblown seeds. Removed plants would be replanted.

### ***Phase 2***

Phase 2 consists of 50 acres directly south of Phase 1. Within Phase 2 all processing plants (aggregate processing, wash, asphalt, RMC, recycle, etc.) will be located. Mining elevations

in this phase will range from 775 feet in the south to 800 feet (MSL) in the northern portion of the phase. Mining activities will be conducted in the same manner as in Phase 1. Soil salvaged (growth media) was stockpiled along the top of the pit forming the berm along the eastern and western perimeters of the mine. The locations of the processing operations may change over the life of the project within Phase 2 to optimize production, access aggregate reserves, and conserve energy. Reclamation will commence after the Phase 2 mine depth has reached the nominal 50 feet below the existing general surface and the processing plants have been removed. Upon completion of Phase 2 mining to the maximum 50 foot depth, reclamation will commence on the eastern and western slopes in the same manner as in the initial phase.

### ***Final Reclamation***

Final reclamation following completion of mining in both phases includes removal of stockpiles and stationary equipment (sand and gravel, and recycle processing equipment; asphalt batching equipment, ready-mixed concrete batch plant). Mobile equipment (dozers, loaders, etc.) and support equipment and supporting structures (office, trailers) will remain on-site for use during reclamation, and will be removed from the site at the conclusion of reclamation. The stationary equipment will be unanchored and relocated, as Granite performs a similar operation numerous times a year in various locations. The fresh water pond and settling basins will be drained, and stabilized.

The operations addressed by the POO may continue pursuant to the Conditional Use Permit, BLM Right-Of-Way CACA-050523, the BLM Plan of Operations, and the Environmental Assessment independent of the mining and crushing operation at the Jimenez Mine Site. However, final reclamation of the 12.9 acres covered by the BLM ROW CACA-050523 will not occur until after operations addressed by the Conditional Use Permit (asphalt plant including crumb rubber system, ready mix concrete plant, and recycle process) permanently cease. The reclamation including revegetation of the 12.9 acre processing area covered by the BLM Right-of-Way CACA-050523 is described in this Reclamation Plan and summarized below.

The equipment will be loaded on to trucks and hauled to a new location. It is anticipated that at the time of reclamation, stockpiles of product will be sold, given away, or used as part of reclamation. The basins will be drained, and stabilized. Any excess material shall be spread over the mine bottom or “mine floor” of the disturbed area and/or backfilled against the slopes by use of loaders and dozers.

As the surfaces will be revegetated using the growth media, any compacted areas of the mine floor will be first ripped; and growth media from the berms spread prior to revegetation. This process will not only loosen the soils; but will also create pockets in which seeds and moisture will be captured to enhance vegetative growth. Likewise, any roads within the reclamation area will also be ripped.

The goal of reclamation is to begin reclamation activities as soon as is practical in areas that

have been mined to their maximum depth and thus will no longer be subject to disturbance. It is anticipated that the final slopes in the Phase 1 area will be the first area open to reclamation, followed by the slope areas in Phase 2. It is anticipated that the last area to be reclaimed will be the mining floor, starting in the Phase 1 area and working south into Phase 2. While the mine plan is presented in Phases, the mine shape and natural geology of the site, as well as market demand for various aggregates may dictate mining in multiple phases at any one time.

Finished slopes will be 2:1 (H:V), as stated above. The plan is to cut the final slopes to the finished slope gradient, as this is the most economical approach; but it leaves the possibility that some over excavation may occur and Granite will then rebuild the slopes with uncompacted fill to the desired 2:1 slope.

## 24. Typical Process Plants Equipment

<b>Plant Equipment</b>	<b>Number</b>	<b>Purpose</b>
<b><i>Aggregate Plant Operations</i></b>		
Feeder	3	Feeds material to main aggregate plant
Crushers	4	Reduces (crushes) rock to products specification sizes
Screens (wet and dry)	4	Sizes material
Hoppers	2	Collects and distributes material
Conveyors	40	Transports material throughout plant
Stackers	12	Stacks finished products into product stockpiles
<b><i>Asphalt Plant</i></b>		
Dryer Burner/Mixer/Baghouse	1	Dries aggregate, heats asphalt oil, and mixes aggregate and oil
Feeder Bin System	1	Aggregate feeder to plant
Conveyors	4	Transports material within plant
Asphalt Oil Storage Tanks	2	Holds asphalt oil transported to Site by tanker truck
Product Silos	2	Stores mixed asphalt
Emulsion Storage Tank	1	Stores emulsion
Crumb Rubber System	1	Adds crumb rubber to asphalt mix
<b><i>Ready Mix Concrete Plant</i></b>		
Concrete plant with mixers	1	Mixes aggregate, cement, and water to produce concrete for distribution
Cement storage silos/bins with baghouse	1	Storage of cement and admixtures delivered to Site by truck
Fly ash silos	1	Stores fly ash
<b><i>Recycle Process</i></b>		
Feeder	1	Feeds material into the recycle plant
Crushers	1	Reduces (crushes) rock to product specification size
Screen	1	Sizes material
Hopper	1	Collects and distributes material
Conveyors	6	Transports material throughout plant
Stackers	2	Stacks finished material into product stockpiles

## Typical Quarry Equipment

<b>Equipment</b>	<b>Typical Number</b>	<b>Purpose</b>
Dozers	1	Construction and maintenance of unpaved on-site roads
Motor Grader	1	Maintain roads on-site.
Water Trucks	1 or 2	Water haul roads, stockpiles, and general dust suppression at Site
Front-End Loaders	2 or 3	Loading of materials onto conveyors, outbound delivery trucks, and into the process equipment.

## RECLAMATION PLAN

### 25. Reclamation Map:

Sheets number 0894-REC-001 and 0894-REC-002 (Reclamation Maps) are included with this Reclamation Plan text. The underlying topography of the site is presented on sheet number 0894-REC-001. A site map and a vicinity map which identifies the location of the Jimenez mine are also included.

Approximately 100 acres of the 100 acre site will be disturbed by mining activities. These 100 acres will be reclaimed under this Reclamation Plan and are depicted on Sheets number 0894-REC-001 and 0894-REC-002 (Reclamation Maps).

### 26. Ultimate Physical Condition:

The reclaimed land will form a shallow open basin with 2:1 side slopes on the Eastern, Northern, and Western perimeter of the site. The final surface of the southern perimeter will conform with the existing grade of the adjacent property immediately to the south. The 2:1 slopes pose no public safety impact and will minimize erosion. The site will be graded and revegetated, eventually returning to desert open space and habitat for plants and wildlife.

### 27. Relationship to Other Uses:

Compatibility With Adjacent Land Uses - The proposed operation is situated on unpatented claims located on federal land designated Multiple-Use Class "L". The CDCA Multiple-Use Class L is a Limited Use class. This Class protects sensitive, natural, scenic, ecological, and cultural resource values. Public lands designated as Class L are managed to provide for generally lower-intensity, carefully controlled multiple uses of resources, while ensuring that sensitive values are not significantly diminished. Permitted uses within this land use classification include: electrical generation facilities, transmission facilities, communication sites, fire management, livestock grazing, mineral exploration and development, motor vehicle access, and recreation. Mineral development is allowed if the action does not cause undue or unnecessary environmental degradation.

Desert land use policies under the County's General Plan encourage uses compatible with the open, rural character (e.g., ranching, agriculture, and mining) of the desert environment, which improve the economic base of the desert.

Zoning Restrictions and County General Plans - The County has zoned the area where the Jimenez Claims are located as S-2 Open Space. The Jimenez site is consistent with the goals and policies of the Imperial County General Plan. All alternatives indicate a limited to moderate use, including camping, limited off-road vehicle usage, energy corridors, and wilderness areas.

**28. Notarized Statement of Notification:**

See Attachment A of 1996 Reclamation Plan.

**29. Soil Salvage Plan:**

The site is composed of a mixture of unconsolidated, poorly sorted silt and gravel of alluvial fans and desert pavement.

As mining progresses into undisturbed areas, the top six inches of surface material (growth media) will be stockpiled for future use in reclamation. This stockpiled material will act as a growth media and seed bank for the revegetation effort. Stockpiled surface material will be identified with signs.

**30. Reclamation**

The goal of this reclamation plan is to return the site to a condition that (1) does not pose a hazard to public safety; (2) minimizes erosion potential and visual impacts, and (3) supports naturally reproducing native vegetation and wildlife species.

***Site Preparation***

The slopes of the mining area will be left at the 2:1 slopes. Remaining topsoil material will be returned to the mine surfaces and spread evenly throughout. The surface of both the slopes and the floor of the Site will be revegetated.

Prior to mining, the top 6-inches of soils (topsoil) was, and will be, pushed off to the perimeter of the mine and used to construct aesthetic and safety berms. The top six inches of surface material (and seed bank) will be graded and stockpiled to create the berm around the perimeter of the mine site as shown on the Plot Plan. Water will be sprayed as necessary to produce a surface crust in order to minimize wind erosion. During reclamation, this topsoil material and remaining topsoil material will be returned to the mining surfaces and spread evenly throughout, over the excavation floor, the excavated slopes and the slopes with the unsalable sand by-product, or tailings. These topsoils will provide the nutrient-rich soils helpful to vegetative growth.

After placement of the topsoil, the surface of both the 2:1 slopes and the floor will be ripped, scarified and/or micro-contoured to enhance the potential for ponding of moisture and seed germination. This process was determined to be the most appropriate revegetation approach based on the extremely dry and hot climate.

***Revegetation***

Prior to initiation of mining selected cacti and ocotillo were removed and transplanted at the

Minoca site near the Jimenez Mine. A qualified biologist will identify cacti and ocotillo appropriate for transplanting to the on-site “cactus garden” located within the one-acre test plot. This activity is described in the attached Revegetation Plan.

A one-acre test plot is being established in the southwest corner of the Jimenez site as shown on Reclamation Plan drawing sheet number 0894-REC-001. This one acre site will be utilized to test revegetation options in accordance with the attached Revegetation Plan. Final revegetation strategy for the entire 100-acre Jimenez site will be based upon review of the test plot results.

Due to the extremely dry, hot weather extremes and erratic precipitation that occurs in this region, typical revegetation methods would not be highly successful. Granite proposes to excavate and reclaim the site using gradual 2:1 slopes and a shallow pit depth of 50 feet. Upon completion of mining within specified areas, the slope and/or pit bottom will be ripped as necessary to break up compacted areas. The stored surface material will be spread over the areas to be reclaimed and the areas tilled to a depth of one foot along the contour. This will create ridges and furrows to aid in holding moisture and windblown seeds.

Revegetation of the recontoured slopes and floor of the mine will occur in accordance with the results of the attached Revegetation Plan test plot findings. Revegetation activities will be timed to take advantage of optimal climate conditions. Historical records indicate that most of the 2.7 – 3.7 inches annual average precipitation occurs during the late fall and early spring. Therefore, if the test plots indicate application of seeds is required for revegetation, seeding will occur between November 1 and January 15, when the seeds have the best chance for germination. Due to the short time required for closure which would not allow sufficient time to begin to re-establish vegetation in this hot dry climate, no interim revegetation efforts will be implemented. Revegetation efforts will commence at the next appropriate planting season during late fall or winter following the completion of the physical reclamation operations using procedures given in this plan including the attached revegetation plan.

A monitoring program to report on the compliance, progress, and success of the test plot program will be initiated as part of the reclamation program. The monitoring program shall monitor the implementation of mitigation measures and the Reclamation Plan. A report of the current status of reclamation activities shall be provided to both the County and the BLM by July 1st of each year of operation until reclamation is deemed complete.

The operations addressed by the POO may continue pursuant to the Conditional Use Permit, BLM Right-Of-Way CACA-050523, the BLM Plan of Operations, and the Environmental Assessment independent of the mining and crushing operation at the Jimenez Mine Site. However, final reclamation of the 12.9 acres covered by the BLM ROW CACA-050523 will not occur until after operations addressed by the Conditional Use Permit (asphalt plant including crumb rubber system, ready mix concrete plant, and recycle process) permanently

cease. The reclamation including revegetation of the 12.9 acre processing area covered by the BLM Right-of-Way CACA-050523 is described in this Reclamation Plan.

### ***Revegetation Monitoring***

The Annual Revegetation Monitoring Report will be prepared to assess the results of revegetation on the disturbed areas of the Site. The monitoring report will be prepared annually to document monitoring and assessment of the revegetation conformance with the success criteria. Quantitative monitoring will occur annually in the spring for up to five years after reclamation is complete. The quantitative assessment will be made of the revegetation efforts to assess achievement of success criteria. Once the quantitative assessment reveals the success criteria have been met, no further annual monitoring events or reports shall be required. Annual monitoring following completion of the revegetation will evaluate surviving perennial plant species for relative success as determined by diversity and density. Individual specimens or areas will receive appropriate remedial attention (maintenance) as necessary. Remedial actions (maintenance) include the removal of invasive exotic or non-native weeds species, reseeding, and herbivore protection.

If the success criteria have not been achieved after the fifth annual monitoring event, recommendations for modification in the planting mix and / or success criteria will be made to the lead agency. Upon approval of the modifications to the planting mix and/or success criteria, annual monitoring events as described above will commence until the success criteria are achieved or an additional five annual monitoring events have occurred. The five-year monitoring cycle with modification of the planting mix and/or success criteria will continue until the applicable success criteria have been achieved.

There will be no backfilling of the pit, except for the replacement of fines and topsoil previously stockpiled along the excavation boundaries, as it will be designed as a shallow basin with gradual slopes of a maximum of 2:1. The 2:1 slopes are inherently stable as the required slopes are usually 2:1. There are no waste dumps or tailings associated with this project.

The site is located on a broad alluvial fan with numerous drainages or dry washes. Sheet flow has been diverted to the east of the site by a two foot high berm of native materials during operations. This berm will be removed after the completion of mining to allow any runoff to enter the pit to provide moisture and seed. As excavation approaches the northeast corner of the 100-acre mine site, a berm will be added to redirect storm water away from the mine. This berm in the northeast corner will remain after the completion of mining to protect the natural flow of storm water.

## **31. Short-Term Phasing**

The project is divided into two phases. Site clearance will be minimized and concurrent reclamation will be undertaken as mining areas within the phases are completed to the

permitted mine depth. Mining and processing will take place in Phases 1 and 2 concurrently.

### **32. Future Mining Potential**

Mining will be a possible second use of the Jimenez site as the reclamation plan will be implemented in such a way as to allow future mining at the site. Other uses include recreation and wildlife habitat.

### **33. Statement of Responsibility**

The Statement of Responsibility is included as Attachment B of the 1996 Reclamation Plan.

### **34. Reclamation Assurance**

The BLM and the County will jointly hold a bond for the reclamation of the Jimenez claims project. Reclamation bond amounts will be updated annually. The amount of the bond will be based on the disturbed acreage multiplied by the appropriate cost factors. The 2013 Financial Assurance is estimated to be \$323,637.

### **35. Revegetation**

The goal of the revegetation program is to reduce potential erosion, visual impacts, and to re-establish plant communities with species composition and densities similar to pre-mining conditions. Please refer to Section 31 subsections *Revegetation* and *Revegetation Monitoring*, as well as the attached July 2013 Revegetation Plan for details regarding revegetation of the site.

### **36. Safety**

All employees working at the Site are MSHA Part-46 safety trained. Each employee and visitor to the Site is required to go through Site-Specific training. Hard hats, steel-toed boots, and safety glasses are to be worn in the operational areas by employees and visitors.

#### **Vehicle Safety**

The on-site speed limit for all mobile plant equipment, delivery trucks, and other vehicles is 15 mph. Speed limit signs will be posted at the front gate and throughout the Site.

#### **Signage**

The front entrance gate is posted with the following signs:

- Company name and contact number
- All visitors must report to the office trailer

- Speed limit 15 mph
- Prop 65

Granite will post “Danger Keep Out” signs along the mine perimeter.