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April 16, 2008

6390.00

Hooven and Company, Inc.  
3445 Central Avenue  
McKinleyville, California 95519

Attention: Tim Hooven

Subject: Response to Comments from The Department of Conservation, Office of Mine  
Reclamation Re: Reclamation Plan for Mason Quarry, CA Mine ID # 91-12-0038

Dear Mr. Hooven:

Per your request, LACO Associates (LACO) herein provides additional information necessary to process the conditional use permit for operations at the Mason Quarry. Specifically, we address advisory comments contained in a letter from the Department of Conservation dated November 17, 2006 (Attachment 1). Recommendations were provided to Anita Punla of the Humboldt County Planning Department to assist in review of the *Reclamation Plan for Mining Operations*, dated July 11, 2006, produced by our office. Below we summarize each recommendation and provide our response:

#### **Mining Operation and Closure**

*OMR:* "The final version of the reclamation plan should specify a termination date, such as December 31, 2021. Dates can be amended as necessary after the plan is approved."

*Response:* The reclamation plan has been amended to include a termination date of December 31, 2037. Actual termination of operations will occur when the total volume of material proposed for extraction (approximately 2,000,000 cubic yards) has been exhausted. The termination date may be amended at a later date depending on contract activity. (Section II, Subsection 10)

*OMR:* "OMR recommends that the plan be revised to provide for details of concurrent or phased reclamation".

*Response:* The configuration of the quarry site is such that there are three general areas; 1) the upper slopes that have yet to be mined, 2) the working face of the mine, and 3) the flat-lying operational area at the base of the working face where materials are stored and loaded. As operations continue into the future, the working face will migrate into the upper slopes and the operational area will grow in size. During the operational lifespan of the quarry there will not be any areas available for reclamation (areas that will not be subject to further disturbance). Therefore, no concurrent or phased reclamation is planned. Reclamation activities will commence when the mine ceases operation. Section III, Subsection 2 and 3 of the reclamation plan have been amended to better clarify these plans.

#### **End Land Use**

*OMR:* The author points out that SMARA "requires that the reclamation plan include a description of the proposed end use or potential uses of the mined lands after reclamation" as well as "a description of the manner in which reclamation, adequate for the proposed use or potential uses, will be accomplished." The author points out that the discussion of potential end uses within the reclamation plan is inconclusive.

*Response:* Based on our discussions with the owners of the quarry, the proposed end use will consist of timber production. Section III, Subsection 1 has been modified to include this language.

### **Geotechnical Requirements**

*OMR:* "OMR recommends that during development of critical areas at the site (such as those adjacent to future building sites) a licensed engineer or professional geologist should periodically evaluate whether different or unusual soil conditions exist in the slope. Observations should be summarized in report form and provided to the necessary agencies on a regular basis."

*Response:* The reclamation plan has been amended to emphasize that no critical sites currently exist or are planned for the mine site during or after operations.

*OMR:* "OMR recommends that a qualified professional observe the slopes during the annual inspection process as mining progresses."

*Response:* The *Engineering Geologic Investigation Report of Findings*, dated June 14, 2006, produced for the Mason Quarry provides discussion of the stability conditions of the site and makes recommendations for maintaining stability during operations. Variations in the strength of materials was noted, and we anticipate that stability conditions may vary as the working face is moved back. We have amended the reclamation plan to include a *Time Schedule of Inspections* (Section II, Subsection 20) in which we recommend that the annual inspection of the site include an evaluation of the working face, slope stability conditions and suitability of the cut-slope configurations. Observations and recommendations (if necessary) will be summarized in an annual inspection report of findings. Final gradients for the cut-slopes should be a minimum of those presented in the geologic report referenced above and may need to be modified based on the exposed materials at the time the mine ceases operation.

### **Hydrology and Water Quality**

*OMR:* "We recommend that evaluation of the effectiveness of the erosion control plan should be done as part of the SMARA annual inspection."

*Response:* The drainage configuration of the Mason Quarry is such that no surface water is discharged into nearby public waters. We have amended the reclamation plan to include a *Time Schedule of Inspections* (Section II, Subsection 20) in which we recommend that the annual inspection of the site include an evaluation of the drainage characteristics and performance of erosion control structures to verify that performance standards for sediment and erosion control, as outlined in SMARA, are being met.

### **Resoiling and Revegetation**

*OMR:* "The Mining Plan states that any topsoil from the new cut will be 'salvaged and sold as a commodity.' This statement should be omitted. Any topsoil must be conserved for reclamation use and could decrease the amount needed to import from offsite."

*Response:* The statement has been omitted. All topsoil excavated as the quarry expands will be stockpiled for reclamation activities.

*OMR:* "Page 11 of the reclamation plan states, '2,000 cubic yards of topsoil will be imported and mixed with substrate and spread over the lower mining operations area.' OMR recommends that this

mixture be tested in advance of large-scale application to determine the need for any amendments. It should also be placed in plots and planted with the proposed seed mix.”

*Response:* The *Resoiling and Revegetation* section of the reclamation plan (Section II, Subsection 4) has been amended and no longer includes plans for import of topsoil materials. Native topsoil salvaged from the site will be reused for reclamation activities.

*OMR:* “OMR recommends that the following seed mix and rates of application be used in place of the grass seed listed on page 12 so that the resulting vegetative cover will be composed of species native to the area.”

*Response:* The recommended seed mix has been added to the *Resoiling and Revegetation* section of the reclamation plan, and will be used to supplement the native seed stock contained in the salvaged topsoil materials.

*OMR:* “A statement should be added to the reclamation plan describing a monitoring and control program for weeds.”

*Response:* The *Resoiling and Revegetation* section (Section III, Subsection 4) has been amended to include the following statement: “Surveying for noxious weeds will be conducted each spring following resoiling and planting until native vegetation has suitably established itself. Noxious weed species will be controlled through hand grubbing or grazing by goats. A weed density of three plants per 10 square meters will be used to trigger control and abatement procedures.”

#### **Administrative Requirements**

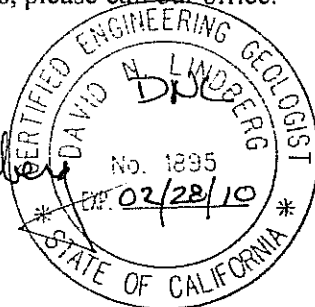
*OMR:* “The financial assurance estimate should include detailed calculations that itemize and describe each task and any costs involved in site reclamation...” “The proposal submitted as Attachment 1 does not provide enough detail to meet these requirements.”

*Response:* The financial assurance estimate has been amended to include changes to the reclamation activities provided herein, and is presented in greater detail.

If you have any questions, please call our office.

Sincerely,  
LACO Associates

*David N. Lindberg*  
David N. Lindberg  
CEG 1895, Exp. 2/28/10



JPB:tgc

# RECLAMATION PLAN FOR MINING OPERATIONS

Mason Quarry

Redwood Creek Valley, Humboldt County, California

APN 316-163-002; California Mine Identification No. 91-12-0038

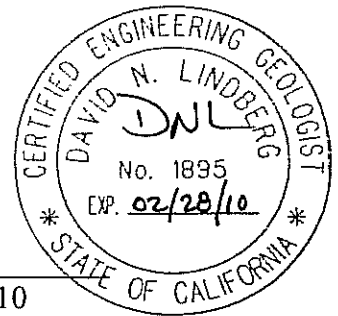
CUP No. 14 91; SMR No. 20 91

Prepared for:

Mason Materials, LLC

3445 Central Avenue

McKinleyville, California 95519



*David N. Lindberg*

David N. Lindberg, CEG 1895, Exp. 2/28/10



**LACO ASSOCIATES**  
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April 16, 2008  
Project No. 6390.00

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## **I. GENERAL INFORMATION**

### **1. California Mine Identification No. 91-12-0038**

### **2. General Ownership/Operators Information**

#### **a. Name of Mine/Activity Summary**

Mason Quarry, Redwood Creek Valley, Humboldt County, California (Figure 1)

This application is being prepared to allow the continuation of permitted activity associated with this existing quarry as it has generally occurred in the past. The project has vested rights in that it continues to operate in the same manner (developed in 1953) as it has prior to local and state permit requirements. In 1991, the Humboldt County Planning Commission approved a Conditional Use Permit (CUP 14 91), Surface Mining Permit (SMR 20 91), and a Reclamation Plan.

#### **b. Applicant/Operator**

Mason Materials, LLC  
3445 Central Avenue  
McKinleyville, California 95519  
(707) 839-1291

#### **c. Property Owner**

Wayne Mason, Trustee of the 2003 Wayne M. Mason Trust  
1633 Henry Lane  
McKinleyville, California 95519  
(707) 839-2668

#### **d. Agent of Process**

Western Timber Services  
Post Office Box 1136  
Arcata, California, 95521  
(707) 822-3628

#### **e. Site Description**

This is an existing open rock mining quarry located 1.5 miles south of State Highway 299 from the east end of Redwood Creek Bridge at Old Chezem Logging Road (private road; also known as Saber Tooth Road). The Humboldt County Assessor's Parcel Number (APN) for the subject site is 316-163-002 (Figure 2).

#### **f. Access Route**

The quarry is accessed from the east end of Redwood Creek Bridge on State Highway 299 via Old Chezem Logging Road. Both Wayne Mason and Caltrans have easements to the quarry on privately owned Old Chezem Road (personnel communication, Tim Hooven, 2006). There is an existing commercial access onto State Highway 299 from the Old Chezem Logging Road.

g. Project History

Mason Quarry was originally developed in 1953 for the construction of the road now known as Old Chezem Logging Road. The road was constructed to provide access for logging purposes in the upper Redwood Creek Valley by the Chezem brothers.

From 1954 through 1990 the quarry was mined for maintenance of the Chezem Logging Road, Humboldt County maintained roads and highways, and for the State of California highways. Both large rip-rap and smaller rocky embankment material has been mined for road construction and maintenance.

Large quantities of material were mined for road repair following the flood in 1955 and again following the flood in 1964. Both Humboldt County and the State of California have contracted with Wayne Mason for maintenance material since 1964.

The quarrying activity primarily involved ripping rock with a bulldozer to create a well graded embankment material which was both loaded and hauled out and also stockpiled for later use. The site presently contains substantial amounts of stockpiled materials from past quarrying operations. Table 1 below contains specific extraction information for the Mason Quarry.

**Table 1: Historic Quantity of Material Removed From Quarry**

| <b>Year</b>  | <b>Project</b>   | <b>Approximate Quantity Removed</b> |
|--------------|--|-------------------------------------|
| 1953         | Old Chezem Logging Road Construction                             | 50,000 cubic yards (CY)             |
| 1955         | State of California Flood Repair Work                            | 30,000 CY                           |
| 1956 to 1963 | Humboldt County and State of California Flood Repair Work        | 10,000 CY                           |
| 1964 to 1965 | State of California Flood Repair Work                            | 35,000 CY                           |
| 1966 to 1991 | Humboldt County and State of California Use                      | 25,000 CY                           |
| 1992 to 2006 | Humboldt County, State of California, and Private Contractor Use | 65,000 CY (estimated)               |

**3. Operations Summary**

a. Mining Operations Summary

The following information was provided by Tim Hooven (*Plan of Operations, Application for Extension of Mason Quarry-Mine ID No. 9101200038, APN 316-163-002*, Submitted on June 23, 2006).

The project has vested rights in that it continues to operate in the same manner as it has prior to local and state permit requirements (per Tim Hooven). The annual activity and amounts have fluctuated widely from 1,000 CY to 50,000 CY per year, which is consistent with the contract needs for this type of material.

To give the County the opportunity to regulate and monitor this operation, to allow an opportunity for public comment, and to more clearly define the project by filing the

Reclamation Plan, a CUP has been applied for in order to continue extraction of heavy construction rock and rocky fill material as described. Although the project is proposed to continue as it has in the past, a mining operations summary has been included to specify how the operation will continue to operate.

The mine encompasses approximately 10 acres (Figure 3) of the 118 acre parcel. The mine consists of a working face from which the quarry rock is removed. Rock is removed by means of a relatively narrow bench that is worked down along the exposed quarry face. Rock is loosened and ripped with a bulldozer and pushed off of the bench to the flat stockpile and loading areas at the base of the face (Figures 3 and 4). Blasting has not been employed in the past and is not anticipated for future operations. The existing rock face will continue to be excavated by working the bench down along the face until the bench excavation has reached the base of the face, at which point a new bench will be cut at the top of the rock face and similarly worked down.

Old Chezem Logging Road is the western boundary of the site. There is approximately 70 to 100 feet of space between the road and the base of the working face that provides areas for stockpiling and loading. The width of the stockpiling and loading areas will increase as the working quarry face recedes as successive benches are worked in the future. Old Chezem Logging Road is in-sloped slightly to drain runoff toward the base of the working rock face. Due to the fractured nature of the underlying rock, runoff water appears to percolate and not to pond on the site.

Once the material is mined from the working face bench, it is graded for size with a non-vibratory grizzly and loaded into trucks with a loader. No onsite processing of rock with crushers has occurred in the past and there is no proposal to process rock with crushers onsite in the future. Activity in the quarry will continue to be intermittent and dependent on demand.

All material mined from the quarry has commercial value and will mainly be used nearby for road and highway maintenance and construction. Waste materials are not expected to be generated.

b. Plan of Operations

See Section II below.

**4. Lead Agency Information**

a. Lead Agency

Humboldt County Planning and Building Department

Attention: Anita Punla, Senior Planner

3015 H Street, Eureka, California 95501

Phone: (707) 268-3727 Fax: (707) 445-7446

b. Proposed Financial Assurances

See Section V below.

## II. MINING PLAN/PLAN OF OPERATIONS

### 5. Plot Plan of Operations

See Figures 3 and 4 for project site details.

### 6. Description

The existing quarry consists of an exposed rock face (the working face as shown in Figures 3 and 4) that is generally mined at a slope of 1 to 1. The presently-active working bench is approximately 85 feet down from the top of cut. This bench will continue to be lowered until it reaches the base of the cut face at the stockpiling and loading areas, approximately 95 feet below its present elevation. A new cut will then be started at the top of the cut rock face which will again be brought down to the stockpile and truck loading areas grade at the base of the cut face. Drainage patterns will not change to any significant degree during the excavation except to expand the stockpiling and loading areas as the rock face recedes during quarry operations. The stockpiling and loading areas will be sloped slightly toward the base of the active quarry rock face and away from the Old Chezem Logging Road to control runoff and prevent sediment discharge from the site. Due to the grading and fractured nature of the rock, water has not in the past, and is not expected to pond on the site.

### 7. Production Schedule

The State and County contracts are expected to be renewed; typically, 1,000 to 50,000 CY of rock per year have been used by these agencies. Additional rock extraction may occur as the contracts dictate.

### 8. Mining Plan

Topsoil (if any) that may have existed when the original cut from the rock face was begun in 1953 is not on the site. When a new cut begins at the top of the rock face, any topsoil encountered will be stockpiled for future reclamation operations.

Material taken from the quarry is used for roadway embankment construction or for slope protection. The dense, well-indurated nature of the graywacke sandstone on this site means there is no waste or overburden material generated requiring disposal (Figure 5).

The quarry site will remain less than ten acres of the 118 acre parcel.

Little water is presently used in the mining operation. If dust control becomes necessary, water will be imported to the site for dust suppression.

The only hazardous materials involved in the mining operation are the fuels and lubrications used for equipment at the site. Due to the short, generally seasonal nature of annual operations at the site, the quantity of these fuels and lubricants will be small.

The mining operations plan (see *Application for Extension Package*, submitted June 23, 2006) does not propose any generation of waste water, impoundment of water, or water diversions.

## **9. Proposed Activity**

The quarry encompasses approximately 10 acres of the 118 acre parcel (Figure 6). Material is extracted by ripping with a bulldozer, separating with a bulldozer or an excavator and static grizzly, and loading into trucks with a loader. No onsite processing with crushers has occurred in the past and none is proposed in future operations. No blasting is proposed. Activity in the quarry will continue to be intermittent and dependent on demand.

The mine is approximately 230 feet wide at the top of the rock face and over 400 feet wide at the base. The existing bench will continue to be excavated bringing the 1 to 1 rock face down to intersect the lower loading and stockpile area.

When the existing bench excavation has been exhausted, a new cut at the top of the rock face will be initiated, creating a new bench that will be brought down to the elevation of the stockpiling and loading areas. This process will continue as long as Mason Quarry remains in operation.

The stockpiling and loading areas will be in-sloped slightly towards the base of the quarry rock face and away from the Old Chezem Logging Road with the intent to prevent runoff and sediment discharge from the site. Due to the slightly in-sloped grading and fractured nature of the rock, runoff is not expected to pond on the site. According to the operator, and as confirmed by our observations, water does not pond on the site, or run off to Redwood Creek, during the wet winter season.

## **10. Schedule/Intensity of Activity**

The Mason Quarry is currently operated under existing permit (CUP 14 91/SMR 20 91). The operator is applying for permit renewal for the standard 15-year approval period, and estimates that there are approximately 2,000,000 CY of material available for extraction. The operator proposes to increase the yards of quarry rock extracted up to 65,000 CY per year.

The duration and intensity of activities at the quarry will be dependent on demand. State and Humboldt County contracts will be renewed as required. Typically the State and County contracts are for several hundred yards of material and are renewed every year. Private sector demand for quarry rock is, and will continue to be, contract-driven. It is expected that activities will continue at similar rates over the next 15 years.

Termination of mining activities is currently anticipated for December 31, 2037. Actual termination of operations will occur when the total volume of material proposed for extraction (approximately 2,000,000 cubic yards) has been exhausted. The termination date may be amended at a later date depending on contract activity.

## **11. Noise**

This project contributes to ambient noise levels only during periods of operation. Noise generated from this project will be comparable to noise levels currently and from past

extraction and loading at this site. See further details on mining related noise in *Plan of Operations - Application for Extension for Mason Quarry; Mine ID No. 91-12-0038, APN 316-163-002*, submitted June 23, 2006, by Mason Materials, LLC.

## **12. Dust**

The North Coast Unified Air Quality Management District enforces dust emissions utilizing the California Health and Safety Code (Section 4170). Section 4170 limits visible emissions that exceed 40 percent density to a maximum of 3 minutes for any 1 hour period. Dust will be generated from equipment operations and quarry rock extraction as well as stockpiling and loading activities. Operation activities will generally be limited to short periods when quarry rock is needed.

According to the operator, the nearest sensitive receptors are the summer residences that are over ½ mile away and more permanent residences over 1 mile away. The USEPA has determined that dust generally settles out of the air within 300 feet of the source. If dust becomes an issue during mining or reclamation, a water truck will be utilized.

The quarry rock is greywacke sandstone and is not a source for natural occurring asbestos. Laboratory testing of one representative rock sample (collected by others) did not detect natural occurring asbestos (see *Engineering Geologic Investigation Report of Findings with Recommendations for the Mason Quarry*, prepared by LACO Associates on June 14, 2006).

## **13. Traffic**

The primary function of the Mason Quarry has been to supply road maintenance material to the Humboldt County Public Works Department, the State of California Department of Transportation Maintenance Division. The quarry also supplies aggregates for the operator to process at another location for public and private construction projects.

A bulldozer working in the quarry for five days can generate enough material (approximately 5,000 CY) to typically last one month. A loader is at the quarry to load out material and typically, one to three trucks haul intermittently during the construction season. Occasionally, during the construction season and depending on demand, the trucking could last four or five days and involve four to six dump trucks per day (per operator).

The other function of this quarry has been to supply material for larger emergency State Highway and County road improvement projects. In these situations, several bulldozers and a loader might work in the quarry to generate and haul materials to the project site.

## **14. Facilities**

No permanent or semi-permanent facilities have been constructed at the quarry and none are planned or required. Portable chemical toilets are provided when the quarry is operating.

## **15. Drainage**

The quarry excavation has not in itself affected drainage patterns. Currently, surface runoff is caught by the road adjacent to the quarry operations (Old Chezem Logging Road) and directed by the in-sloped road towards the base of the quarry face. There is no evidence of soil erosion onsite.

## **16. Vegetation and Wildlife**

Vegetation in both the existing and proposed expansion of the mine site is minimal, although adjacent lands are well-vegetated with a second growth forest after initial harvests in the early 1950's. According to vegetation and wildlife surveys conducted by others and attached to the Application for Extension package (submitted June 23, 2006), no rare or endangered species occur on or near the project site.

## **17. Land Use**

Lands surrounding the project have been, and will continue to be, used for timber harvesting and as ranch land. Rural residential use of the land exists to a lesser extent due to the remoteness of the region.

Land use for quarry mining in the Humboldt County General Plan Frame Work Plan recognizes the importance of existing rock quarry sites as follows:

“There are few locations of high quality rock necessary for rip rap material and jetty construction. New sources of this material are in demand. Other materials such as limestone and clays have been utilized for various purposes in the past but the demand is presently very limited. Sand, gravel and rock, being necessary to construction and development, are an essential component for the continued well-being of the County. They are the basis for much of the construction materials for roads, concrete, stream bank protection, erosion control, septic systems and passive solar projects. Importation of these materials would raise costs and negatively impact the development and maintenance within the County. It is important to protect specific sites and haul routes against land use incompatibilities to assure the continued utilization of this resource.”

## **18. Water Requirements**

No water is presently required by the proposed quarrying operations; however, if dust control is needed, the water will be provided from a water truck filled offsite.

Potential contaminants from equipment will be minimized through proper equipment maintenance conducted offsite. The site does not contain natural occurring asbestos.

## **19. Contaminants**

No waste water is expected to be produced and no water impoundments or drainage diversions are proposed. Also, no mine wastes are expected to be generated from quarry operations.

## **20. Time Schedule of Inspections**

An annual inspection of the site will be conducted by a qualified professional at the onset of the wet season and will include an evaluation of the drainage characteristics and performance of erosion control structures to verify that performance standards for sediment and erosion control, as outlined in SMARA, are being met. Inspection of the working face will also be conducted during the annual inspection to assess the exposed rock conditions and stability characteristics. A letter report detailing the observations and findings of these inspections along with any recommendations (if necessary) will be produced and provided to the necessary regulatory agencies.

## **III. RECLAMATION PLAN**

### **1. Proposed Use of Site Afterwards**

The parcel containing the mining area (APN 316-163-002) is zoned Timberland Production and Agriculture Exclusive. It has a General Plan designation of Timberland. Surrounding parcels are primarily zoned TPZ, Agriculture Exclusive and Agriculture Grazing, some of which have been developed for rural residential uses. The proposed end use for the Mason Quarry will be Timberland Production, consistent with current zoning within the area. No critical sites such as building areas or public use areas are proposed for this site.

### **2. Time Schedule of Reclamation Activities**

The configuration of the quarry site is such that there are three general areas; 1) the upper slopes that have yet to be quarried, 2) the working face of the mine, and 3) the flat-lying operational area at the base of the working face where materials are stored and loaded. As operations continue into the future, the working face will migrate into the upper slopes and the operational area will grow in size. During the operational lifespan of the quarry there will not be any areas available for reclamation (areas that will not be subject to further disturbance). Therefore, no concurrent or phased reclamation is planned. Reclamation activities will commence when the mine ceases operation.

Final reclamation operations will be completed within three months after the quarry operations are completed. Stockpiles will be removed or used for reclamation activities. Equipment will be removed after the reclamation activities are completed.

### **3. Reclamation**

The reclamation of the Mason Quarry will predominately include grading and revegetation activities. Final grading will include drainage improvements, decompaction of working surfaces (excluding quarry rock face) and distribution of topsoil and remaining materials onto the stockpile and truck loading areas. Activities to promote revegetation will occur on the access roads, and the stockpile and loading areas at the base of the working face.

Natural drainage features above the quarry site will be cleared of quarry debris and fill to allow for natural drainage and prevent sediment erosion and discharge into Redwood Creek. The final condition of the rock face will be inspected/approved by a qualified

professional so that it can be left in a stable orientation and allowed to revegetate naturally.

Remaining quarry operations access roads will be out-sloped, decompacted, mulched, and revegetated. Water bars and rolling dips will be installed where necessary to convey slope drainage across the access roads. Energy dissipaters will be installed along Old Chezem Logging Road and reclaimed access quarry roads where there is a potential for concentrated flow off the quarry site to cause erosion. The Old Chezem Logging Road and the existing berm along its western edge will remain.

Final grading within the lower quarry operations working area will be designed to retain the slight in-slope. This will provide a relatively level area for percolation. The stockpile and loading areas will be tilled to improve infiltration and facilitate revegetation.

**4. Resoiling and Revegetation**

Topsoil will be salvaged as the quarry expands and stockpiled onsite for later use during reclamation activities. Stockpiled topsoil will be mixed with substrate and spread over the lower mining operations area and access roads to promote revegetation efforts.

At the truck loading, stockpile areas and access roads, the surface will be tilled (worked with heavy equipment) to a depth of 1 foot and mixed with topsoil to promote revegetation. The area will then be dry seeded with native plant seed mixture and straw mulch (free of invasive seeds) will be spread over the seeded area. An acceptable seed mix and rates of application are included in the table below and will be straw mulched over the seeded area at 1,000 pounds per acre to improve germinating conditions. On the steeper access roads and slopes, straw mulch will be increased to 2,000 pounds per acre. The quarry site (excluding the bare rock quarry face) will be planted with two-year old Douglas fir seedlings from a local seed zone at approximately 400 trees per acre (recommended planting by Western Timber Services, Inc., Arcata, California).

| Common Name         | Latin name                 | Pounds per acre PLS* |
|---------------------|----------------------------|----------------------|
| California brome    | <i>Bromus carinatus</i>    | 5                    |
| Blue wildrye        | <i>Elymus glaucus</i>      | 5                    |
| California fescue   | <i>Festuca californica</i> | 5                    |
| Small fescue        | <i>Vulpia microstachys</i> | 10                   |
| Bluegrass           | <i>Poa secunda</i>         | 5                    |
| Rose-flowered lotus | <i>Lotus micranthus</i>    | 5                    |
| <b>Total</b>        |                            | <b>35</b>            |

\*PLS = Pure Live Seed

Rocky areas will remain exposed after the operation. Such areas will be left to naturally occurring species such as Black oak, Tan oak, Douglas fir, coyote brush, ceanothus, and herbaceous grasses.

Surveying for noxious weeds will be conducted each spring following resoiling and planting until native vegetation has suitably established itself. Noxious weed species will be controlled through hand grubbing or grazing by goats. A weed density of three plants per 10 square meters will be used to trigger control and abatement procedures.

**5. Effect of Reclamation on Future Mining**

The method of extraction will remove existing quarry rock in a manner that will not affect the opportunity to mine on adjacent parcels. Reclamation of the quarry site will not preclude re-establishing an active quarry site if sufficient rock material surplus still remains at the site after the quarry closes.

**6. Public Safety**

Hazards from the project are limited. Once the reclamation efforts are completed no attractive nuisance to encourage trespass will remain. No residual equipment or structures will remain on the quarry site.

**IV. RECLAMATION STANDARDS**

**1. Wildlife Protection**

Performance standards for endangered species are not necessary since rare, threatened, or endangered species or species of concern or their respective habitat have not been identified on the project site (see Biology and Wildlife Special Studies section attached to Application for Extension of Mason Quarry, submitted June 23, 2006).

**2. Quarry Rock Face**

The final quarry rock face will be similar to the existing rock face (Figures 7 and 8). Because of the nature of the rock, quarry operations are unlikely to trigger any type of significant landslide within the quarry site or leave the site in an unstable configuration. Rocks that fall from the quarry face will be caught on the pad below the face.

**3. Revegetation**

Revegetation will occur to the extent that it is consistent with the proposed end use. Planting will be conducted during the most favorable period of the year for plant establishment (November through March).

Performance standards for Douglas firs will be 60 percent survival. Performance standards for grasses will be 40 percent plant density of undisturbed area, with each grass comprising at least 10 percent of the total. If performance standards are not reached within two years, additional planting or seeding will take place to ensure standards are met. The mining operator or designated agent will be responsible for compliance with the performance standard of the revegetation.

**4. Drainage, Stream Protection and Erosion Control.**

Reclamation activities shall be conducted to protect onsite and downstream beneficial uses of water. Local watercourses will be protected from sedimentation and pollution.

Erosion and sedimentation shall be controlled during all phases of quarry reclamation and closure to minimize sedimentation of watercourses as required by the State Water Resources Control Board.

Surface runoff and drainage from quarry operations will be controlled by utilizing berms, revegetation, tilling of the surface, and site in-sloping. Hay bales, site maintenance, and erosion control measures will ensure that the surrounding land and water resources are protected from erosion and sedimentation.

**5. Agriculture Resources**

Agriculture uses on neighboring parcels will not be adversely affected by quarry operation or reclamation activities. Portions of the quarry site will revert back to timber production as the Douglas fir seedling and natural revegetation reestablishes and matures.

**6. Equipment Removal**

All equipment will be removed when mining operations cease.

**7. Tailing and Mine Waste management**

Not Applicable.

**8. Closure of Surface Opening**

Not Applicable.

**V. FINANCIAL ASSURANCES**

Reclamation activities will be conducted by Hooven Construction. An amount of \$5,916.17 (operators estimate plus 10 percent for contingency) shall be secured as required by State law for the initiation or continuation of the permit. This amount was provided by the operator as permitted by SMARA. The amounts were provided by Tim Hooven in his attached cost estimate (Attachment 1).

**VI. APPLICANT'S STATEMENT**

Tim Hooven, operator, hereby accepts responsibility for reclaiming the mined lands in accordance with this Reclamation Plan.

(To be signed after County approval and with any necessary final revisions)

\_\_\_\_\_  
Tim Hooven

\_\_\_\_\_  
Date

**VII. LIST OF FIGURES AND ATTACHMENTS**

Figure 1: Location Map  
Figure 2: Land Use Map

- Figure 3: Site Plan
- Figure 4: Operation Plot Plan
- Figure 5: Quarry Site Geology Map
- Figure 6: Proposed Cut Profile Photographs
- Figure 7: Proposed Cut Area Map
- Figure 8: Expected Quarry Face Final Cut Profile

Attachment 1: Hooven and Company, Inc., Cost Proposal

JPB:tgc

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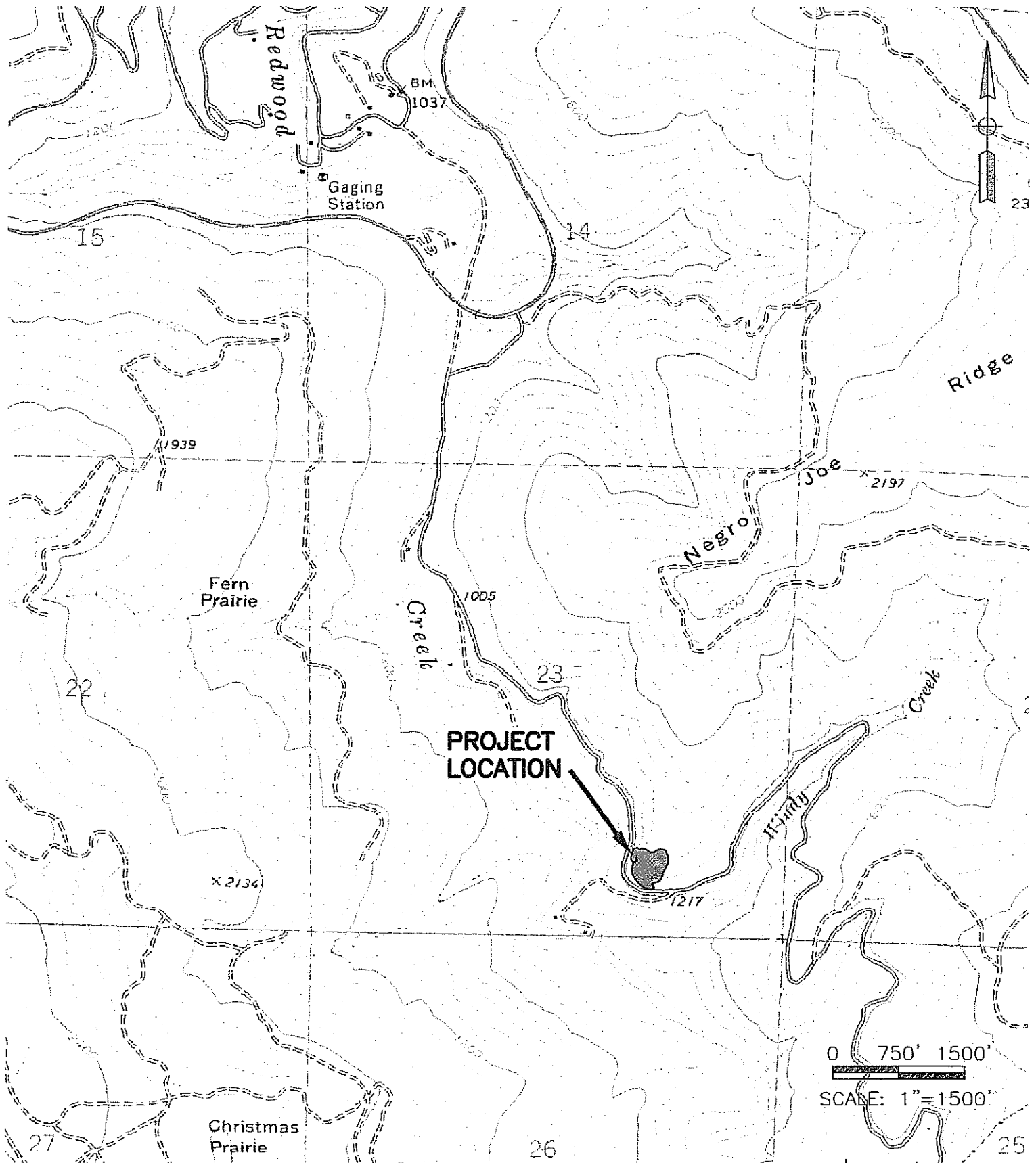


**LACO ASSOCIATES**  
CONSULTING ENGINEERS  
21 W 4TH ST. EUREKA, CA 95501 (707)443-5054

|          |  |
|----------|--|
| PROJECT  | RECLAMATION PLAN FOR MINING OPERATIONS |
| CLIENT   | MASON QUARRY                           |
| LOCATION | MASON QUARRY APN: 316-163-002          |
|          | LOCATION MAP                           |

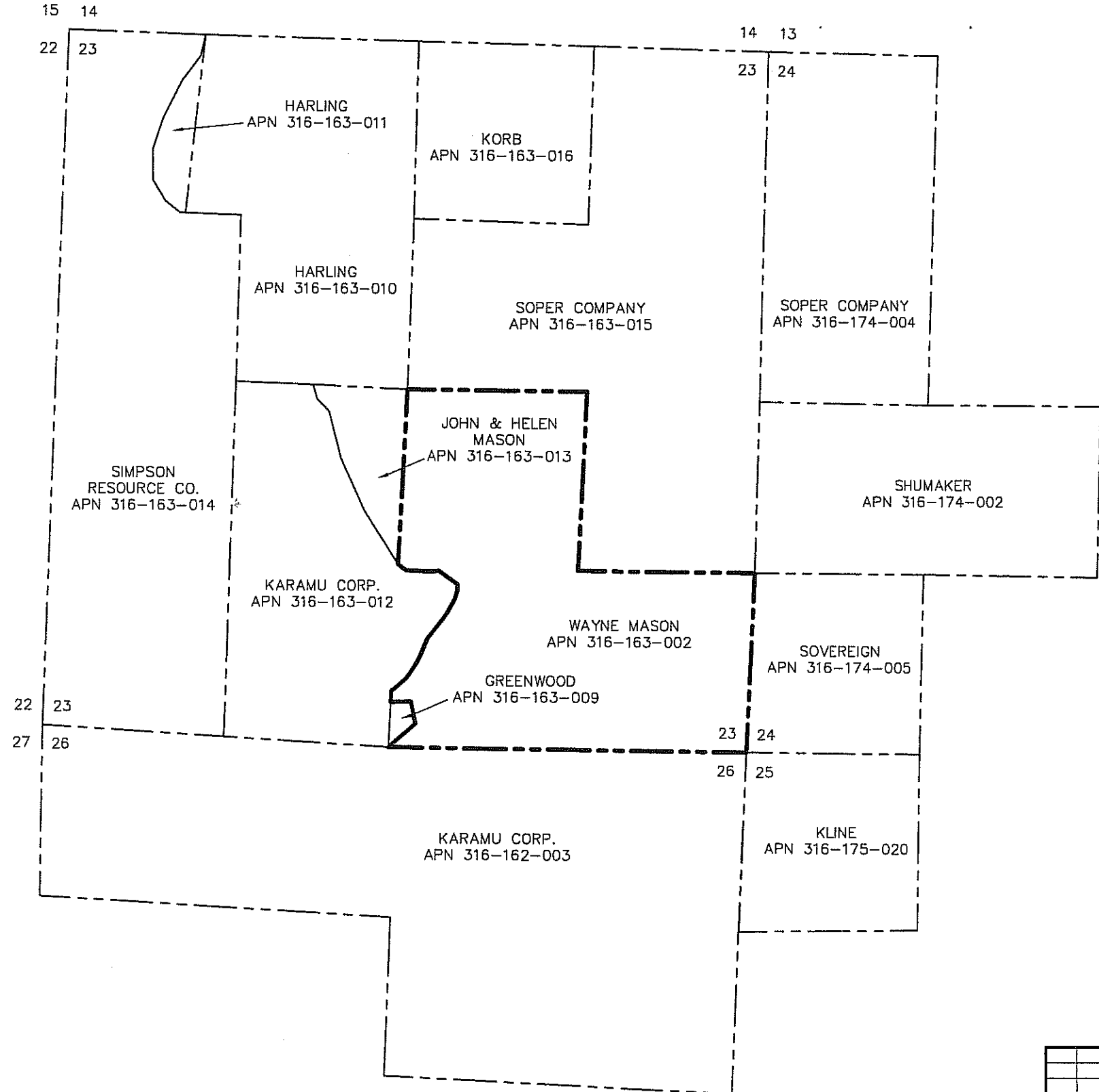
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| CHECK | DNL      |
| SCALE | 1"=1500' |

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|---------|---------|
| FIGURE  | 1       |
| JOB NO. | 6390.00 |



**ADJACENT PROPERTIES**

1" = 100'

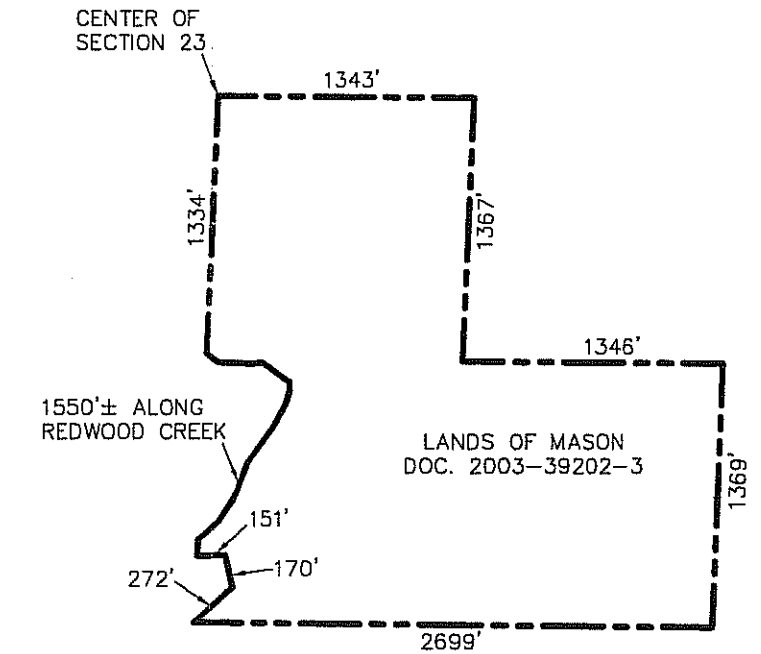


**MASON QUARRY  
MASON MATERIALS, LLC.**

LOCATED IN TOWNSHIP 6 NORTH, RANGE 3 EAST, SECTION 23  
ASSESSOR'S PARCEL NUMBER 316-163-002  
QUARRY ID NUMBER 91120038

**LAND USE NOTES**

- STRUCTURES ON THE MASON QUARRY PARCEL, APN 316-163-002, ARE SUMMER CABINS AND DO NOT HAVE RESIDENTS ON A REGULAR BASIS. NO VEHICLE TRAFFIC OR EVIDENCE OF RECENT VEHICLE TRAFFIC WAS SEEN ON THE ADJACENT PARCELS TO THE NORTH SHOWN AS HAVING STRUCTURES ON THE USGS QUAD.
- PARCELS ADJACENT TO THE MASON QUARRY PARCEL HAVE A GENERAL PLAN DESIGNATION OF "TIMBERLAND" OR "AGRICULTURE-GRAZING." THOSE PARCELS WITH THE GENERAL PLAN DESIGNATION OF "AGRICULTURE-GRAZING" HAVE A ZONING DESIGNATION OF "UNCLASSIFIED"; THOSE PARCELS WITH THE GENERAL PLAN DESIGNATION OF "TIMBERLAND" HAVE A COMBINED ZONING OF "AGRICULTURE-EXCLUSIVE" AND "TIMBER PRODUCTION ZONE."



**SUBJECT PROPERTY DETAIL**

1" = 100'

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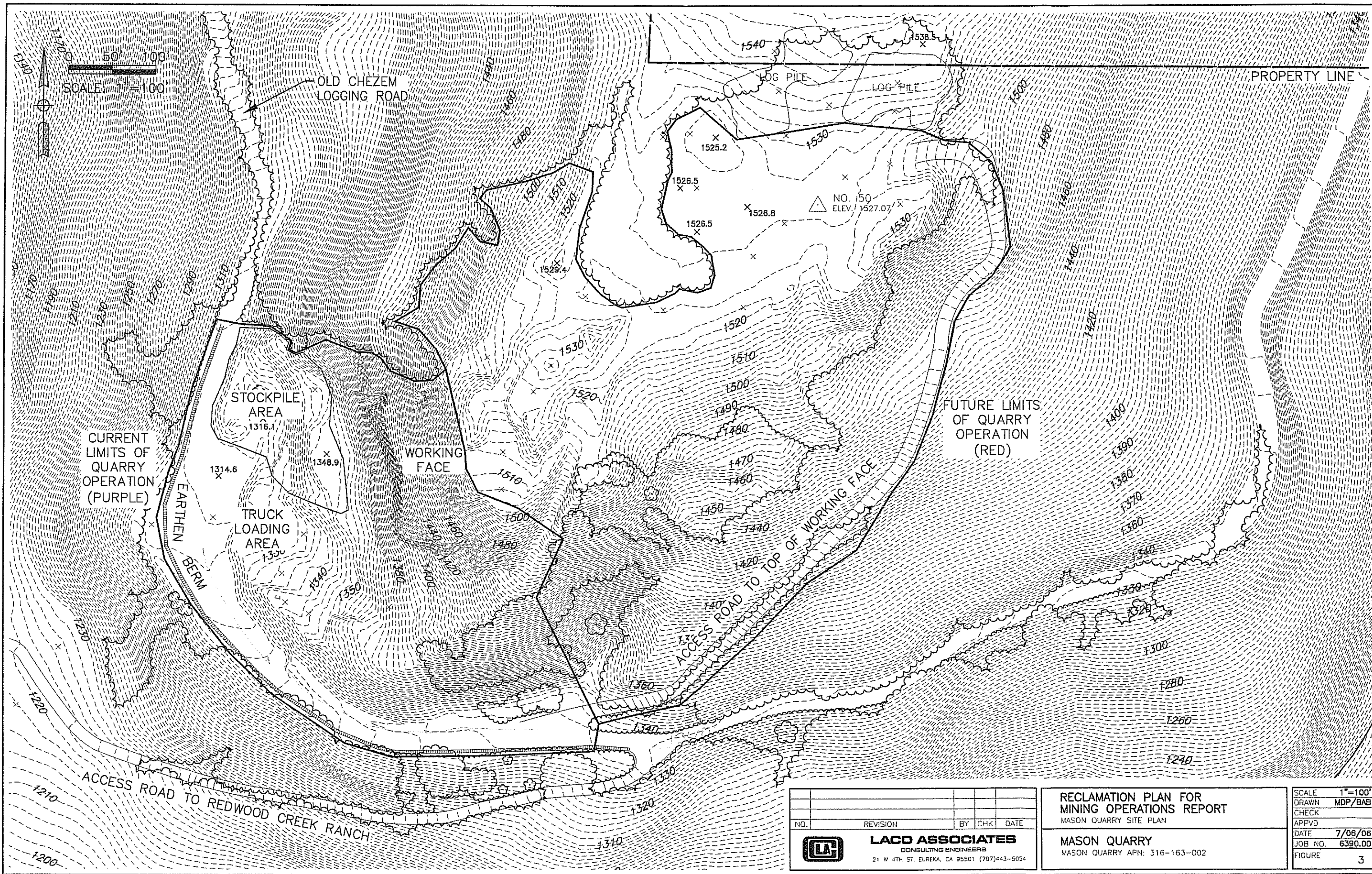
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| NO.   | REVISION | BY | CHK | DATE |
| <b>LACO ASSOCIATES</b><br>CONSULTING ENGINEERS<br>21 W 4TH ST. EUREKA, CA 95501 (707)443-5054 |          |    |     |      |

**RECLAMATION PLAN FOR  
MINING OPERATIONS REPORT**  
LANDUSE MAP

**MASON QUARRY**  
MASON QUARRY APN: 316-163-002

|         |           |
|---------|-----------|
| SCALE   | 1"=100'   |
| DRAWN   | RJM/BAE   |
| CHECK   |           |
| APPVD   | <i>DM</i> |
| DATE    | 7/06/06   |
| JOB NO. | 6390.00   |
| FIGURE  | 2         |

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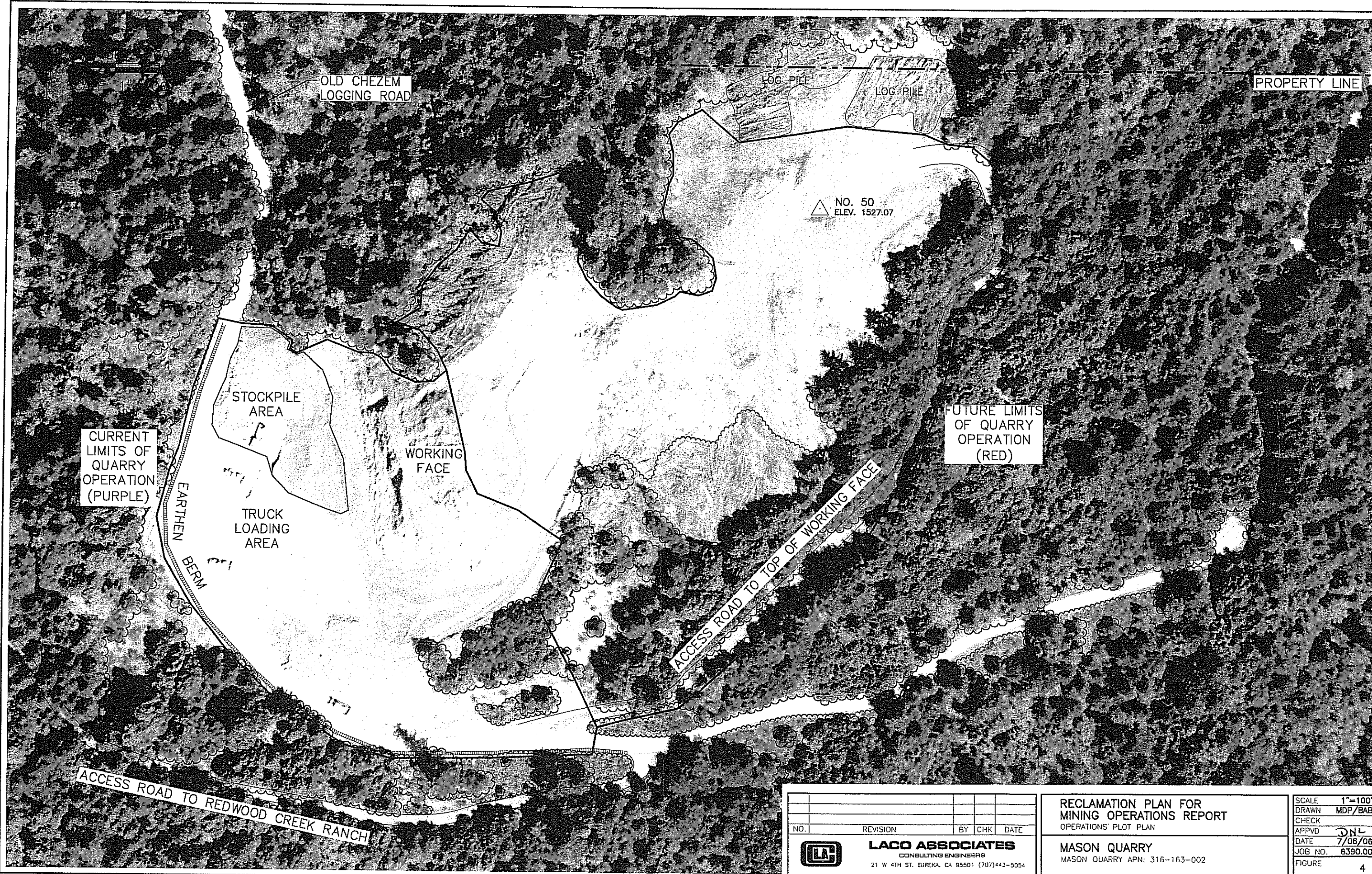



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 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054

|  |         |
|--|---------|
| <b>RECLAMATION PLAN FOR MINING OPERATIONS REPORT</b> |         |
| MASON QUARRY SITE PLAN                               |         |
| MASON QUARRY   |         |
| MASON QUARRY APN: 316-163-002                        |         |
| SCALE  | 1"=100' |
| DRAWN  | MDP/BAB |
| CHECK  |         |
| APPVD  |         |
| DATE   | 7/06/06 |
| JOB NO.  | 6390.00 |
| FIGURE   | 3       |


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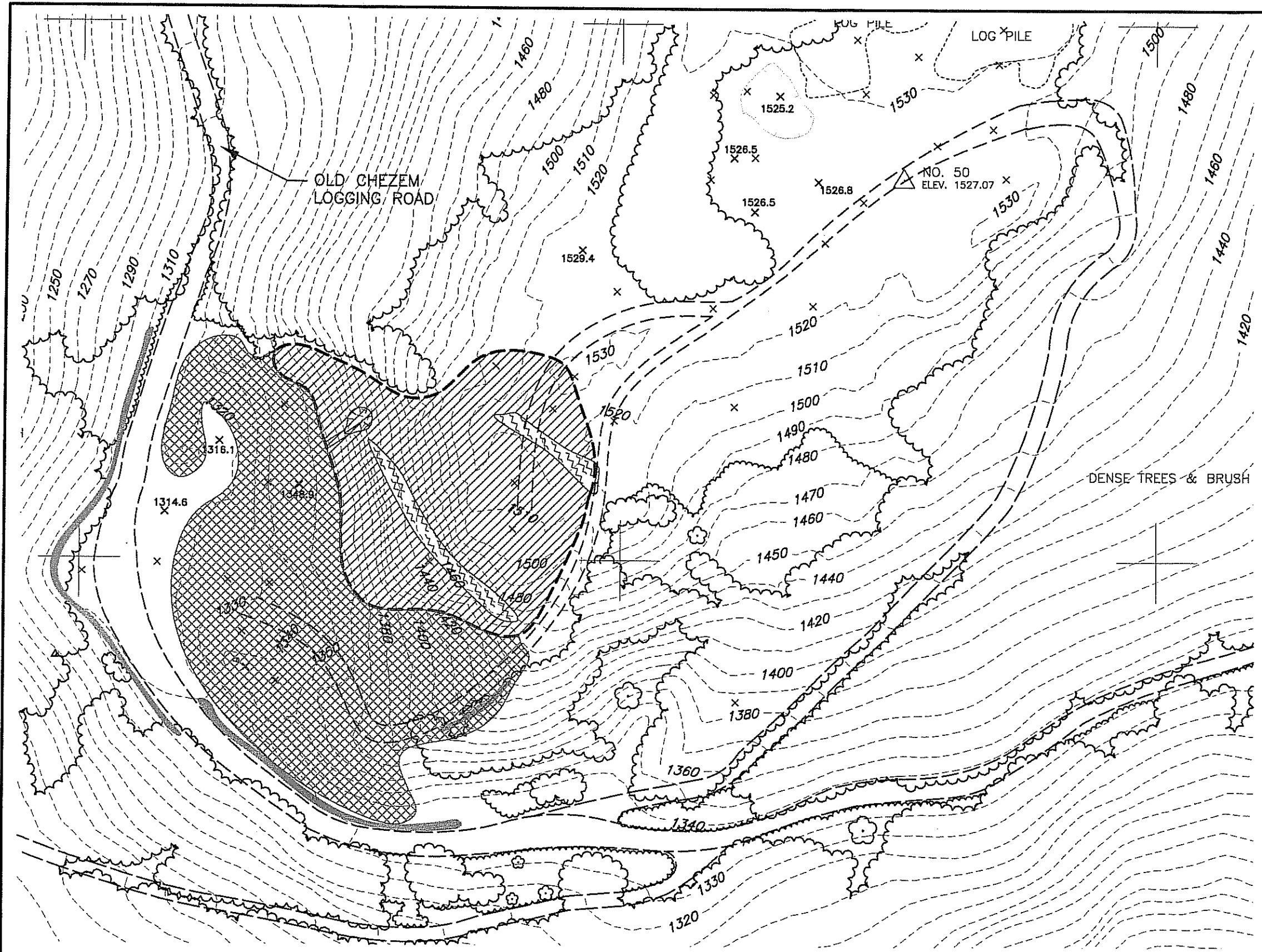
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| NO.   | REVISION | BY | CHK | DATE |
|   |          |    |     |      |
|  <b>LACO ASSOCIATES</b><br>CONSULTING ENGINEERS<br>21 W 4TH ST. EUREKA, CA 95501 (707)443-5054 |          |    |     |      |

RECLAMATION PLAN FOR  
 MINING OPERATIONS REPORT  
 OPERATIONS' PLOT PLAN

MASON QUARRY  
 MASON QUARRY APN: 316-163-002

|         |   |
|---------|---|
| SCALE   | 1"=100'   |
| DRAWN   | MDP/BAB   |
| CHECK   |   |
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| DATE    | 7/06/06   |
| JOB NO. | 6390.00   |
| FIGURE  | 4   |

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**LEGEND**

- SHEAR ZONES
- DEBRIS SLIDE
- ROADS
- BERMS
- COLLUVIUM/  
STOCKPILED MATERIALS
- EXPOSED BEDROCK

0 50' 100'  
 SCALE: 1"=100'

| NO. | REVISION | BY | CHK | DATE |
|-----|----------|----|-----|------|
|     |          |    |     |      |

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 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054

**RECLAMATION PLAN FOR  
 MINING OPERATIONS REPORT**  
 QUARRY SITE GEOLOGY


**MASON QUARRY**  
 MASON QUARRY APN: 316-163-002

|         |         |
|---------|---------|
| SCALE   | 1"=100' |
| DRAWN   | RJM/BAB |
| CHECK   |         |
| APPVD   | DM      |
| DATE    | 7/06/06 |
| JOB NO. | 6390.00 |
| FIGURE  | 5       |



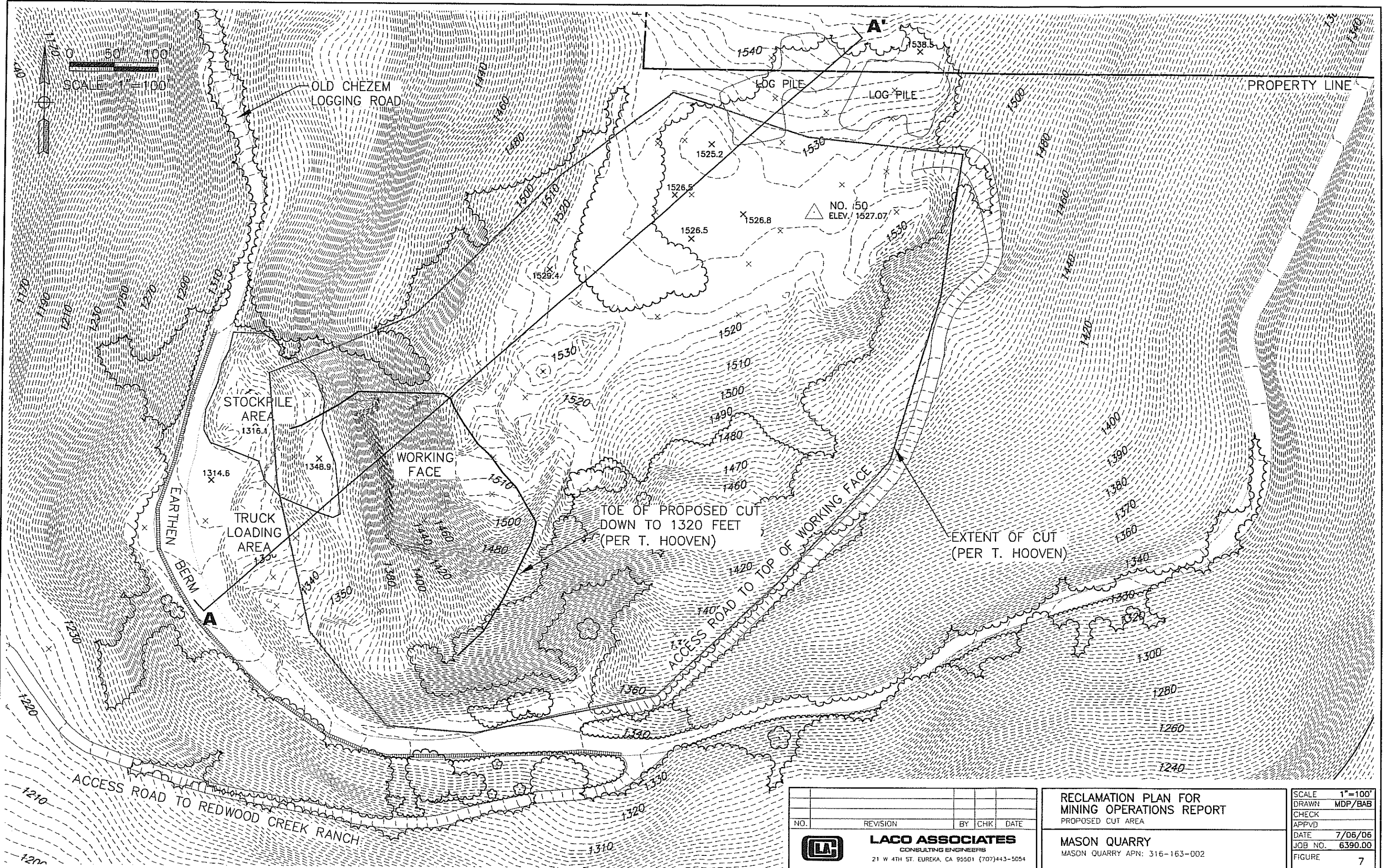
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**LACO ASSOCIATES**  
 CONSULTING ENGINEERS  
 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054


|   |  |
|---|--|
| <b>RECLAMATION PLAN FOR PHOTOGRAPHS OF QUARRY</b> |  |
| PROPOSED CUT PROFILE                              |  |
| <b>MASON QUARRY</b>                               |  |
| MASON QUARRY APN: 316-163-002                     |  |

|         |         |
|---------|---------|
| SCALE   | NTS     |
| DRAWN   | FRB/BAB |
| CHECK   |         |
| APPVD   |         |
| DATE    | 7/06/06 |
| JOB NO. | 6390.00 |
| FIGURE  | 6       |



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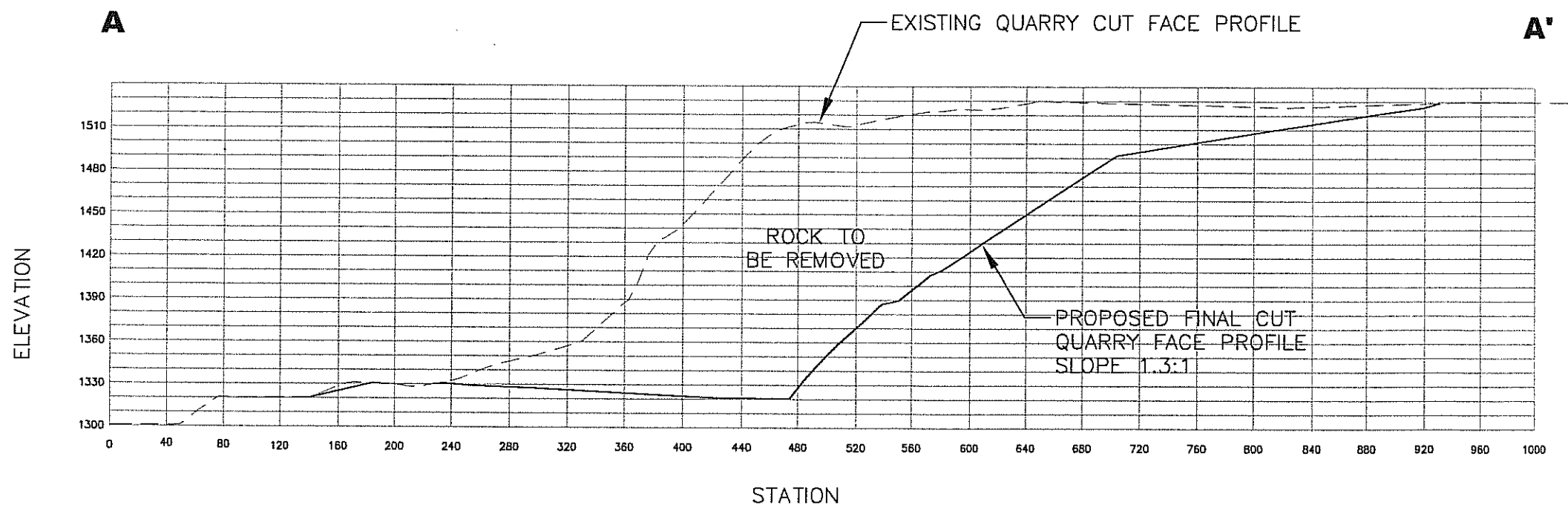
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| NO. | REVISION | BY | CHK | DATE |
|     |          |    |     |      |


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 CONSULTING ENGINEERS  
 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054

**RECLAMATION PLAN FOR**  
**MINING OPERATIONS REPORT**  
 PROPOSED CUT AREA  
**MASON QUARRY**  
 MASON QUARRY APN: 316-163-002

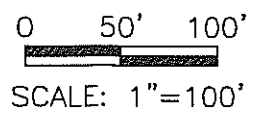
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 CHECK  
 APPVD  
 DATE 7/06/06  
 JOB NO. 6390.00  
 FIGURE 7


Jan 15, 2008--4:26pm  
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**SECTION A-A'**  
 NO VERTICAL EXAGGERATION

PROFILE PROVIDED  
 BY TIM HOOVEN



|   |  |  |  |          |  |  |  |    |  |  |  |     |  |  |  |      |  |  |  |
|---|--|--|--|----------|--|--|--|----|--|--|--|-----|--|--|--|------|--|--|--|
| NO.   |  |  |  | REVISION |  |  |  | BY |  |  |  | CHK |  |  |  | DATE |  |  |  |
|  <b>LACO ASSOCIATES</b><br>CONSULTING ENGINEERS<br>21 W 4TH ST. EUREKA, CA 95501 (707)443-5054 |  |  |  |          |  |  |  |    |  |  |  |     |  |  |  |      |  |  |  |

|   |  |
|---|--|
| <b>RECLAMATION PLAN FOR<br/>         MINING OPERATIONS REPORT</b><br>EXPECTED QUARRY FACE FINAL CUT PROFILE |  |
| <b>MASON QUARRY</b><br>MASON QUARRY APN: 316-163-002  |  |

|         |         |
|---------|---------|
| SCALE   | 1"=100' |
| DRAWN   | TH/BAB  |
| CHECK   |         |
| APPVD   |         |
| DATE    | 6/26/06 |
| JOB NO. | 6390.00 |
| FIGURE  | 8       |

**Attachment 1**  
*Hooven and Company, Inc.,*  
*Cost Proposal*



# Unit Price Report

Job: 75248 - mason quarry

P.01

Apr 8 2008 14:02

| Bid Item  | Description   | Quantity | Units | Unit Price | Rounded Ext. Price | Extended Price     |
|-----------|---|----------|-------|------------|--------------------|--------------------|
| <b>01</b> | <b>Grading, decommissioning, drainage, decompaction</b> |          |       |            |                    |                    |
|           | Cat D8  | 16.00    | HR    | 128.38     | 2,054.04           | \$2,918.90         |
|           | Road Grader   | 8.00     | HR    | 108.11     | 864.86             | 2,054.04<br>864.86 |
| <b>02</b> | <b>Resoiling, Revegetation</b>                          |          |       |            |                    |                    |
|           | General Laborer   | 24.00    | HR    | 27.03      | 648.64             | \$2,997.28         |
|           | Erosion Control (Type D) Quatle, LS                     | 1.00     | LS    | 1,081.07   | 1,081.07           | 648.64             |
|           | 8   | 8.00     | HR    | 89.19      | 713.51             | 1,081.07           |
|           | End Dump, CY, 1 Hour                                    | 24.00    | CY    | 23.09      | 554.05             | 713.51<br>554.05   |
| <b>50</b> | <b>Profit, Taxes, OH</b>                                |          |       |            |                    |                    |
|           | LABOR BURDEN  | 22.00    | %     | 0.00       | 0.00               | \$0.00             |
|           | OVERHEAD - Under \$100K                                 | 16.00    | %     | 0.00       | 0.00               | 0.00               |
|           | SUB MARKUP  | 5.00     | %     | 0.00       | 0.00               | 0.00               |
|           | Sales Tax   | 7.25     | %     | 0.00       | 0.00               | 0.00               |
|           | Profit  | 15.00    | %     | 0.00       | 0.00               | 0.00               |
|           |   |          |       |            | <b>\$5,916.17</b>  | <b>\$5,916.17</b>  |



# Cost Item Report

Job: 75248 - mason quarry

| T<br>Y | Reference     | Description                        | AdjQty | Units | AdjUnitCost | Labor    | Material | Equipment  | SubContr | Other      | XtdCost    |
|--------|---------------|------------------------------------|--------|-------|-------------|----------|----------|------------|----------|------------|------------|
| S      | 0125.03       | Erosion Control (Type D) Quote, LS | 1.00   | LS    | 800.00      | 0.00     | 0.00     | 0.00       | 800.00   | 0.00       | \$800.00   |
| A      | 1205.08       | End Dump, CY, 1 Hour               | 24.00  | CY    | 17.08       | 40.00    | 280.00   | 90.00      | 0.00     | 0.00       | \$410.00   |
| E      | 13.40.18      | Cat D8                             | 16.00  | HR    | 95.00       | 0.00     | 0.00     | 1,520.00   | 0.00     | 0.00       | \$1,520.00 |
| E      | 13.50.13      | 8                                  | 8.00   | HR    | 66.00       | 0.00     | 0.00     | 528.00     | 0.00     | 0.00       | \$528.00   |
| E      | 13.50.18      | Road Grader                        | 8.00   | HR    | 80.00       | 0.00     | 0.00     | 640.00     | 0.00     | 0.00       | \$640.00   |
| L      | 14.17         | General Laborer                    | 24.00  | HR    | 20.00       | 480.00   | 0.00     | 0.00       | 0.00     | 0.00       | \$480.00   |
| P      | 70.0199.02.10 | LABOR BURDEN                       | 22.00  | %     | 5.20        | 0.00     | 0.00     | 0.00       | 0.00     | 114.40     | \$114.40   |
| P      | 70.0199.03.10 | SUB MARKUP                         | 5.00   | %     | 8.00        | 0.00     | 0.00     | 0.00       | 0.00     | 40.00      | \$40.00    |
| P      | 70.0199.04.10 | OVERHEAD - Under \$100K            | 16.00  | %     | 43.98       | 0.00     | 0.00     | 0.00       | 0.00     | 703.73     | \$703.73   |
| O      | 70.10         | Sales Tax                          | 7.25   | %     | 2.80        | 0.00     | 0.00     | 0.00       | 0.00     | 20.30      | \$20.30    |
| Q      | 70.14         | Profit                             | 15.00  | %     | 43.98       | 0.00     | 0.00     | 0.00       | 0.00     | 659.75     | \$659.75   |
|        |               |                                    |        |       |             | \$520.00 | \$280.00 | \$2,778.00 | \$800.00 | \$1,538.17 | \$5,916.17 |