Planning Director Staff Report: Hearing of May 27, 2021
County of Ventura • Resource Management Agency • Planning Division
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Ojai Quarry
Reclamation Plan Amendment

Case No. PL18-0136

CA Mine ID# 91-56-0025

A. PROJECT INFORMATION

1. **Request**: The applicant requests that a Reclamation Plan Amendment (RPA) be approved to authorize changes in the final reclaimed configuration of the Ojai Quarry. (Case No. PL18-0136)

2. **Applicant/Property Owner:** GraLar, LLC. (Larry Mosler), 2280 Moonridge Ave., Newbury Park, CA 91320

3. **Decision-Making Authority**: Pursuant to Section 8107-9.6.9 of the Ventura County Non-Coastal Zoning Ordinance (NCZO), the proposed changes in the approved reclamation plan require a public hearing to be held. Pursuant to Section 8111-6.1.2 of the NCZO, the Planning Director would be the decision-maker for the requested change in the Reclamation Plan.

4. **Project Site Location and Parcel Number:** The project site is located at 15558 Maricopa Highway in the unincorporated area of Ventura County, near the City of Ojai. The Tax Assessor's parcel numbers for the lot that constitutes the project site are APNs 009-0-090-16 and 009-0-090-18. (Exhibit 2).

5. **Project Site Land Use and Zoning Designations:**

   a. <u>Countywide General Plan Land Use Map Designation</u>: Open Space (Exhibit 2)

   b. <u>Zoning Designation</u>: "OS-160 ac" (Open Space, 160 acre minimum lot size) (Exhibit 2)

6. **Adjacent Zoning and Land Uses/Development** (Exhibit 2)**:**

Location in Relation to the Project Site	Zoning	Land Uses/Development
North	OS-160 ac	Open Space
South	OS-160 ac	Open Space
East	OS-80 ac (Opens Space, 80 Acre Minimum Lot Size) and OS-40 ac (Open Space, 40 Acre Minimum Lot Size)	Open Space
West	OS-160 ac / SRP(Open Space, 160 Acre Minimum Lot Size/Scenic Resource Protection Overlay Zone)	Open Space

7. **Project History:**

The project site has been used intermittently as a rock quarry since 1939. At that time, the facility was known as the "Maricopa Placer Claim." The original owner, Schmidt Construction, Inc., leased the site in 1948 and purchased it in fee in 1962.

In response to complaints received from nearby residents, the Planning Division notified the property owner in 1973 that a Condition Use Permit (CUP) would be required to continue the mining operation. In 1974, the property owner applied for a CUP. The potential impacts of mining under the requested permit were evaluated in an Environmental Impact Report (EIR) prepared by the County in accordance with the California Environmental Quality Act (CEQA). On January 15, 1976, the Planning Commission certified the EIR and granted CUP 3489 (including the site Reclamation Plan required under the Surface Mining and Reclamation Act) to authorize surface mining activities for a 20-year period.

In 1980, the property owner filed an application to modify CUP 3489 (Case No. CUP 3489-1) and amend the Reclamation Plan in order to extend the CUP expiration date of CUP 3489 by 5 years. The quarry encompassed four acres at that time. The Planning Commission found that the project changes would have a potentially significant effect on the environment, and that the original EIR adequately addressed these potential impacts. In 1981, the Planning Commission granted a modified CUP (Case No. CUP 3489-1) and approved an amended Reclamation Plan.

In 1986, the property owner filed an application to modify CUP 3489-1 (Case No. CUP 3489-2) and amend the Reclamation Plan to authorize a 9-acre expansion of the area subject to mining excavation. In 1991, the Planning Division completed the preparation of a subsequent EIR for the proposed project changes. On June 1, 1995, the Planning Commission certified the subsequent EIR (Exhibit 7), granted modified CUP 3489-2 and approved the amended Reclamation Plan (Exhibit 5).

On February 2, 2005, Mosler Rock-Gralar, LLC, acquired ownership of the quarry and renamed it the "Mosler Rock-Ojai Quarry." In accordance with the requirements of Condition of Approval 8 of CUP 3489-2, the Permittee, signed an "Acceptance of Conditions" statement dated February 2, 2005 for CUP 3489-2. This statement certifies that the Operator/Permittee read and fully understands all of the Conditions of Approval placed on the Conditional Use Permit, and agrees to abide by these conditions.

Compliance History (2008-2012)

The County issued to the operator six CUP notices of violation, a SMARA Order to Comply (OTC) and a Notice of Permit Revocation between 2008 and 2011. The notices of violation are designated as ZV08-0030, PV09-0009, PV10-0012 (as amended), PV10-0090, PV10-0080, PV10-0070 and PV10-0072-79. On February 22, 2012, the Planning Division entered into a Compliance Agreement (CA12-0007) with the operator to ensure the site remained in compliance during the processing of a Reclamation Plan Compliance Amendment (RPCA).

The chart below summarizes the violations and the abatement measures taken by the operator:

Violation No.	Violation Summary	Abatement Measure
ZV08-0030 issued February 14, 2008	1. Mining outside of permitted boundaries 2. Commencing excavation and grading in violation of EUA AD06-0153 (COA NO. 2) 3. Failure to plant five 24" box oak trees, in violation of EUA AD06-0153 (COA No. 4) 4. Failure to submit an approved grading plan, in violation of EUA AD06-0153 (COA No. 6) 5. Failure to apply for a permit	✓ All excavation beyond the permitted boundary has ceased ✓ On April 17, 2012 the Planning Director approved A Reclamation Plan Compliance Agreement (RPCA) which addressed over-excavated violation areas

	mod, in violation of EUA AD06-0153 (COA No. 7) 6. Failure to provide written notice to CalTrans, CAF&G, and MSHA, in violation of EUA AD06-0153 (COA No. 10) 7. Failure to mark the EUA boundary, in violation of EUA AD06-0153 (COA No. 12)	
PV09-0009, as amended April 27, 2009	1. Exceeding the daily maximum number of truck drips (COA No. 39) 2. Failure to maintain written records and failure to maintain trucking contracts (COA No. 40)	✓ Trucking operations are limited to 20 trips per day ✓ Written records of all truck trips to and from the Ojai Quarry are maintained for a minimum of one year and provided to the Planning Division upon request
PV10-0012, as amended May 12, 2010 *NOTE: On June 9, 2011 the Planning Division issued a revised NOV for operating unpermitted equipment on June 3, 2011, although that instance was abated by the Permittee/Operator on June 7, 2011.	1. Operating outside of permitted hours of operation (COA No. 19) 2. Operating unpermitted equipment within unauthorized areas (COA No. 1a and 1b)	✓ Cease all operations outside of the permitted hours of operation ✓ Cease operation and maintenance of all unpermitted equipment and remove equipment from the site
PV10-0090	1. Mining outside the permitted mining boundaries and in violation of the phased mining and reclamation plans (COA Nos. 1.a, 45, 48.c, and 48.d) 2. Failure to obtain a Zoning Clearance prior to conducting activities in each phase (COA No. 5.b) 3. Failure to submit updated	✓ All excavation beyond the permitted boundary has ceased ✓ A Zoning Clearance is issued before excavation begins in a new mining phase ✓ Annual Geologic Reports have been submitted or site was directly inspected by County Geologist, Jim O'Tousa

	Geologic Slope Stability Program to the Public Works Agency (Geo and Soils Mitigation Measure 3.b) 4. Failure to stockpile topsoil (COA No. 36) 5. Failure to install vegetation and landscaping materials (Biological Mitigation Measure 2.d) 6. Failure to stake property (Condition No. 49)	✓ Any available topsoil is stockpiled on-site ✓ Vegetation has been installed as directed by wildlife agencies and in accordance with approved landscaping requirements; ✓ Staking has been completed to the extent safely possible
PV10-0080, July 8, 2010	1. Operating outside of permitted hours of operation (COA No. 19)	✓ Cease all operations outside of the permitted hours of operation
PV10-0070 & PV10-0072-79, August 11, 2010	1. Failure to provide trucking Contracts (COA No. 40) 2. Trucking violations within the restricted time/zone (Condition No. 19) *This violation also include a violation for failing to provide requested weigh tickets; however, the Permittee/Operator provided the weigh tickets, thus abating that count of the violation	✓ Provide copies of the trucking contracts pursuant to the requirements of the Conditional Use Permit Conditions of Approval ✓ Prohibit truck travel through the restricted time/zone pursuant to the requirements of the Conditional Use Permit Conditions of Approval

Reclamation Plan Compliance Amendment

On April 17, 2012 the Planning Director approved a Reclamation Plan Compliance Amendment (RPCA) which addresses the reclamation of the areas of disturbance outside of the area addressed by the 1995 Reclamation Plan. The reclamation of these areas will be in accordance with the current standards as set forth in the Surface Mining and Reclamation Act (SMARA) and the State Mining and Geology Board reclamation regulations. The approved RPCA depicted disturbed Areas 1 and 2. These areas were originally disturbed for the purpose of addressing a safety order issued by the U.S. Department of Labor, Mine Safety and Health Administration (MSHA) to remove unstable boulders within and adjacent to the active mine area. Originally, the Operator disturbed 1.3 acres in Area 1. In order to stabilize the balance of the slope in this area, the Operator graded an additional 0.94 acres in Areas 1 and 2. The 2.24 acres of disturbed area is addressed in the RPCA. Area 2 is approximately 0.70 acres.

Quarry operations also occur on a portion of Parcel 009-0-09-180, a 2.08-acre parcel (Area 3) that abuts State Route 33. Operations have occurred on this parcel since before the approval of CUP 3489-2. The scale, scale house and equipment storage area are located in Area 3. The RPCA ensures the disturbed portions of Area 3 will be reclaimed.

The 1995 Reclamation Plan approved concurrent with the granting of CUP 3489-2 calls for a “bottom-up” phased reclamation of the site. Reclamation of the site was divided into Phases I, II, and III. Phase I is separated into two sub-phases, IA and IB. Although mining excavation has largely occurred in the Phase I area, small areas of Phases II and III have been disturbed by mining activities. (e.g. haul roads).

The order of reclamation phasing was reversed with the approval of the RPCA in 2012. As authorized by the RPCA, the site will be reclaimed from in a “top-down” manner. This phasing ensures that the reclaimed slopes will be stable.

The 1995 Reclamation Plan includes a Quarry Tailings Disposal Area. Planning Staff has interpreted the 1995 Reclamation Plan to require the fill on the benches between elevations 1215 and 1305 in the event of termination of the mining operations prior to completion of all three phases of mining. The Operator has over-excavated (mined below the final Reclamation Plan elevations) in this area. By present estimates, meeting the fill requirements of the 1995 plan, backfilling this area would require approximately 97,000 cubic yards of material. This material is to be obtained from the existing (permitted) mined areas.

All mined lands will be reclaimed to a suitable end use of Natural Open Space. Reclamation of the site will begin within 90 days following cessation of all mining activities.

The final reclaimed surface is characterized by a series of benches and slopes extending up the side of the existing mine site and hydro-seeded per the original (1995) Reclamation Plan requirements. Area 1 and 2 would also be hydro-seeded and all disturbed areas of Area 3 would be re-vegetated. Undisturbed areas would remain in a natural state. The existing approved 1995 Reclamation Plan (Exhibit 5), as augmented by the 2012 RPCA (Exhibit 6), remains in effect.

Compliance Agreement CA12-0007

A Compliance Agreement (CA12-0007) was executed between the Operator and the Planning Division on February 22, 2012. The Compliance Agreement included the terms and conditions for on-going regulatory compliance and a repayment plan for the County Condition Compliance and processing fees. The Compliance Agreement is no longer in effect.

Modified CUP PL15-0118:

On March 7, 2017, the Board of Supervisors granted modified CUP No. PL15-0118 to authorize mining operations to continue at the Ojai Quarry for an additional 30-year period ending in 2046. The previously approved Reclamation Plan for this mining facility was not revised as part of this land use permit action by the Board. The approved Reclamation Plan continues to be comprised of the 1995 plan as augmented by the 2012 Reclamation Plan Compliance Amendment (RPCA).

The proposed RPA would authorize a change in the Final Reclaimed Surface (FRS) depicted in the approved Reclamation Plan.

8. **Project Description:** The applicant requests that a Reclamation Plan Amendment (RPA) be approved to authorize changes in the final reclaimed configuration of the Ojai Quarry.

   The current approved Reclamation Plan for the Ojai Quarry is comprised of the 1995 Reclamation Plan (Exhibit 5) and the 2012 RPCA (Exhibit 6). Because excavation and material removal occurred below the FRS depicted in the 1995 plan, reclamation of the site in accordance with the approved plan could not be achieved without the backfilling of the over-excavated areas. Approximately 97,000 cubic yards of material would have to be placed in the over-excavated area to create the approved FRS.

   The proposed RPA (Exhibit 3) would allow the existing ground surface in the over-excavated area to constitute a part of the FRS. This would eliminate the requirement for the placement of 97,000 cubic yards of fill.

   The proposed project does not include any other substantial changes in the reclamation requirements to be applied to the mined lands at the subject facility. No changes in the operational limitations established by CUP PL15-0118 are proposed or would be authorized by the requested RPA.

   After a couple of iterations of reviews and comments, the proposed RPA was found to be acceptable by the California Division of Mine Reclamation in February of 2021.

B. SCOPE OF THE HEARING

Section 2770 of the Public Resources Code (PRC) mandates that a permit to operate must be obtained, a reclamation plan prepared in accordance with

SMARA must be approved, and a financial assurance must be posted with the Lead Agency and State in order to operate a mining facility. The operator of the Ojai Quarry is currently in compliance with these requirements.

A Reclamation Plan is not a local land use permit granted by the County of Ventura. It does not include conditions of approval. It is a mandatory plan required by State law to be prepared for each surface mining facility. Although it must include an estimated closure date, a Reclamation Plan does not "expire" and remains in effect until a mining site is reclaimed and the financial assurance released by concurrent action of the County and State.

The proposed project is limited to amendments of the approved Reclamation Plan for this facility. No changes in the operating permit (Conditional Use Permit PL15-0118) are proposed. The proposed RPA would revise the geometry of the FRS and bring the reclamation requirements of the area of the mining facility currently subject to the 1995 approved Reclamation Plan up to current SMARA standards. A revised financial assurance would be posted that reflects the proposed RPA, if approved.

In accordance with PRC 2770(a) and 2770(b), a proposed Reclamation Plan that substantially meets SMARA standards must be approved by the Lead Agency, or the State Mining and Geology Board on appeal. Thus, the consideration of the RPA by the Planning Director is limited to whether the RPA satisfies the standards of SMARA and is in compliance with the reclamation regulations (CCR 3500 et.seq.) adopted by the State Mining and Geology Board.

C. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) COMPLIANCE

Pursuant to CEQA (Public Resources Code §21000 et seq.) and the State CEQA Guidelines (Title 14, California Code or Regulations, Division 6, Chapter 3, §15000 et seq.), the subject application is a "project" that is subject to environmental review.

On January 15, 1976, the Planning Commission certified an EIR and granted CUP 3489 (including the site reclamation plan) for a period of 20 years.

In 1980, the property owner filed an application to modify CUP 3489 (Case No. CUP 3489-1) and amend the Reclamation Plan in order to extend the CUP expiration date of CUP 3489 by 5 years. The quarry encompassed four acres at that time. The Planning Commission found that the project changes would have a potentially significant effect on the environment, and that the original EIR adequately addressed these potential impacts. In 1981, the Planning Commission granted a modified CUP (Case No. CUP 3489-1) and approved an amended Reclamation Plan.

In 1986, the property owner filed an application to modify CUP 3489-1 (Case No. CUP 3489-2) and amend the Reclamation Plan to authorize a 9-acre expansion of the area subject to mining excavation. In 1991, the Planning Division completed the preparation of a subsequent EIR for the proposed project changes. On June 1, 1995, the Planning Commission certified the subsequent EIR, granted modified CUP 3489-2 and approved the amended Reclamation Plan. The certified EIR identified potential project specific and cumulative impacts related to aesthetics (visual), biology/sedimentation, geology/soils and traffic. This EIR is attached as Exhibit 7.

On April 17, 2012 the Planning Director approved a Reclamation Plan Compliance Amendment to augment the 1995 approved Reclamation Plan. An Addendum to the 1995 certified EIR was prepared for the action.

The proposed RPA would replace the current approved Reclamation Plan. The only substantial change in site reclamation that would be allowed under the RPA is a change in the configuration of the FRS for the Ojai Quarry. Under the proposed RPA, the current over-excavated areas of the quarry would become part of the FRS and the current requirement to place 97,000 cubic yards of fill would be largely eliminated.

The proposed change in FRS configuration would not substantially alter the appearance of the Ojai Quarry (at the time of final reclamation) from public views along the adjacent State Highway 33. This is because the over-excavated areas are not prominently visible from the highway under current conditions and would be screened by required vegetation planted as part of reclamation of the site.

The other issue pertinent to the proposed RPA is slope stability. This issue is addressed by State-licensed geologists and engineers in reports included in the RPA (Exhibit 3). Based on the information provided in these reports, the current slopes proposed to remain after site reclamation meet established standards of stability. The slopes in question were created by mining excavation that occurred more than 30 years ago. No substantial slope failure has occurred over this period.

In terms of biological resources, the proposed RPA continues to require revegetation of the slopes that would remain after mining excavation ceases. The over-excavated area would serve a beneficial post-mining purpose as a sediment trap to limit siltation of nearby Matilija Creek. Siltation would also be minimized by eliminating the grading activities that would be required to place the currently required 97,000 cubic yards of fill.

Given the above factors, the proposed RPA can be addressed in an Addendum to the 1995 certified EIR.

The CEQA Guidelines [§15164(a)] state that the lead agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary, but none of the conditions described in the CEQA Guidelines (§15162) calling for the preparation of a subsequent EIR have occurred. The attached EIR Addendum (Exhibit 4) includes a description of the changes or additions that are necessary to the EIR; and, a discussion of why none of the conditions described in the CEQA Guidelines exist, which require the preparation of a subsequent EIR.

Based on the information provided in the EIR Addendum, and in light of the whole record, staff recommends the decision-maker find there is no substantial evidence to warrant the preparation of a subsequent EIR and the Addendum to the EIR (Exhibit 4) reflects the County's independent judgment and analysis.

D. CONSISTENCY WITH THE GENERAL PLAN

Pursuant to Section 8107-9.5.1 of the Ventura County Non-Coastal Zoning Ordinance, "all mining and reclamation shall be consistent with the County General Plan, the Ventura County Water Management Plan, and the State Surface Mining and Reclamation Act of 1975 (SMARA), as amended, and State policy adopted pursuant to SMARA."

Evaluated below is the consistency of the proposed Reclamation Plan Amendment (RPA; Exhibit 6) with the applicable policies of the General Plan.

COS-1.1 Protection of Sensitive Biological Resources: *The County shall ensure that discretionary development that could potentially impact sensitive biological resources be evaluated by a qualified biologist to assess impacts and, if necessary, develop mitigation measures that fully account for the impacted resource. When feasible, mitigation measures should adhere to the following priority: avoid impacts, minimize impacts, and compensate for impacts. If the impacts cannot be reduced to a less than significant level, findings of overriding considerations must be made by the decision-making body.*

<u>Staff Analysis:</u> The proposed RPA does not involve any new ground disturbance at the Ojai Quarry. The level of ground disturbance is authorized by CUP PL15-0118 as granted by the County in 2017 and was evaluated in the certified EIR and Addenda. The disturbed areas of the site were previously evaluated by qualified biologists in the review conducted as part of the granting of the CUP. Mitigation measures are identified in the EIR and have been implemented. The currently approved Reclamation Plan, and the proposed RPA, include measures to facilitate the ultimate conversion of the site from a mining to an open space habitat use. A Reclamation Plan is essentially a State-mandated mitigation measure that addresses the adverse impacts of surface mining activities.

Southern California steelhead trout (Oncorhynchus mykiss) has been federally listed as endangered since 1997. Southern California steelhead trout is what the US Fish and Wildlife Service and National Marine Fisheries Service call a Distinct Population Segment (DPS) of the steelhead trout species. Under the Endangered Species Act, an entire species can be listed as threatened or endangered or certain populations (i.e., a Distinct Population Segment) may be listed. For steelhead trout, several DPSs have been listed.

Critical habitat for the Southern California steelhead trout has been identified in Ventura County and includes the Ventura River and major tributaries (Matilija Creek - North Fork and San Antonio Creek) and the Santa Clara River and major tributaries (Sespe Creek and Santa Paula Creek).

Southern Steelhead trout have been observed in the Matilija Creek adjacent to the project site. Measures to minimize sedimentation of the creek have been implemented on the site as recommended by the Regional Water Quality Control Board. These measures include sedimentation basins that filter site runoff prior to discharge into Matilija Creek. The operation is also subject to the terms of a Streambed Alteration Agreement executed with the California Division of Fish and Wildlife (CDFW). With the continued implementation of these measures, no new impacts on Steelhead trout are anticipated.

The implementation of the proposed RPA will not have an adverse effect on water quality in the creek or on biological resources. Phased reclamation of the site as mining excavation is progressively completed will involve revegetation and stabilization of the hillside and result in reduced sedimentation after the cessation of mining.

Based on the above discussion, the proposed RPA is consistent with this policy.

COS-1.6 Discretionary Development on Hillsides and Slopes: *The County shall require discretionary development on hillsides and slopes, which have an average natural slope of 20 percent or greater in the area where the proposed development would occur, to be sited and designed in a manner that will minimize grading, alteration of natural land forms, and vegetation removal to avoid significant impacts to sensitive biological resources to the extent feasible.*

<u>Staff Analysis:</u> Implementation of the proposed RPA will not result in development on hillsides and slopes. The RPA constitutes a plan for reclaiming the lands disturbed by authorized mining activities for future use as open space. No new adverse effect on biological resources has been identified that would result from RPA implementation. Refer to the above staff analysis of consistency of the RPA with General Plan Policy COS-1.1

COS-3.1 Scenic Roadways: *The County shall protect the visual character of scenic resources visible from state or County designated scenic roadways.*

COS-3.6 Open Space Character: *The County shall require discretionary development outside of Existing Communities be planned and designed to maintain the scenic open space character of the surrounding area, including view corridors from highways. Discretionary development should integrate design, construction, and maintenance techniques that minimize the visibility of structures from public viewing locations within scenic vistas.*

Staff Analysis: State Highway 33 is a designated scenic highway. The Ojai Quarry is located adjacent to this highway and is prominently visible. This mining facility, however, has been in operation for more than 80 years and is part of the existing historic conditions in this area. A modified Conditional Use Permit was granted in 2017 to authorize mining operations to continue until 2046.

The current approved Reclamation Plan for this facility is comprised of the 1995 plan augmented by the 2012 RPCA (Exhibits 5 and 6). This approved plan specifies the measures required to reclaim the site upon the cessation of mining excavation. These measures include revegetation of the site to minimize public views of the lands disturbed by mining. The proposed RPA would retain the current revegetation requirements and add measures necessary to satisfy current SMARA standards in the area currently subject to the 1995 RP. Thus, implementation of the proposed RPA would not substantially affect scenic resources along State Highway 33.

Based on the above discussion, the proposed RPA is consistent with these policies.

COS-6.1 Balanced Mineral Resource Production and Conservation: The County shall balance the development and conservation of mineral resources with economic, health, safety, and social and environmental protection values.

Staff Analysis: With the granting of Conditional Use Permit PL15-0118 in 2017, the Board of Supervisors balanced the continued operation of the Ojai Quarry with the economic, health, safety and social and environmental protection values. Approval and implementation of the proposed RPA will not exacerbate the adverse effects of the ongoing surface mining activities authorized at the subject facility. The proposed RPA would result in the entirety of the mined lands to be subject to current mine reclamation standards set forth in SMARA and the State Mining and Geology Board reclamation regulations.

Based on the above discussion, the proposed RPA is consistent with this policy.

WR-2.1 Identify and Eliminate of Sources of Water Pollution: *The County shall cooperate with Federal, State and local agencies in identifying and eliminating or minimizing all sources of existing and potential point and non-point sources of pollution to ground and surface waters, including leaking fuel tanks, discharges from storm drains, dump sites, sanitary waste systems, parking lots, roadways, and mining operations.*

WR-2.2 Water Quality Protection for Discretionary Development: *The County shall evaluate the potential for discretionary development to cause deposition and discharge of sediment, debris, waste, and other contaminants into surface runoff, drainage systems, surface water bodies, and groundwater. In addition, the County shall evaluate the potential for discretionary development to limit or otherwise impair later reuse or reclamation of wastewater or stormwater. The County shall require discretionary development to minimize potential deposition and discharge through point source controls, storm water treatment, runoff reduction measures, best management practices, and low impact development.*

<u>Staff Analysis:</u> The proposed RPA does not involve an increase in water demand or a substantial change in the runoff characteristics of the mining site. Required measures designed to reduce impacts on water resources (e.g. minimize sedimentation of Matilija Creek) will continue to be implemented on the mining site. The Operator has entered into a Streambed Alteration Agreement with the California Department of Fish and Game (CDFG) which requires compliance with all applicable regulations designed to protect the quality of water in the nearby watercourse.

The elimination of the backfill requirement included in the proposed RPA will reduce sedimentation due to erosion of fill material and make available additional area for the capture of sediment eroded from the remnant steep slopes.

Based on the above discussion, the proposed RPA is consistent with these policies.

E. CONFORMANCE WITH SMARA AND STATE MINING AND GEOLOGY BOARD RECLAMATION REQUIREMENTS:

The text and diagrams included in the proposed Reclamation Plan Amendment (RPA) (Exhibit 6) describe and document the conformance of the reclamation measures included therein with the requirements of the Surface Mining and Reclamation Act (SMARA) and the SMGB reclamation regulations. The RPA was reviewed by County staff and by staff of the State Division of Mine Reclamation. The draft RPA was revised in response to comments provided by DMR. The proposed RPA under consideration at this hearing is considered by County and State staff to adequately demonstrate conformance with all applicable reclamation requirements.

F. ZONING ORDINANCE COMPLIANCE

The proposed RPA is subject to the special use standards set forth in Section 8107-9.6 of the NCZO. The conformance of the RPA with the applicable standards is evaluated in the following table.

Special Use Standards Consistency Analysis

Special Use Standard	In conformance?
§8107-9.5.1: All mining and reclamation shall be consistent with the County General Plan, the Ventura County Water Management Plan, and the state Surface Mining and Reclamation Act of 1975 (SMARA), as amended, and State policy adopted pursuant to SMARA.	**Yes.** As discussed in Section C of this staff report, the proposed RPA is consistent with the relevant policies of the General Plan. Refer to Section E above regarding the conformance of the RPA with SMARA. According to the California Division of Mine Reclamation (DMR) and the County Planning Division, the RPA has been prepared in accordance with SMARA and the SMGB reclamation regulations.
§8107-9.5.4: All surface mining activities shall strike a reasonable balance with other resource priorities such as water, farmland, fish and wildlife and their habitat, groundwater recharge, sediment for replenishment of beaches and the protection of public and private structures and facilities.	**Yes.** With the granting of Conditional Use Permit PL15-0118 in 2017, the Board of Supervisors balanced the continued operation of the Ojai Quarry with the economic, health, safety and social and environmental protection values. Approval and implementation of the proposed RPA will not exacerbate the adverse effects of the ongoing surface mining activities authorized at the subject facility. The proposed RPA would result in the entirety of the mined lands to be subject to current mine reclamation standards set forth in SMARA and the State Mining and Geology Board reclamation regulations.
§8107-9.5.7: Appropriate and reasonable monitoring and enforcement measures shall be imposed on each mining operation which will ensure that all permit conditions, guidelines and standards are fulfilled.	**Yes.** The subject mining operation will be subject to mandatory annual site inspections for SMARA compliance and periodic condition compliance review.
§8107-9.5.8: Reclamation of a site shall include the removal of equipment and facilities and the restoration of the site so that it is readily adaptable for alternate land use(s) which is consistent with the approved reclamation plan as well as the existing and proposed uses in the general area. Reclamation shall be conducted in phases on an ongoing basis, where feasible.	**Yes.** The proposed amended Reclamation Plan includes the removal of equipment and facilities, and reclamation of the site consistent with SMARA standards. The proposed Reclamation Plan Amendment includes phased reclamation of the site.
§8107-9.6.1: Projects shall be located, designed, operated and reclaimed so as to minimize their adverse impact on the physical and social environment, and on natural resources. To this end, dust, noise, vibration, noxious odors, intrusive light,	**Yes.** Issues involving traffic, aesthetics, dust, noise, lighting, groundwater, and flood control are addressed in the conditions of approval of Conditional Use Permit PL15-0118.

Special Use Standards Consistency Analysis

Special Use Standard	In conformance?
aesthetic impacts, traffic impacts and other factors of nuisance and annoyance, erosion, and flooding shall be minimized or eliminated through the best accepted mining and reclamation practices, applicable to local conditions, which are consistent with contemporary principles and knowledge of resource management, storm water quality, groundwater quality and quantity, flood control engineering and flood plain management.	The proposed Reclamation Plan Amendment has been found by County and State staff to meet SMARA performance standards for slope stability, revegetation, erosion control and restoration of wildlife habitat.
§8107-9.6.3: Mining operations and their accessory uses, access roads, facilities, stockpiling of mineral resources and related mining activities shall be consistent with current engineering and public works standards and in no case shall obstruct, divert, or otherwise affect the flow of natural drainage and flood waters so as to cause significant adverse impacts, except as authorized by the Public Works Agency.	**Yes.** The engineering practices utilized as part of the existing mining operation will not change with implementation of the proposed RPA. As indicated in the proposed Reclamation Plan Amendment, the site will be reclaimed in accordance with the performance standards for drainage, erosion control and slope stability established in the SMGB reclamation regulations.
§8107-9.6.4: Contaminants, water run-off and siltation shall be controlled and generally contained on the project site so as to minimize adverse off-site impacts.	**Yes.** Pursuant to CUP PL15-0118, the mine operator is required to comply with NPDES and State stormwater regulations. As indicated in the proposed Reclamation Plan Amendment, the site will be reclaimed in accordance with the performance standards for drainage, erosion control and slope stability established in the SMGB reclamation regulations.
§8107-9.6.9: No mining permit shall be approved without an approved reclamation plan, unless it is exempted from said reclamation plan by the State Department of Conservation. Where reclamation plans are not processed concurrently with a discretionary land use entitlement, at least one noticed public hearing on the reclamation plan must be held prior to its approval. Such reclamation plans are subject to all rights of appeal associated with permit approval. All reclamation plans must be found to be consistent with and approved in accordance with: the Ventura County Zoning Ordinance, as amended; the provisions of SMARA (Public Resource Code (PRC) § 2710 et seq.), PRC Section 2207, and State regulation Title 14 California	**Yes.** The Reclamation Plan Amendment (RPA) has been reviewed by staff of the County Planning Division and by the California Department of Conservation, Division of Mine Reclamation. These agencies have found the RPA to be in conformance with the Ventura County Non-Coastal Zoning Ordinance, the Surface Mining and Reclamation Act (SMARA), and the State Mining and Geology Board reclamation regulations. The proposed RPA is compatible with the existing geological and topographic features the area. The technical reports included in the RPA document that the proposed final slope configuration will be stable. Each of the specific additional considerations listed in NCZO Section 8107-9.6.9 (items a. through k) are addressed in the proposed RPA (Exhibit 6).

Special Use Standards Consistency Analysis

Special Use Standard	In conformance?
Code of Regulations (CCR) § 3500 et seq., as amended; the regulations, guidelines and other measures adopted by the State Mining and Geology Board; Ventura County Public Works Agency standards; any and all locally adopted resource management goals and policies; and compatible with the existing geological and topographical features of the area. Additional considerations, such as the following, shall also be addressed in the reclamation plan and permit: a. The creation of safe, stable slopes and the prevention of subsidence; b. Control of water run-off and erosion; c. Views of the site from surrounding areas; d. Availability of backfill material; e. Proposed subsequent use of the land which will be consistent with the General Plan and existing and proposed uses in the general area; f. Removal or reuse of all structures and equipment; g. The time frame for completing the reclamation; h. The costs of reclamation if the County will need to contract to have it performed; i. Revegetation of the site; j. Phased reclamation of the project area; k. Provisions of an appropriate financial assurance mechanism to ensure complete implementation of the approved reclamation plan.	
§8107-9.6.10: All equipment, except that which is required to complete the reclamation plan, and all facilities and structures on the project site, except those approved for retention in support of the authorized "end use", shall be removed from the site in accordance with the reclamation plan, within 180 days after the termination of the use, unless a time extension is approved by the Planning Director.	**Yes.** Removal of mining equipment is incorporated into the proposed Reclamation Plan Amendment. The timing of removal, consistent with this standard, is included in the conditions of approval of CUP PL15-0118.
§8107-9.6.17: Monitoring of the permit or aspects of it may be required as often as necessary to ensure compliance with the permit conditions. In any case, the permit and site shall be reviewed and inspected by the Planning Division or its contractors at	**Yes.** Annual inspections of the site are ongoing and mandated by SMARA and the SMGB Regulations. Thus, the site will be monitored for compliance with the approved Reclamation Plan. The Planning Director has the authority to increase the frequency of inspections if

Special Use Standards Consistency Analysis

Special Use Standard	In conformance?
least once a year. The purpose of said review is to ascertain whether the permittee is in compliance with all conditions of the permit and current SMARA requirements and whether there have been significant changes in environmental conditions, land use or mining technology, or if there is other good cause which would warrant the Planning Director's filing of an application for modification of the conditions of the permit.	warranted by conditions observed on the site.
§8107-9.6.20: Performance bonds or other securities may be imposed on any permit to ensure compliance with certain specific tasks or aspects of the permit. The amount of the security shall be based upon the actual anticipated costs for completing the subject task if the County were forced to complete it rather than the permittee. The performance security may be posted in phases as tasks are undertaken or required to be completed.	**Yes.** The mine operator is required to post a Financial Assurance with the State and County to assure reclamation of the site in conformance with the applicable approved Reclamation Plan. The required Financial Assurance is subject to annual review and adjustment by the County.
§8107-9.6.21: The permittee shall maintain, for the life of the permit, liability insurance of not less than $500,000 for one person and $1,000,000 for all persons, and $2,000,000 for property damage, unless the Ventura County Risk Management Agency deems higher limits are necessary. This requirement does not preclude the permittee from being self-insured.	**Yes.** Insurance requirements consistent with this standard are included in the conditions of approval of CUP PL15-0118.

F. RECLAMATION PLAN FINDINGS AND SUPPORTING EVIDENCE

The Planning Director must make certain findings in order to approve a Reclamation Plan pursuant to NCZO Section 8107-9.6.9. The ability to make the required findings is evaluated below.

1. **The reclamation plan must be consistent with and approved in accordance with:**

    - **The Ventura County Zoning Ordinance**
    - **The provisions of SMARA (Public Resources Code Section 2710 et seq.).**
    - **Public Resources Code Section 2207 (i.e. State Annual Reporting and Fee requirements).**

- **State mining regulations (14 CCR Section 3500 et.seq.).**
- **The regulations, guidelines and other measures adopted by the State Mining and Geology Board**
- **Ventura County Public Works Agency standards**
- **Any and all locally adopted resource management goals and policies.**

The proposed Reclamation Plan Amendment (RPA; Case No. PL18-0136) was prepared consistent with the County of Ventura Reclamation Plan application form. The RPA lists all applicable reclamation regulations and documentation of conformance with each regulatory standard. Based on review by County staff and staff of the State Office of Mine Reclamation, the proposed RPA (Exhibit 3) includes the required documentation of conformance with the above-listed statutory and regulatory requirements.

Based on the above discussion, this finding can be made.

2. The reclamation plan must be compatible with the existing geological and topographical features of the area.

The Reclamation Plan Amendment reflects, and is compatible with, the existing geological and topographical features of the project area. The geologic conditions underlying the existing slopes have been evaluated in the technical reports prepared by California-licensed geologists and engineers included in the RPA (Exhibit 3). These reports document that the existing slopes meet established standards of slope stability. Thus, the existing slopes in the historically over-excavated areas of the mining site can be (and are) designated as a portion of the final reclaimed surface depicted in the proposed RPA.

Upon the completion of mining activities, the mining site will be reclaimed to an open space use with stable slopes. The site will be re-vegetated and drainage control measures will be installed to minimize erosion and sedimentation. The condition of the reclaimed slopes will be compatible with the undisturbed slopes that will surround the former excavation area.

Based on the above discussion, this finding can be made.

3. Additional considerations, such as the following, shall be addressed in the reclamation plan and permit:

- **The creation of stable slopes and the prevention of subsidence;**
- **Control of water run-off and erosion;**
- **Views of the site from surrounding areas;**
- **Availability of backfill materials;**

- **Proposed subsequent use of the land which will be consistent with the General Plan and existing and proposed uses in the general area;**
- **Removal or reuse of all structures and equipment;**
- **The time frame for completing reclamation;**
- **The costs of reclamation if the County will need to contract to have it performed;**
- **Revegetation of the site;**
- **Phased reclamation of the project area;**
- **Provisions of an appropriate financial assurance mechanism to ensure complete implementation of the approved reclamation plan.**

The proposed RPA (Exhibit 3) adequately addresses each of the issues specified above based on review by County staff and the State Division of Mine Reclamation.

Based on the above discussion, this finding can be made.

G. PLANNING DIRECTOR HEARING NOTICE AND PUBLIC COMMENTS

The Planning Division provided public notice of the Planning Director hearing in accordance with the Government Code (§65091) and Ventura County Non-Coastal Zoning Ordinance (§8111-3.1 et seq.). The Planning Division provided 30 days notice to the California Division of Mine Reclamation, mailed notice to owners of property within 300 feet of the subject project site, and placed a legal ad in the Ventura County Star on May 17, 2021.

H. RECOMMENDED ACTIONS

Based on the information provided above, Planning Division Staff recommends that the Planning Director take the following actions:

1. **CERTIFY** that the Planning Director has reviewed and considered this staff report and all exhibits thereto, including the Addendum (Exhibit 4) to the Environmental Impact Report, and has considered all comments received during the public comment process;

2. **FIND** that the Reclamation Plan Amendment has been prepared in conformance with the requirements of Section 8107-9 of the Ventura County NCZO, the California Surface Mining and Reclamation Act (Pub. Res. Code § 2710 et seq.), and the State Mining and Geology Board regulations (14 Cal. Code of Regs, § 3500 et seq.);

3. **APPROVE** the Reclamation Plan Amendment; and

4. **DESIGNATE** the Planning Division as the custodian of the documents pertaining to the subject Reclamation Plan Compliance Amendment and environmental document, and that the location of those documents shall be in the Planning Division files.

The decision of the Planning Director is final unless appealed to the Planning Commission within 10 calendar days after the Reclamation Plan Amendment has been approved or denied (or on the following workday if the 10th day falls on a weekend or holiday). Any aggrieved person may file an appeal of the decision with the Planning Division. The Planning Division shall then set a hearing date before the Planning Commission to review the matter at the earliest convenient date.

If you have any questions concerning the information presented above, please contact Mindy Fogg at (805) 654-5192 or at Mindy.Fogg@ventura.org,

Prepared by:

____
Mindy Fogg, Manager
Commercial and Industrial Permits

EXHIBITS

Exhibit 2 – Site Maps
Exhibit 3a – Proposed Reclamation Plan Amendment Text
Exhibit 3b – Proposed Reclamation Plan Amendment Site Plan
Exhibit 3c – Engineering Geologic Report
Exhibit 3d – Slope Stability Analysis
Exhibit 3e – Geologic Slope/Stability Review
Exhibit 3f – Stormwater Pollution Prevention Plan
Exhibit 4 – Draft EIR Addendum
Exhibit 5 – 1995 Reclamation Plan
Exhibit 6 – 2012 Reclamation Plan Compliance Amendment
Exhibit 7 – Final Environmental Impact Report Certified in 1995

Ventura County, California
Resource Management Agency
GIS Development & Mapping Services
Map created on 04-28-2021

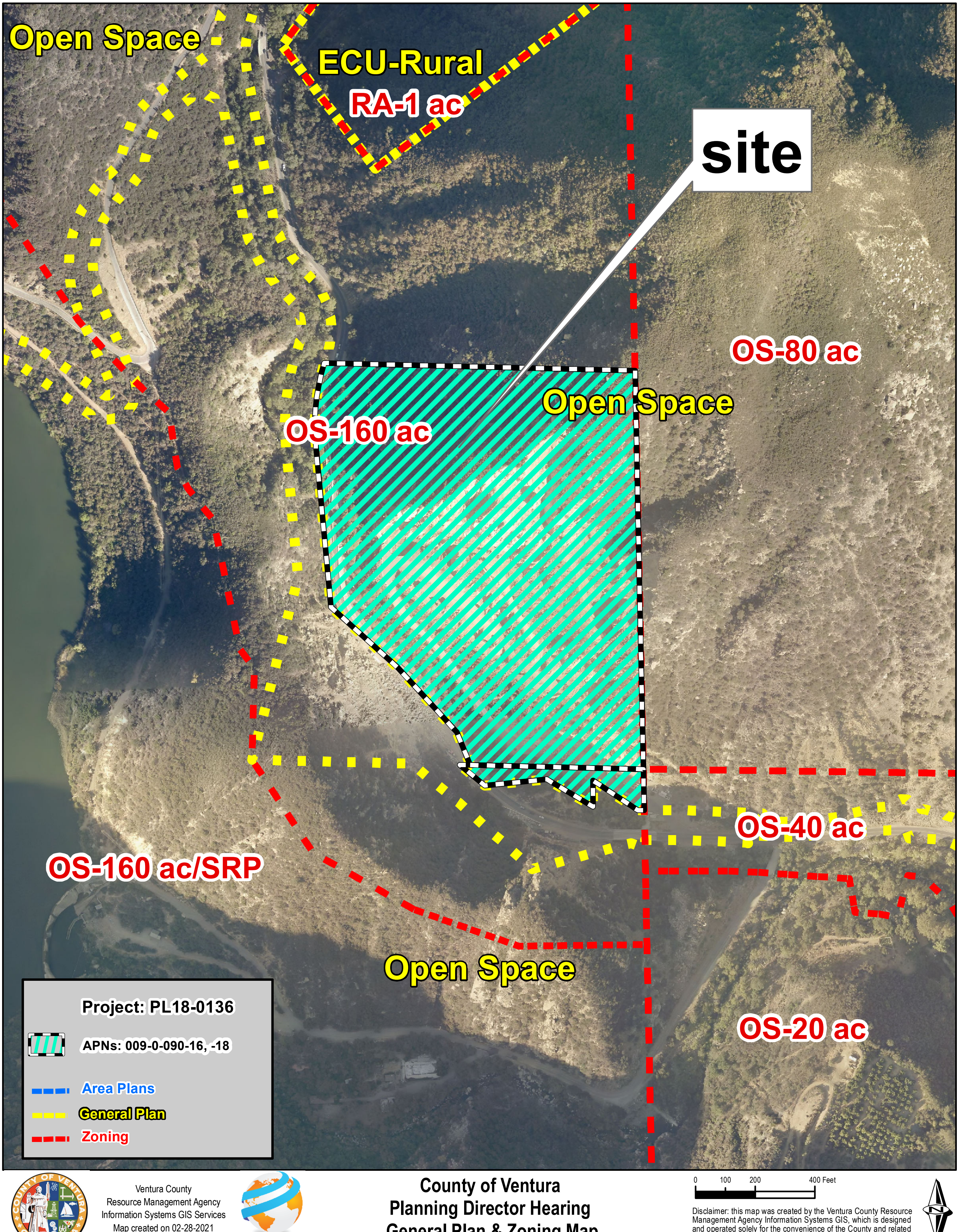
RMAgis

County of Ventura
Planning Director Hearing
Case No. PL18-0136
Exhibit 2 - Maps

0 10,500 21,000 Feet

Disclaimer: This Map was created by the Ventura County Resource Management Agency, Mapping Services - GIS which is designed and operated solely for the convenience of the County and related public agencies. The County does not twarrant the accuracy of this mapand no decision involving a risk of economic loss or physical injury should be made in reliance thereon.

RH



Ventura County
Resource Management Agency
Information Systems GIS Services
Map created on 02-28-2021
Source: Pictometry: 2019

RMAgis

County of Ventura
Planning Director Hearing
General Plan & Zoning Map
PL20-0086

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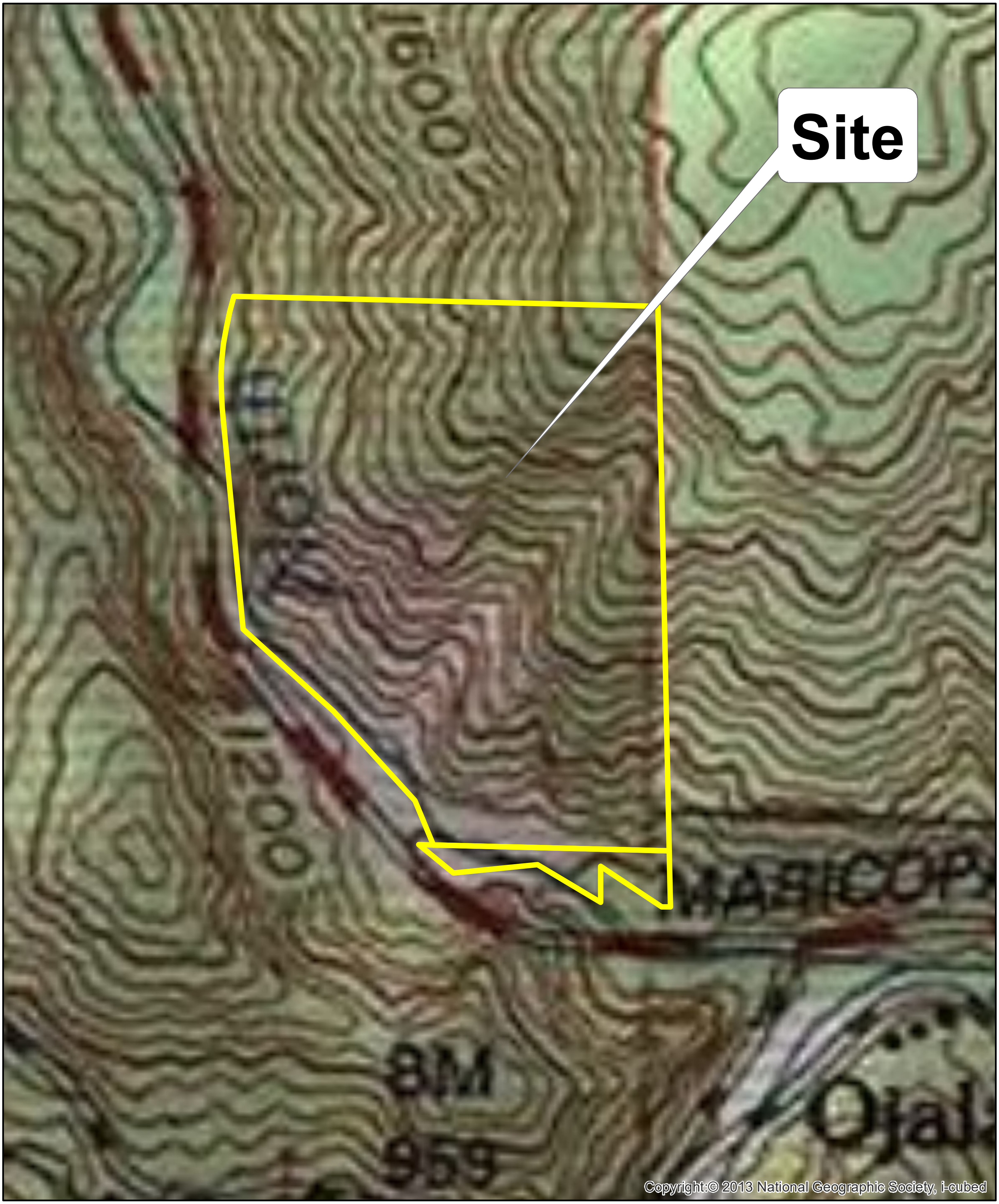
RH



County of Ventura
Resource Management Agency
GIS Development & Mapping Services
Map created on 04-28-2021
Source: Matilija U.S.G.S.
7.5 Minutes Quadrangle
Contour Interval = 20 ft

RMAgis

County of Ventura
planning Director Hearing
PL18-0136
Topo Map

0 250 500 Feet

Disclaimer: This Map was created by the Ventura County Resource Management Agency, Mapping Services - GIS which is designed and operated solely for the convenience of the County and related public agencies. The County does no twarrant the accuracy of this mapand no decision involving a risk of economic loss or physical injury should be made in reliance thereon.

RH

RECLAMATION PLAN

Reclamation Plan Compliance Amendment

REVISED, APRIL 5, 2012
REVISED, APRIL 4, 2012
REVISED, February 16, 2012
REVISED, December 3, 2014
REVISED, July 30, 2015
REVISED, August 1, 2020
REVISED, December 3, 2020

Reclamation Plan for Mosler Rock—Ojai Quarry

California Mine ID # 91-56-0025

Ojai, California
APN(s) 009-0-090-160 and 180

Submitted by:

Gralar, LLC
dba Mosler Rock Products
2280 Moonridge Ave.
Newbury Park, CA 91320

SMARA Lead Agency Submitted: December 6, 2012

County of Ventura • Resources Management Agency • Planning Division
800 S. Victoria Ave., Ventura, CA 93009 • 805/654-2488 • www.ventura.org/rma/planning

{DPC/00018339.}

County of Ventura
Planning Director Hearing
Case No. PL18-0136
Exhibit 3a - Proposed Reclamation Plan Amendment Text

Project Contact Information

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ojaiquarry@verizon.net

MINE OPERATOR:

Same as above

PROPERTY OWNER:

Same as above

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ATTACHMENTS

FIGURES

1.0 SITE AND AREA CHARACTERISTICS

Site Information	
General Plan Designation	Open Space
Zoning District, Ordinance	OS-160 ac (Open Space, 160 Acre Minimum Lot Size)
Site Size	**Project Parcels:** APN 009-0-09-160 (30.20 acres) and 009-0-09-180 (2.08 acres). See **Figure A**, Vicinity Map, and **Figure B**, Aerial Photograph of quarry site. **Mining Areas**: The mining area approved by CUP 3489-2 is 13 acres located entirely on APN 009-0-09-160. However, only 8.55 acres of the approved 13 acres will be disturbed. These 8.55 acres includes a portion of the haul road, rock stockpiles and working benches. **Other Disturbed Areas:** There are three areas which have been disturbed outside the approved CUP mining boundaries. Area 1 is 2.2372 acres. Area 2 is .07002 acres. These two areas are included within this amended reclamation plan, as shown on **Attachment 1**, Reclamation Map. An additional disturbed area (Area 3) is located near the entry where the scale/scale house and equipment storage is located. Area 3 is located on a portion separate parcel, 009-0-09-180, that is 2.08 acres. Total disturbed area under this RPCA is about 13 acres.
Current Use & Development	Active hard rock mining is occurring on 8.55 acres of the 30.2 acres that makes up APN 009-0-09-160 and on a portion of APN 009-0-09-180. No additional development of the site is proposed to occur as part of mining activity under this amended reclamation plan. There are no future development plans proposed by the property owners following mining activity.
Surrounding Land Use	North: Open Space (No development) South: Open Space (Los Padres National Forest) East: Open Space (No development) West: Open Space (No development)
Access	Access is provided via a private access road adjacent to State Highway 33. This is the only vehicle access to the subject site and it is not open to the public. Pedestrian trespass could occur

Site Information	
	inasmuch as a majority of the site is not fenced. However, very steep slopes and uneven terrain discourages trespass. No trespass signs will be posted. Access to State Route 33 also occurs across a small, triangular area of a neighboring property that is not owned by the quarry owner and operator. The operator has an easement over this triangular piece of land.
Public Services/Utilities	**Utilities** **Water-** Water is provided to the site by direct pumping from the Matilija Creek. The mine operator / owner has vested and accrued water rights to Matilija Creek as identified in the Chicago Title Insurance (Policy No. 44011066; see **Attachment 2**). **Sewer-**There are no sewer lines which serve the subject site. The mine operator/owner provides a portable toilet for employees, service personnel and delivery truck drivers which is serviced as needed by Marborg Industries, 186 N. Quarantina St, Santa Barbara, 93103. **Power/Electric-**There is three-phase electricity provided by Southern California Edison (SCE). **Gas-**No natural gas is provided to the site. Nor is there any need or requirement for natural gas. **Public Services-** Police service is provided by the Ventura County Sherriff's Office with a patrol station located in the City of Ojai (approximately 7 miles from the subject site). Fire Protection and emergency services are provided by the Ventura County Fire Protection District, specifically from Fire Station No. 22 which is located in Meiners Oaks (approximately 5 miles from the subject site).

1.1 EXISTING LAND USE

The existing land use on the subject site is mining and accessory uses, as permitted in the Ventura County Non-Costal Zoning Ordinance ("NCZO") §8105-4 and §8107-9, permitted under an approved Conditional Use Permit (3489-2) by the County Planning Commission on June 1, 1995. The approved mining area is thirteen (13) acres of a 30 acre legal parcel. Currently only 8.55 acres within the 13 acres of approved mining area are being actively mined. Under this Amended Reclamation Plan, mining activity is limited to the existing 8.55 acres. 4.45 acres of the approved 13-acre mining area will remain in its natural state as no mining activities will occur in this area prior to the expiration of CUP 3489-2. The remainder seventeen (17) acres of the 30 acre subject site has an existing land use as Open Space and will remain in a natural state.

1.2 VISIBILITY

A photo of the overall mining site as viewed from a ridgetop vantage point on State Route 33 are included as **Attachments 3.**

Visibility from State Route 33 from a point directly across from the subject site, prior to mining activity, was of a steep rocky slope with limited native vegetation. Visibility from State Route, at the same location, during mining operations in the past and current, has exposed mining operations to passing motorists. There are no residences, commercial development or improved recreational areas which can view the mine site. Visual mitigation is provided by berms and stream bank vegetation on the lowest portion of the mine site. Hydro-seeding of the non-rock portions of the mine site with native seeds will assist with the reestablishment of native vegetation.

Exposed rock is currently visible on the lower portion of the existing quarry site. This exposed rock base will partly remain following reclamation activities due to meager or no organic material remaining within the cracks and crevasses of the base material. Hydro-seeding will occur over these non-rock exposed outcroppings on the site. The existing haul roads and working benches of the site can be reached with a hydro-seeding truck. All other areas that are not rock and cannot be reached with a hydro-seed truck will be hand broadcasted

The visual aspect of mining operations is a noticeable contrast to the surrounding area. However the visual impacts were analyzed in detail as part of the Environmental Impact Report for CUP 3489-2. At the time of certification of this EIR, a finding of overriding consideration was made by the County of Ventura regarding visual impacts. Nevertheless, the County placed a number of conditions and mitigation measures upon the Conditional Use Permit which remain in place until the permit expires.

1.3 SITE LOCATION AND ACCESS

The existing Mosler Rock-Ojai Quarry is located in the northeast area of Ventura County on a portion of APNs 009-0-090-160 and -180. The site is approximately 3.5 miles north of the City of Ojai immediately adjacent to State Route 33 (also known as the Maricopa Highway) as shown on the USGS Wheeler Springs/Matilija 7.5 minute Quad Map. A Vicinity Map of the site is included as Figure A . Access to the Mosler Rock-Ojai Quarry is provided by a gated private access entry adjacent to State Route 33 near the 15.63 mile marker. This vehicle access entry and gate is not used by the public or any adjacent property owner.

1.4 BACKGROUND INFORMATION

The project site has been used intermittently as a rock quarry since 1939, which at that time it was known as the “Maricopa Placer Claim.” The original owner, Schmidt Construction, Inc. leased the site in 1948 and purchased it in fee in 1962. In 1973 the Ventura County Planning Division notified Schmidt Construction, Inc. that continued mining would require a Conditional Use Permit. In 1974, Schmidt Construction, Inc. applied for a Conditional Use Permit, which was also subject to a requirement for an Environmental Impact Report (EIR) pursuant to the California Environmental Act (CEQA). The County prepared the required EIR. On January 15, 1976, the Ventura County Planning Commission certified the EIR and approved Conditional Use Permit 3489 for a 4-acre mine site for a period of 30 years. The County also approved the required SMARA reclamation plan.

In 1980, Schmidt Construction, Inc. requested, from Ventura County, a modification to Conditional Use Permit 3489 (Case No. CUP 3489-1), including a reclamation plan amendment. The purpose for that request was to allow a 5-year time extension to Conditional Use Permit 3489 for the continued mining of the 4-acre rock quarry. In 1981, the Ventura Planning Commission approved both the Conditional Use Permit modification (CUP 3489-1) plus an amendment to the original reclamation plan.

In 1986, Schmidt Construction, Inc. once again requested, from Ventura County, a modification to Conditional Use Permit 3489-1 to expand the mining boundaries by 9 acres. On June 1, 1995, the Ventura County Planning Commission certified a subsequent EIR and approved the requested modification (known as CUP 3489-2) As part of the County's approval of CUP 3489-2 an Amended Reclamation Plan was also included as Exhibit 5 within the Staff Report and CUP conditions of approval.

On February 2, 2005, Gralar, LLC obtained ownership of the subject rock quarry and renamed it the "Mosler Rock – Ojai Quarry." Gralar LLC, dba Mosler Rock Products, remains as the current property owner and mine operator.

1.5 GEOLOGY

Geology reports prepared by Scott Hogrefe, CEG of Gold Coast Geoservices, Inc., that provide ongoing geologic supervision of the mining operation are included or referenced within **Attachment 5.** An Engineering Geology report by Dr. Sands Figures, of Norfleet Consultants, dated January 15, 2018, is attached as **Attachment 7**. **Attachment 6** from Gold Coast Geoservices is a current slope stability review and evaluation of the overall potential rock fall in the area. These reports provide a substantial description of the geometric interrelationships of the geology and geometry of the mine based on recent expert professional review of the site. Please refer to these reports for details on the regional and site specific geology and specific site requirements.

1.6 HYDROLOGY

(a) Surface Water

The quarry property drains into Matilija Creek, the major through-flowing stream for draining of a large watershed extending for several miles northeastward of the site into the Wheeler Gorge Area. Matilija Creek flows year-round and may be subject to overflow during periods of flooding and heavy rainfall. All site drainage presently flows in a relatively controlled manner to Matilija Creek.

(b) Groundwater

Given the steep topography of the site and drainage conditions, the subject of groundwater was not considered a relevant factor in the approval of the Reclamation Plan in 1995.

1.7 SOILS

Soils present at the quarry property included Artificial Fill (AF), which covers a majority of the site downslope of the quarry area. This soil type consists of quarry non-cohesive waste by-products containing boulder, gravel, sand, and silt mixtures which are grayish brown in overall color. Quarry soils also include landslide deposits (Qls), which exist near the top of the present quarry slope. These appear, from a distance, as jumbled masses of angular boulders in a matrix of tan, gravelly silty sand. Soils at the quarry also include those from the Matilija Formation (Tma). These Eocene rock deposits consist of a brown-weathering, light gray to tan medium-grained arkosic sandstone interbedded with brown to gray-green silty very fine-grained sandstone and silty shale. Sandstone dominates over shale by an approximate 50:1 ratio in the project site area.

1.8 VEGETATION

Two distinct vegetation types, or plant communities, are found on the site. The two types are mixed chaparral and riparian woodland. Mixed chaparral is dominated by chamise (adenostoma fasculatum), scrub oak(Quercus domosa), California sagebrush (Artemesia califonica), laurel leaved sumac(Rhus lauria), California buckwheat (Erogonum fasciculatum),toyan (Heteromeles arbutifolia), and ceanothus (Ceanothus sp.). Generally, these plant species possess relatively small, broad, hard leaves and are evergreen. A dense cover of primarily native needle grass exists between shrubs where soils are found.

Riparian woodland also exists in community form along the North Fork of Matilija Creek. This vegetation is dominated by white alder (Alnus rhombifolia), western sycamore (Platanus racemosa), arroyo willow(Salix lasiolepis), and coast live oak(Quercus agrifolia). Also found are large shrubs, including California bay, toyon and laurel leaved sumac. Well-developed riparian vegetation is found both upstream and downstream from the existing quarry site.

1.9 WILDLIFE

Active mining is occurring on a portion of the subject site, there are currently no existing plant communities in the area of active rock removal because of the mining activites occurring in the immediate area. The RPCA will assist with the reestablishment of the mixed chaparral plant community to provide future wildlife habitat. The use of hydro-seeding with seeds obtained from a local source, which includes a mix of local plant communities, will help accelerate vegetated cover for wildlife equal to better than that which existed prior to being disturbed.

Within the upper undisturbed mining boundary area a mixed chaparral plant community currently exists which provides habitat for wildlife. As noted above, 4.45 acres of this area was not disturbed prior to June 1, 2015, but will be mined prior to June 1, 2046.

This upper portion (4.45 acres) of the 13-acre quarry site retains an area dominated by chamise (adenostoma fasculatum), scrub oak (Quercus domosa), California sagebrush (Artemisa California), laurel leafed sumac (Rhus laurina), California buckwheat (Erogonum fasciculatum), toyon (Heteromeles arbutifolia) and ceanothus (Ceanotlus sp.). Within this general area, these plant species possess relatively small, broad hard leaves and are evergreen. Rock faces and outcrops also make up a large portion of the area between these shrubs. Mixed chaparral is widely distributed in the region.

General wildlife species which potentially use the riparian woodland which might be considered to be species of special concern including the Cooper's Hawk(Accipitr cooperi) and Sharp-shinned hawk (Accipiter straitus). Neither of the species were observed during the original biological assessment for the project. the possibility of occurrence was noted to be possible .Potential impacts to these species are addressed in the Environmental Impact Report (EIR), which was certified with the current permit approved in 1995. This RPCA will not have any additional impacts to the wildlife in on the mining site.

Mining activities are not permitted within Matilija Creek which traverses a portion of the greater subject parcel. The Creek and its wetland habitat have never been within the permitted active mining area. Mining on-site results in alterations to surface soils and underlying geology which is a part of the watershed for Matilija Creek. The California Deparment of Fish and Game (CDFG) has jurisdiction over the North Fork of the Matilija Creek as it is a blue line stream. Downstream, there is potential for changes to surface and groundwater hydrology, which if unmitigated, may have adverse impacts on downstream riparian and aquatic habits. However, the project was condition to incorporate the mitigation measures identified in the EIR to mitigate potential impacts to ripairian and aquatic habitats of the Matilija Creek. This RPCA will not have additional impacts to the noted habitats or the creek or the areas surrounding the subject site.

1.10 GENERAL PROJECT DESCRIPTION

<u>Overview of Mining Operations</u>

This RPCA constitutes an amendment to the existing Reclamation Plan, approved in 1995 in conjunction with CUP 3489-2. The RPCA is consistent with the plan approved in 1995, incorporating the compliance area identified outside of the original mining boundaries which were disturbed as a result of various MSHA directives to address perched boulders. This RPCA is intended to ensure adequate reclamation of these additional disturbed areas, which are not to be further mined.

This RPCA reflects intent to mine approximately 485,833 tons of material within the mining boundary approved under CUP 3489-2 between June 2011 (the date the previous version of this amendment was submitted) and June 1, 2015. The original approval of the mine expected an annual extraction of 80,000 tons of rock. The overall mine was permitted to produce 2,400,000 and the average mining rate is approximately 40,000 tons per year. Assuming full depletion of the quarry reserves, the quarry would have an expected mine life of an additional 30 years past this CUP modification, or until the year 2046.

Additional Areas of Disturbance Covered Within this Amended Plan

This RPCA covers two areas of disturbance outside of the approved mining boundary identified within Conditional Use Permit (CUP 3489-2) to bring these areas into compliance with current Reclamation Plan (see Figures 2 and 3).

These areas were originally disturbed for the purpose of addressing a citation order from the U.S. Department of Labor, Mine Safety and Health Administration (MSHA) to remove perched boulders within and adjacent to the active mine area. Amended Area 1 originally disturbed 1.3 acres. This amendment shows Area. 1 as 2.24 acres in order to stabilize the balance of the slope in this area. Area 2 is approximately .0.70 acres.

Quarry operations also occur on a portion of Parcel 009-0-09-180, a 2.08-acre parcel that principally abuts State Route 33. Operations have occurred on this parcel since before the approval of CUP 3499-2. This parcel contains the scale/scale house and equipment storage. These areas have been reclaimed.

Summary of Reclamation Required

All mined lands will be reclaimed to the end use of Natural Open Space. Reclamation of the site would begin within 90 days following cessation of mining activities and continue until performance criteria is met. The current permit expires on June 1, 2046, which requires Reclamation to begin September 1, 2046. It is anticipated to last for a three year period but will continue until habitat success criteria is met or an extension is not obtained to continue mining operations.

The final reclaimed surface would be characterized by a series of benches and slopes extending up the side of the existing mine site and hydro-seeded per the original Reclamation Plan (1995).

Phasing of Mine Operations

The Reclamation Plan approved in conjunction with CUP 3489-2 sets forth a “bottom-up” phased. As shown in **Attachment 8**, which includes the reclamation maps approved in 1995, the phasing is divided into three phases, Phases I, II, and III (Phase I is separated into two sub-phases, IA and IB.) Although the principal area of mining has occurred in Phase I, small areas of Phases II and III have been disturbed by mining activities. (ie haul roads, etc.).

2.0 OPERATIONS PLAN (MINING PLAN) Section 2772 (c) of SMARA and Section 8107-9 of the County Non-Costal Zoning Ordinance requires that all of the following information be included a Reclamation Plan

2.1 MINERAL COMMODITY

The mineral commodity to be mined is sandstone.

2.2 MINING OPERATION AND PHASING

The active mining area of 8.55 acres has no overburden inasmuch as this area is where rock material is currently being removed. The rock material is extracted by excavators and transported on site by front end loaders to the processing area.

2.3 END USE

The project's "end-use" is Natural Preservation-Open Space. The proposed end use is feasible and is consistent with the Ventura County General Plan which identifies the area surrounding the mine site as Open Space (refer to Figure 3.1 Ventura County General Plan Land Use Map) and Non-Costal Zoning Ordinance Section 8104-1.

2.4 PROJECT LIFE

Conditional Use Permit (CUP 3489-2) permitted mining for 30 years (1995-2015). The renewal modification request will extend the permit to 2046. Reclamation will commence within 90 days of permit expiration or within 90 day of a mine area being inactive for two years. Compliance Areas 1 and 2 will be reclaimed within 90 days of County approval of the RCPA. Reclamation will be on-going until 2046 and is anticipated to be completed within three years (2039). Reclamation monitoring will begin annually once reclamation has commenced in Compliance Areas 1 and 2 and will continue semi-annually once mining has concluded, until success criterion is achieved.

2.5 PROJECT SIZE

The total mine site approved by Conditional Use Permit (CUP 3489-2) is 13 acres. Currently only 8.55 acres of the 13 acre mine site is actively mined. For total disturbed area which is part of this RPCA see Section 1.10.

2.6 EXCAVATIONS

The estimated maximum depth of mining measured from the original ground surface to the final reclaimed surface will be approximately 100 feet. The mining depths will substantially vary because the site is naturally steep, great variations in mine depth occur. At either edge of mining limit the excavation are shallower as the mine face meets the natural grade. In the center of the mine area depths are more significant but still vary widely as the operator operates the mine to achieve access and maintain stable safe slope faces within the mine operation. The current geological review of the site prepared by Gold Coast Geoservices (**Attachment 5**) has addressed the current overall gross stability of the excavated rock faces.

2.7 ANTICIPATED PRODUCTION COMMODITY

CUP 3489-2 was approved on June 1, 1995 thereby authorizing mining activities on the subject site for a period of 30 years (ending on June 1, 2015). This permit renewal will authorize mining activities to continue for an additional 30 years (ending June 1, 2046). A maximum annual production of tonnage, in any calendar year, was not imposed with the approval of CUP 3489-2. The mining limits and Reclamation area were identified within a mapped area identified as Exhibits "5-7" of CUP 3489-2 (See **Attachment 8)**.

At the average mining rate of approximately 40,000 tons per year (for the last five years), mining of the 2,400,000 million tons of rock material originally approved by CUP 3489-2 would require approximately an additional 40 years to accomplish.

PRODUCTION SUMMARY – 2005-2011

YEAR	TOTAL MATERIAL PRODUCED (TONS)	TOTAL MATERIAL PRODUCED (CUBIC YDS)*
2005	66,778	44,518
2006	52,693	35128
2007	28,455	18,970
2008	33,514	22,342
2009	18,405	12,297
2010	25,740	17,116
2011	50,000	73,333

ANTICIPATED PRODUCTION SUMMARY – 2012-2046

MATERIAL PRODUCED
(TONS)

2012	50,000	33,500
2013	50,000	33,500
2014	50,000	33,500
June 1, 2015	NTE 50,000	33,500
Maximum totals based on maximum production anticipated in the Environmental Impact Report (1995)	**NTE 200,000**	**NTE 134,000**

2.8 PLANNED ORE PROCESSING METHODS (on-site)

Current rock processing is by mechanical crushing and separation (dry screening). Additional processing includes cutting dimensional stone. There are no activities related to smelting, leaching, or a production batch plant for asphalt on concrete on the subject site.

2.9 PRODUCTION WATER DATA

All water used on site is pumped from the adjacent creek. Water is pumped using a four inch electric submersible pump and utilized primarily for dust control and re-vegetation establishment. No water meter is used in the pumping activities used as part of the extraction from the adjacent creek so quantities are not known, but are minimal in quantity. No processing chemicals are used on the subject site. There are no fertilizers used on site.

2.10 MINE WASTES

The Quarry generates no overburden that is not cost as fill material or used within the mine operation as road material. There are no waste tailings generated from the operations at the site.

2.11 IMPORTED WASTES

No imported wastes such as domestic garbage, chemicals, oil or other material will be disposed on this mine site.

2.12 AVAILABILITY OF BACKFILL MATERIAL

Fill required for the Reclamation Plan will be generated within the mine area. No significant import of material is expected to achieve the requirements of the Reclamation Plan.

EROSION AND SEDIMENTATION CONTROL

Erosion control measures are identified in the Project Storm Water Pollution Prevention Plan (SWPPP), submitted to the State, dated August 2020 **(Attachment 10).** The Project operates under WDID permit number 456I 109388 and is current with all reporting requirements relative to this plan and in good standing with

There is no mining activity occurring within the bed or banks of the Matilija Creek. No mining activity will occur in this area in the future.

A portion of the southerly stream bank has been rehabilitated under the provisions of a California Fish & Game Streambed Alteration Agreement #1600-2006-017-R5 due to a past rock slide caused by excessive rains. See Section 500.3.5 of the aforementioned Project Storm Water Pollution Prevention Plan (Attachment 10) for details.

2.13 BLASTING

Condition 32 of the CUP 3489-2 requires that any explosives used as a regular part of the mining operations subject to the CUP shall be done with all permits from Federal, State and local agencies. Storage of all blasting materials is located within an approved (by the Ventura County Fire Protection District) secured location on-site.

2.14 TRUCK TRAFFIC

The total number of daily truck trips is 40 (20 round trips) as limited by Condition 39 of CUP 3489-2). The number of truck trips hauling material from the mine site varies from day to day. However the maximum number of truck trips will not exceed 20 round trips per day using State Route 33. Truck haul routes are limited to State Route 33. Also, loaded trucks are prohibited from driving through the City of Ojai between the hours of 8 AM and 9 AM on weekdays (not applicable when Nordhoff High School is not in session). See Condition No. 40 of CUP 3489-2 for additional truck limits and record-keeping requirements.

2.15 SETBACKS

The active mine site complies with the requirements of the Ventura County Non-Coastal Zoning Code in that it meets the 100 foot setback from the roadway and any residence.

The mine site would also meet the 200 foot setback from any institutional use if there were any such use adjacent.

2.16 CONTAMINANT CONTROL

No mining wastes are expected to remain on the subject site at the termination of mining activities. Any mining wastes discharged would be in compliance with the applicable water quality control plan, including turbidity and water quality objectives. No waste from the subject site contains hazardous constituents. No waste from the site has acid generating potential; and any waste generated by mining activities is readily containable within the two detention basins.

2.17 DUST PREVENTION

Water trucks are used as needed throughout the mine and access road for dust control in accordance with Condition No. 51 of CUP 3489-2

2.18 LIGHT EMANATION

The mine site does not contain any permanent night time lighting. There are also no neighborhood areas in proximity to the mine site. Therefore, all provisions of the County's Non-Coastal Zoning Code and Condition No. 27 of CUP 3498-3 can be met.

2.19 BUILDING COLOR SCHEME

All of the mine site's above ground facilities and structure (scale house) are painted in various gray tone colors to help blend with the adjacent rock background.

2.20 SITE MAINTENANCE

The mine site will be maintained in a neat and orderly manner so as not to create any hazardous conditions or unsightly conditions which are visible from outside the mine site. The mine site shall meet all requirements of Condition No. 29 of CUP 3489-2.

2.21 NOISE

The mine site is not located near any residences, schools, health care facilities or any other noise sensitive land use. The mine site activities are only conducted from 7 AM until 7 p.m. per Condition No. 19 of CUP 3489-2 which limits night time noise use. Also, all equipment operated on site does not exceed the County's General Plan noise standards.

2.22 LEGAL DESCRIPTION

Those portions of the east half of the southwest quarter of the southwest quarter and the southwest quarter of the southwest quarter of the southwest quarter of Section 21; the southeast quarter of the southeast quarter of the southeast quarter of Section 20; the northeast quarter and that portion of the northeast quarter of the southeast quarter of Section 29, Township 5 north, range 23 west, San Bernardino Meridian, in the County of Ventura, State of California, according to the official plat of survey thereof, as described and shown as Parcel 3 in Exhibits A and B of Parcel Map Waiver No. 792, recorded January 21, 1998, as Document No 98-007402 of Official records.

Except that portion granted to the State of California in deed recorded October 10, 1949, in Book 894, Page 501 and Book 894, Page 512 both of Official Records.

3.0 CONFORMANCE WITH THE RECLAMATION STANDARDS OF SMARA

3.1 NON-COSTAL ZONING ORDINANCE §8107-9.6.9

This RPCA has provided for the progressive rehabilitation mined lands such that, when reclamation is complete, it will contain stable slopes, be readily adaptable for alternate land uses, and be free of derelict machinery, waste materials and scrap to the satisfaction of the designated County official. The proposed mining site land form, to the extent reasonable and practical, shall be re-vegetated for soil stabilization, free of drainage problems, coordinated with present and anticipated future land use, and compatible with the topography and general environment of surrounding property.

Conformance of this proposed RPCA with each of the above-listed standards is described on the next page.

(a) Progressive rehabilitation of the mining site land form

Table 2 - Proposed Mining and Reclamation Completion Dates

Project Phase	Project Area(acres)	Estimated Date of Completion of Mining	Estimated Date of Completion of Reclamation
I-III	8.55**	June 1, 2015	2018

Note: * indicates dates that include a three year monitoring period for evaluation of reclamation success.

(b) Stable slopes [see Non-Costal Zoning Ordinance Section 8107-9.6.9(a)]

The stability of slopes is addressed in the original Geotechnical Report by Pacific Material Laboratory Dated July 25,1988 this report was substantially relied on to create the current Reclamation Plan requirements. The report prescribes the slopes of the Reclamation plan, the slope stability and construction requirements of the Reclamation Plan. Sheet 4 of 4 of the 1995 Reclamation (Attachment 8) specifically states the requirements the mine operation and Reclamation. The current review of the site is provided in the newer report by Gold Coast Geoservices Figures, dated June 5, 2020 (Attachment 6)

(c) Site readily adaptable for alternate land use

The project's "end-use" is Natural - Open Space. Approximately 8.55 acres of the subject site (disturbed area) will be re-vegetated to match the surrounding natural environment (see Section 3 below). The proposed end use is is consistent with the Ventura County General Plan which identifies the area surrounding the mine site as Open Space (refer to Ventura County General Plan Land Use Map Figure 3.1). No post-reclamation development is proposed.

(d) Free of structures, derelict machinery, waste materials and scrap (see Non-Costal Zoning Ordinance Section 8107-9.6.10)

The only building structure on the subject site is the truck scale and associated 10-ft by 20-ft scale house. The scale house, truck scale, and all mining related equipment (and accessories) will be removed within 90 days of the conclusion of mining (e.g. September 1, 2015). The subject site contains two de-silting basins which are part of the RWQCB mine operators Storm Water Pollution Prevention Plan (SWPPP). These two basins are currently in place to reduce sediment transportation from the mine site to the adjacent creek. After reclamation, these detention basins will be removed and refilled. Following removal and refill of the detention basins, the quarry will function as it was prior to mining activities. The vegetation that is established by reclamation efforts will help reduce silt transport. Otherwise, the soil will move, just as it does on all the adjacent hillsides.

(e) Re-vegetation for soil stabilization

See Section 3.4.3 of this Reclamation Plan regarding the re-vegetation actions related to soil stabilization.

(f) Free of drainage problems

As stated above, the operation is subject to and in compliance with a Storm Water Pollution Prevention Plan, which is included as **Attachment 10.**

(g) Compatible with the topography and general environment of surrounding property

The final slope configuration of the mine site will remain generally steep as are the surrounding slopes in the immediate area. The final site configuration will include a stair step design with two wide benches providing an optimal environment for the re-establishment of native plant material. The site will be revegetated with a native seed mix to ensure the final site condition is consistent with the natural surrounding environment.

Any remaining rock outcroppings will be a noticeable contrast to the surrounding area; however, the rock outcrops were analyzed in detail as part of the Environmental Impact Report for CUP 3489-2. At the time of certification of the EIR a finding of overriding consideration was made by the County of Ventura regarding visual impacts.

Nevertheless, the County placed a number of conditions and mitigation measures upon the Conditional Use Permit (CUP 3489-2) which will remain in place until June 1, 2015.

3.2 CONSISTENCY WITH SMARA RECLAMATION STANDARDS

3.2.1 Past Reclamation Activities

Some Remediation and Reclamation work has been completed by the former Quarry owner, Schmidt Construction Company. This rock face is depicted by the notation "Reclaimed by Schmidt" in Attachment 1.

3.3 STATE MINING AND GEOLOGY BOARD (SMGB) – Sections 3502 et seq.

Section 3502 of the State Mining and Geology Board Reclamation Regulations requires that all of the following in the Reclamation Plan:

(a) Environmental Setting [SMGB §3502 (b)(1))]

General Environmental Setting

The subject parcel containing the mine site is 30.20 acres of which 13 acres constitutes the approved disturbance area under CUP 3489-2. The general area is characterized by ridgelines and valleys. The project site is located northwest of the Ojai Valley. It is situated on the lower east face of the steep-sided canyon eroded by the north fork of the Matilija Creek which intersects the Ventura River approximately half a mile southeast of the subject site. Topographic relief measured from the crest of the ridge located upslope (northeast) of the site to the creek is roughly 1, 030 feet. Matilija Creek has flooded in the past causing damage to the adjacent Highway 33. Past storms have also been responsible for transportation of rock material from the project area into the creek. However, currently in place are two detention basins, higher earthen berms and wider working benches that assist in the prevention of rock material and silt from entering the creek at the toe of the slope. All site drainage presently flows in a controlled manner to Matilija Creek via unimproved earthen swales along haul roads to two detention basins

Effects

Exposed rock is currently visible on the lower portion of the existing quarry site. This exposed rock base will partly remain following reclamation activities due to meager or no organic material remaining within the cracks and crevasses of the base material. Hydro-seeding and hand broadcasting will occur over all non-rock portions of the mine site that have been disturbed.

These rock outcroppings are a noticeable contrast to the surrounding area and were analyzed in detail as part of the Environmental Impact Report for CUP 3489-2. At the time of certification the EIR June 1, 1995 a finding of overriding consideration was made by the County of Ventura Planning Commission regarding visual impacts the County placed a number of conditions and mitigation measures to mitigate potential impacts within Conditional Use Permit (CUP 3489-2) which remain in place until June 1, 2015. See Section I, "Environmental Mitigation Monitoring Conditions," from the conditions of approval for CUP 3489-2.

The final slope and contours of the mine site, at the conclusion of mining activities, will include slopes set further back from the adjacent Matilija Creek than the original slope. The existing access and haul roads will remain paved post reclamation. There are currently no residences adjacent to the mine site. However, in the future if there are; no compatibility conflicts will exists as the end use of the subject site is Natural - Open Space.

(b) Public Health and Safety [SMGB §3502 (b)(2)]

During the period of active mining and reclamation activities, the existing gate will remain locked, a "private property" sign will remain posted and fencing to the project site located near State Route 33 will remain to prevent unauthorized pedestrian or vehicle access. Mining activities on-site will comply with all Federal (MSHA) and State (OSHA) mine safety regulations concerning operating standards and operation of equipment. Existing employees, including contract labor, are trained in mine safety and first aid. Refresher courses are conducted periodically in accordance with applicable regulations.

Mine workers carry portable radios for on-site communication and cellular phones for off-site communication. All visitors, outside vendors and truck drivers are required to check in and check out with the scale weigh master or owner/operator. Conditions affecting safety are continually monitored by the mine owner/operator as the designated safety coordinator.

The Mosler Rock –Ojai Quarry is private property the general public is not permitted during or after office hours or post-reclamation

There will be no open shafts or any hazardous materials present on-site pre or post-reclamation.

(c) Slope Stability and Design [SMGB §3502 (b)(3)]

The designed steepness and proposed treatment of the final slopes shall take into consideration the physical properties of the slope materials, the overall gross rock stability, local surficial stability, landscaping requirements, and other factors shall be considered in determining the final mine slope faces. The 1995 Reclamation Plans specifies angles that must be approved by a Certified Engineering Geologist. The current Geology Report (Attachment 5) address the current slope stability of the site and the future permeate slope design in detail.

Slope angles shall be provided that are flatter than the critical gradient for the type of material involved. Whenever final slopes approach the critical gradient for the type of material involved, an engineering analysis of the slope stability is required.

(d) Disposition of Old Equipment [SMGB §3502 (b)(5)]

When all mining activities cease, all mobile and processing equipment, not required for reclamation, will be removed from the site. All buildings and fixtures not included in the final approved Reclamation Plan will be removed. There are no existing ground water wells, water pipelines or related utilities on the subject site. Therefore, there will be nothing remaining on the site for future uses to use.

(e) Temporary Stream or Watershed Diversions

There are no current nor are there any future plans for any temporary stream or watershed diversions.

3.4 STATE MINING AND GEOLOGY BOARD (SMGB) – SECTIONS 3700 et seq.

Section 3700 of the State Mining and Geology Board Reclamation Regulations requires that all of the following in the Reclamation Plan

3.4.1 Section 3703 – Performance Standards for Wildlife Habitat

(a) Rare, Threatened or Endangered Species shall be conserved

While no rare, threatened or endangered species were identified in the original biological survey prepared for the Environmental Impact Report (Attachment 9), Southern California steelhead trout (Oncorhynchus mykiss) has been federally listed as endangered since 1997. Southern California steelhead trout is what the US Fish and Wildlife Service and National Marine Fisheries Service call a Distinct Population Segment (DPS) of the steelhead trout species. Under the Endangered Species Act, an entire species can be listed as threatened or endangered or certain populations (i.e., a Distinct Population Segment) may be listed. For steelhead trout, several DPSs have been listed. Critical habitat for the Southern California steelhead trout has been identified in Ventura County and includes the Ventura River and major tributaries (Matilija Creek - North Fork and San Antonio Creek) and the Santa Clara River and major tributaries (Sespe Creek and Santa Paula Creek).

Southern Steelhead trout have been observed in the Matilija Creek, which runs adjacent to the project site, but the proposed reclamation activities would not affect the Matilija Creek as the compliance areas (1, 2 and 3) are located on the far eastern portion of the project site away from the creek. No impacts on the Southern Steelhead are anticipated.

The reclamation activities included in the RPCA will serve to mitigate the adverse effects of the unauthorized ground disturbance and the areas previously authorized for excavation. The site will be re-vegetated using native plant species. Annual monitoring will occur until such time that re-vegetation criteria are met.

A copy of the previous biological study for project approval in 1995 is attached as **Attachment 7**.

(b) Wildlife shall be established on disturbed land in a condition at least as good as that which existed before the lands were disturbed by surface mining operations

The proposed reclamation activities will occur primarily in areas previously authorized to be disturbed by mining activities. The 2-acre area located outside the boundary of the authorized disturbance area specified in the 1995 Approved Reclamation Plan reflects unauthorized ground disturbance. The mining activities that occurred in this area included the removal of existing vegetation with the resulting loss of wildlife habitat. Chaparral was lost that formerly served as foraging area and habitat for both the Cooper's Hawk and Sharp-shinned Hawk. Although neither of these species were observed during the field investigations, conducted by S. Gregory Nelson on July 24, 1991 (Attachment 9), the probability of occurrence in this area is high. Based on the Biological study, the loss of habitat to these sensitive species is considered adverse, but would not be significant given the abundance of chaparral habitat in the regional area.

Within the upper undisturbed mining boundary area a mixed chaparral plant community currently exists which provides habitat for wildlife. The 4.45-acre area above the 1420 and 1510 contour (see **Attachment A** for an identification of this meandering line) retains an area dominated by chamise (adenostoma fasculatum), scrub oak (Quercus domosa), California sagebrush (Artemisa California), laurel leafed sumac (Rhus laurina), California buckwheat (Erogonum fasciculatum), toyon (Heteromeles arbutifolia) and ceanothus (Ceanotlus sp.). Within this currently undisturbed area within the mining limits, these plant species possess relatively small, broad hard leaves and are evergreen. Rock faces and outcrops also make up a large portion of the area between these shrubs. Mixed chaparral is widely distributed in the region surrounding the subject site.

(c) Wetland Habitat shall be avoided. Any wetland habitat impacted as a consequence of surface mining operations shall be mitigated at a minimum of one to one ratio for wetland habitat acreage and wetland habitat value:

There are no mining activities permitted within Matilija Creek which traverses of portion of the greater subject parcel. The Creek and its wetland habitat have never been within the permitted active mining area.

The adjacent wetland habitat surrounding Matilija Creek is protected from quarry operations by several earthen berms located on the down slope side of all haul roads and working benches. Also, drainage is directed to two (2) detention basins to control siltation prior to allowing it to enter the Creek.

3.4.2 Section 3704 – Performance Standards for Backfilling, Re-grading, Slop Stability and Re-contouring

(a) Where backfilling is proposed for urban uses (e.g., roads, building sites, or other improvements subject to settlement), the fill material shall be compacted in accordance with Section 7010, Chapter 70 of the UBC, or the local grading ordinance

There is no backfilling proposed for urban uses as part of this Amended Reclamation Plan. There are also no plans or proposals for any future use other than open space following reclamation.

(b) Where backfilling is required for resource conservation purposes, fill material shall be backfilled to the standards required for the resource conservation use involved

There is no backfilling proposed for conservation uses.

(c) Piles or dumps of mining waste shall be stockpiled in such a manner as to facilitate phased reclamation. They shall be segregated from topsoil, etc.

Soil obtained by processing rock material is used to support fill material along the length of the site roads.

(d) Final reclaimed fill slopes shall not exceed 2:1 (horizontal to vertical), except with support of geologic and engineering analysis

(e) At closure, all fill slopes, including permanent piles or dumps of mine waste and overburden, shall conform with the surrounding topography and/or approved end use

All fill slopes will be consistent with the geotechnical recommendations of the Geology report (Attachment 5). There will be no permanent piles or dumps of mine waste nor will there be any overburden remaining on the subject site. All overburden material within the processing areas will be used as part of the re-vegetative plan for this Reclamation Plan Compliance Amendment.

(f) Cut slopes, including final highwalls and quarry faces, shall have a minimum slope stability factor of safety that is suitable for the approved end use and conform with the surrounding topography and/or approved end use

Quarry slopes shall be as set forth in the Attachment 5 and 6 by Scott Hogrefe, Gold Coast Geoservices.

(g) Permanent placement of piles or dumps of mining waste and overburden shall not occur within wetlands, unless mitigation acceptable to the lead agency has been proposed to offset wetland impacts and/or losses:

There will be no placement of material of any type within the wetlands of the adjacent Matilija Creek. Therefore, there are no requirements by any regulatory agency to provide an offset regarding approved quarry operations

3.4.3 Section 3705 – Performance Standards for Re-vegetation

(a) Suitable Vegetative Cover shall be provided:

The map sheet included in the Reclamation Plan that depicts the re-vegetation of the final reclaimed surface is shown as **Attachment A**.

Prior to mining activities, the site contained mixed chaparral dominated by chamise (Adenostoma fasculatum), scrub oak (Quercus domosa), California sagebrush (Artemisia California), laurel leaved sumac (Rhus laurina), California buckwheat (Erogonum fasiculatum), toyon (Heteomeles arbutifolia) and ceanothus (Ceanolus,sp.)

The components of the proposed revegetation hydroseed mix* are as follows:

Species	Common Name	Pounds PLS/acre
Vulpia microstachys	Six-weeks fescue	5
Nassella Pulchra	Purple needlegrass	3
Eriogonum fasciculatum	California buckwheat	5
Artemisia california	California sagebrush	3
Salvia Leucophylla	Purple sage	3
Lupinus albifrons	Silver bush lupine	2
Eriophyllum confertillorum	Golden yarrow	3
Eschscholzia californica	California Poppy	.5
Lotus scoparius	deerweed	4
Total		28.5

*Note: This seed mix will also include the binding and fertilizer elements of a typical hydro-seed application.

(b) Test Plots shall be provided:

Test plots will be established during reclamation of Area 1. Test plots will demonstrate the reclamation process within each planting “zone”. The test plots are expected to be approximately 10 10’ in size and be located near the common line of amended Area 1 and number on the outside of the switchback turn since this location should provide suitable test plot areas for each of the reclaimed conditions onsite. The seed mix listed above will be applied using hydroseed application methods.

The test plots will be monitored and Re-vegetation success of these test plots and of this RPCA shall be judged by the following standard:

- Native perennial cover shall equal 25% of the area reseeded.
- Species richness shall equal 4 native perennial species per 100 sq. meters.
- Perennial stem density equal to 50 per 100 sq. meters

TEST PLOT DESIGN. Fenced areas 4 plots measuring 10 feet by 10 feet each.

Test Plot Number	Treatment	Comments
Plot 1	Control no treatment	Determine native plant germination and success rate of natural revegetation
Plot 2	Seed mix at 28.5 pounds per acre	Germination test of seed mix
Plot 3	Seed mix at 28.5 pounds per acre over ripped road surfaces and slopes	Revegatation formula covered by FACE- Ripped roads and Bench areas
Plot 4	Seed mix at 28.5 pounds per acre per acre over rock face slopes	Revegatation formula covered by FACE – exposed hard rock area

Working bench areas will be ripped with a tracked dozer and hydro-seeded using the above seed mix table within 90 days of conclusion of mining activities. Other non-rock areas will be hydro-seeded with the aforementioned seed mix. Areas not available by access to a hydro-seeding will be accomplished by hand broadcasting.

Should remediation of the test plots fail, a qualified botanist will evaluate the need to implement remedial measures by a visual assessment of the vegetation within the test plots. If native vegetation has not established, then the investigator will suggest the appropriate remedial measures necessary.

Monitoring for revegetation success will be conducted annually during the spring until performance standards have been achieved. Sampling will be carried out by evaluation of 3 - 400 square foot plots for each of the two revegetation procedures. (ripped roads and rock face) for a total of 6 evaluation areas.

(c) Where surface mining activities result in compaction of the soil, ripping or disking shall be used in areas to be re-vegetated

All paved haul road will remain post-reclamation but the working bench areas shall be ripped to a depth of 12 to 16 inches to aid in root penetration. The ripped areas will be left in a roughened condition to aid in trapping seed and organic matter. The site will not be compacted to engineering standards as roots cannot penetrate compacted areas.

(d) Prior to closure, all access roads shall be stripped of road base materials

<u>The paved haul roads which currently exist on the site shall remain for the operator's private use and access post-reclamation</u>. <u>Nor are any such paved roadways planed in the future</u>. All working bench areas shall be ripped to a depth of 12 to 16 inches to aid in root penetration. The ripped areas will be left in a roughened condition to aid in trapping seed and organic matter. The site will not be compacted to engineering standards as roots cannot penetrate compacted areas.

(e) Soil analysis shall be required to determine the presence of essential elements for plant growth

A soils analysis will be completed prior to any test plots being hydro-seeded or any final reclamation activities. The soils analysis results shall be provided to the hydro-seed contractor prior to any application on site.

(f) Temporary access for exploration shall not disrupt the soil surface except where necessary to gain safe access

No future mineral exploration is contemplated by the current mine operator/owner.

(g) Native species shall be used for re-vegetation

Please see the re-vegetative seed mix identified in Section 3.3a

(h) Planting shall be conducted during the most favorable period of the year

Seeding of the quarry slope surfaces will be conducted between October and December to coincide with the start of the annual wet season. Seed germination would be initiated by natural rainfall.

(i) Soil stabilizing practices shall be used where necessary to control erosion

Earthen berms will be established on the downward side of the haul road and working/processing areas to control erosion until vegetative cover has been established.

(j) If irrigation is used, the operator must demonstrate that the vegetation has been self-sustaining without irrigation for a minimum of two years prior to release of financial assurances

There will be no irrigation system for the purpose of assisting the re-vegetation of the disturbed areas. The species selected for re-vegetation are native to the area and are drought tolerant. Irrigation should not be needed for areas receiving hydro-seeding and is not recommended for these areas. Large-scale irrigation will only serve to increase the growth of weedy species, thereby increasing the competitive advantage of the weedy exotic plants.

(k) Noxious weeds shall be managed

Weeds (i.e. invasive, non-native species) will be eradicated in the reclamation area identified as Compliance Areas 1 and 2 during mine operation as part of an interim activity and on the site where weeds are encountered. Invasive weeds shall be eradicated using a glyphosate herbicide, registered as Honcho Plus or similar product. These measures will remain in place until the vegetative cover of mined lands is established.

No more than 5% cover of weeds in any given 100 sq. meter area and no stands of weeds more than 2 meters in diameter within the mining boundary shall be allowed to exist without the above control being implemented.

(l) Protection measures, such as fencing of vegetated areas, shall be used where needed to protect from grazing, trampling, etc.

The two test plot areas shall be marked as such with signage notifying employees and others to keep out of the areas with vehicle, equipment, storage or trespass. These measures will remain in place until the vegetative cover of the test plot lands is established and all mining activity has been terminated on the subject site.

(m) Success of re-vegetation shall be judged based upon the effectiveness of the vegetation for the approved end use

Monitoring for revegetation success will be conducted annually during the spring until performance standards have been achieved. Sampling will be carried out by evaluation of 3 - 400 square foot plots for each of the two revegetation procedures. (ripped roads and rock face) for a total of 6 evaluation areas.

A County approved botanist shall evaluate test plots for establishment compared to other directly adjacent, undisturbed, lands. The qualified botanist will evaluate the need to implement remedial measures by a visual assessment of the vegetation within the test plots. If native vegetation has not established, then the investigator will suggest the appropriate remedial measures necessary.

Inspections with County personnel will be conducted at least annually as required by SMARA and the reclamation monitoring plan. Corrections will be made as necessary based on criteria in Section (b) above.

3.4.4 Section 3706 – Performance Standards for Drainage, Diversion Structures, Waterways and Erosion Control

(a) Surface mining and reclamation activities shall be conducted to protect on-site and downstream beneficial uses

The Storm Water Pollution Prevention Plan (SWPPP), dated March 20, 2012 (WDID 456I 019388) is intended to prevent substantial effects on downstream resources and users (Attachment 10). This project specific SWPPP has been uploaded to the State's Storm Water Database (SMARTS) and the mine is currently in conformance with required reporting requirements.

Multiple earth berms are currently in place to reduce the potential of sediment entering the creek. See Section 500.3.5 of the above Project Storm Water Pollution Prevention Plan for details.

(b) The quality of water, recharge potential, and storage capacity of groundwater aquifers shall not be diminished

The mining operation and Reclamation Plan would not reduce recharge potential or the storage capacity of ground water because the surface area and porosity of the mined area would not change by the operations. The surface material is primarily rock and the site is steep.

Potential ground water quality impacts from fuels and lubricants will be minimized by the use a very small mobile equipment fleet of ATV's in the mine area, storage of equipment away from the stream course, and regular maintenance of that equipment to limit potential releases of fuels or lubricants from that equipment. On-site there are small amounts (less than 10 gallons) of gasoline and hydraulic fluids in marked approved containers. These materials are stored within a portable container above the scale house.

There is no water well within the quarry site; therefore, there is no use of any ground water aquifer.

(c) Erosion and sedimentation shall be controlled

The Storm Water Pollution Prevention Plan (SWPPP), dated March 20, 2012 (WDID 456I 019388) is intended to prevent substantial effects on downstream resources and users.

(d) Surface runoff and drainage from surface mining operations shall be controlled

See Section 3.4(a) above. Also, during the three year period following termination of all mining activities, the quarry will be inspected every six months for erosion and sedimentation. Erosion capable of transporting one cubic yard or greater of sediment to the creek will be promptly corrected using standard BMPs.

(f) When stream diversions are required, they shall be constructed in accordance with the stream and lake alteration agreement between the operator and State Department of Fish and Game; and the requirements of the Federal Clean Water Act

The mine operator and/owner has a CA Fish & Game Streambed Alteration Agreement #1600-2006-0107-R5, dated August 2, 2006 for the purpose of removing rocks and boulders which fell into the creek in a land slide in February 2006. The rocks and boulders have currently been removed and mitigation is on-going for those areas of the adjacent stream bank affected by the slide material under the above California Fish and Game (F&G) Agreement 1600-2006-0107-R5. No stream diversions are part of mining operations. Nor were any such stream diversions permitted as part of CUP 3489-2 approved by the County of Ventura.

(g) When no longer needed, stream diversions shall be removed

There are no stream diversions created to support mining activities for this project.

3.4.5 Section 3707—Performance Standards for Prime Agricultural Land Reclamation

In addition to the standards for topsoil salvage, maintenance and redistribution, the following standards shall apply to mining

operations on prime agricultural lands where the end use is agriculture:

(a) Mining Operations which will operate on prime agricultural lands, as defined by the U.S. Soil Conservation Service (Natural Resources Conservation Service), shall return all disturbed areas to a fertility level as specified in the approved reclamation plan.

The subject site is not identified as containing prime agricultural lands as illustrated by the U. S. Natural Resources Conservation Service on their web soil survey (websoilsurvey.nrcs.gov). The site is listed as being within the Los Padres National Forest Area, California, Area No. 9 Inks-Lodo-Agua Dulce families complex, 30 to 80 percent slopes. Contact person at the Somis District Office of NRCS is Brooks Engelhart.

(b) When district soil are present, topsoil shall be salvaged and segregated by defined A, B, and C soil horizons. Upon reconstruction of the soil, the sequence of horizons shall have the A atop the B, the B atop the C, and the C atop the graded overburden.

This Section is not applicable (see Section 3.5a. above)

(c) Reclamation shall be deemed complete when productive capability of the affected land is equivalent to or exceeds, for two consecutive crop years, that of the pre-mining condition or similar crop production in the area. Productivity rates, based on reference areas described in the approved reclamation plan, shall be specified in the approved reclamation plan.

This Section is not applicable (see Section 3.5a. above)

(d) Use of fertilizers or other soil amendments shall not cause contamination of surface or ground water. Note: Authority cited: Sections 2755, 2756 and 2773, Public Resources Code. Reference 2772, Public Resources Code.

This Section is not applicable (see Section 3.5a above) as it relates to any possible future agriculture activity; however, use of fertilizers or other soil amendments as part of the reclamation project area will be limited to types and application rates consistent with applicable regulations.

3.4.6 Section 3708 - Performance Standards related to Other Agricultural Lands

This Section is not applicable (see Section 3.5a above) as it relates to any possible future agriculture activity

3.4.7 Section 3709 - Performance Standards for Building, Structure and Equipment Removal

(a) All equipment, supplies and other materials shall be stored in designated areas

All equipment and materials used for reclamation activities on the proposed project site will be stored in areas and structures designated for such uses. All waste shall be disposed by a licensed waste hauler.

(b) All buildings, structures and equipment shall be dismantled and removed prior to final mine closure, except as necessary for the end use

All buildings, structures and equipment shall be removed within six months following mine closure.

3.4.8 Section 3710 - Performance Standards for Stream Protection, including Surface and Groundwater

(a) Surface and groundwater shall be protected from pollutants

Diesel fuel and oils are used onsite for operating equipment. Fuels and lubricants are not stored on site; instead, a mobile fuel and lubricant service vehicle serves the equipment. All waste oil generated at the project site is collected and transported for off-site disposal by properly trained and licensed personnel. This procedure will continue throughout this project life.

The Mosler Rock-Ojai Quarry currently operates under an NPDES Industrial Activities general storm water discharge permit WDID No. 4561019388 which has been active since March 25, 2005.

This RPCA does not include any disturbance of jurisdictional waters. Previous consultation with the US Army Corps of Engineers, NOAA and the California Department of Fish and Game was conducted to design and implement the existing drainage and sediment control plan.

(b) In-stream surface mining operations shall be conducted in compliance with Section 1600 et seq. of the California Fish and Game Code, Section 404 of the Clean Water Act, and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

No in-stream mining occurs on-site as the current permit does not permit any in-stream surface mining within the Matilija Creek which traverses portions of APNs 009-0-090-160 and -180. Therefore this section 3710 is not applicable to this amended reclamation plan.

(c) Extraction of sand and gravel from river channels shall be regulated to control channel degradation in order to prevent undermining of bridge supports, exposure of pipelines or other structures buried within the channel, loss of spawning habitat, lowering of groundwater levels, destruction of riparian vegetation, and increased stream bank erosion (exceptions may be specified in

the approved reclamation plan). Changes in channel elevations and bank erosion shall be evaluated annually using records of annual extraction quantities and benchmarked annual cross sections and/or sequential aerial photographs to determine appropriate extraction locations and rates.

No in-stream mining occurs on-site as the current permit does not permit any in-stream surface mining within the Matilija Creek which traverses portions of APNs 009-0-090-160 and -180. Therefore this section 3710 is not applicable to this amended reclamation plan.

(d) In accordance with the requirements of the California Fish and Game Code section 1600 et seq., in-stream mining activities shall not cause fish to become entrapped in pools or in off-channel pits, nor shall they restrict spawning or migratory activities.

No in-stream mining occurs on-site as the current permit does not permit any in-stream surface mining within the Matilija Creek which traverses portions of APNs 009-0-090-160 and -180. Therefore this section 3710 is not applicable to this amended reclamation plan.

3.4.9 Section 3711 - Performance Standards for Topsoil Salvage

(a) All salvageable topsoil suitable for re-vegetation shall be removed as a separate layer from mining area. Topsoil removal shall not precede mining activities by more than one year without approval

There are no provisions for stockpiling topsoil. There is no salvageable topsoil to be obtained inasmuch as mining activities from this time forward (until June 1, 2015) will remain within the currently mined areas. Any soil obtained as part of rock processing will be used as an over layer for the haul road and to cover the two detention basins following their removal. Surplus rock fines, from processing activities, are being removed from the site intermittently. Since the site provides little suitable growth media, it may be necessary to import commercially available topsoil, compost or other amendments to the site for revegetation. Test plots will be used to determine what soil and/or amendments are necessary to achieve revegetation success criteria.

(b) Topsoil resources shall be mapped prior to stripping and the location of topsoil stockpiles shall be shown on the reclamation plan

See comments within Section 3.4.9(a) above.

(c) Soil salvage operations and phases of reclamation shall be carried out in accordance with a schedule that : 1) is set forth in the approved reclamation plan; 2) minimizes the area disturbed; and 3) is designed to achieve maximum re-vegetation success

See comments within Section 3.4.9(a).

(d) Topsoil and suitable growth media shall be used to phase reclamation as soon as can be accommodated by the mining schedule presented in the approved reclamation plan following the mining of an area. Topsoil that cannot be used immediately should be stockpiled where it will not be disturbed. Topsoil shall be clearly identified to distinguish it from mine waste. Protect stockpiles from erosion and weed growth Relocation of topsoil stockpiles must be approved

The encountered soil, as a provision of rock processing will be used as topping for the two detention basins following their removal will be reclaimed. The removed detention basins and all areas disturbed will be seeded with native erosion control seed mix to prevent erosion. Surplus rock fines, from processing activities, are being removed from the site intermittently.

(e) Topsoil and growth media shall be redistributed in a manner that results in a stable, uniform thickness consistent with the approved end use, site configuration and drainage

See comments within section 3.4.9(a).

3.4.10 Section 3712 - Performance Standards for Tailing and Mine Waste Management

State Water Resources Control Board mine waste disposal regulations in Article 1, Subchapter 1, Chapter 7 (C:15) of Title 27, California Code of Regulations, shall govern mine waste and tailings and mine waste disposal units shall be reclaimed in conformance with this article:

No mining wastes are expected to remain on the subject site at the termination of mining activities, however, if any mining waste or tailings remain on site, the waste/tailings will be placed using the fill standards established in the Geology reports (Attachment 5). Any mining wastes discharged would be in compliance with the applicable water quality control plan, including turbidity and water quality objectives. No waste from the subject site contains hazardous constituents. No waste from the site has acid generating potential; and any waste generated by current mining activities is readily containable within the two detention basins.

3.4.10.1 Section 22470: SWRCB - Applicability

No mining wastes are expected to remain on the subject site at the termination of mining activities. Any mining wastes discharged would be in compliance with the applicable water quality control plan, including turbidity and water quality objectives. No waste from the subject site contains hazardous constituents. No waste from the site has acid generating potential; and any waste generated by mining activities is readily containable.

3.4.10.2 Section 22480: SWRCB - Groups of Mining Waste

(a) Definition: Mining waste is waste from the mining and processing of ores and mineral commodities. Mining waste includes: (1) Overburden; (2) Natural geologic material which have been removed or relocated but have not been processed (waste rock); and (3) the solid residues, sludge, and liquids from the processing of ores and mineral commodities.

(b) Waste Group Classification

If there were any possible mining waste generated by this project as identified by the criteria listed in 27 CCR 22480 as either Group A, Group B, or Group C waste: this project will fall within Group C.

(c) Treatment

See comment noted in Section 3.4.10(b) below.

3.4.10.3 Section 22490: SWRCB - Mining Unit Siting and Construction Standards

(a) Proximity to Faults - New Mining Units

1. Holocene Faults

There are no expectations of any mining waste to remain on the subject site following termination of mining activities. Also, the site is not located within a mapped California Special Studies Zone (Alquist-Priola Earthquake Fault Zone).

2. Areas of Rapid Geologic Change

There are no expectations of any mining waste to remain on the subject site following termination of mining activities.

(b) Flooding - All mining units shall be protected from flooding as shown on Table 1.2 of the Section 22490 SWQCB regulations

The existing active mine site currently operating more than 100 feet in elevation above Matilija Creek. Due to past plantings and other back protections, there is no expectation that the Creek will undercut the existing bank to a degree that will affect this existing mine site.

(c) Construction and Discharge standards

The Storm Water Pollution Prevention Plan (SWPPP), dated June 22, 2006 (WDID No. 456I019388) and the annual implementation of Best Management Practices (see Attachments C and Q of the above Plan) would prevent substantial effects on downstream resources and users caused by mining activities. This SWPPP has been uploaded to State online storm water filing system.

(d) Registered Professionals

Retention structures (during mining) shall be designed by a California registered professional civil engineer.

(e) General Containment Structure Criteria

See the Storm Water Pollution Prevention Plan (SWPPP), dated June 22, 2006 (WDID No. 456I019388); specifically, Section 500 of this Reclamation Plan as to construction criteria.

(f) Liners

This section is not applicable as the mine site does not use liners in any detention structure and liners are not required for any other operation of the mine site

(g) Leachate Collection and Removal Systems

This section is not applicable as the mine site does not require a leachate collection and removal system and it is not required for any other operation of the mine site

(h) Precipitation and Drainage Controls; Design Storm

The Storm Water Pollution Prevention Plan (SWPPP), dated August 2020 and the implementation of Best Management Practices (see Attachments C and Q of the above Plan) of this Plan would prevent substantial effects of erosion and sedimentation.

A project specific SWPPP has been uploaded to the State's Storm Water Database (SMARTS).

Also, two detention basins along with multiple earth berms are currently in place to reduce the potential of sediment entering the creek. See Section 500.3.5 of the above Project Storm Water Pollution Prevention Plan for details. As noted, these will be removed following completion of mining.

3.4.10.4 Section 22510 - Closure and Post-Closure Maintenance of Mining Units

(a) Closure Performance Standard

This RPCA includes the incorporation of permanent sediment control measures including grading, drainage control features and limited re-vegetation of the mine site. The reclaimed land would also meet applicable State and County standards for stability. These measures would avoid substantial erosion of the final reclaimed slopes and preclude the potential for substantial sedimentation of nearby streams.

(b) Plan

Mining Units shall be closed according to an approved closure and post closure maintenance plan which implements this section and provides for continued compliance with the applicable standards in this article for waste containment, precipitation and drainage controls, and monitoring throughout closure and the post closure maintenance period.

Upon approval, this RPCA would fulfill the requirements of this section.

(c) Reclamation

This section is not applicable as the Mosler Rock – Ojai Quarry is not a waste generator under the provisions of the Regional Water Quality Control Board.

(d) Oversight and Monuments

The existing Mosler Rock – Ojai Quarry is not an existing or new solid waste landfill. Therefore the requirements of SWRCB Section 20950 (b) and (d) are not applicable.

(e) Inactive Units

Containment structures at inactive Mining Units shall be subject to the same standards as apply to an active Mining Unit.

The two existing detention basins on the mine site will remain following the conclusion of all reclamation activities.

(f) Financial Assurance

The operator's financial assurance to be established under SMARA for this reclamation plan is adequate to comply with any and all closure and post-closure maintenance requirements as verified by County and State Office of Mine Reclamation staff.

(g) Ending Post-Closure

Post closure monitoring will be ended upon achievement of the re-vegetation success criteria and release of the reclamation bond or letter of credit held by the County of Ventura.

(h) Vegetation

Re-vegetation of the proposed project site will not impair the integrity of any of the water drainage detention features retained following r site reclamation. No irrigation of vegetation is proposed as part of the re-vegetation plan for the subject site due to the fact that hydro-seeding will proceed the rain season. The hydro-seed mix is made up of native plant material so it is expected that only annual rain is needed to promote growth.

(i) Waste Pile Closure Standards

(j) Surface Impoundment Closure Standards

(k) Tailings Pond Closure Standards

No waste piles will remain at the time mining concludes and reclamation begins. There are no surface impoundment structures or surface features. The subject site does not have any ponds to capture mine tailings. There are no plans to provide any such ponds

(l) Erosion and Sedimentation Protection

The erosion, sedimentation control and re-vegetation features are designed to minimize erosion and the threat of water quality degradation from sedimentation.

The detention/retention basin complex has been designed to address first flush runoff pollutants per the State requirements. It further functions to mitigate potential increases in storm water runoff due to activity at the site. The erosion, sedimentation control and re-vegetation features of this Amended Reclamation Plan are designed to minimize erosion and the threat of water quality degradation from sedimentation.

3.4.11 Section 3713 - Performance Standards for Closure of Surface Openings

(a) Except those used solely for blasting or those that will be mined through within one year, all drill holes, water holes, water wells, and monitoring wells shall be completed or abandoned in accordance with each of the following: (1) Water Code sections 13700, et seq. and 13800, et seq.; (2) the applicable local ordinance adopted pursuant to Water Code section 13803; (3) the applicable Department of Water Resources report issued pursuant of Water Code section 13800; and (4) Subdivisions (1) and (2) or section 2511(g) of Chapter 15 of Title 23 regarding discharge of waste to land.

The subject mine site has never contained any water holes, water wells or monitoring wells. All drill holes which were used for occasional blasting will have been completely mined through prior to any reclamation activities.

(b) Prior to closure, all portals, shafts, tunnels, or other surface openings to underground workings shall be gated or otherwise protected from public entry to protect the public and wildlife

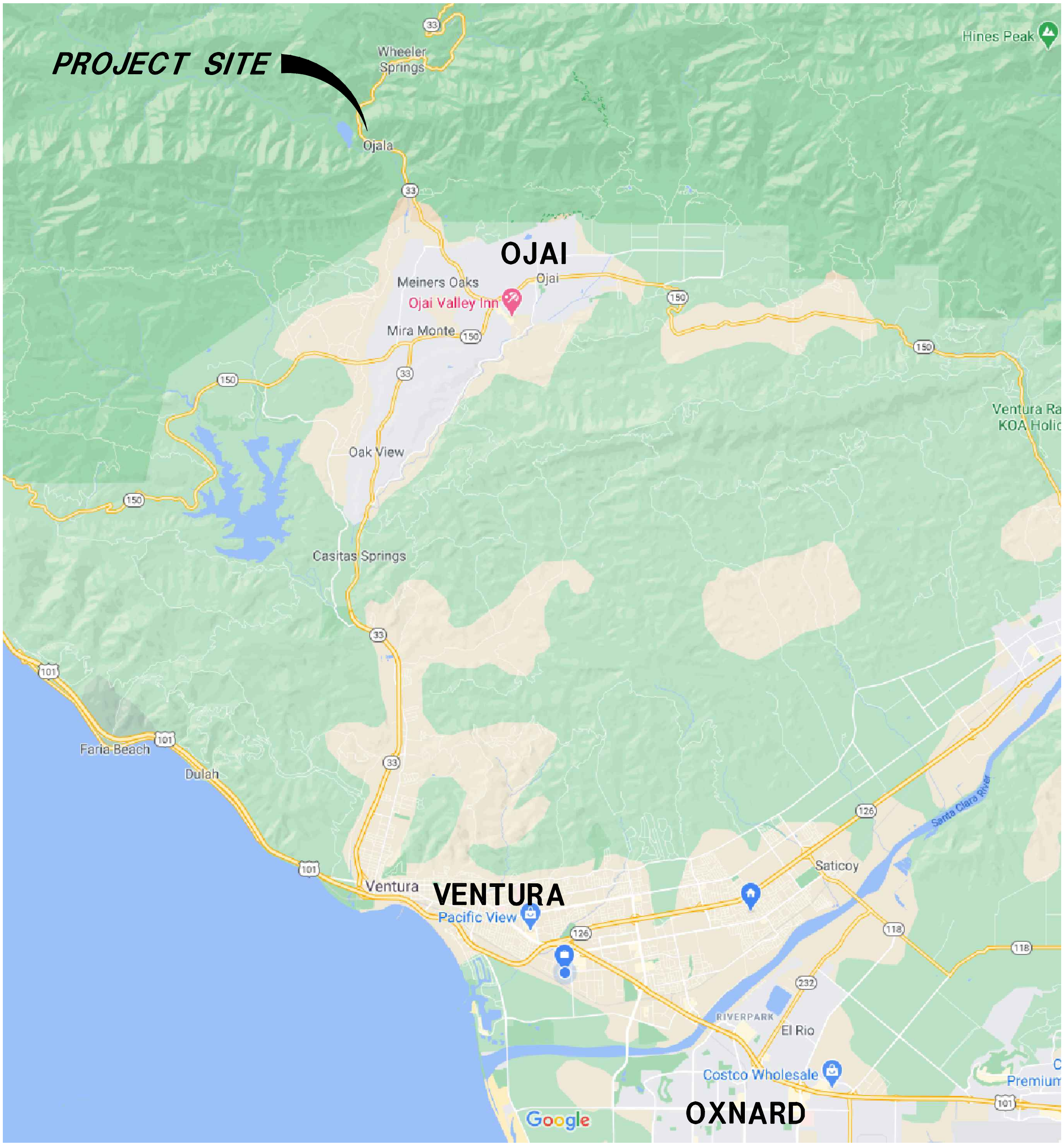
No underground workings currently exist nor are they planned to be established at the project site. The only vehicle access to the site will remain protected with a locked gate and related fencing following all reclamation activities.

5.0 FINANCIAL ASSURANCE (SMARA SECTION 2773.1)

A Revised Financial Assurance Cost Estimate, prepared by Jensen Design & Survey, Inc., and RGP Planning and Development Services, was accepted by the County on February 28, 2012 and attached as Exhibit 18D of the staff report package.

6.0 STATEMENT OF RESPONSIBILITIES

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.



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FAX 805/654-6979

MOSLER ROCK - OJAI QUARY

VICINITY MAP

SHEET 1 OF 1

Dec 10, 2020

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MOSLER ROCK - OJAI QUARY

AERIAL IMAGE

SHEET 1 OF 1

Dec 10, 2020

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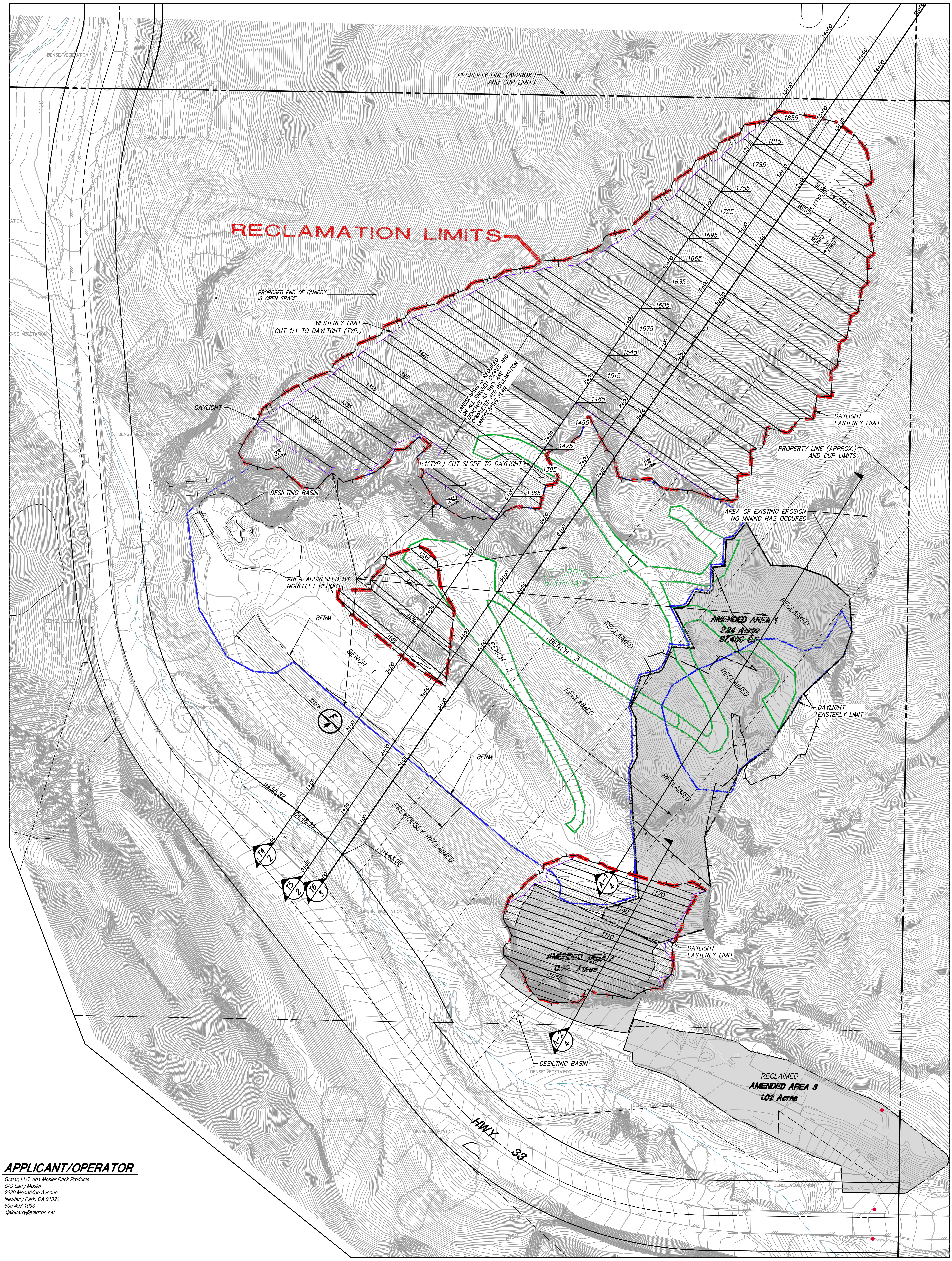

APPLICANT/OPERATOR

Gralar, LLC, dba Mosler Rock Products
C/O Larry Mosler
2280 Moonridge Avenue
Newbury Park, CA 91320
805-498-1093
ojaiquarry@verizon.net

CONTOURS ARE BASED ON AERIAL SURVEY BY JDS - AUGUST 2019

2020

60' 30' 0' 60' 120'
GRAPHIC SCALE: 1"=60'

LEGEND

- NORFLEET REPORT LIMITS
- RECLAMATION AREA
- ACCESS ROADS

SEE SHEET 2 & 3 FOR CROSS SECTIONS
SEE SHEET 4 FOR TYPICAL DETAILS

LEGAL DESCRIPTION

Those portions of the east half of the southwest quarter of the southwest quarter and the southwest quarter of the southwest quarter of the southwest quarter of Section 21; the southeast quarter of the southeast quarter of the southeast quarter of Section 20; the northeast quarter and that portion of the northeast quarter of the southeast quarter of Section 29, Township 5 north, range 23 west, San Bernardino Meridian, in the County of Ventura, State of California, according to the official plat of survey thereof, as described and shown as Parcel 3 in Exhibits A and B of Parcel Map Waiver No. 792, recorded January 21, 1998, as Document No 98-007402 of Official records.

Except that portion granted to the State of California in deed recorded October

GELOGIC DESCRIPTION

The Ojai Quarry is located within Matilija Canyon in the southeast part o
light-colored sandstone and light to dark-colored siltstone, assigned to t
geology of the Ojai Quarry is discussed in detail in the Norfleet report (2
detailed geologic discussion and analysis of the site conditions (see Appe

The geologic conditions within the RPA are essentially the same as those
into three domains or geomechanical units (GMU's), as shown on the Ge
into the RPA to the north of the area mapped by Norfleet, as shown on t
essentially vertical to overturned bedding structure across the quarry. Jo
bedding. No daylighted bedding or daylighted jointing plane conditions a

County of Ventura
Planning Director Hearing
Case No. PL18-0136
Exhibit 3b - Proposed
Reclamation Plan Amendment
Site Plan

REGISTERED PROFESSIONAL ENGINEER
FREDERICK T. GIROUX
No. C 057289
CIVIL
STATE OF CALIFORNIA

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SCALE: 1"=60'	J.N.: MOS02.4059
DATE: 12/10/2020	DWG. NAME: 4059_2019 01 Rec Plan.dwg

RECLAMATION PLAN
FOR
OJAI QUARRY

HWY 33
City of Ojai
COUNTY OF VENTURA — STATE OF CALIFORNIA

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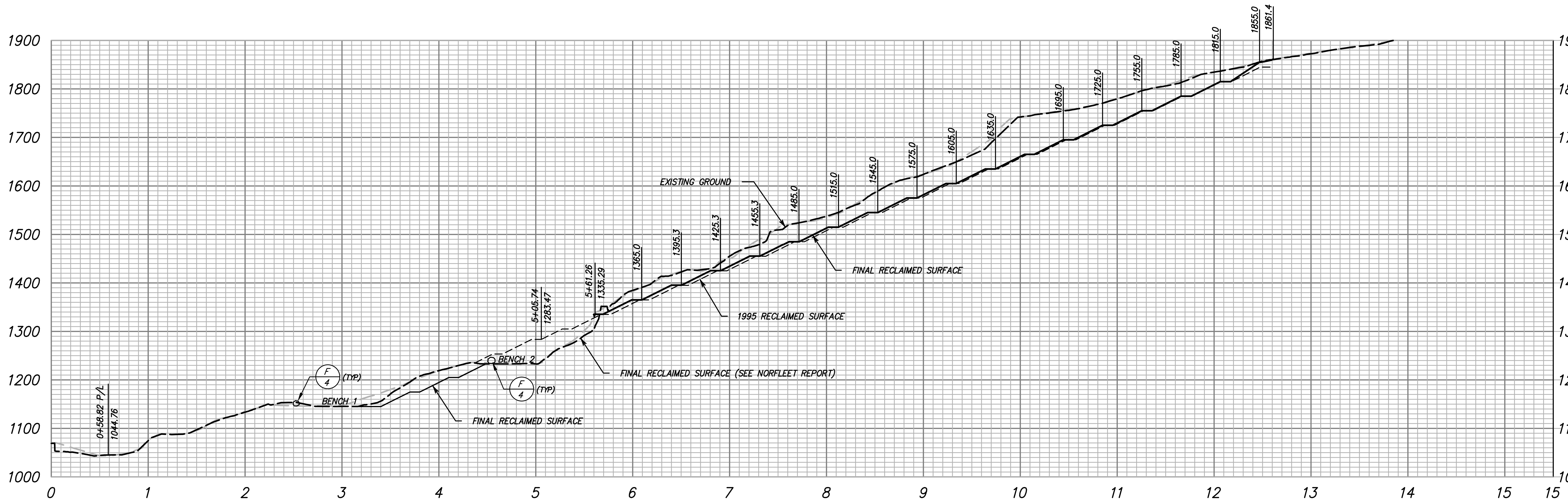


SECTION T4

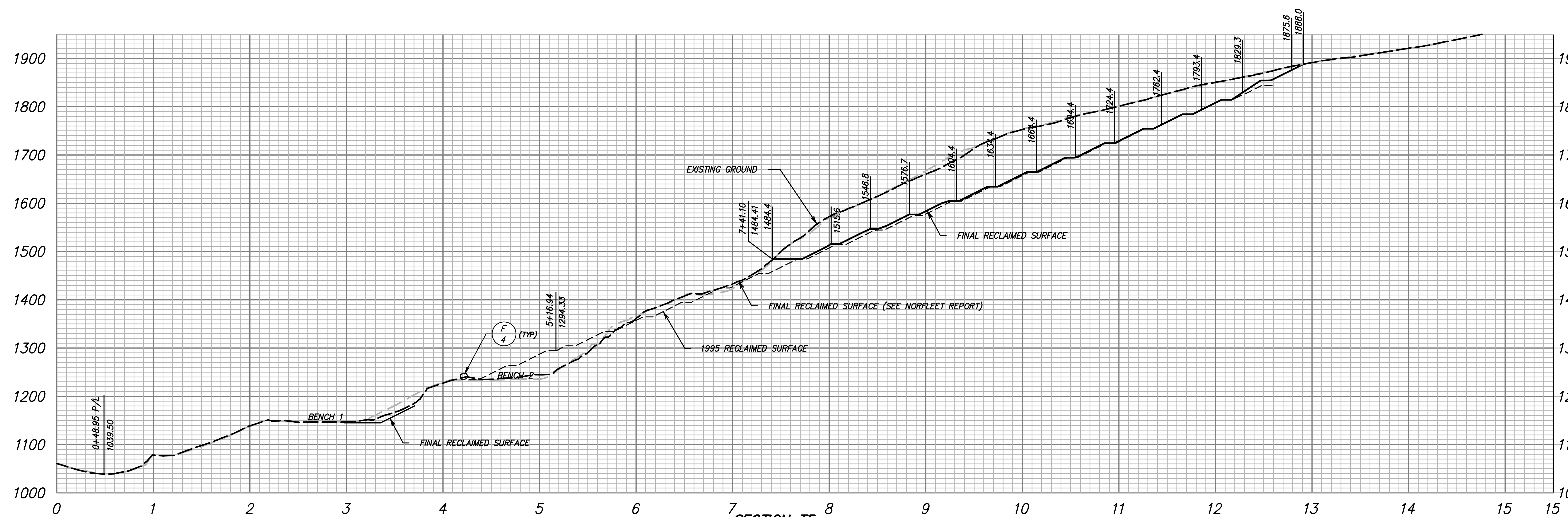
HORZ SCALE: 1" = 60'
VERT SCALE: 1" = 30'

RECLAMATION NOTES

1. ALL ACCESS ROADS SHALL BE GRADED TO DRAIN INTO HILLSIDE WITH BOULDERS PLACED ALONG OUTSIDE OF ROADWAY, AS SHOWN IN DETAIL F, SHEET 3.
2. ALL ACCESS ROAD DRAINAGE CANAL/DITCHES SHALL BE CONSTRUCTED ON EXISTING BEDROCK
3. THIS RECLAMATION PLAN WAS PREPARED BASED ON THE QUARRY EXCAVATION SCHEME AS SHOWN ON SHEET 1 (QUARRY PLAN), BUT DUE TO POSSIBLE CHANGES IN QUARRY OPERATIONS DUE TO CHANGE IN STRUCTURAL GEOLOGY OF UNDERLYING STRATA, THIS RECLAMATION PLAN MAY BE REVISED ACCORDINGLY, SUBJECT TO THE REVIEW AND APPROVAL OF THE LEAD AGENCY.
4. QUARRY EXCAVATION SHALL BE UNDER THE OBSERVATION OF AN ENGINEERING GEOLOGIST WHO SHALL PROVIDE PERIODIC INSPECTION ON AT LEAST AN ANNUAL BASIS OF MEASURES TO MITIGATE QUARRY SAFETY AND TO AID IN IDENTIFICATION OF ANY CHANGES IN TERRAIN DISTURBANCE WITHIN OR ADJACENT TO QUARRY SITE. ANY CHANGE IN SLOPE PERFORMANCE OR EROSION/SEDIMENTATION CONDITIONS MAY REQUIRE REVISION TO THIS RECLAMATION PLAN. RESULTS OF THE ANNUAL INSPECTION SHALL BE SUMMARIZED IN A REPORT PREPARED BY THE ENGINEERING GEOLOGIST.
5. QUARRY EXCAVATION SHALL BE LIMITED TO 30 FOOT MAX BENCHES WITH TEMPORARY QUARRY EXCAVATION SLOPE NO TO EXCEED 60 DEGREE ANGLE OF REPOSE, WITHOUT WRITTEN APPROVAL BY THE ENGINEERING GEOLOGIST. TEMPORARY SLOPES ARE DEFINED AS SLOPES GRADED WITHIN THE PREVIOUS 12 MONTHS. FINAL SLOPES SHALL NOT EXCEED A 45 DEGREE ANGLE OF REPOSE AND SHALL HAVE 10 FOOT WIDE BENCHES EVERY 30 VERTICAL FEET, UNLESS APPROVED BY THE ENGINEERING GEOLOGIST AND THE LEAD AGENCY. NO PERCHED BOULDERS SHALL EXIST AT ANY TIME ON THE SITE.
6. WARNING SIGN INDICATING QUARRY HAZARD AND POSSIBLE ROCKFALL DANGER SHALL BE POSTED ALONG HIGHWAY 33 BELOW THE QUARRY SITE. WARNING SIGN SHALL ALSO BE POSTED INDICATING NO RECREATIONAL USE OF CREEK BELOW QUARRY SITE.
7. THE WESTERLY EDGE OF THE QUARRY SITE SHALL BE SLOPED AND BERMED TO PREVENT ANY MATERIALS FROM ROLLING DOWN THE NATURAL SLOPE INTO HIGHWAY 33, OR MATILIJA CREEK. IN THE EVENT THAT QUARRY MATERIALS FALL INTO MATILIJA CREEK, SAID MATERIALS SHALL BE REMOVED IMMEDIATELY BY CONTRACTOR.

QUARRY NOTES

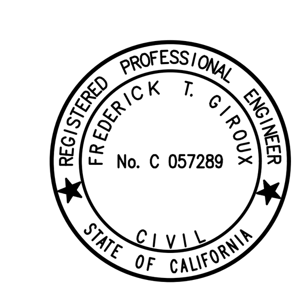
1. THIS PLAN WAS PREPARED TAKING INTO CONSIDERATION THE FINDINGS AND RECOMMENDATIONS OF PACIFIC MATERIALS LABORATORY, INC REPORT DATED JULY 25, 1988, ALONG WITH REPORTS PREPARED BY GOLD COAST GEOSERVICES, DATED DECEMBER 7, 2018 AND BY NORFLEET CONSULTANTS, DATED JULY 2015.
2. PRIOR TO ANY QUARRY EXCAVATION, ANY ON-SITE PERCHED BOULDERS OR LAND/ROCK SLIDES UPSLOPE THAT POSE DANGER TO ANY DOWNSLOPE QUARRY EXCAVATION SHALL BE REMOVED FIRST.
3. QUARRY EXCAVATION SHALL COMMENCE FROM TOP OF SLOPE, PROCEEDING DOWNWARD ACCORDING TO BENCH DETAIL D, SHEET 3.



SECTION T5

HORZ SCALE: 1" = 60'
VERT SCALE: 1" = 30'

2020



SEE SHEET 1 FOR SITE PLAN
SEE SHEET 4 FOR TYPICAL DETAILS

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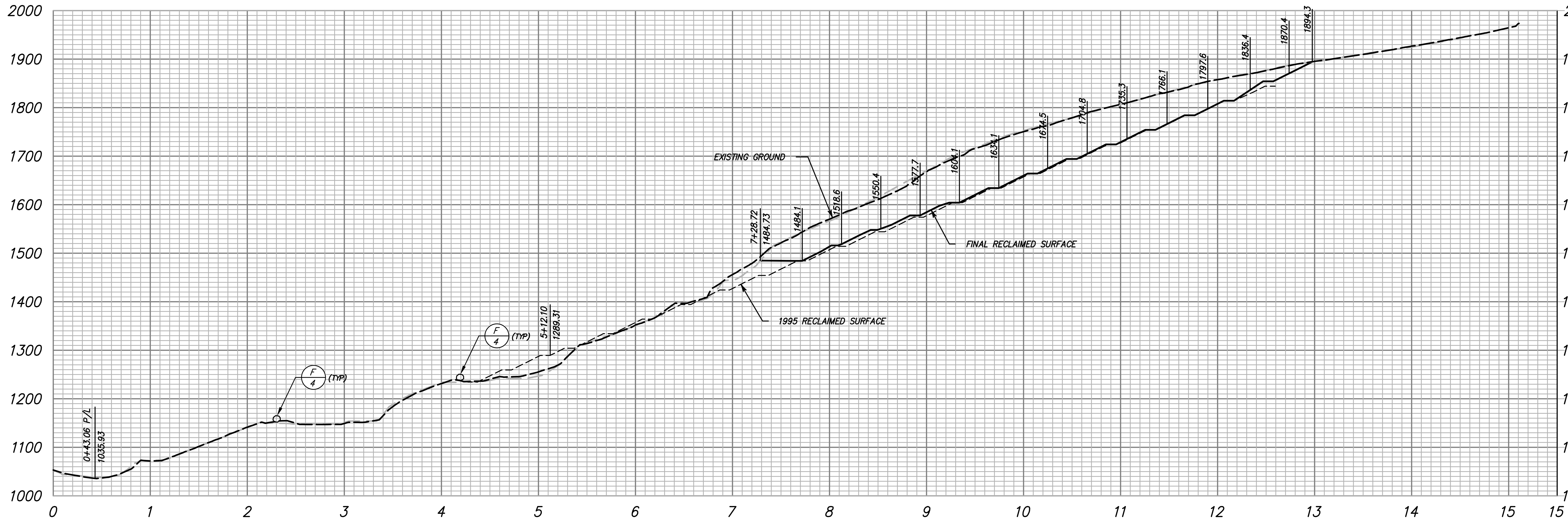
DATE: 12/10/2020
DWG. NAME: 4059_2019 Rec Plan – Sections.dwg

RECLAMATION PLAN FOR OJAI QUARRY

HWY 33
City of Ojai
COUNTY OF VENTURA
STATE OF CALIFORNIA

SHEET 2 OF 4

J:\MOS24059\Eng\Improvement Plans\2019 Rec Plan Update\4059_2019 Rec Plan – Sections.dwg Dec 10, 2020, 2:30pm jmccoskey



SECTION T6
HORZ SCALE: 1" = 60'
VERT SCALE: 1" = 30'

RECLAMATION NOTES

1. ALL ACCESS ROADS SHALL BE GRADED TO DRAIN INTO HILLSIDE WITH BOULDERS PLACED ALONG OUTSIDE OF ROADWAY, AS SHOWN IN DETAIL F, SHEET 3.
2. ALL ACCESS ROAD DRAINAGE CANAL/DITCHES SHALL BE CONSTRUCTED ON EXISTING BEDROCK
3. THIS RECLAMATION PLAN WAS PREPARED BASED ON THE QUARRY EXCAVATION SCHEME AS SHOWN ON SHEET 1 (QUARRY PLAN), BUT DUE TO POSSIBLE CHANGES IN QUARRY OPERATIONS DUE TO CHANGE IN STRUCTURAL GEOLOGY OF UNDERLYING STRATA, THIS RECLAMATION PLAN MAY BE REVISED ACCORDINGLY, SUBJECT TO THE REVIEW AND APPROVAL OF THE LEAD AGENCY.
4. QUARRY EXCAVATION SHALL BE UNDER THE OBSERVATION OF AN ENGINEERING GEOLOGIST WHO SHALL PROVIDE PERIODIC INSPECTION ON AT LEAST AN ANNUAL BASIS OF MEASURES TO MITIGATE QUARRY SAFETY AND TO AID IN IDENTIFICATION OF ANY CHANGES IN TERRAIN DISTURBANCE WITHIN OR ADJACENT TO QUARRY SITE. ANY CHANGE IN SLOPE PERFORMANCE OR EROSION/SEDIMENTATION CONDITIONS MAY REQUIRE REVISION TO THIS RECLAMATION PLAN. RESULTS OF THE ANNUAL INSPECTION SHALL BE SUMMARIZED IN A REPORT PREPARED BY THE ENGINEERING GEOLOGIST.
5. QUARRY EXCAVATION SHALL BE LIMITED TO 30 FOOT MAX BENCHES WITH TEMPORARY QUARRY EXCAVATION SLOPE NO TO EXCEED 60 DEGREE ANGLE OF REPOSE, WITHOUT WRITTEN APPROVAL BY THE ENGINEERING GEOLOGIST. TEMPORARY SLOPES ARE DEFINED AS SLOPES GRADED WITHIN THE PREVIOUS 12 MONTHS. FINAL SLOPES SHALL NOT EXCEED A 45 DEGREE ANGLE OF REPOSE AND SHALL HAVE 10 FOOT WIDE BENCHES EVERY 30 VERTICAL FEET, UNLESS APPROVED BY THE ENGINEERING GEOLOGIST AND THE LEAD AGENCY. NO PERCHED BOULDERS SHALL EXIST AT ANY TIME ON THE SITE.
6. WARNING SIGN INDICATING QUARRY HAZARD AND POSSIBLE ROCKFALL DANGER SHALL BE POSTED ALONG HIGHWAY 33 BELOW THE QUARRY SITE. WARNING SIGN SHALL ALSO BE POSTED INDICATING NO RECREATIONAL USE OF CREEK BELOW QUARRY SITE.
7. THE WESTERLY EDGE OF THE QUARRY SITE SHALL BE SLOPED AND BERMED TO PREVENT ANY MATERIALS FROM ROLLING DOWN THE NATURAL SLOPE INTO HIGHWAY 33, OR MATILIJA CREEK. IN THE EVENT THAT QUARRY MATERIALS FALL INTO MATILIJA CREEK, SAID MATERIALS SHALL BE REMOVED IMMEDIATELY BY CONTRACTOR.

QUARRY NOTES

1. THIS PLAN WAS PREPARED TAKING INTO CONSIDERATION THE FINDINGS AND RECOMMENDATIONS OF PACIFIC MATERIALS LABORATORY, INC REPORT DATED JULY 25, 1988, ALONG WITH REPORTS PREPARED BY GOLD COAST GEOSERVICES, DATED DECEMBER 7, 2018 AND BY NORFLEET CONSULTANTS, DATED JULY 2015.
2. PRIOR TO ANY QUARRY EXCAVATION, ANY ON-SITE PERCHED BOULDERS OR LAND/ROCK SLIDES UPSLOPE THAT POSE DANGER TO ANY DOWNSLOPE QUARRY EXCAVATION SHALL BE REMOVED FIRST.
3. QUARRY EXCAVATION SHALL COMMENCE FROM TOP OF SLOPE, PROCEEDING DOWNWARD ACCORDING TO BENCH DETAIL D, SHEET 3.

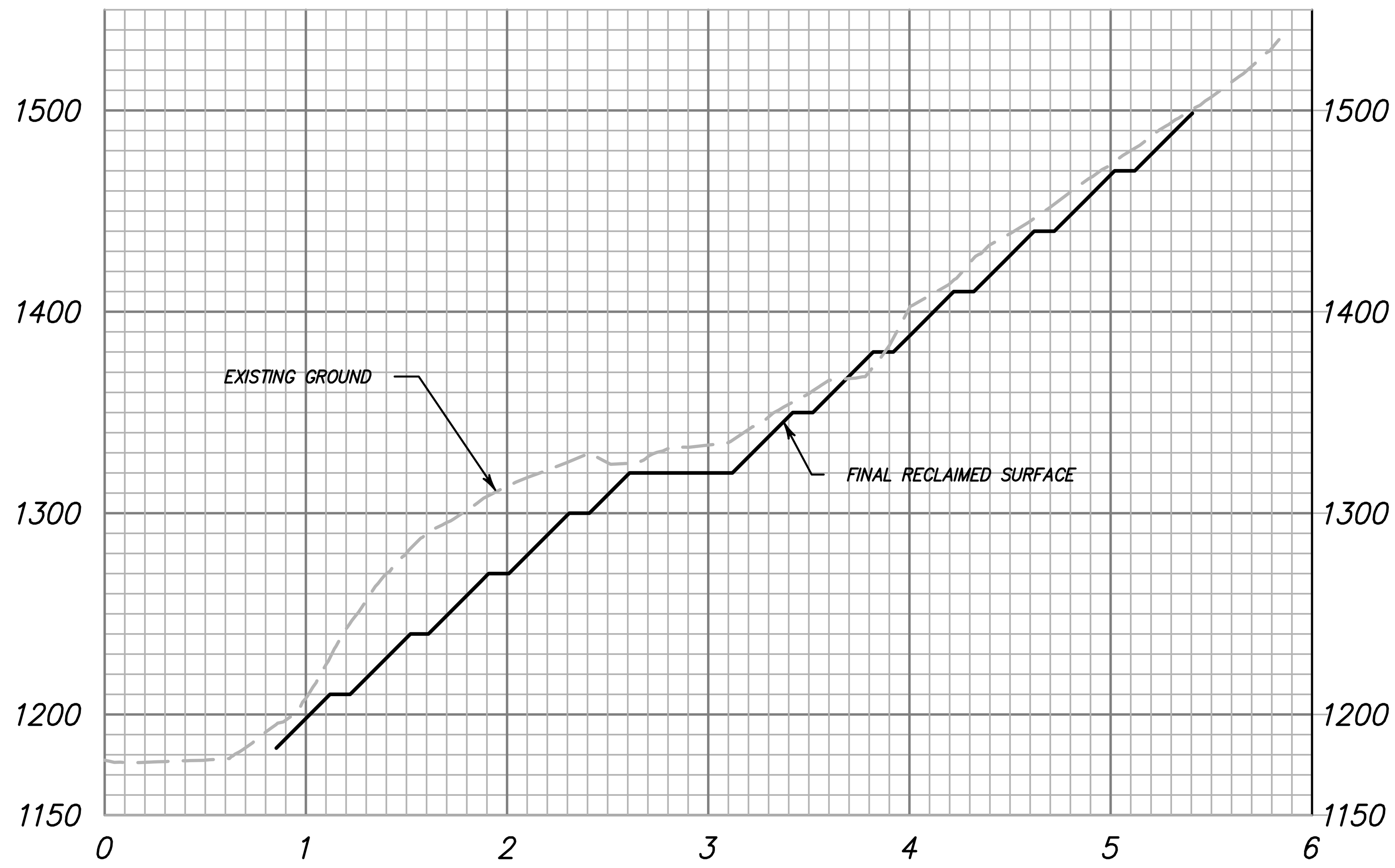
2020

SEE SHEET 1 FOR SITE PLAN
SEE SHEET 4 FOR TYPICAL DETAILS

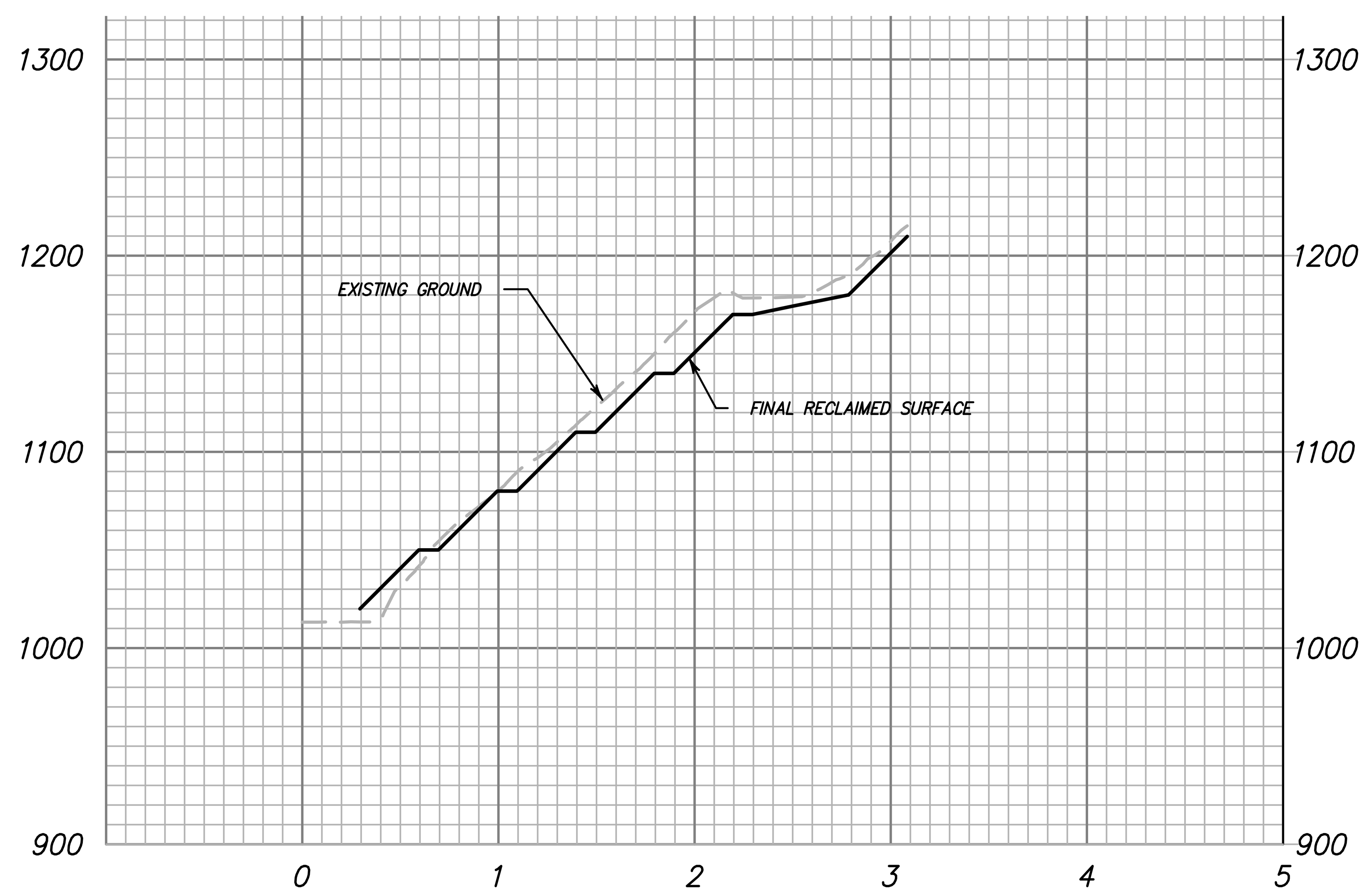
REGISTERED PROFESSIONAL ENGINEER
FREDERICK T. GIROUX
No. C 057289
CIVIL
STATE OF CALIFORNIA

JENSEN DESIGN & SURVEY, INC
www.jdscivil.com
1672 DONLON STREET
VENTURA, CALIF. 93003
PHONE 805/654-6977
FAX 805/654-6979

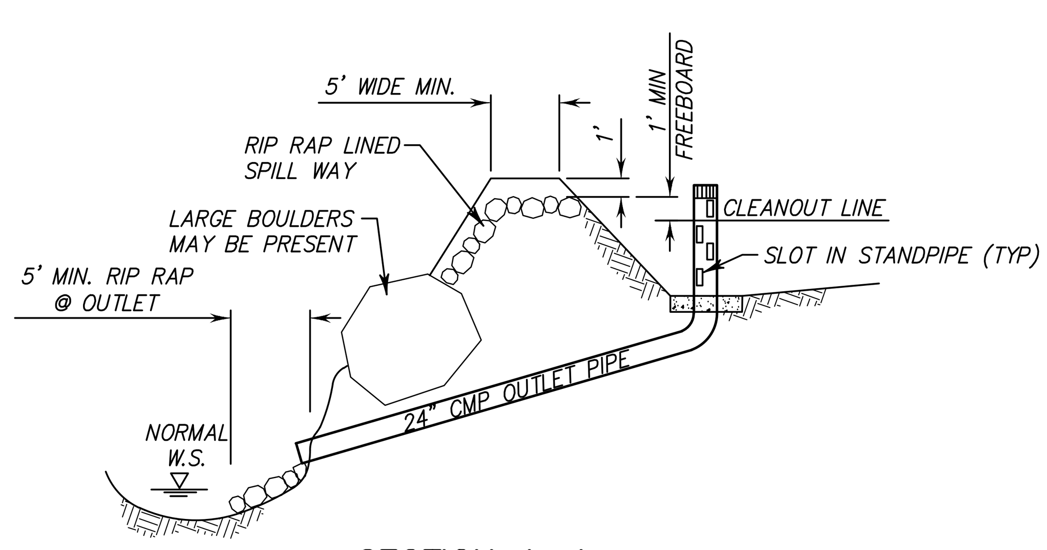
SCALE: 1"=60'	J.N.: MOS02.4059	RECLAMATION PLAN FOR OJAI QUARRY	SHEET 3 OF 4
DATE: 12/10/2020	DWG. NAME: 4059_2019 Rec Plan - Sections.dwg	HWY 33 City of Ojai COUNTY OF VENTURA STATE OF CALIFORNIA	



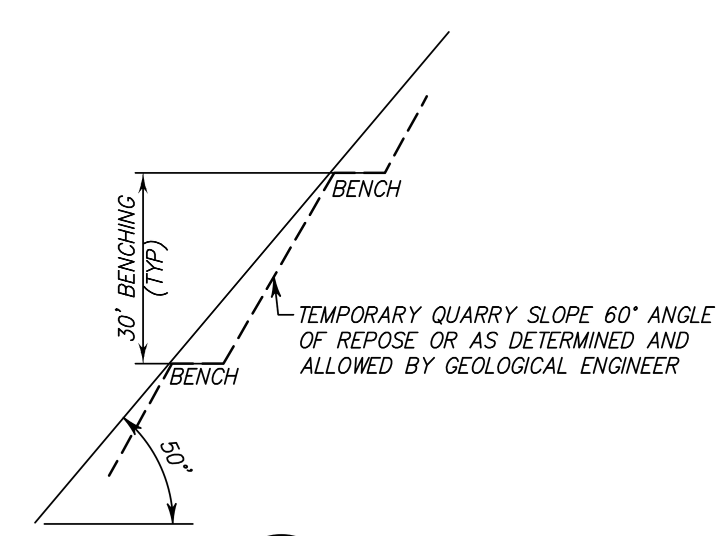
SECTION A-1
HORZ SCALE: 1" = 60'
VERT SCALE: 1" = 60'



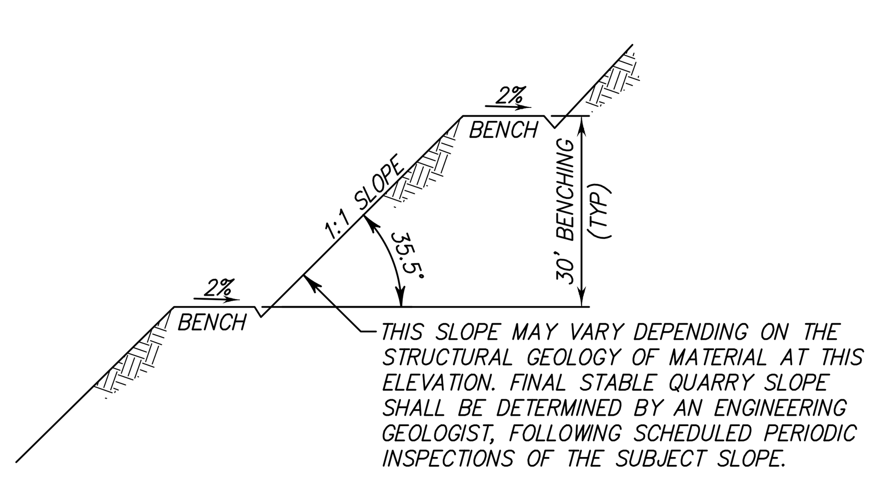
SECTION A-2
HORZ SCALE: 1" = 60'
VERT SCALE: 1" = 60'



SECTION A-A
NOT TO SCALE



D
–
BENCH DETAIL
NOT TO SCALE



E
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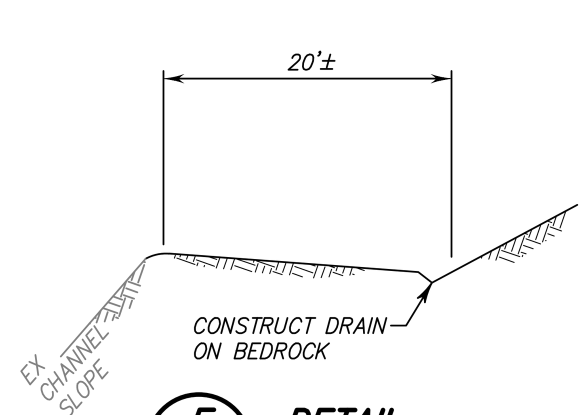
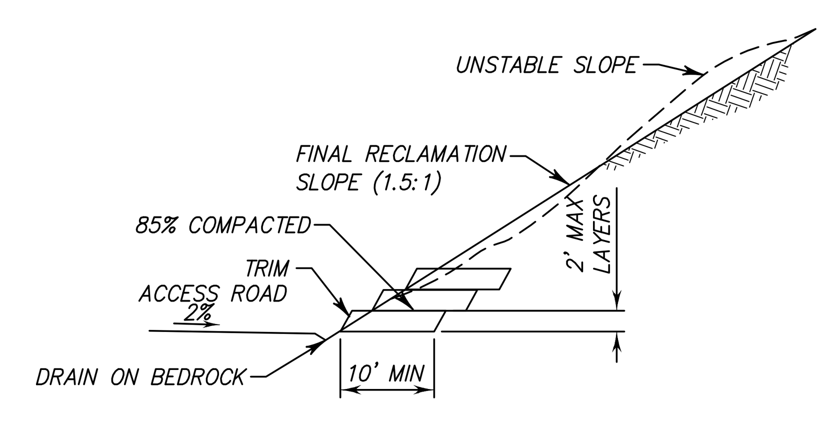
FINAL BENCHING DETAIL
NOT TO SCALE



F
–
DETAIL
NOT TO SCALE



H
–
DETAIL
NOT TO SCALE
WORK PROCEDURE ON EXISTING UNSTABLE SLOPE

SEE SHEET 1 FOR SITE PLAN
SEE SHEET 2 & 3 FOR SECTIONS

2020

JENSEN DESIGN & SURVEY, INC www.jdscivil.com 1672 DONLON STREET VENTURA, CALIF. 93003 PHONE 805/654-6977 FAX 805/654-6979	RECLAMATION PLAN FOR OJAI QUARRY HWY 33 City of Ojai COUNTY OF VENTURA STATE OF CALIFORNIA	SHEET 4 OF 4
SCALE: 1"=60' J.N.: MOS02.4059		
DATE: 12/10/2020 DWG. NAME: 4059_2019 Rec Plan – Sections.dwg		

August 22, 2019
File No. GC18-092902

Ventura County Planning Department
800 S. Victoria Avenue
Ventura, CA 93009

SUBJECT: Engineering Geologic Report for Ojai Quarry, Ojai, County of Ventura.

Ladies and Gentlemen:

In accordance with your request, this report provides an updated geologic analysis and discussion of slope stability for the Ojai Quarry. The scope of work in preparation of this report included the following:

1) Review of geologic data for the Ojai Quarry in previous geologic reports prepared by Norfleet Consultants (see reference list in Appendix I).
2) Site reconnaissance on June 8, 2019 to observe and evaluate the current site conditions.
3) Review of aerial topographic survey maps of the Ojai Quarry and vicinity provided by *Jensen Design & Survey*.
4) Discussions with the quarry operator, Mr. Larry Mosler.
5) Preparation of this report.

Site Geology Overview

The Ojai Quarry is an active mine located on the easterly side of State Highway 33 ("Maricopa Highway") about 4 miles north of the city of Ojai within unincorporated Ventura County. Eocene age (34-56 million years old) marine sandstone and siltstone assigned to the Matilija Formation is mined at the quarry for construction materials and rock products.

County of Ventura
Planning Director Hearing
Case No. PL18-0136
Exhibit 3c - Engineering Geologic Report

The Matilija Formation within and adjoining the quarry varies from thickly bedded or massive, to well-bedded and medium to thickly bedded, dipping at high angle (80-85 degrees) to the southeast. Complex high angle jointing planes vary from closely spaced to widely spaced.

Slope Stability Analysis

The quarry is located within steep terrain on the lower part of a southwest sloping ridge on the east wall of Matilija Canyon. The mining operations are confined to an area approximately 650 feet in length, with about 500 feet in relief. A mining road provides vehicular access from Maricopa Highway to the actively mined slope areas. Mining excavations within the quarry vary from 1h:1v to 0.5h:1v slope ratio, varying in height with a maximum mined excavation height of about 50 feet. Slopes adjoining the quarry are steep, varying from 1.5h:1v to 1h:1v slope ratio, with about 600 feet in relief to the top of the ridge above the mining area. The slopes are deemed to be grossly stable and have a low potential for slope failure. No adverse geologic structures such as daylighted bedding planes, daylighted jointing planes, or highly fractured rock were observed in the slopes within and adjacent to the quarry.

A landslide (debris slide) occurred in May, 2019, at the upper southeast side of the mining area, originating from within the natural slope area just above the mined area. The landslide was approximately 40 feet in width, 5-10 feet in depth, and about 150 feet in length. No damages occurred as a result of the landslide, and rock material from the landslide were removed from the mining roadbed surface.

Conclusions and Recommendations

The slope conditions do not appear to be significantly changed from those described in the report by Norfleet Consultants, dated 01/15/18. Mined slopes are performing satisfactory. The slope conditions are considered to be suitable for continued mining activity. Rock topple or rock spall can occur from mined slope areas, particularly following seasonal rainstorms, so that loose rock material should be removed from the mined slope surfaces.

REMARKS

Please call this office at (805) 484-5070 if you have any questions regarding this report.

Respectfully submitted,

GOLD COAST GEOSERVICES, INC.

Scott J. Hogrefe, CEG 1516

APPENDIX
REFERENCE MATERIALS

California Division of Mines and Geology, Landslide Map of the Central and Western Santa Monica Mountains, Los Angeles and Ventura Counties, Open-File Report 83-13, 1983.

California Division of Mines and Geology, Seismic Hazards Zone Map for the 7.5-minute Point Dume Quadrangle, 2001.

Dibblee, T.W., Jr., and Ehrenspeck, H.E., 1994, Geologic Map of the Point Dume Quadrangle, Los Angeles County, California: Dibblee Geological Foundation.

Norfleet Consultants, Geologic Slope Review, Ojai Quarry, Ojai, CA; dated 01/15/18.

GOLD COAST GEOSERVICES, INC.
Engineering Geologic and Geotechnical Consultants

June 5, 2020
File No. GC18-092902

LARRY MOSLER
OJAI QUARRY
15558 Maricopa Highway
Ojai, CA

SUBJECT: Updated Stability Analysis for Ojai Quarry, Mine ID #91-56-0025, Ojai, County of Ventura.

Dear Mr. Mosler:

In accordance with your request, and as required in a letter issued by the State of California Department of Conservation Division of Mine Reclamation, this report was prepared to provide baseline geologic and geotechnical conditions for the entire project area in the proposed Reclamation Plan Amendment (RPA) for the Ojai Quarry. The scope of work in preparation of this report included the following:

1. Site meetings with the quarry operator, Larry Mosler, to observe and review quarry operations and to review the proposed RPA provided by Jensen Design & Survey.

2. Review of previous geologic and geotechnical reports for the Ojai Quarry, prepared by Norfleet Consultants.

3. Review of pertinent geologic and geotechnical maps and documents for use in evaluation of slope design analysis and recommendations for the RPA.

4. Slope stability analysis to determine the static and pseudo-static (seismic) safety factors for the slope design for the RPA by Jensen Design & Survey.

County of Ventura
Planning Director Hearing
Case No. PL18-0136
Exhibit 3d - Slope Stability Analysis

DISCUSSION OF RPA

The RPA prepared by Jensen Design & Survey (see Appendix III with this report) proposes expanded mining limits that extend north-northeasterly from the mining limits that were evaluated by Norfleet Consultants in a report dated December 5, 2011. The cross-sections by Jensen Design & Survey (see Appendix III) show the proposed slope configurations within the expanded mining limits area and including the slope configurations within the lower current mining area. The RPA proposes 1h:v1 slope configurations, with maximum proposed slope height of 30 feet and intervening 10 feet wide benches. The RPA area has a maximum total slope relief of about 560 feet.

GEOLOGIC SETTING

The Ojai Quarry is located within Matilija Canyon in the southeast part of the Topatopa Mountains. The rock material within the quarry consists of light-colored sandstone and light to dark-colored siltstone, assigned to the Matilija Formation or Matilija Sandstone of marine origin and Eocene age. The geology of the Ojai Quarry is discussed in detail in the Norfleet report (2011), and the reader is therefore referred to that report for a thorough and detailed geologic discussion and analysis of the site conditions (see Appendix II).

The geologic conditions within the RPA are essentially the same as those discussed in the Norfleet report (2011). Norfleet subdivided the Matilija sandstone into three domains or geomechanical units (GMU's), as shown on the Geotechnical Map with this report. The rock domains or GMU's per Norfleet extend into the RPA to the north of the area mapped by Norfleet, as shown on the Geotechnical Map. The rock types are separated by very high angle, essentially vertical to overturned bedding structure across the quarry. Jointing planes are typically high angle, commonly developed parallel or subparallel to bedding. No daylighted bedding or daylighted jointing plane conditions are anticipated.

STABILITY ANALYSIS

In the detailed slope stability analysis of the Ojai Quarry design slopes as previously performed by Norfleet Consultants (see Appendix II), the Matilija Sandstone was separated into 3 predominant rock types, identified as Domain A, Domain B, and Domain C.

The rockmass exposed in the quarry slopes varies from GOOD to VERY GOOD rock quality.

Uniaxial compressive rock strength varies from MEDIUM STRONG to VERY STRONG (Domains B and C), and from STRONG to EXTREMELY STRONG (Domain A sandstone).

Rock structure is classified as varying from BLOCKY to VERY BLOCKY.

The Matilija Sandstone varies from INTACT to STRONGLY JOINTED. Jointing surfaces vary from widely spaced to close. Most jointing surfaces are classified as varying from FAIR (smooth, moderately weathered and altered) to VERY GOOD (very rough, fresh unweathered surfaces).

From the laboratory test data and rock characterization, the following rockmass properties were determined by Norfleet for Domain A sandstone:

Intact rock strength (sigma ci) = 2,000 Ksf (from uniaxial compression tests)
Hoek-Brown constant (mi) = 17 ± 5
Geological Strength Index (GSI) = 40 to 50
Mohr-Coulomb fit for sandstone: cohesion = 11 to 26 Ksf and friction angle = 45°- 51°
Mohr-Coulomb fit for siltstone: cohesion = 2.1 to 4 Ksf and friction angle = 18°- 30°

The GSI was estimated using charts from Hoek (2008).

ROCK SLOPE STABILITY ANALYSIS

The attached slope stability analysis has been performed using shear strength parameters as previously reported by Norfleet Consultants for Domain A and B. The shear strengths are based on the Hoek-Brown Criterion and the Geologic Strength Index, and are considered to be reasonable from an engineering geologic standpoint.

Stability data printout sheets generated using GSTABL are presented in Appendix I. Adequate factors of safety against slope failure were determined for all cases, assuming circular failure mode for all cases. Shear strength parameters determined from the Hoek-Brown Criterion and Geological Strength Index and as previously reported by Norfleet Consultants were used in the analysis, and are considered to be acceptable for the rock conditions at this quarry.

ROCKFALL

As noted in the report by Norfleet Consultants, rocks will occasionally fall from working slopes and finished rock slopes. The proposed benches between the proposed 1:1 cut slopes are intended to mitigate the rockfall hazard potential by effectively reducing the potential for rocks to roll beyond the benches.

CONCLUSIONS

The results of the stability analysis indicate that the mining reclamation plan slopes will possess adequate safety factors against large-scale slope failure under static conditions and in the event of an earthquake. It is noted that the geologic conditions at this quarry are characterized as geologically complex, so that it is recommended that excavations be evaluated annually (or more frequently if mining operations become accelerated) by the engineering geologist, to verify the continuity of the geologic conditions that are anticipated in the analysis, and to provide updated analysis and recommendations if conditions are encountered that are found to differ from those discussed in this report.

<u>REMARKS</u>

Please call this office at (805) 484-5070 if you have any questions regarding this report.

Respectfully submitted,

GOLD COAST GEOSERVICES, INC.

PROFESSIONAL GEOLOGIST
SCOTT J. HOGREFE
No.1516
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

Scott J. Hogrefe, CEG 1516

REFERENCES CITED

Hoek, E. and Brown, E.T., 1980a, *Underground excavations in rock*, London: Institution of Mining and Metallurgy.

Hoek, E., and Bray, J., (1981), *Rock slope engineering*, London: Institution of Mining and Metalurgy, London.

Hoek, E., Caranza-Torres, CT, Corcum, B. (2002), Hoek-Brown failure criterion- 2002 edition. In: Bawden HRW, Curran J., Telsenicki, M. (eds), Proceedings of the North American Rock Mechanics Society (NARMS-TAC 2002) Mining Innovation and Technology, Toronto, pp 267-273.

Hoek, E. (2008), Course notes entitled Practical Rock Engineering.

Norfleet Consultants, Slope Stability Study For the Ojai Quarry Reclamation Plan, Ojai, CA, dated 12/5/2011.

Norfleet Consultants, Supplemental Slope Stability Review for the Ojai Quarry, Ojai, CA, dated 6/18/2015.

Norfleet Consultants, Geologic/Slope Review, Ojai Quarry, Ojai, CA, dated 01/15/2018.

Rocscience (2007), Roclab, v. 1.031, Computer software for analysis of rock mass strength.

APPENDIX I

SLOPE STABILITY ANALYSIS DATA SHEETS

*** GSTABL7 ***

** GSTABL7 by Dr. Garry H. Gregory, Ph.D.,P.E.,D.GE **

** Original Version 1.0, January 1996; Current Ver. 2.005.3, Feb. 2013 **

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SLOPE STABILITY ANALYSIS SYSTEM

Modified Bishop, Simplified Janbu, or GLE Method of Slices.
(Includes Spencer & Morgenstern-Price Type Analysis)
Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
Nonlinear Undrained Shear Strength, Curved Phi Envelope,
Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.

****

Analysis Run Date: 6/1/2020
Time of Run: 01:47PM
Run By: IM
Input Data Filename: C:\Users\Project Files\Slope Stability\18-092902 (OJAI QUARRY)\Section T-4, circular failure, static.in
Output Filename: C:\Users\Project Files\Slope Stability\18-092902 (OJAI QUARRY)\Section T-4, circular failure, static.OUT
Unit System: English

Plotted Output Filename: C:\Users\Project Files\Slope Stability\18-092902 (OJAI QUARRY)\Section T-4, circular failure, static.PLT

PROBLEM DESCRIPTION: 15558 Maricopa Hwy, Ojai: Section T-4
Circular, Static

BOUNDARY COORDINATES

11 Top Boundaries
11 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	70.00	50.00	45.00	1
2	50.00	45.00	85.00	50.00	1

3	85.00	50.00	110.00	90.00	1
4	110.00	90.00	140.00	90.00	1
5	140.00	90.00	220.00	150.00	1
6	220.00	150.00	340.00	150.00	1
7	340.00	150.00	1247.00	845.00	1
8	1247.00	845.00	1257.00	845.00	1
9	1257.00	845.00	1260.00	860.00	1
10	1260.00	860.00	1390.00	900.00	1
11	1390.00	900.00	1550.00	930.00	1

Default Y-Origin = 0.00(ft)

Default X-Plus Value = 0.00(ft)

Default Y-Plus Value = 0.00(ft)

ISOTROPIC SOIL PARAMETERS

1 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	150.0	150.0	26000.0	45.0	0.00	0.0	0

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

1000 Trial Surfaces Have Been Generated.

10 Surface(s) Initiate(s) From Each Of 100 Points Equally Spaced Along The Ground Surface Between X = 340.00(ft)
and X =1260.00(ft)

Each Surface Terminates Between X =1275.00(ft)
and X =1550.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = 0.00(ft)

30.00(ft) Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Evaluated. They Are
Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Simplified Janbu Method * *

Total Number of Trial Surfaces Attempted = 1000

Number of Failed Attempts to Generate Trial Surface = 9

Number of Trial Surfaces With Valid FS = 991

Percentage of Trial Surfaces With Non-Valid FS Solutions
of the Total Attempted = 0.9 %

Statistical Data On All Valid FS Values:
FS Max = 119.249 FS Min = 3.447 FS Ave = 8.639
Standard Deviation = 7.816 Coefficient of Variation = 90.47 %

Failure Surface Specified By 53 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	340.000	150.000
2	369.935	148.026
3	399.911	146.820
4	429.908	146.383
5	459.906	146.716
6	489.885	147.819
7	519.827	149.690
8	549.711	152.328
9	579.517	155.732
10	609.226	159.900
11	638.819	164.828
12	668.275	170.513
13	697.576	176.952
14	726.702	184.141
15	755.634	192.074
16	784.353	200.747
17	812.840	210.154
18	841.076	220.288
19	869.044	231.143
20	896.723	242.712
21	924.097	254.987
22	951.147	267.960
23	977.855	281.623
24	1004.204	295.966

25	1030.176	310.981
26	1055.755	326.657
27	1080.923	342.983
28	1105.665	359.950
29	1129.962	377.546
30	1153.801	395.759
31	1177.164	414.578
32	1200.038	433.990
33	1222.405	453.982
34	1244.253	474.541
35	1265.566	495.654
36	1286.330	517.307
37	1306.532	539.485
38	1326.159	562.174
39	1345.198	585.359
40	1363.635	609.025
41	1381.459	633.155
42	1398.659	657.736
43	1415.222	682.749
44	1431.138	708.178
45	1446.397	734.008
46	1460.988	760.221
47	1474.902	786.799
48	1488.130	813.725
49	1500.663	840.982
50	1512.492	868.551
51	1523.610	896.415
52	1534.011	924.554
53	1534.901	927.169

Factor of Safety
*** 3.447 ***

Individual data on the 56 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	29.9	55931.1	0.0	0.0	0.	0.	0.0	0.0	0.0
2	30.0	166365.0	0.0	0.0	0.	0.	0.0	0.0	0.0
3	30.0	273563.9	0.0	0.0	0.	0.	0.0	0.0	0.0
4	30.0	377239.1	0.0	0.0	0.	0.	0.0	0.0	0.0
5	30.0	477117.6	0.0	0.0	0.	0.	0.0	0.0	0.0
6	29.9	572942.1	0.0	0.0	0.	0.	0.0	0.0	0.0
7	29.9	664474.2	0.0	0.0	0.	0.	0.0	0.0	0.0
8	29.8	751489.5	0.0	0.0	0.	0.	0.0	0.0	0.0
9	29.7	833784.2	0.0	0.0	0.	0.	0.0	0.0	0.0

10	29.6	911176.3	0.0	0.0	0.	0.	0.0	0.0	0.0
11	29.5	983495.9	0.0	0.0	0.	0.	0.0	0.0	0.0
12	29.3	1050600.4	0.0	0.0	0.	0.	0.0	0.0	0.0
13	29.1	1112361.5	0.0	0.0	0.	0.	0.0	0.0	0.0
14	28.9	1168674.2	0.0	0.0	0.	0.	0.0	0.0	0.0
15	28.7	1219452.8	0.0	0.0	0.	0.	0.0	0.0	0.0
16	28.5	1264634.5	0.0	0.0	0.	0.	0.0	0.0	0.0
17	28.2	1304171.5	0.0	0.0	0.	0.	0.0	0.0	0.0
18	28.0	1338045.1	0.0	0.0	0.	0.	0.0	0.0	0.0
19	27.7	1366250.2	0.0	0.0	0.	0.	0.0	0.0	0.0
20	27.4	1388808.8	0.0	0.0	0.	0.	0.0	0.0	0.0
21	27.0	1405759.9	0.0	0.0	0.	0.	0.0	0.0	0.0
22	26.7	1417165.8	0.0	0.0	0.	0.	0.0	0.0	0.0
23	26.3	1423101.4	0.0	0.0	0.	0.	0.0	0.0	0.0
24	26.0	1423674.9	0.0	0.0	0.	0.	0.0	0.0	0.0
25	25.6	1418996.2	0.0	0.0	0.	0.	0.0	0.0	0.0
26	25.2	1409215.2	0.0	0.0	0.	0.	0.0	0.0	0.0
27	24.7	1394492.1	0.0	0.0	0.	0.	0.0	0.0	0.0
28	24.3	1374995.9	0.0	0.0	0.	0.	0.0	0.0	0.0
29	23.8	1350925.2	0.0	0.0	0.	0.	0.0	0.0	0.0
30	23.4	1322496.4	0.0	0.0	0.	0.	0.0	0.0	0.0
31	22.9	1289934.2	0.0	0.0	0.	0.	0.0	0.0	0.0
32	22.4	1253479.1	0.0	0.0	0.	0.	0.0	0.0	0.0
33	21.8	1213399.6	0.0	0.0	0.	0.	0.0	0.0	0.0
34	2.7	151663.8	0.0	0.0	0.	0.	0.0	0.0	0.0
35	10.0	544176.5	0.0	0.0	0.	0.	0.0	0.0	0.0
36	3.0	163730.4	0.0	0.0	0.	0.	0.0	0.0	0.0
37	5.6	307197.6	0.0	0.0	0.	0.	0.0	0.0	0.0
38	20.8	1116377.4	0.0	0.0	0.	0.	0.0	0.0	0.0
39	20.2	1038842.3	0.0	0.0	0.	0.	0.0	0.0	0.0
40	19.6	961240.7	0.0	0.0	0.	0.	0.0	0.0	0.0
41	19.0	883909.2	0.0	0.0	0.	0.	0.0	0.0	0.0
42	18.4	807167.9	0.0	0.0	0.	0.	0.0	0.0	0.0
43	17.8	731344.8	0.0	0.0	0.	0.	0.0	0.0	0.0
44	8.5	332361.5	0.0	0.0	0.	0.	0.0	0.0	0.0
45	8.7	323739.4	0.0	0.0	0.	0.	0.0	0.0	0.0
46	16.6	578721.5	0.0	0.0	0.	0.	0.0	0.0	0.0
47	15.9	503171.3	0.0	0.0	0.	0.	0.0	0.0	0.0
48	15.3	430413.8	0.0	0.0	0.	0.	0.0	0.0	0.0
49	14.6	360755.7	0.0	0.0	0.	0.	0.0	0.0	0.0
50	13.9	294501.7	0.0	0.0	0.	0.	0.0	0.0	0.0
51	13.2	231943.8	0.0	0.0	0.	0.	0.0	0.0	0.0
52	12.5	173366.5	0.0	0.0	0.	0.	0.0	0.0	0.0
53	11.8	119048.8	0.0	0.0	0.	0.	0.0	0.0	0.0
54	11.1	69256.7	0.0	0.0	0.	0.	0.0	0.0	0.0
55	10.4	24246.6	0.0	0.0	0.	0.	0.0	0.0	0.0
56	0.9	163.5	0.0	0.0	0.	0.	0.0	0.0	0.0

Failure Surface Specified By 52 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)

1	358.586	164.242
2	388.459	161.482
3	418.394	159.517
4	448.371	158.348
5	478.369	157.976
6	508.366	158.401
7	538.341	159.623
8	568.273	161.642
9	598.141	164.455
10	627.924	168.061
11	657.600	172.457
12	687.149	177.640
13	716.549	183.606
14	745.781	190.351
15	774.823	197.871
16	803.656	206.160
17	832.257	215.213
18	860.608	225.022
19	888.689	235.581
20	916.478	246.882
21	943.958	258.918
22	971.108	271.680
23	997.910	285.159
24	1024.344	299.345
25	1050.391	314.229
26	1076.034	329.800
27	1101.254	346.047
28	1126.033	362.958
29	1150.354	380.521
30	1174.200	398.725
31	1197.554	417.556
32	1220.399	437.001
33	1242.719	457.046
34	1264.499	477.677
35	1285.723	498.879
36	1306.376	520.638
37	1326.443	542.939
38	1345.911	565.764
39	1364.766	589.099
40	1382.993	612.927
41	1400.581	637.230
42	1417.517	661.993
43	1433.789	687.196
44	1449.385	712.823
45	1464.295	738.856
46	1478.508	765.276
47	1492.014	792.064
48	1504.803	819.201
49	1516.866	846.669
50	1528.196	874.447
51	1538.783	902.517
52	1548.206	929.664

Factor of Safety
*** 3.465 ***

Failure Surface Specified By 52 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	349.293	157.121
2	378.727	151.319
3	408.329	146.450
4	438.070	142.518
5	467.921	139.527
6	497.851	137.480
7	527.830	136.379
8	557.830	136.225
9	587.820	137.018
10	617.769	138.758
11	647.649	141.443
12	677.429	145.070
13	707.079	149.635
14	736.571	155.134
15	765.874	161.562
16	794.960	168.912
17	823.799	177.176
18	852.363	186.347
19	880.623	196.415
20	908.551	207.370
21	936.120	219.202
22	963.301	231.898
23	990.067	245.447
24	1016.392	259.833
25	1042.250	275.044
26	1067.615	291.063
27	1092.462	307.876
28	1116.765	325.464
29	1140.501	343.811
30	1163.645	362.899
31	1186.176	382.707
32	1208.069	403.218
33	1229.304	424.409
34	1249.860	446.260
35	1269.715	468.749
36	1288.850	491.854
37	1307.247	515.552
38	1324.885	539.819
39	1341.749	564.630
40	1357.821	589.962
41	1373.085	615.788

42	1387.526	642.084
43	1401.130	668.822
44	1413.883	695.977
45	1425.771	723.520
46	1436.785	751.426
47	1446.911	779.665
48	1456.141	808.210
49	1464.465	837.032
50	1471.875	866.102
51	1478.364	895.392
52	1482.504	917.344

Factor of Safety
*** 3.486 ***

Failure Surface Specified By 51 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	340.000	150.000
2	369.736	146.027
3	399.579	142.965
4	429.502	140.816
5	459.477	139.583
6	489.475	139.267
7	519.469	139.868
8	549.431	141.385
9	579.332	143.817
10	609.145	147.162
11	638.842	151.417
12	668.394	156.577
13	697.776	162.638
14	726.958	169.594
15	755.914	177.439
16	784.617	186.166
17	813.040	195.765
18	841.156	206.229
19	868.939	217.547
20	896.363	229.709
21	923.403	242.704
22	950.032	256.519
23	976.228	271.141
24	1001.964	286.557
25	1027.216	302.753
26	1051.962	319.713
27	1076.178	337.421
28	1099.842	355.861
29	1122.931	375.016

30	1145.423	394.868
31	1167.299	415.397
32	1188.536	436.586
33	1209.116	458.414
34	1229.020	480.861
35	1248.228	503.905
36	1266.722	527.526
37	1284.487	551.701
38	1301.504	576.408
39	1317.757	601.624
40	1333.233	627.324
41	1347.916	653.485
42	1361.792	680.083
43	1374.849	707.093
44	1387.074	734.489
45	1398.457	762.245
46	1408.985	790.337
47	1418.650	818.738
48	1427.443	847.420
49	1435.355	876.358
50	1442.378	905.524
51	1443.312	909.996

Factor of Safety
*** 3.495 ***

Failure Surface Specified By 51 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	367.879	171.362
2	397.487	166.528
3	427.228	162.598
4	457.076	159.577
5	487.001	157.466
6	516.977	156.269
7	546.976	155.986
8	576.969	156.617
9	606.930	158.162
10	636.829	160.620
11	666.639	163.987
12	696.333	168.262
13	725.883	173.440
14	755.261	179.516
15	784.441	186.484
16	813.394	194.339
17	842.095	203.072

18	870.516	212.676
19	898.631	223.142
20	926.414	234.460
21	953.840	246.620
22	980.881	259.609
23	1007.515	273.417
24	1033.715	288.030
25	1059.458	303.435
26	1084.719	319.618
27	1109.475	336.563
28	1133.704	354.254
29	1157.382	372.676
30	1180.487	391.810
31	1202.999	411.641
32	1224.895	432.148
33	1246.157	453.312
34	1266.763	475.115
35	1286.696	497.536
36	1305.935	520.555
37	1324.465	544.148
38	1342.266	568.296
39	1359.324	592.975
40	1375.621	618.162
41	1391.143	643.834
42	1405.875	669.968
43	1419.804	696.538
44	1432.917	723.521
45	1445.201	750.890
46	1456.645	778.622
47	1467.239	806.689
48	1476.972	835.066
49	1485.836	863.727
50	1493.823	892.644
51	1500.671	920.751

Factor of Safety
*** 3.498 ***

Failure Surface Specified By 50 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	349.293	157.121
2	379.211	154.909
3	409.180	153.543
4	439.176	153.022
5	469.174	153.348
6	499.151	154.520

7	529.083	156.537
8	558.946	159.398
9	588.717	163.100
10	618.372	167.640
11	647.886	173.015
12	677.237	179.221
13	706.402	186.252
14	735.356	194.103
15	764.078	202.767
16	792.543	212.238
17	820.730	222.509
18	848.617	233.571
19	876.180	245.415
20	903.398	258.031
21	930.249	271.411
22	956.712	285.543
23	982.766	300.415
24	1008.390	316.017
25	1033.563	332.335
26	1058.267	349.357
27	1082.480	367.069
28	1106.184	385.457
29	1129.360	404.506
30	1151.990	424.202
31	1174.054	444.528
32	1195.537	465.468
33	1216.420	487.006
34	1236.687	509.125
35	1256.323	531.807
36	1275.310	555.033
37	1293.635	578.786
38	1311.283	603.046
39	1328.239	627.795
40	1344.490	653.012
41	1360.024	678.677
42	1374.827	704.771
43	1388.888	731.271
44	1402.196	758.158
45	1414.741	785.409
46	1426.511	813.004
47	1437.499	840.919
48	1447.695	869.133
49	1457.090	897.624
50	1461.824	913.467

Factor of Safety
*** 3.509 ***

Failure Surface Specified By 55 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	349.293	157.121
2	378.193	149.071
3	407.339	141.966
4	436.702	135.813
5	466.249	130.620
6	495.949	126.390
7	525.771	123.130
8	555.684	120.841
9	585.655	119.528
10	615.653	119.190
11	645.646	119.829
12	675.603	121.444
13	705.491	124.033
14	735.279	127.593
15	764.935	132.121
16	794.429	137.611
17	823.728	144.058
18	852.801	151.456
19	881.619	159.796
20	910.150	169.069
21	938.363	179.266
22	966.231	190.376
23	993.721	202.386
24	1020.807	215.286
25	1047.458	229.059
26	1073.646	243.693
27	1099.345	259.171
28	1124.526	275.478
29	1149.164	292.595
30	1173.231	310.505
31	1196.702	329.189
32	1219.553	348.627
33	1241.760	368.799
34	1263.298	389.682
35	1284.145	411.255
36	1304.279	433.495
37	1323.678	456.379
38	1342.322	479.882
39	1360.192	503.979
40	1377.268	528.645
41	1393.532	553.854
42	1408.967	579.579
43	1423.557	605.792
44	1437.286	632.466
45	1450.139	659.573
46	1462.104	687.084
47	1473.166	714.970
48	1483.316	743.201
49	1492.541	771.747
50	1500.832	800.579
51	1508.181	829.665

52	1514.579	858.975
53	1520.020	888.477
54	1524.497	918.141
55	1525.350	925.378

Factor of Safety
*** 3.513 ***

Failure Surface Specified By 55 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	340.000	150.000
2	368.743	141.407
3	397.756	133.774
4	427.006	127.109
5	456.461	121.418
6	486.090	116.710
7	515.858	112.988
8	545.733	110.257
9	575.683	108.519
10	605.674	107.778
11	635.673	108.033
12	665.646	109.284
13	695.562	111.530
14	725.387	114.768
15	755.088	118.996
16	784.631	124.207
17	813.986	130.397
18	843.119	137.559
19	871.997	145.684
20	900.590	154.764
21	928.866	164.788
22	956.793	175.747
23	984.340	187.627
24	1011.478	200.415
25	1038.176	214.097
26	1064.405	228.659
27	1090.136	244.084
28	1115.340	260.355
29	1139.990	277.454
30	1164.058	295.363
31	1187.519	314.061
32	1210.345	333.528
33	1232.512	353.743
34	1253.995	374.682
35	1274.771	396.324
36	1294.817	418.643

37	1314.110	441.617
38	1332.630	465.218
39	1350.355	489.422
40	1367.267	514.200
41	1383.346	539.527
42	1398.576	565.374
43	1412.938	591.713
44	1426.418	618.514
45	1439.000	645.748
46	1450.670	673.385
47	1461.416	701.394
48	1471.226	729.745
49	1480.089	758.406
50	1487.995	787.346
51	1494.935	816.532
52	1500.902	845.932
53	1505.889	875.515
54	1509.891	905.247
55	1511.664	922.812

Factor of Safety
*** 3.525 ***

Failure Surface Specified By 54 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	367.879	171.362
2	396.847	163.561
3	426.050	156.693
4	455.459	150.767
5	485.043	145.789
6	514.771	141.762
7	544.614	138.693
8	574.540	136.583
9	604.518	135.435
10	634.517	135.251
11	664.507	136.030
12	694.456	137.771
13	724.335	140.474
14	754.110	144.134
15	783.753	148.749
16	813.233	154.313
17	842.519	160.820
18	871.580	168.265
19	900.388	176.639
20	928.911	185.934

21	957.122	196.140
22	984.990	207.246
23	1012.488	219.242
24	1039.586	232.115
25	1066.256	245.850
26	1092.472	260.436
27	1118.206	275.855
28	1143.432	292.093
29	1168.123	309.133
30	1192.254	326.956
31	1215.801	345.546
32	1238.738	364.881
33	1261.043	384.944
34	1282.692	405.712
35	1303.663	427.165
36	1323.935	449.280
37	1343.485	472.034
38	1362.295	495.405
39	1380.345	519.367
40	1397.616	543.897
41	1414.091	568.969
42	1429.752	594.556
43	1444.583	620.634
44	1458.569	647.174
45	1471.696	674.150
46	1483.950	701.533
47	1495.318	729.296
48	1505.789	757.409
49	1515.352	785.844
50	1523.997	814.571
51	1531.715	843.562
52	1538.498	872.785
53	1544.339	902.211
54	1548.899	929.794

Factor of Safety
*** 3.528 ***

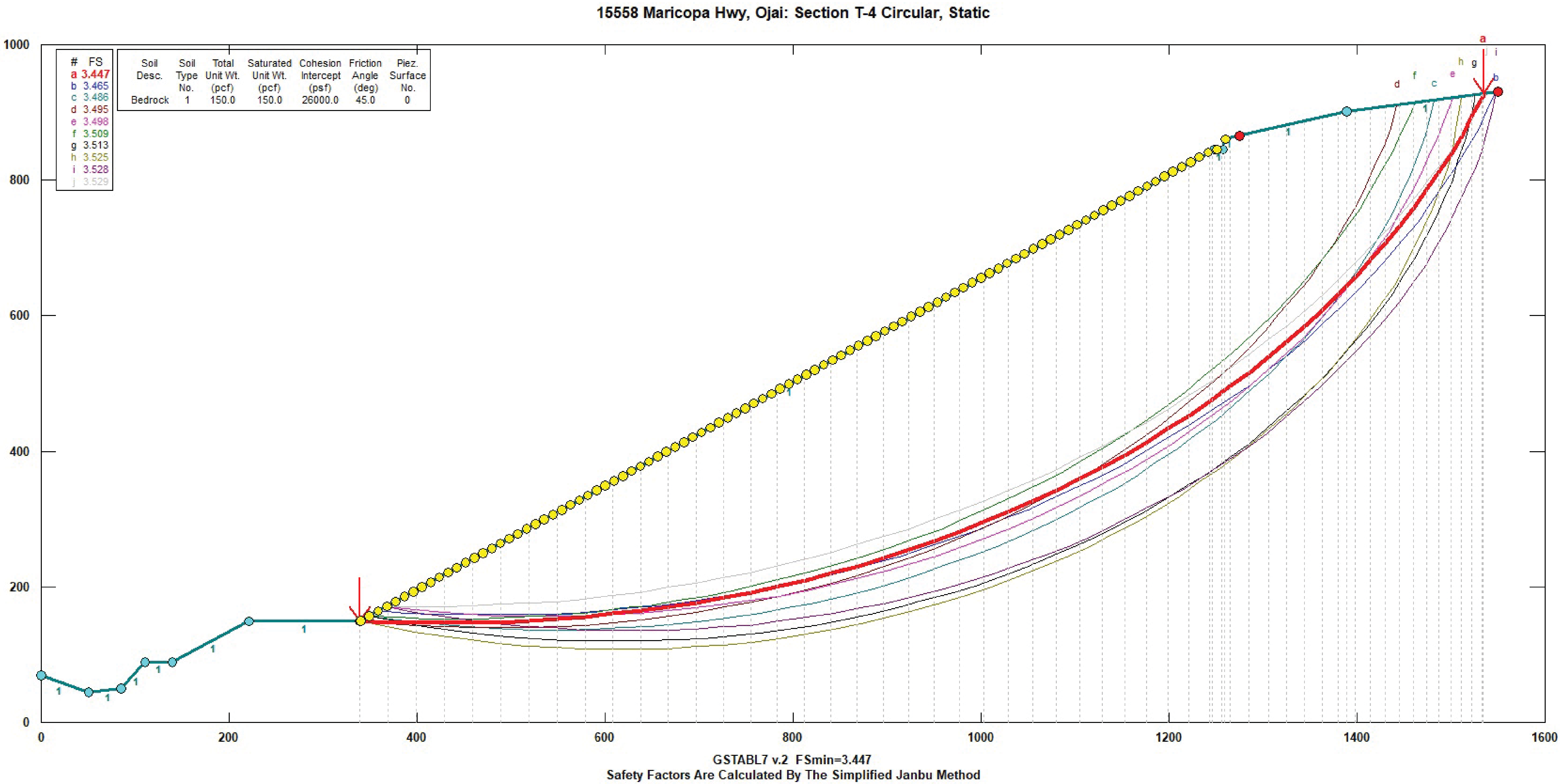
Failure Surface Specified By 51 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	367.879	171.362
2	397.874	170.799
3	427.873	170.971
4	457.859	171.877
5	487.814	173.517
6	517.720	175.891
7	547.559	178.996

8	577.313	182.831
9	606.964	187.394
10	636.494	192.682
11	665.886	198.691
12	695.122	205.419
13	724.185	212.861
14	753.056	221.012
15	781.719	229.868
16	810.157	239.423
17	838.352	249.672
18	866.287	260.608
19	893.947	272.225
20	921.313	284.517
21	948.370	297.475
22	975.102	311.091
23	1001.492	325.359
24	1027.525	340.268
25	1053.185	355.811
26	1078.456	371.977
27	1103.324	388.758
28	1127.774	406.142
29	1151.790	424.120
30	1175.359	442.681
31	1198.466	461.814
32	1221.098	481.507
33	1243.240	501.749
34	1264.880	522.526
35	1286.005	543.828
36	1306.601	565.640
37	1326.657	587.950
38	1346.161	610.745
39	1365.101	634.011
40	1383.465	657.734
41	1401.242	681.899
42	1418.422	706.492
43	1434.995	731.499
44	1450.951	756.905
45	1466.279	782.693
46	1480.971	808.849
47	1495.018	835.357
48	1508.411	862.202
49	1521.143	889.366
50	1533.206	916.834
51	1537.658	927.686

Factor of Safety
*** 3.529 ***

**** END OF GSTABL7 OUTPUT ****



15558 Maricopa Hwy, Ojai: Section T-4 Circular, Static
FS
a 3.447
b 3.465
c 3.486
d 3.495
e 3.498
f 3.509
g 3.513
h 3.525
i 3.528
j 3.529
Soil Desc. | Soil Type No. | Total Unit Wt. (pcf) | Saturated Unit Wt. (pcf) | Cohesion Intercept (psf) | Friction Angle (deg) | Piez. Surface No.
Bedrock | 1 | 150.0 | 150.0 | 26000.0 | 45.0 | 0
GSTABL7 v.2 FSmin=3.447
Safety Factors Are Calculated By The Simplified Janbu Method

*** GSTABL7 ***

** GSTABL7 by Dr. Garry H. Gregory, Ph.D.,P.E.,D.GE **

** Original Version 1.0, January 1996; Current Ver. 2.005.3, Feb. 2013 **

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SLOPE STABILITY ANALYSIS SYSTEM
Modified Bishop, Simplified Janbu, or GLE Method of Slices.
(Includes Spencer & Morgenstern-Price Type Analysis)
Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
Nonlinear Undrained Shear Strength, Curved Phi Envelope,
Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.

****

Analysis Run Date: 6/1/2020
Time of Run: 12:17PM
Run By: IM
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Output Filename: C:\Users\Project Files\Slope Stability\18-092902 (OJAI QUARRY)\Section T-5, circular failure, static.OUT
Unit System: English

Plotted Output Filename: C:\Users\Project Files\Slope Stability\18-092902 (OJAI QUARRY)\Section T-5, circular failure, static.PLT

PROBLEM DESCRIPTION: 15558 Maricopa Hwy, Ojai: Section T5
Circular, Static

BOUNDARY COORDINATES

55 Top Boundaries
55 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	60.00	50.00	40.00	1
2	50.00	40.00	90.00	60.00	1

3	90.00	60.00	100.00	80.00	1
4	100.00	80.00	125.00	80.00	1
5	125.00	80.00	220.00	150.00	1
6	220.00	150.00	330.00	150.00	1
7	330.00	150.00	375.00	195.00	1
8	375.00	195.00	385.00	215.00	1
9	385.00	215.00	425.00	235.00	1
10	425.00	235.00	440.00	235.00	1
11	440.00	235.00	465.00	265.00	1
12	465.00	265.00	475.00	265.00	1
13	475.00	265.00	505.00	295.00	1
14	505.00	295.00	515.00	295.00	1
15	515.00	295.00	525.00	305.00	1
16	525.00	305.00	535.00	305.00	1
17	535.00	305.00	565.00	335.00	1
18	565.00	335.00	575.00	335.00	1
19	575.00	335.00	605.00	365.00	1
20	605.00	365.00	615.00	365.00	1
21	615.00	365.00	645.00	395.00	1
22	645.00	395.00	655.00	395.00	1
23	655.00	395.00	685.00	425.00	1
24	685.00	425.00	695.00	425.00	1
25	695.00	425.00	725.00	455.00	1
26	725.00	455.00	735.00	455.00	1
27	735.00	455.00	765.00	485.00	1
28	765.00	485.00	775.00	485.00	1
29	775.00	485.00	805.00	515.00	1
30	805.00	515.00	815.00	515.00	1
31	815.00	515.00	845.00	545.00	1
32	845.00	545.00	855.00	545.00	1
33	855.00	545.00	885.00	575.00	1
34	885.00	575.00	895.00	575.00	1
35	895.00	575.00	925.00	605.00	1
36	925.00	605.00	935.00	605.00	1
37	935.00	605.00	965.00	635.00	1
38	965.00	635.00	975.00	635.00	1
39	975.00	635.00	1005.00	665.00	1
40	1005.00	665.00	1015.00	665.00	1
41	1015.00	665.00	1045.00	695.00	1
42	1045.00	695.00	1055.00	695.00	1
43	1055.00	695.00	1085.00	725.00	1
44	1085.00	725.00	1095.00	725.00	1
45	1095.00	725.00	1125.00	755.00	1
46	1125.00	755.00	1135.00	755.00	1
47	1135.00	755.00	1165.00	785.00	1
48	1165.00	785.00	1175.00	785.00	1
49	1175.00	785.00	1205.00	815.00	1
50	1205.00	815.00	1215.00	815.00	1
51	1215.00	815.00	1245.00	845.00	1
52	1245.00	845.00	1255.00	845.00	1
53	1255.00	845.00	1300.00	890.00	1
54	1300.00	890.00	1475.00	950.00	1
55	1475.00	950.00	1550.00	970.00	1

Default Y-Origin = 0.00(ft)

Default X-Plus Value = 0.00(ft)

Default Y-Plus Value = 0.00(ft)

ISOTROPIC SOIL PARAMETERS

1 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	150.0	150.0	26000.0	45.0	0.00	0.0	0

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

1000 Trial Surfaces Have Been Generated.

10 Surface(s) Initiate(s) From Each Of 100 Points Equally Spaced Along The Ground Surface Between X = 330.00(ft)
and X =1300.00(ft)

Each Surface Terminates Between X =1305.00(ft)
and X =1550.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = 0.00(ft)

30.00(ft) Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Evaluated. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Simplified Janbu Method * *

Total Number of Trial Surfaces Attempted = 1000

Number of Failed Attempts to Generate Trial Surface = 19

Number of Trial Surfaces With Valid FS = 981

Percentage of Trial Surfaces With Non-Valid FS Solutions
of the Total Attempted = 1.9 %

Statistical Data On All Valid FS Values:
FS Max = 131.410 FS Min = 3.474 FS Ave = 8.040
Standard Deviation = 8.266 Coefficient of Variation = 102.82 %

Failure Surface Specified By 56 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	330.000	150.000
2	359.123	142.801
3	388.460	136.525
4	417.979	131.179
5	447.653	126.767
6	477.451	123.294
7	507.345	120.763
8	537.303	119.178
9	567.296	118.539
10	597.294	118.847
11	627.268	120.103
12	657.187	122.304
13	687.022	125.448
14	716.743	129.533
15	746.319	134.554
16	775.723	140.506
17	804.924	147.384
18	833.893	155.180
19	862.602	163.886
20	891.022	173.495
21	919.124	183.996
22	946.880	195.380
23	974.263	207.633
24	1001.246	220.745
25	1027.802	234.703
26	1053.903	249.492
27	1079.525	265.098
28	1104.641	281.504
29	1129.226	298.696
30	1153.257	316.655
31	1176.709	335.363
32	1199.558	354.803
33	1221.782	374.955
34	1243.359	395.798
35	1264.267	417.312

36	1284.486	439.475
37	1303.995	462.266
38	1322.774	485.661
39	1340.806	509.637
40	1358.072	534.171
41	1374.554	559.237
42	1390.237	584.811
43	1405.105	610.868
44	1419.142	637.381
45	1432.336	664.324
46	1444.672	691.671
47	1456.139	719.393
48	1466.725	747.463
49	1476.420	775.853
50	1485.213	804.535
51	1493.097	833.481
52	1500.062	862.661
53	1506.104	892.047
54	1511.214	921.608
55	1515.388	951.316
56	1516.444	961.052

Factor of Safety
*** 3.474 ***

Individual data on the 103 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	29.1	79337.3	0.0	0.0	0.	0.	0.0	0.0	0.0
2	15.9	109450.2	0.0	0.0	0.	0.	0.0	0.0	0.0
3	10.0	99997.5	0.0	0.0	0.	0.	0.0	0.0	0.0
4	3.5	40981.2	0.0	0.0	0.	0.	0.0	0.0	0.0
5	29.5	399657.7	0.0	0.0	0.	0.	0.0	0.0	0.0
6	7.0	108035.0	0.0	0.0	0.	0.	0.0	0.0	0.0
7	15.0	238455.6	0.0	0.0	0.	0.	0.0	0.0	0.0
8	7.7	128867.4	0.0	0.0	0.	0.	0.0	0.0	0.0
9	17.3	335234.7	0.0	0.0	0.	0.	0.0	0.0	0.0
10	10.0	211256.7	0.0	0.0	0.	0.	0.0	0.0	0.0
11	2.5	52506.6	0.0	0.0	0.	0.	0.0	0.0	0.0
12	27.5	657437.1	0.0	0.0	0.	0.	0.0	0.0	0.0
13	2.3	61241.7	0.0	0.0	0.	0.	0.0	0.0	0.0
14	7.7	200311.0	0.0	0.0	0.	0.	0.0	0.0	0.0
15	10.0	269859.7	0.0	0.0	0.	0.	0.0	0.0	0.0
16	10.0	278153.5	0.0	0.0	0.	0.	0.0	0.0	0.0
17	2.3	64559.8	0.0	0.0	0.	0.	0.0	0.0	0.0

18	27.7	840344.4	0.0	0.0	0.	0.	0.0	0.0	0.0
19	2.3	74537.4	0.0	0.0	0.	0.	0.0	0.0	0.0
20	7.7	250099.9	0.0	0.0	0.	0.	0.0	0.0	0.0
21	22.3	760507.0	0.0	0.0	0.	0.	0.0	0.0	0.0
22	7.7	279876.5	0.0	0.0	0.	0.	0.0	0.0	0.0
23	10.0	368430.8	0.0	0.0	0.	0.	0.0	0.0	0.0
24	12.3	462423.2	0.0	0.0	0.	0.	0.0	0.0	0.0
25	17.7	705852.9	0.0	0.0	0.	0.	0.0	0.0	0.0
26	10.0	409837.7	0.0	0.0	0.	0.	0.0	0.0	0.0
27	2.2	89851.2	0.0	0.0	0.	0.	0.0	0.0	0.0
28	27.8	1198694.5	0.0	0.0	0.	0.	0.0	0.0	0.0
29	2.0	90885.2	0.0	0.0	0.	0.	0.0	0.0	0.0
30	8.0	357819.0	0.0	0.0	0.	0.	0.0	0.0	0.0
31	21.7	1003963.2	0.0	0.0	0.	0.	0.0	0.0	0.0
32	8.3	397144.3	0.0	0.0	0.	0.	0.0	0.0	0.0
33	10.0	484825.0	0.0	0.0	0.	0.	0.0	0.0	0.0
34	11.3	555332.8	0.0	0.0	0.	0.	0.0	0.0	0.0
35	18.7	950508.6	0.0	0.0	0.	0.	0.0	0.0	0.0
36	10.0	518478.8	0.0	0.0	0.	0.	0.0	0.0	0.0
37	0.7	37408.7	0.0	0.0	0.	0.	0.0	0.0	0.0
38	29.2	1560991.4	0.0	0.0	0.	0.	0.0	0.0	0.0
39	0.1	4189.7	0.0	0.0	0.	0.	0.0	0.0	0.0
40	10.0	549375.5	0.0	0.0	0.	0.	0.0	0.0	0.0
41	18.9	1053706.0	0.0	0.0	0.	0.	0.0	0.0	0.0
42	11.1	637384.2	0.0	0.0	0.	0.	0.0	0.0	0.0
43	10.0	577403.2	0.0	0.0	0.	0.	0.0	0.0	0.0
44	7.6	440235.6	0.0	0.0	0.	0.	0.0	0.0	0.0
45	22.4	1330868.9	0.0	0.0	0.	0.	0.0	0.0	0.0
46	6.0	363575.1	0.0	0.0	0.	0.	0.0	0.0	0.0
47	4.0	239158.0	0.0	0.0	0.	0.	0.0	0.0	0.0
48	24.1	1474821.8	0.0	0.0	0.	0.	0.0	0.0	0.0
49	5.9	367442.3	0.0	0.0	0.	0.	0.0	0.0	0.0
50	10.0	624814.8	0.0	0.0	0.	0.	0.0	0.0	0.0
51	11.9	744881.8	0.0	0.0	0.	0.	0.0	0.0	0.0
52	18.1	1159232.1	0.0	0.0	0.	0.	0.0	0.0	0.0
53	9.3	596716.0	0.0	0.0	0.	0.	0.0	0.0	0.0
54	0.7	47194.3	0.0	0.0	0.	0.	0.0	0.0	0.0
55	26.2	1707667.2	0.0	0.0	0.	0.	0.0	0.0	0.0
56	3.8	248529.0	0.0	0.0	0.	0.	0.0	0.0	0.0
57	10.0	659480.3	0.0	0.0	0.	0.	0.0	0.0	0.0
58	12.8	845027.2	0.0	0.0	0.	0.	0.0	0.0	0.0
59	17.2	1152700.4	0.0	0.0	0.	0.	0.0	0.0	0.0
60	8.9	598327.2	0.0	0.0	0.	0.	0.0	0.0	0.0
61	1.1	73248.3	0.0	0.0	0.	0.	0.0	0.0	0.0
62	24.5	1654066.4	0.0	0.0	0.	0.	0.0	0.0	0.0
63	5.5	374001.3	0.0	0.0	0.	0.	0.0	0.0	0.0
64	10.0	679589.4	0.0	0.0	0.	0.	0.0	0.0	0.0
65	9.6	652868.9	0.0	0.0	0.	0.	0.0	0.0	0.0
66	20.4	1393177.9	0.0	0.0	0.	0.	0.0	0.0	0.0
67	4.2	290218.2	0.0	0.0	0.	0.	0.0	0.0	0.0
68	5.8	393306.6	0.0	0.0	0.	0.	0.0	0.0	0.0
69	18.3	1244117.6	0.0	0.0	0.	0.	0.0	0.0	0.0
70	11.7	806368.3	0.0	0.0	0.	0.	0.0	0.0	0.0
71	10.0	682482.7	0.0	0.0	0.	0.	0.0	0.0	0.0

72	1.7	115640.5	0.0	0.0	0.	0.	0.0	0.0	0.0
73	22.8	1552785.8	0.0	0.0	0.	0.	0.0	0.0	0.0
74	5.4	371416.3	0.0	0.0	0.	0.	0.0	0.0	0.0
75	10.0	676092.9	0.0	0.0	0.	0.	0.0	0.0	0.0
76	6.8	454259.2	0.0	0.0	0.	0.	0.0	0.0	0.0
77	21.6	1447360.6	0.0	0.0	0.	0.	0.0	0.0	0.0
78	1.6	110144.4	0.0	0.0	0.	0.	0.0	0.0	0.0
79	10.0	663553.4	0.0	0.0	0.	0.	0.0	0.0	0.0
80	9.3	607606.6	0.0	0.0	0.	0.	0.0	0.0	0.0
81	20.2	1322239.4	0.0	0.0	0.	0.	0.0	0.0	0.0
82	15.5	1009279.6	0.0	0.0	0.	0.	0.0	0.0	0.0
83	4.0	258112.4	0.0	0.0	0.	0.	0.0	0.0	0.0
84	18.8	1184873.9	0.0	0.0	0.	0.	0.0	0.0	0.0
85	18.0	1090689.0	0.0	0.0	0.	0.	0.0	0.0	0.0
86	17.3	997210.6	0.0	0.0	0.	0.	0.0	0.0	0.0
87	16.5	904970.8	0.0	0.0	0.	0.	0.0	0.0	0.0
88	15.7	814471.2	0.0	0.0	0.	0.	0.0	0.0	0.0
89	14.9	726242.8	0.0	0.0	0.	0.	0.0	0.0	0.0
90	14.0	640783.1	0.0	0.0	0.	0.	0.0	0.0	0.0
91	13.2	558599.5	0.0	0.0	0.	0.	0.0	0.0	0.0
92	12.3	480176.3	0.0	0.0	0.	0.	0.0	0.0	0.0
93	11.5	405990.9	0.0	0.0	0.	0.	0.0	0.0	0.0
94	10.6	336510.8	0.0	0.0	0.	0.	0.0	0.0	0.0
95	8.3	234593.3	0.0	0.0	0.	0.	0.0	0.0	0.0
96	1.4	37571.1	0.0	0.0	0.	0.	0.0	0.0	0.0
97	8.8	212832.5	0.0	0.0	0.	0.	0.0	0.0	0.0
98	7.9	159365.5	0.0	0.0	0.	0.	0.0	0.0	0.0
99	7.0	112513.8	0.0	0.0	0.	0.	0.0	0.0	0.0
100	6.0	72614.4	0.0	0.0	0.	0.	0.0	0.0	0.0
101	5.1	39974.3	0.0	0.0	0.	0.	0.0	0.0	0.0
102	4.2	14872.5	0.0	0.0	0.	0.	0.0	0.0	0.0
103	1.1	748.5	0.0	0.0	0.	0.	0.0	0.0	0.0

Failure Surface Specified By 53 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	339.798	159.798
2	369.602	156.370
3	399.491	153.799
4	429.442	152.087
5	459.430	151.234
6	489.430	151.243
7	519.417	152.113
8	549.368	153.843
9	579.256	156.431
10	609.057	159.876
11	638.748	164.175
12	668.302	169.325
13	697.697	175.320
14	726.908	182.156
15	755.910	189.828

16	784.681	198.329
17	813.195	207.652
18	841.431	217.789
19	869.364	228.732
20	896.971	240.473
21	924.230	253.001
22	951.118	266.306
23	977.613	280.377
24	1003.694	295.203
25	1029.338	310.771
26	1054.526	327.068
27	1079.235	344.082
28	1103.445	361.797
29	1127.138	380.200
30	1150.292	399.276
31	1172.890	419.008
32	1194.912	439.380
33	1216.340	460.376
34	1237.157	481.978
35	1257.345	504.169
36	1276.889	526.930
37	1295.771	550.242
38	1313.976	574.087
39	1331.490	598.444
40	1348.298	623.294
41	1364.385	648.615
42	1379.739	674.388
43	1394.347	700.591
44	1408.198	727.203
45	1421.279	754.201
46	1433.579	781.563
47	1445.090	809.267
48	1455.801	837.290
49	1465.703	865.608
50	1474.788	894.200
51	1483.050	923.040
52	1490.480	952.105
53	1490.965	954.257

Factor of Safety
*** 3.489 ***

Failure Surface Specified By 51 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	330.000	150.000
2	359.928	147.922
3	389.902	146.682

4	419.900	146.281
5	449.896	146.718
6	479.869	147.994
7	509.795	150.108
8	539.649	153.057
9	569.410	156.840
10	599.053	161.454
11	628.556	166.895
12	657.894	173.158
13	687.047	180.240
14	715.990	188.133
15	744.700	196.833
16	773.157	206.333
17	801.336	216.624
18	829.217	227.699
19	856.777	239.549
20	883.996	252.166
21	910.850	265.538
22	937.321	279.656
23	963.386	294.509
24	989.026	310.085
25	1014.220	326.371
26	1038.949	343.356
27	1063.193	361.025
28	1086.934	379.365
29	1110.153	398.362
30	1132.832	418.001
31	1154.953	438.266
32	1176.498	459.142
33	1197.451	480.612
34	1217.796	502.660
35	1237.516	525.267
36	1256.597	548.418
37	1275.022	572.092
38	1292.779	596.273
39	1309.852	620.941
40	1326.229	646.076
41	1341.897	671.660
42	1356.844	697.671
43	1371.057	724.091
44	1384.526	750.897
45	1397.240	778.070
46	1409.190	805.587
47	1420.365	833.428
48	1430.758	861.570
49	1440.359	889.992
50	1449.162	918.672
51	1456.029	943.496

Factor of Safety
*** 3.527 ***

Failure Surface Specified By 52 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	359.394	179.394
2	389.393	179.163
3	419.389	179.650
4	449.365	180.855
5	479.303	182.776
6	509.187	185.413
7	538.999	188.765
8	568.723	192.829
9	598.341	197.603
10	627.836	203.084
11	657.191	209.270
12	686.390	216.156
13	715.416	223.739
14	744.252	232.014
15	772.882	240.977
16	801.289	250.622
17	829.457	260.944
18	857.370	271.938
19	885.013	283.596
20	912.368	295.912
21	939.421	308.879
22	966.155	322.490
23	992.557	336.736
24	1018.610	351.611
25	1044.299	367.104
26	1069.611	383.208
27	1094.530	399.912
28	1119.042	417.208
29	1143.133	435.086
30	1166.790	453.535
31	1189.998	472.545
32	1212.745	492.104
33	1235.017	512.203
34	1256.802	532.828
35	1278.088	553.969
36	1298.861	575.613
37	1319.110	597.748
38	1338.824	620.362
39	1357.992	643.440
40	1376.601	666.971
41	1394.643	690.940
42	1412.105	715.333
43	1428.979	740.138
44	1445.255	765.339
45	1460.922	790.923
46	1475.974	816.874
47	1490.399	843.178
48	1504.192	869.819

49	1517.343	896.783
50	1529.845	924.054
51	1541.691	951.616
52	1548.965	969.724

Factor of Safety
*** 3.557 ***

Failure Surface Specified By 51 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	339.798	159.798
2	369.653	156.856
3	399.583	154.801
4	429.560	153.636
5	459.559	153.361
6	489.553	153.976
7	519.515	155.481
8	549.419	157.875
9	579.239	161.155
10	608.949	165.319
11	638.522	170.363
12	667.932	176.283
13	697.154	183.072
14	726.161	190.726
15	754.928	199.238
16	783.430	208.599
17	811.642	218.803
18	839.538	229.839
19	867.094	241.698
20	894.286	254.370
21	921.091	267.844
22	947.483	282.107
23	973.441	297.147
24	998.940	312.951
25	1023.960	329.505
26	1048.477	346.794
27	1072.470	364.803
28	1095.918	383.516
29	1118.801	402.917
30	1141.097	422.989
31	1162.788	443.714
32	1183.854	465.073
33	1204.277	487.048
34	1224.039	509.619
35	1243.122	532.767
36	1261.510	556.471
37	1279.186	580.711

38	1296.135	605.464
39	1312.341	630.710
40	1327.792	656.426
41	1342.472	682.588
42	1356.369	709.175
43	1369.471	736.163
44	1381.767	763.528
45	1393.244	791.245
46	1403.894	819.291
47	1413.707	847.641
48	1422.674	876.270
49	1430.788	905.152
50	1438.041	934.262
51	1438.762	937.576

Factor of Safety
*** 3.565 ***

Failure Surface Specified By 56 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	349.596	169.596
2	378.290	160.841
3	407.262	153.054
4	436.479	146.244
5	465.908	140.420
6	495.516	135.588
7	525.270	131.752
8	555.136	128.918
9	585.080	127.089
10	615.069	126.266
11	645.068	126.451
12	675.044	127.643
13	704.964	129.842
14	734.792	133.044
15	764.497	137.246
16	794.043	142.443
17	823.398	148.630
18	852.529	155.799
19	881.402	163.943
20	909.986	173.051
21	938.248	183.114
22	966.156	194.121
23	993.678	206.059
24	1020.784	218.915
25	1047.443	232.674
26	1073.625	247.320

27	1099.300	262.837
28	1124.440	279.208
29	1149.015	296.414
30	1172.999	314.436
31	1196.364	333.253
32	1219.084	352.844
33	1241.133	373.187
34	1262.486	394.259
35	1283.120	416.036
36	1303.011	438.494
37	1322.136	461.608
38	1340.474	485.350
39	1358.004	509.695
40	1374.707	534.616
41	1390.563	560.083
42	1405.556	586.068
43	1419.667	612.542
44	1432.880	639.475
45	1445.182	666.837
46	1456.558	694.596
47	1466.995	722.722
48	1476.482	751.183
49	1485.008	779.946
50	1492.563	808.979
51	1499.138	838.250
52	1504.727	867.724
53	1509.322	897.370
54	1512.920	927.154
55	1515.515	957.041
56	1515.717	960.858

Factor of Safety
*** 3.569 ***

Failure Surface Specified By 52 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	388.788	216.894
2	418.375	211.935
3	448.097	207.861
4	477.928	204.674
5	507.840	202.378
6	537.807	200.974
7	567.802	200.464
8	597.800	200.848
9	627.773	202.126
10	657.694	204.297
11	687.537	207.358
12	717.276	211.308

13	746.884	216.142
14	776.335	221.856
15	805.602	228.446
16	834.660	235.905
17	863.483	244.227
18	892.045	253.404
19	920.321	263.428
20	948.285	274.290
21	975.913	285.981
22	1003.181	298.490
23	1030.063	311.807
24	1056.537	325.918
25	1082.579	340.813
26	1108.165	356.477
27	1133.272	372.896
28	1157.880	390.057
29	1181.965	407.943
30	1205.506	426.539
31	1228.482	445.828
32	1250.874	465.794
33	1272.660	486.418
34	1293.822	507.682
35	1314.341	529.568
36	1334.198	552.055
37	1353.377	575.124
38	1371.859	598.755
39	1389.629	622.926
40	1406.671	647.615
41	1422.969	672.802
42	1438.509	698.463
43	1453.278	724.576
44	1467.262	751.118
45	1480.448	778.064
46	1492.826	805.392
47	1504.384	833.076
48	1515.111	861.092
49	1524.999	889.416
50	1534.038	918.022
51	1542.221	946.885
52	1547.894	969.439

Factor of Safety
*** 3.576 ***

Failure Surface Specified By 59 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)

1	330.000	150.000
2	358.175	139.696
3	386.679	130.340
4	415.479	121.942
5	444.545	114.512
6	473.842	108.058
7	503.339	102.587
8	533.002	98.104
9	562.799	94.617
10	592.695	92.127
11	622.658	90.638
12	652.654	90.152
13	682.650	90.669
14	712.612	92.188
15	742.505	94.708
16	772.298	98.226
17	801.957	102.739
18	831.448	108.240
19	860.739	114.724
20	889.797	122.184
21	918.589	130.611
22	947.083	139.996
23	975.248	150.329
24	1003.051	161.597
25	1030.462	173.788
26	1057.450	186.890
27	1083.985	200.886
28	1110.038	215.761
29	1135.578	231.499
30	1160.578	248.082
31	1185.010	265.492
32	1208.846	283.708
33	1232.059	302.712
34	1254.625	322.481
35	1276.516	342.993
36	1297.710	364.225
37	1318.182	386.155
38	1337.910	408.756
39	1356.870	432.005
40	1375.043	455.874
41	1392.408	480.338
42	1408.945	505.368
43	1424.637	530.937
44	1439.464	557.017
45	1453.411	583.578
46	1466.463	610.590
47	1478.604	638.023
48	1489.821	665.847
49	1500.102	694.031
50	1509.435	722.542
51	1517.809	751.350
52	1525.215	780.421
53	1531.646	809.724
54	1537.093	839.225

55	1541.551	868.892
56	1545.015	898.691
57	1547.480	928.590
58	1548.944	958.554
59	1549.117	969.764

Factor of Safety
*** 3.581 ***

Failure Surface Specified By 51 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	359.394	179.394
2	388.944	174.217
3	418.645	169.992
4	448.466	166.721
5	478.377	164.410
6	508.346	163.059
7	538.344	162.671
8	568.338	163.245
9	598.299	164.782
10	628.195	167.279
11	657.995	170.735
12	687.669	175.145
13	717.187	180.505
14	746.517	186.809
15	775.629	194.052
16	804.495	202.224
17	833.083	211.319
18	861.364	221.327
19	889.310	232.237
20	916.892	244.038
21	944.080	256.718
22	970.848	270.265
23	997.167	284.663
24	1023.010	299.898
25	1048.351	315.955
26	1073.164	332.817
27	1097.423	350.466
28	1121.104	368.885
29	1144.181	388.054
30	1166.630	407.953
31	1188.430	428.563
32	1209.557	449.862
33	1229.990	471.828
34	1249.708	494.438
35	1268.689	517.670
36	1286.916	541.498

37	1304.368	565.899
38	1321.029	590.848
39	1336.880	616.318
40	1351.906	642.284
41	1366.090	668.719
42	1379.419	695.595
43	1391.879	722.885
44	1403.457	750.561
45	1414.141	778.594
46	1423.919	806.956
47	1432.782	835.617
48	1440.721	864.547
49	1447.728	893.718
50	1453.795	923.098
51	1457.411	943.969

Factor of Safety
*** 3.581 ***

Failure Surface Specified By 58 Coordinate Points

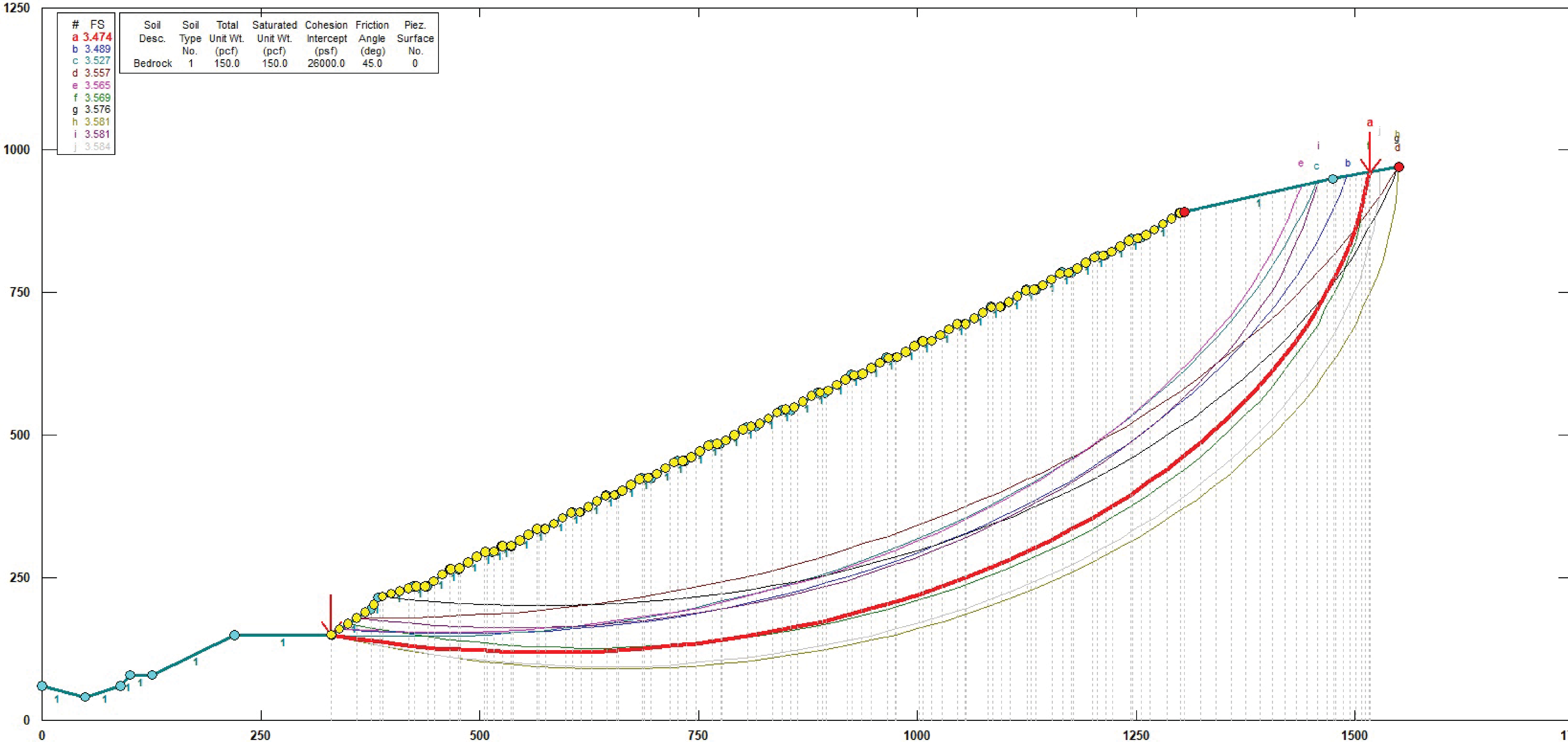
Point No.	X-Surf (ft)	Y-Surf (ft)
1	330.000	150.000
2	358.276	139.977
3	386.875	130.914
4	415.763	122.823
5	444.908	115.711
6	474.276	109.587
7	503.834	104.459
8	533.549	100.332
9	563.386	97.210
10	593.312	95.098
11	623.292	93.997
12	653.291	93.909
13	683.277	94.834
14	713.215	96.771
15	743.069	99.718
16	772.808	103.672
17	802.396	108.627
18	831.800	114.578
19	860.986	121.519
20	889.921	129.442
21	918.572	138.337
22	946.906	148.194
23	974.891	159.002
24	1002.496	170.750
25	1029.688	183.422

26	1056.436	197.006
27	1082.711	211.485
28	1108.482	226.843
29	1133.719	243.062
30	1158.395	260.124
31	1182.480	278.010
32	1205.948	296.699
33	1228.771	316.169
34	1250.924	336.399
35	1272.381	357.366
36	1293.117	379.045
37	1313.110	401.412
38	1332.337	424.441
39	1350.774	448.107
40	1368.403	472.381
41	1385.201	497.237
42	1401.151	522.646
43	1416.233	548.579
44	1430.432	575.006
45	1443.729	601.898
46	1456.112	629.223
47	1467.564	656.951
48	1478.074	685.050
49	1487.629	713.488
50	1496.218	742.232
51	1503.832	771.250
52	1510.461	800.508
53	1516.099	829.973
54	1520.739	859.612
55	1524.375	889.391
56	1527.004	919.276
57	1528.622	949.232
58	1528.928	964.381

Factor of Safety
*** 3.584 ***

**** END OF GSTABL7 OUTPUT ****

15558 Maricopa Hwy, Ojai: Section T5 Circular, Static



GSTABL7 v.2 FSmin=3.474
Safety Factors Are Calculated By The Simplified Janbu Method

*** GSTABL7 ***

** GSTABL7 by Dr. Garry H. Gregory, Ph.D.,P.E.,D.GE **

** Original Version 1.0, January 1996; Current Ver. 2.005.3, Feb. 2013 **

****

SLOPE STABILITY ANALYSIS SYSTEM

Modified Bishop, Simplified Janbu, or GLE Method of Slices.
(Includes Spencer & Morgenstern-Price Type Analysis)
Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
Nonlinear Undrained Shear Strength, Curved Phi Envelope,
Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.

****

Analysis Run Date: 6/1/2020
Time of Run: 02:23PM
Run By: IM
Input Data Filename: C:\Users\Project Files\Slope Stability\18-092902 OJAI QUARRY)\Section T-6, circular failure, static.in
Output Filename: C:\Users\Project Files\Slope Stability\18-092902 (OJAI QUARRY)\Section T-6, circular failure, static.OUT
Unit System: English

Plotted Output Filename: C:\Users\Project Files\Slope Stability\18-092902 (OJAI QUARRY)\Section T-6, circular failure, static.PLT

PROBLEM DESCRIPTION: 15558 Maricopa Hwy, Ojai: Section T-6
Circular, Static

BOUNDARY COORDINATES

16 Top Boundaries
16 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	50.00	40.00	40.00	1
2	40.00	40.00	65.00	40.00	1

3	65.00	40.00	90.00	70.00	1
4	90.00	70.00	112.00	70.00	1
5	112.00	70.00	215.00	150.00	1
6	215.00	150.00	335.00	150.00	1
7	335.00	150.00	375.00	215.00	1
8	375.00	215.00	410.00	235.00	1
9	410.00	235.00	500.00	245.00	1
10	500.00	245.00	540.00	310.00	1
11	540.00	310.00	640.00	400.00	1
12	640.00	400.00	675.00	405.00	1
13	675.00	405.00	740.00	485.00	1
14	740.00	485.00	785.00	485.00	1
15	785.00	485.00	1295.00	895.00	1
16	1295.00	895.00	1550.00	980.00	1

Default Y-Origin = 0.00(ft)

Default X-Plus Value = 0.00(ft)

Default Y-Plus Value = 0.00(ft)

ISOTROPIC SOIL PARAMETERS

1 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	150.0	150.0	26000.0	45.0	0.00	0.0	0

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

1000 Trial Surfaces Have Been Generated.

10 Surface(s) Initiate(s) From Each Of 100 Points Equally Spaced Along The Ground Surface Between X = 300.00(ft)
and X =1290.00(ft)

Each Surface Terminates Between X =1300.00(ft)
and X =1550.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation

At Which A Surface Extends Is Y =   0.00(ft)

50.00(ft) Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Evaluated. They Are
Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Total Number of Trial Surfaces Attempted = 1000

Number of Failed Attempts to Generate Trial Surface =   32

Number of Trial Surfaces With Valid FS = 968

Percentage of Trial Surfaces With Non-Valid FS Solutions
of the Total Attempted =   3.2 %

Statistical Data On All Valid FS Values:
FS Max = 66.727   FS Min =   3.616   FS Ave =   7.692
Standard Deviation =   6.044   Coefficient of Variation =   78.57 %

Failure Surface Specified By 34 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	330.000	150.000
2	379.418	142.394
3	429.141	137.141
4	479.058	134.251
5	529.055	133.731
6	579.021	135.583
7	628.842	139.802
8	678.408	146.379
9	727.606	155.299
10	776.325	166.542
11	824.457	180.083
12	871.892	195.891
13	918.525	213.930
14	964.249	234.161
15	1008.963	256.537
16	1052.565	281.008
17	1094.958	307.519

18	1136.046	336.011
19	1175.736	366.419
20	1213.940	398.675
21	1250.572	432.707
22	1285.548	468.437
23	1318.791	505.786
24	1350.225	544.669
25	1379.780	584.999
26	1407.389	626.685
27	1432.990	669.633
28	1456.526	713.748
29	1477.944	758.928
30	1497.195	805.074
31	1514.236	852.080
32	1529.029	899.842
33	1541.540	948.251
34	1548.020	979.340

Circle Center At X = 515.111 ; Y = 1187.234 ; and Radius = 1053.623

Factor of Safety
*** 3.616 ***

Individual data on the 43 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	5.0	288.6	0.0	0.0	0.	0.	0.0	0.0	0.0
2	40.0	218085.8	0.0	0.0	0.	0.	0.0	0.0	0.0
3	4.4	48728.7	0.0	0.0	0.	0.	0.0	0.0	0.0
4	30.6	392137.5	0.0	0.0	0.	0.	0.0	0.0	0.0
5	19.1	281124.4	0.0	0.0	0.	0.	0.0	0.0	0.0
6	49.9	780226.5	0.0	0.0	0.	0.	0.0	0.0	0.0
7	20.9	344588.1	0.0	0.0	0.	0.	0.0	0.0	0.0
8	29.1	587167.7	0.0	0.0	0.	0.	0.0	0.0	0.0
9	10.9	274455.7	0.0	0.0	0.	0.	0.0	0.0	0.0
10	39.0	1127892.6	0.0	0.0	0.	0.	0.0	0.0	0.0
11	49.8	1717696.2	0.0	0.0	0.	0.	0.0	0.0	0.0
12	11.2	425835.4	0.0	0.0	0.	0.	0.0	0.0	0.0
13	35.0	1359200.5	0.0	0.0	0.	0.	0.0	0.0	0.0
14	3.4	133393.1	0.0	0.0	0.	0.	0.0	0.0	0.0
15	49.2	2130004.8	0.0	0.0	0.	0.	0.0	0.0	0.0
16	12.4	596116.6	0.0	0.0	0.	0.	0.0	0.0	0.0
17	36.3	1758053.8	0.0	0.0	0.	0.	0.0	0.0	0.0
18	8.7	412787.6	0.0	0.0	0.	0.	0.0	0.0	0.0
19	39.5	1931384.5	0.0	0.0	0.	0.	0.0	0.0	0.0

20	47.4	2474708.5	0.0	0.0	0.	0.	0.0	0.0	0.0
21	46.6	2578924.8	0.0	0.0	0.	0.	0.0	0.0	0.0
22	45.7	2652090.8	0.0	0.0	0.	0.	0.0	0.0	0.0
23	44.7	2694402.5	0.0	0.0	0.	0.	0.0	0.0	0.0
24	43.6	2706407.8	0.0	0.0	0.	0.	0.0	0.0	0.0
25	42.4	2689049.0	0.0	0.0	0.	0.	0.0	0.0	0.0
26	41.1	2643589.2	0.0	0.0	0.	0.	0.0	0.0	0.0
27	39.7	2571662.8	0.0	0.0	0.	0.	0.0	0.0	0.0
28	38.2	2475219.8	0.0	0.0	0.	0.	0.0	0.0	0.0
29	36.6	2356499.8	0.0	0.0	0.	0.	0.0	0.0	0.0
30	35.0	2218041.8	0.0	0.0	0.	0.	0.0	0.0	0.0
31	9.5	591867.6	0.0	0.0	0.	0.	0.0	0.0	0.0
32	23.8	1450791.5	0.0	0.0	0.	0.	0.0	0.0	0.0
33	31.4	1805620.5	0.0	0.0	0.	0.	0.0	0.0	0.0
34	29.6	1567151.0	0.0	0.0	0.	0.	0.0	0.0	0.0
35	27.6	1333607.5	0.0	0.0	0.	0.	0.0	0.0	0.0
36	25.6	1108174.2	0.0	0.0	0.	0.	0.0	0.0	0.0
37	23.5	893999.6	0.0	0.0	0.	0.	0.0	0.0	0.0
38	21.4	694167.4	0.0	0.0	0.	0.	0.0	0.0	0.0
39	19.3	511659.3	0.0	0.0	0.	0.	0.0	0.0	0.0
40	17.0	349331.1	0.0	0.0	0.	0.	0.0	0.0	0.0
41	14.8	209874.0	0.0	0.0	0.	0.	0.0	0.0	0.0
42	12.5	95803.5	0.0	0.0	0.	0.	0.0	0.0	0.0
43	6.5	14058.5	0.0	0.0	0.	0.	0.0	0.0	0.0

Failure Surface Specified By 34 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	320.000	150.000
2	369.193	141.055
3	418.768	134.550
4	468.604	130.500
5	518.579	128.914
6	568.571	129.798
7	618.459	133.148
8	668.120	138.956
9	717.435	147.209
10	766.281	157.885
11	814.541	170.960
12	862.097	186.401
13	908.833	204.171
14	954.635	224.226
15	999.391	246.518
16	1042.992	270.991
17	1085.332	297.587
18	1126.307	326.240
19	1165.818	356.881
20	1203.769	389.435
21	1240.066	423.823
22	1274.622	459.960
23	1307.351	497.759

24	1338.175	537.128
25	1367.018	577.970
26	1393.810	620.186
27	1418.486	663.673
28	1440.985	708.325
29	1461.252	754.033
30	1479.238	800.686
31	1494.900	848.170
32	1508.199	896.369
33	1519.102	945.166
34	1523.582	971.194

Circle Center At X =   525.793 ; Y = 1140.991 ; and Radius = 1012.133

Factor of Safety
***   3.651   ***

Failure Surface Specified By 33 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	310.000	150.000
2	359.780	145.320
3	409.722	142.912
4	459.722	142.781
5	509.676	144.928
6	559.480	149.349
7	609.031	156.033
8	658.227	164.968
9	706.964	176.135
10	755.142	189.510
11	802.660	205.065
12	849.421	222.769
13	895.327	242.585
14	940.282	264.472
15	984.194	288.383
16	1026.971	314.270
17	1068.524	342.079
18	1108.768	371.751
19	1147.618	403.226
20	1184.994	436.438
21	1220.818	471.318
22	1255.016	507.794
23	1287.518	545.790
24	1318.254	585.226
25	1347.163	626.022
26	1374.183	668.093
27	1399.258	711.350

28	1422.337	755.705
29	1443.372	801.065
30	1462.318	847.337
31	1479.137	894.423
32	1493.794	942.227
33	1499.155	963.052

Circle Center At X = 437.586 ; Y = 1239.916 ; and Radius = 1097.358

Factor of Safety
*** 3.653 ***

Failure Surface Specified By 34 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	310.000	150.000
2	359.401	142.287
3	409.119	136.979
4	459.035	134.090
5	509.033	133.625
6	558.995	135.587
7	608.802	139.970
8	658.339	146.764
9	707.487	155.953
10	756.131	167.516
11	804.158	181.425
12	851.453	197.647
13	897.906	216.145
14	943.406	236.874
15	987.847	259.787
16	1031.125	284.828
17	1073.136	311.939
18	1113.783	341.057
19	1152.970	372.112
20	1190.604	405.031
21	1226.596	439.738
22	1260.863	476.149
23	1293.323	514.180
24	1323.899	553.741
25	1352.521	594.739
26	1379.120	637.077
27	1403.633	680.656
28	1426.004	725.372
29	1446.179	771.121
30	1464.111	817.795
31	1479.758	865.283
32	1493.082	913.475

33	1504.053	962.257
34	1504.502	964.834

Circle Center At X = 493.626 ; Y = 1163.769 ; and Radius = 1030.265

Factor of Safety
*** 3.658 ***

Failure Surface Specified By 34 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	340.000	158.125
2	389.087	148.612
3	438.589	141.574
4	488.382	137.029
5	538.340	134.987
6	588.338	135.454
7	638.249	138.430
8	687.949	143.905
9	737.311	151.868
10	786.211	162.297
11	834.526	175.166
12	882.135	190.443
13	928.918	208.090
14	974.756	228.061
15	1019.534	250.307
16	1063.140	274.772
17	1105.464	301.394
18	1146.398	330.105
19	1185.841	360.834
20	1223.692	393.504
21	1259.856	428.031
22	1294.243	464.330
23	1326.765	502.307
24	1357.340	541.869
25	1385.893	582.915
26	1412.350	625.342
27	1436.645	669.043
28	1458.716	713.907
29	1478.509	759.823
30	1495.974	806.674
31	1511.066	854.342
32	1523.747	902.707
33	1533.986	951.647
34	1537.807	975.936

Circle Center At X = 554.127 ; Y = 1130.594 ; and Radius = 995.764

Factor of Safety
*** 3.666 ***

Failure Surface Specified By 32 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	340.000	158.125
2	389.965	159.984
3	439.820	163.788
4	489.490	169.532
5	538.897	177.206
6	587.968	186.800
7	636.628	198.298
8	684.803	211.684
9	732.420	226.936
10	779.406	244.032
11	825.691	262.946
12	871.204	283.649
13	915.875	306.109
14	959.637	330.292
15	1002.424	356.163
16	1044.171	383.681
17	1084.814	412.804
18	1124.291	443.489
19	1162.542	475.689
20	1199.510	509.354
21	1235.138	544.435
22	1269.373	580.876
23	1302.161	618.624
24	1333.454	657.621
25	1363.204	697.808
26	1391.365	739.123
27	1417.896	781.504
28	1442.755	824.886
29	1465.904	869.204
30	1487.310	914.391
31	1506.938	960.377
32	1509.242	966.414

Circle Center At X = 317.397 ; Y = 1440.658 ; and Radius = 1282.732

Factor of Safety
*** 3.696 ***

Failure Surface Specified By 33 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	360.000	190.625
2	409.653	184.747
3	459.527	181.190
4	509.511	179.959
5	559.499	181.058
6	609.382	184.486
7	659.050	190.233
8	708.397	198.288
9	757.315	208.633
10	805.698	221.246
11	853.441	236.099
12	900.440	253.161
13	946.593	272.393
14	991.800	293.755
15	1035.963	317.200
16	1078.985	342.677
17	1120.774	370.130
18	1161.239	399.501
19	1200.291	430.724
20	1237.846	463.734
21	1273.823	498.457
22	1308.143	534.818
23	1340.731	572.739
24	1371.518	612.136
25	1400.436	652.926
26	1427.422	695.018
27	1452.417	738.322
28	1475.368	782.743
29	1496.225	828.185
30	1514.942	874.550
31	1531.479	921.736
32	1545.799	969.641
33	1548.230	979.410

Circle Center At X = 510.918 ; Y = 1252.906 ; and Radius = 1072.948

Factor of Safety
*** 3.701 ***

Failure Surface Specified By 35 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)

1	300.000	150.000
2	348.357	137.288
3	397.304	127.081
4	446.711	119.405
5	496.448	114.283
6	546.383	111.726
7	596.383	111.741
8	646.316	114.330
9	696.050	119.484
10	745.452	127.190
11	794.393	137.428
12	842.742	150.170
13	890.371	165.383
14	937.155	183.027
15	982.968	203.055
16	1027.691	225.413
17	1071.204	250.043
18	1113.392	276.879
19	1154.143	305.850
20	1193.350	336.880
21	1230.908	369.885
22	1266.718	404.780
23	1300.686	441.471
24	1332.720	479.861
25	1362.737	519.848
26	1390.657	561.327
27	1416.405	604.188
28	1439.914	648.316
29	1461.121	693.596
30	1479.971	739.907
31	1496.412	787.126
32	1510.403	835.129
33	1521.905	883.788
34	1530.888	932.974
35	1536.407	975.469

Circle Center At X = 571.079 ; Y = 1082.852 ; and Radius = 971.441

Factor of Safety
*** 3.708 ***

Failure Surface Specified By 33 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	330.000	150.000
2	379.017	140.132

3	428.493	132.912
4	478.285	128.363
5	528.250	126.495
6	578.244	127.316
7	628.120	130.823
8	677.737	137.005
9	726.949	145.845
10	775.615	157.317
11	823.594	171.388
12	870.748	188.018
13	916.940	207.157
14	962.036	228.752
15	1005.906	252.739
16	1048.424	279.049
17	1089.467	307.607
18	1128.915	338.328
19	1166.655	371.126
20	1202.578	405.905
21	1236.580	442.564
22	1268.562	480.997
23	1298.432	521.094
24	1326.105	562.738
25	1351.499	605.810
26	1374.541	650.184
27	1395.166	695.732
28	1413.312	742.323
29	1428.928	789.821
30	1441.969	838.091
31	1452.397	886.991
32	1460.181	936.382
33	1461.639	950.546

Circle Center At X = 537.984 ; Y = 1056.421 ; and Radius = 929.977

Factor of Safety
*** 3.715 ***

Failure Surface Specified By 33 Coordinate Points

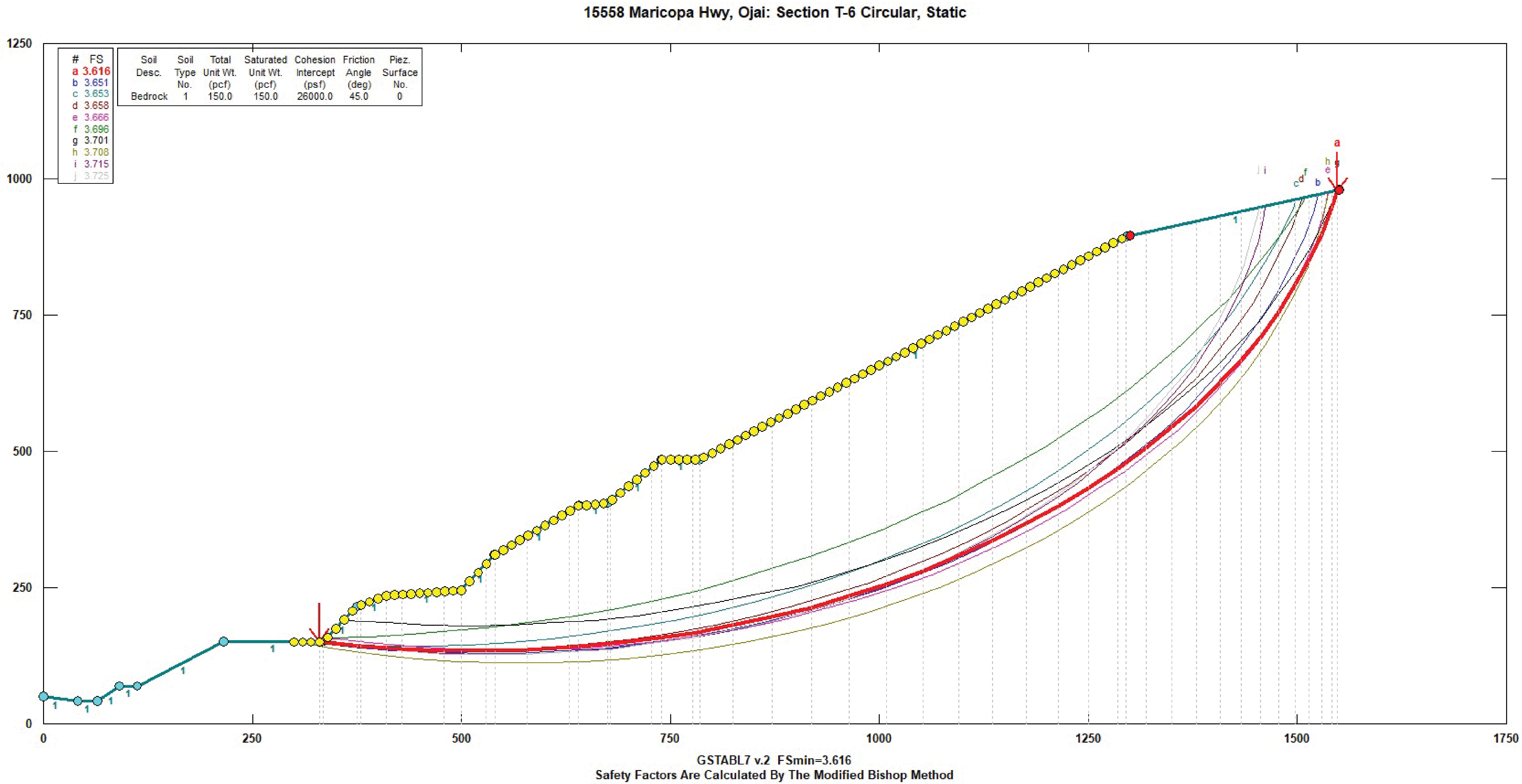
Point No.	X-Surf (ft)	Y-Surf (ft)
1	330.000	150.000
2	378.996	140.031
3	428.461	132.736
4	478.249	128.138
5	528.214	126.250
6	578.207	127.077
7	628.081	130.618

8	677.690	136.861
9	726.887	145.788
10	775.526	157.373
11	823.464	171.582
12	870.561	188.373
13	916.676	207.696
14	961.674	229.494
15	1005.423	253.704
16	1047.792	280.252
17	1088.657	309.062
18	1127.898	340.048
19	1165.399	373.119
20	1201.049	408.178
21	1234.743	445.120
22	1266.381	483.837
23	1295.871	524.215
24	1323.125	566.134
25	1348.063	609.471
26	1370.611	654.098
27	1390.703	699.883
28	1408.279	746.692
29	1423.288	794.386
30	1435.686	842.825
31	1445.435	891.865
32	1452.507	941.363
33	1453.063	947.688

Circle Center At X = 537.982 ; Y = 1046.779 ; and Radius = 920.581

Factor of Safety
*** 3.725 ***

**** END OF GSTABL7 OUTPUT ****



15558 Maricopa Hwy, Ojai: Section T-6 Circular, Static
FS
a 3.616
b 3.651
c 3.653
d 3.658
e 3.666
f 3.696
g 3.701
h 3.708
i 3.715
j 3.725
Soil Desc. | Soil Type No. | Total Unit Wt. (pcf) | Saturated Unit Wt. (pcf) | Cohesion Intercept (psf) | Friction Angle (deg) | Piez. Surface No.
Bedrock | 1 | 150.0 | 150.0 | 26000.0 | 45.0 | 0
1250
1000
750
500
250
0
0
250
500
750
1000
1250
1500
1750
GSTABL7 v.2 FSmin=3.616
Safety Factors Are Calculated By The Modified Bishop Method

*** GSTABL7 ***

** GSTABL7 by Dr. Garry H. Gregory, Ph.D.,P.E.,D.GE **

** Original Version 1.0, January 1996; Current Ver. 2.005.3, Feb. 2013 **

****

SLOPE STABILITY ANALYSIS SYSTEM
Modified Bishop, Simplified Janbu, or GLE Method of Slices.
(Includes Spencer & Morgenstern-Price Type Analysis)
Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
Nonlinear Undrained Shear Strength, Curved Phi Envelope,
Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.

****

Analysis Run Date: 6/2/2020
Time of Run: 09:18AM
Run By: IM
Input Data Filename: C:\Users\Project Files\Slope Stability\18-092902 (OJAI QUARRY)\section a-1, circular failure, static.in
Output Filename: C:\Users\Project Files\Slope Stability\18-092902 OJAI QUARRY)\section a-1, circular failure, static.OUT
Unit System: English

Plotted Output Filename: C:\Users\Project Files\Slope Stability\18-092902 (OJAI QUARRY)\section a-1, circular failure, static.PLT

PROBLEM DESCRIPTION: 15558 Maricopa Hwy, Ojai: Section A-1
Circular, Static

BOUNDARY COORDINATES

6 Top Boundaries
6 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	178.00	5.00	176.00	1
2	5.00	176.00	80.00	180.00	1

3	80.00	180.00	260.00	320.00	1
4	260.00	320.00	310.00	320.00	1
5	310.00	320.00	540.00	500.00	1
6	540.00	500.00	600.00	545.00	1

Default Y-Origin = 0.00(ft)

Default X-Plus Value = 0.00(ft)

Default Y-Plus Value = 0.00(ft)

ISOTROPIC SOIL PARAMETERS

1 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	150.0	150.0	26000.0	45.0	0.00	0.0	0

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

1000 Trial Surfaces Have Been Generated.

10 Surface(s) Initiate(s) From Each Of 100 Points Equally Spaced Along The Ground Surface Between X = 80.00(ft) and X = 535.00(ft)

Each Surface Terminates Between X = 540.00(ft) and X = 600.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = 0.00(ft)

30.00(ft) Line Segments Define Each Trial Failure Surface.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Total Number of Trial Surfaces Attempted = 1000

Number of Trial Surfaces with Misleading FS = 1

Number of Failed Attempts to Generate Trial Surface = 49

Number of Trial Surfaces With Valid FS = 950

Percentage of Trial Surfaces With Non-Valid FS Solutions
of the Total Attempted = 5.0 %

Statistical Data On All Valid FS Values:
FS Max = 437.843 FS Min = 6.452 FS Ave = 18.998
Standard Deviation = 24.850 Coefficient of Variation = 130.80 %

Failure Surface Specified By 26 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	80.000	180.000
2	108.934	172.075
3	138.384	166.356
4	168.181	162.875
5	198.157	161.652
6	228.138	162.694
7	257.956	165.995
8	287.440	171.536
9	316.422	179.286
10	344.736	189.200
11	372.222	201.223
12	398.722	215.285
13	424.086	231.306
14	448.169	249.195
15	470.833	268.850
16	491.950	290.159
17	511.399	313.001
18	529.069	337.244
19	544.860	362.752
20	558.681	389.379
21	570.454	416.972
22	580.112	445.375
23	587.599	474.426
24	592.873	503.959
25	595.904	533.805
26	596.117	542.088

Circle Center At X = 199.404 ; Y = 558.681 ; and Radius = 397.060

Factor of Safety
*** 6.452 ***

Individual data on the 28 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	28.9	66034.0	0.0	0.0	0.	0.	0.0	0.0	0.0
2	29.4	197645.0	0.0	0.0	0.	0.	0.0	0.0	0.0
3	29.8	323520.8	0.0	0.0	0.	0.	0.0	0.0	0.0
4	30.0	440540.4	0.0	0.0	0.	0.	0.0	0.0	0.0
5	30.0	545909.6	0.0	0.0	0.	0.	0.0	0.0	0.0
6	29.8	637224.1	0.0	0.0	0.	0.	0.0	0.0	0.0
7	2.0	46909.3	0.0	0.0	0.	0.	0.0	0.0	0.0
8	27.4	621692.9	0.0	0.0	0.	0.	0.0	0.0	0.0
9	22.6	492193.5	0.0	0.0	0.	0.	0.0	0.0	0.0
10	6.4	138792.2	0.0	0.0	0.	0.	0.0	0.0	0.0
11	28.3	644981.8	0.0	0.0	0.	0.	0.0	0.0	0.0
12	27.5	670904.7	0.0	0.0	0.	0.	0.0	0.0	0.0
13	26.5	678981.6	0.0	0.0	0.	0.	0.0	0.0	0.0
14	25.4	669849.1	0.0	0.0	0.	0.	0.0	0.0	0.0
15	24.1	644663.8	0.0	0.0	0.	0.	0.0	0.0	0.0
16	22.7	605066.9	0.0	0.0	0.	0.	0.0	0.0	0.0
17	21.1	553141.2	0.0	0.0	0.	0.	0.0	0.0	0.0
18	19.4	491359.5	0.0	0.0	0.	0.	0.0	0.0	0.0
19	17.7	422519.4	0.0	0.0	0.	0.	0.0	0.0	0.0
20	10.9	245366.0	0.0	0.0	0.	0.	0.0	0.0	0.0
21	4.9	104247.6	0.0	0.0	0.	0.	0.0	0.0	0.0
22	13.8	275242.6	0.0	0.0	0.	0.	0.0	0.0	0.0
23	11.8	203526.8	0.0	0.0	0.	0.	0.0	0.0	0.0
24	9.7	138039.9	0.0	0.0	0.	0.	0.0	0.0	0.0
25	7.5	81974.8	0.0	0.0	0.	0.	0.0	0.0	0.0
26	5.3	38356.8	0.0	0.0	0.	0.	0.0	0.0	0.0
27	3.0	9960.9	0.0	0.0	0.	0.	0.0	0.0	0.0
28	0.2	129.6	0.0	0.0	0.	0.	0.0	0.0	0.0

Failure Surface Specified By 25 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	84.596	183.575
2	113.417	175.247
3	142.799	169.189
4	172.563	165.436
5	202.529	164.010
6	232.516	164.922
7	262.340	168.165
8	291.821	173.719
9	320.781	181.551
10	349.043	191.613
11	376.436	203.845

12	402.794	218.171
13	427.957	234.506
14	451.773	252.749
15	474.096	272.791
16	494.791	294.510
17	513.733	317.774
18	530.807	342.441
19	545.909	368.363
20	558.948	395.381
21	569.845	423.332
22	578.532	452.047
23	584.959	481.350
24	589.085	511.065
25	590.706	538.029

Circle Center At X = 205.830 ; Y = 549.138 ; and Radius = 385.141

Factor of Safety
*** 6.548 ***

Failure Surface Specified By 25 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	80.000	180.000
2	108.757	171.453
3	138.106	165.239
4	167.859	161.397
5	197.824	159.951
6	227.809	160.912
7	257.620	164.273
8	287.066	170.013
9	315.957	178.094
10	344.107	188.464
11	371.336	201.057
12	397.468	215.792
13	422.335	232.574
14	445.777	251.296
15	467.643	271.835
16	487.793	294.061
17	506.096	317.830
18	522.436	342.990
19	536.706	369.379
20	548.816	396.826
21	558.687	425.156
22	566.256	454.185
23	571.473	483.728

24	574.307	513.594
25	574.483	525.862

Circle Center At X = 200.846 ; Y = 533.955 ; and Radius = 374.016

Factor of Safety
*** 6.649 ***

Failure Surface Specified By 25 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	102.980	197.873
2	131.596	188.867
3	160.850	182.219
4	190.549	177.975
5	220.494	176.162
6	250.487	176.792
7	280.330	179.861
8	309.823	185.349
9	338.773	193.219
10	366.986	203.419
11	394.274	215.881
12	420.459	230.524
13	445.364	247.248
14	468.826	265.944
15	490.688	286.488
16	510.806	308.743
17	529.045	332.562
18	545.286	357.785
19	559.419	384.247
20	571.352	411.772
21	581.006	440.177
22	588.315	469.272
23	593.232	498.867
24	595.724	528.763
25	595.746	541.810

Circle Center At X = 227.762 ; Y = 544.384 ; and Radius = 368.294

Factor of Safety
*** 6.659 ***

Failure Surface Specified By 25 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	89.192	187.149
2	118.588	181.159
3	148.343	177.338
4	178.299	175.708
5	208.294	176.277
6	238.166	179.042
7	267.755	183.989
8	296.903	191.090
9	325.452	200.307
10	353.248	211.592
11	380.144	224.883
12	405.993	240.108
13	430.657	257.187
14	454.003	276.027
15	475.907	296.527
16	496.249	318.576
17	514.921	342.057
18	531.823	366.843
19	546.863	392.800
20	559.961	419.790
21	571.047	447.667
22	580.059	476.281
23	586.952	505.479
24	591.686	535.103
25	592.020	539.015

Circle Center At X = 185.541 ; Y = 584.821 ; and Radius = 409.177

Factor of Safety
*** 6.706 ***

Failure Surface Specified By 24 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	98.384	194.299
2	127.311	186.346
3	156.781	180.733
4	186.606	177.495
5	216.594	176.653
6	246.553	178.213
7	276.292	182.165
8	305.619	188.483
9	334.347	197.126

10	362.291	208.040
11	389.273	221.155
12	415.119	236.386
13	439.664	253.635
14	462.750	272.793
15	484.230	293.736
16	503.966	316.331
17	521.831	340.431
18	537.710	365.884
19	551.503	392.525
20	563.121	420.184
21	572.488	448.684
22	579.546	477.842
23	584.249	507.471
24	586.364	534.773

Circle Center At X = 212.120 ; Y = 551.220 ; and Radius = 374.605

Factor of Safety
*** 6.772 ***

Failure Surface Specified By 24 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	98.384	194.299
2	126.898	184.974
3	156.095	178.080
4	185.769	173.666
5	215.708	171.762
6	245.702	172.383
7	275.537	175.524
8	305.002	181.162
9	333.889	189.258
10	361.993	199.754
11	389.115	212.576
12	415.062	227.634
13	439.652	244.820
14	462.709	264.013
15	484.071	285.076
16	503.586	307.861
17	521.116	332.207
18	536.536	357.940
19	549.739	384.879
20	560.629	412.833
21	569.130	441.603
22	575.182	470.986
23	578.741	500.774

24	579.751	529.813

Circle Center At X = 223.341 ; Y = 528.090 ; and Radius = 356.414

Factor of Safety
*** 6.789 ***

Failure Surface Specified By 25 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	80.000	180.000
2	109.780	176.374
3	139.735	174.735
4	169.733	175.090
5	199.641	177.436
6	229.327	181.765
7	258.660	188.055
8	287.511	196.281
9	315.751	206.405
10	343.256	218.383
11	369.905	232.161
12	395.579	247.680
13	420.166	264.869
14	443.557	283.655
15	465.647	303.952
16	486.341	325.672
17	505.546	348.719
18	523.178	372.991
19	539.158	398.381
20	553.416	424.776
21	565.889	452.060
22	576.522	480.113
23	585.268	508.810
24	592.089	538.024
25	592.284	539.213

Circle Center At X = 149.404 ; Y = 625.967 ; and Radius = 451.336

Factor of Safety
*** 6.789 ***

Failure Surface Specified By 24 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	121.364	212.172
2	149.971	203.136
3	179.235	196.535
4	208.951	192.414
5	238.908	190.804
6	268.894	191.716
7	298.698	195.142
8	328.108	201.060
9	356.918	209.426
10	384.923	220.182
11	411.926	233.253
12	437.736	248.545
13	462.171	265.950
14	485.058	285.346
15	506.234	306.596
16	525.552	329.549
17	542.873	354.043
18	558.076	379.905
19	571.054	406.953
20	581.714	434.995
21	589.982	463.833
22	595.798	493.264
23	599.122	523.079
24	599.707	544.780

Circle Center At X = 243.105 ; Y = 547.359 ; and Radius = 356.611

Factor of Safety
*** 6.830 ***

Failure Surface Specified By 24 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	121.364	212.172
2	149.884	202.866
3	179.092	196.020
4	208.777	191.685
5	238.724	189.892
6	268.714	190.654
7	298.531	193.965
8	327.958	199.802
9	356.781	208.121

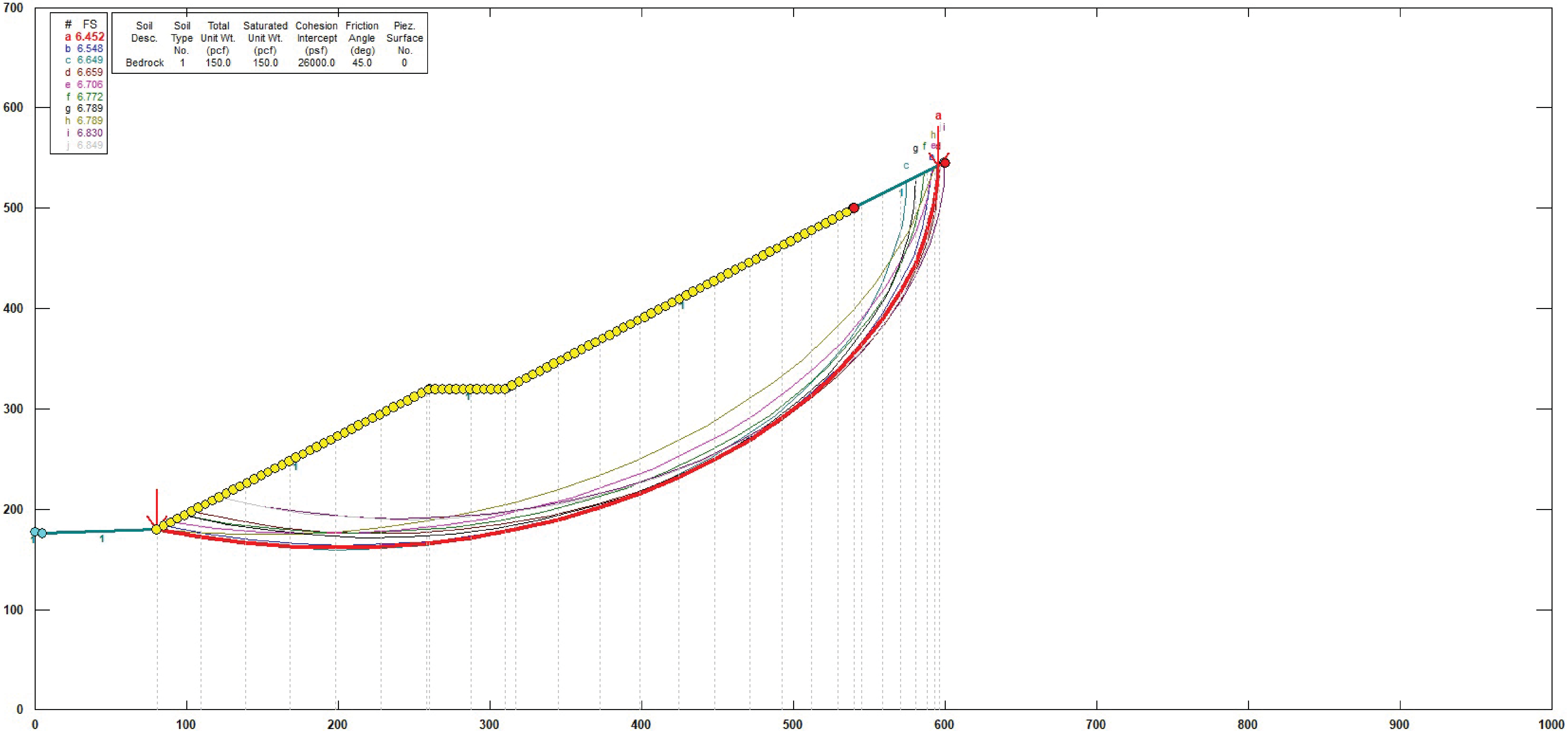
10	384.792	218.863
11	411.787	231.950
12	437.571	247.287
13	461.955	264.762
14	484.765	284.248
15	505.833	305.605
16	525.008	328.678
17	542.149	353.298
18	557.133	379.288
19	569.851	406.459
20	580.211	434.614
21	588.138	463.547
22	593.573	493.051
23	596.478	522.910
24	596.709	542.532

Circle Center At X = 244.824 ; Y = 541.689 ; and Radius = 351.886

Factor of Safety
*** 6.849 ***

**** END OF GSTABL7 OUTPUT ****

15558 Maricopa Hwy, Ojai: Section A-1 Circular, Static



GSTABL7 v.2 FSmin=6.452
Safety Factors Are Calculated By The Modified Bishop Method

*** GSTABL7 ***

** GSTABL7 by Dr. Garry H. Gregory, Ph.D.,P.E.,D.GE **

** Original Version 1.0, January 1996; Current Ver. 2.005.3, Feb. 2013 **

****

SLOPE STABILITY ANALYSIS SYSTEM
Modified Bishop, Simplified Janbu, or GLE Method of Slices.
(Includes Spencer & Morgenstern-Price Type Analysis)
Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
Nonlinear Undrained Shear Strength, Curved Phi Envelope,
Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.

****

Analysis Run Date: 6/2/2020
Time of Run: 09:25AM
Run By: IM
Input Data Filename: C:\Users\Project Files\Slope Stability\18-092902 (OJAI QUARRY)\Section A-2, circular failure, static.in
Output Filename: C:\Users\Project Files\Slope Stability\18-092902 (OJAI QUARRY)\Section A-2, circular failure, static.OUT
Unit System: English

Plotted Output Filename: C:\Users\Project Files\Slope Stability\18-092902 (OJAI QUARRY)\Section A-2, circular failure, static.PLT

PROBLEM DESCRIPTION: 15558 Maricopa Hwy, Ojai: Section A-2
Circular, Static

BOUNDARY COORDINATES

6 Top Boundaries
6 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	12.00	20.00	12.00	1
2	20.00	12.00	220.00	170.00	1

3	220.00	170.00	230.00	170.00	1
4	230.00	170.00	280.00	180.00	1
5	280.00	180.00	310.00	210.00	1
6	310.00	210.00	500.00	280.00	1

Default Y-Origin = 0.00(ft)

Default X-Plus Value = 0.00(ft)

Default Y-Plus Value = 0.00(ft)

ISOTROPIC SOIL PARAMETERS

1 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	150.0	150.0	26000.0	45.0	0.00	0.0	0

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

1000 Trial Surfaces Have Been Generated.

10 Surface(s) Initiate(s) From Each Of 100 Points Equally Spaced Along The Ground Surface Between X = 20.00(ft)
and X = 220.00(ft)

Each Surface Terminates Between X = 225.00(ft)
and X = 500.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = 0.00(ft)

20.00(ft) Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Evaluated. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Total Number of Trial Surfaces Attempted = 1000

Number of Failed Attempts to Generate Trial Surface = 57

Number of Trial Surfaces With Valid FS = 943

Percentage of Trial Surfaces With Non-Valid FS Solutions
of the Total Attempted = 5.7 %

Statistical Data On All Valid FS Values:
FS Max = 210.011 FS Min = 7.708 FS Ave = 22.331
Standard Deviation = 22.185 Coefficient of Variation = 99.34 %

Failure Surface Specified By 30 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	20.000	12.000
2	39.662	8.338
3	59.488	5.703
4	79.423	4.103
5	99.416	3.540
6	119.410	4.018
7	139.352	5.535
8	159.189	8.086
9	178.866	11.665
10	198.330	16.263
11	217.530	21.865
12	236.412	28.459
13	254.925	36.024
14	273.021	44.543
15	290.649	53.990
16	307.762	64.341
17	324.314	75.567
18	340.260	87.639
19	355.556	100.524
20	370.163	114.186
21	384.039	128.589
22	397.148	143.694
23	409.454	159.460
24	420.923	175.844
25	431.526	192.802
26	441.232	210.289
27	450.017	228.257
28	457.855	246.657
29	464.726	265.439

30 465.270 267.205

Circle Center At X = 100.240 ; Y = 388.048 ; and Radius = 384.513

Factor of Safety
*** 7.708 ***

Individual data on the 33 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	19.7	28305.5	0.0	0.0	0.	0.	0.0	0.0	0.0
2	19.8	84289.1	0.0	0.0	0.	0.	0.0	0.0	0.0
3	19.9	138056.6	0.0	0.0	0.	0.	0.0	0.0	0.0
4	20.0	188985.0	0.0	0.0	0.	0.	0.0	0.0	0.0
5	20.0	236502.3	0.0	0.0	0.	0.	0.0	0.0	0.0
6	19.9	280094.2	0.0	0.0	0.	0.	0.0	0.0	0.0
7	19.8	319309.1	0.0	0.0	0.	0.	0.0	0.0	0.0
8	19.7	353763.2	0.0	0.0	0.	0.	0.0	0.0	0.0
9	19.5	383144.9	0.0	0.0	0.	0.	0.0	0.0	0.0
10	19.2	407217.2	0.0	0.0	0.	0.	0.0	0.0	0.0
11	2.5	54370.0	0.0	0.0	0.	0.	0.0	0.0	0.0
12	10.0	218289.3	0.0	0.0	0.	0.	0.0	0.0	0.0
13	6.4	137820.1	0.0	0.0	0.	0.	0.0	0.0	0.0
14	18.5	391265.1	0.0	0.0	0.	0.	0.0	0.0	0.0
15	18.1	370532.0	0.0	0.0	0.	0.	0.0	0.0	0.0
16	7.0	139121.9	0.0	0.0	0.	0.	0.0	0.0	0.0
17	10.6	214339.2	0.0	0.0	0.	0.	0.0	0.0	0.0
18	17.1	359478.2	0.0	0.0	0.	0.	0.0	0.0	0.0
19	2.2	48270.7	0.0	0.0	0.	0.	0.0	0.0	0.0
20	14.3	304718.2	0.0	0.0	0.	0.	0.0	0.0	0.0
21	15.9	326749.6	0.0	0.0	0.	0.	0.0	0.0	0.0
22	15.3	298022.8	0.0	0.0	0.	0.	0.0	0.0	0.0
23	14.6	267558.4	0.0	0.0	0.	0.	0.0	0.0	0.0
24	13.9	235899.4	0.0	0.0	0.	0.	0.0	0.0	0.0
25	13.1	203614.9	0.0	0.0	0.	0.	0.0	0.0	0.0
26	12.3	171292.8	0.0	0.0	0.	0.	0.0	0.0	0.0
27	11.5	139531.6	0.0	0.0	0.	0.	0.0	0.0	0.0
28	10.6	108934.0	0.0	0.0	0.	0.	0.0	0.0	0.0
29	9.7	80100.2	0.0	0.0	0.	0.	0.0	0.0	0.0
30	8.8	53620.3	0.0	0.0	0.	0.	0.0	0.0	0.0
31	7.8	30066.9	0.0	0.0	0.	0.	0.0	0.0	0.0
32	6.9	9988.1	0.0	0.0	0.	0.	0.0	0.0	0.0
33	0.5	63.8	0.0	0.0	0.	0.	0.0	0.0	0.0

Failure Surface Specified By 32 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	30.101	19.980
2	49.251	14.213
3	68.689	9.502
4	88.355	5.862
5	108.190	3.303
6	128.136	1.833
7	148.133	1.456
8	168.120	2.175
9	188.038	3.985
10	207.827	6.883
11	227.428	10.859
12	246.781	15.901
13	265.831	21.994
14	284.518	29.121
15	302.787	37.259
16	320.584	46.385
17	337.855	56.471
18	354.548	67.486
19	370.613	79.398
20	386.003	92.172
21	400.671	105.768
22	414.573	120.146
23	427.667	135.263
24	439.915	151.074
25	451.280	167.532
26	461.727	184.586
27	471.225	202.187
28	479.746	220.281
29	487.265	238.814
30	493.758	257.730
31	499.207	276.974
32	499.877	279.955

Circle Center At X = 145.020 ; Y = 366.751 ; and Radius = 365.318

Factor of Safety
*** 7.716 ***

Failure Surface Specified By 31 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)

1	32.121	21.576
2	51.565	16.890
3	71.225	13.220
4	91.049	10.575
5	110.984	8.964
6	130.976	8.390
7	150.971	8.854
8	170.914	10.356
9	190.753	12.892
10	210.433	16.454
11	229.902	21.034
12	249.106	26.618
13	267.995	33.192
14	286.517	40.737
15	304.622	49.234
16	322.262	58.660
17	339.388	68.989
18	355.955	80.193
19	371.918	92.242
20	387.234	105.104
21	401.861	118.744
22	415.760	133.125
23	428.894	148.208
24	441.227	163.953
25	452.726	180.317
26	463.360	197.256
27	473.099	214.724
28	481.919	232.674
29	489.795	251.058
30	496.705	269.826
31	499.844	279.943

Circle Center At X = 132.031 ; Y = 393.445 ; and Radius = 385.057

Factor of Safety
*** 7.757 ***

Failure Surface Specified By 30 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	38.182	26.364
2	57.666	21.851
3	77.361	18.371
4	97.212	15.933
5	117.164	14.543
6	137.161	14.206

7	157.148	14.922
8	177.070	16.689
9	196.871	19.503
10	216.496	23.355
11	235.892	28.236
12	255.003	34.131
13	273.778	41.023
14	292.163	48.895
15	310.109	57.724
16	327.565	67.486
17	344.483	78.153
18	360.816	89.696
19	376.518	102.083
20	391.546	115.280
21	405.859	129.250
22	419.416	143.953
23	432.180	159.351
24	444.116	175.399
25	455.190	192.053
26	465.372	209.267
27	474.634	226.993
28	482.949	245.183
29	490.296	263.785
30	495.130	278.206

Circle Center At X = 133.587 ; Y = 393.729 ; and Radius = 379.551

Factor of Safety
*** 7.916 ***

Failure Surface Specified By 30 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	34.141	23.172
2	53.871	19.897
3	73.739	17.598
4	93.696	16.281
5	113.693	15.950
6	133.682	16.605
7	153.615	18.244
8	173.442	20.864
9	193.117	24.458
10	212.590	29.017
11	231.815	34.531
12	250.745	40.986
13	269.334	48.366

14	287.536	56.653
15	305.308	65.827
16	322.605	75.866
17	339.388	86.746
18	355.613	98.439
19	371.242	110.918
20	386.237	124.153
21	400.562	138.110
22	414.181	152.756
23	427.062	168.056
24	439.172	183.972
25	450.484	200.466
26	460.969	217.498
27	470.602	235.025
28	479.359	253.006
29	487.219	271.397
30	488.888	275.906

Circle Center At X = 110.443 ; Y = 421.364 ; and Radius = 405.437

Factor of Safety
*** 7.923 ***

Failure Surface Specified By 30 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	36.162	24.768
2	55.498	19.660
3	75.092	15.649
4	94.881	12.750
5	114.802	10.971
6	134.791	10.318
7	154.785	10.792
8	174.721	12.393
9	194.535	15.115
10	214.164	18.950
11	233.546	23.885
12	252.618	29.904
13	271.321	36.989
14	289.595	45.118
15	307.382	54.263
16	324.624	64.396
17	341.269	75.486
18	357.261	87.495
19	372.551	100.388
20	387.091	114.121
21	400.832	128.653

22	413.733	143.936
23	425.752	159.921
24	436.851	176.559
25	446.994	193.796
26	456.150	211.578
27	464.288	229.847
28	471.384	248.546
29	477.414	267.615
30	478.559	272.101

Circle Center At X = 136.397 ; Y = 364.798 ; and Radius = 354.497

Factor of Safety
*** 7.942 ***

Failure Surface Specified By 31 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	40.202	27.960
2	59.292	21.994
3	78.692	17.132
4	98.338	13.388
5	118.167	10.776
6	138.112	9.303
7	158.110	8.975
8	178.093	9.792
9	197.997	11.753
10	217.756	14.850
11	237.305	19.073
12	256.580	24.408
13	275.518	30.839
14	294.056	38.344
15	312.135	46.897
16	329.694	56.472
17	346.676	67.037
18	363.025	78.556
19	378.688	90.993
20	393.613	104.307
21	407.751	118.453
22	421.056	133.386
23	433.484	149.056
24	444.994	165.411
25	455.549	182.399
26	465.114	199.964
27	473.657	218.048
28	481.151	236.591
29	487.570	255.532
30	492.895	274.810

31	493.497	277.604

Circle Center At X = 153.838 ; Y = 358.082 ; and Radius = 349.133

Factor of Safety
*** 7.962 ***

Failure Surface Specified By 31 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	40.202	27.960
2	58.950	20.995
3	78.078	15.153
4	97.518	10.452
5	117.201	6.910
6	137.060	4.539
7	157.025	3.347
8	177.025	3.339
9	196.990	4.514
10	216.851	6.869
11	236.538	10.394
12	255.982	15.079
13	275.114	20.906
14	293.868	27.855
15	312.178	35.901
16	329.980	45.017
17	347.211	55.170
18	363.811	66.325
19	379.722	78.443
20	394.888	91.481
21	409.256	105.394
22	422.775	120.133
23	435.399	135.646
24	447.082	151.878
25	457.785	168.774
26	467.468	186.273
27	476.100	204.314
28	483.649	222.835
29	490.088	241.770
30	495.396	261.053
31	499.373	279.769

Circle Center At X = 167.164 ; Y = 341.029 ; and Radius = 337.834

Factor of Safety
*** 7.975 ***

Failure Surface Specified By 29 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	30.101	19.980
2	49.985	17.825
3	69.947	16.593
4	89.944	16.286
5	109.935	16.904
6	129.875	18.447
7	149.723	20.911
8	169.435	24.290
9	188.970	28.578
10	208.286	33.766
11	227.340	39.841
12	246.094	46.792
13	264.505	54.603
14	282.536	63.258
15	300.146	72.738
16	317.300	83.022
17	333.959	94.089
18	350.087	105.915
19	365.652	118.475
20	380.619	131.742
21	394.955	145.686
22	408.631	160.280
23	421.618	175.490
24	433.886	191.285
25	445.411	207.631
26	456.166	224.493
27	466.130	241.834
28	475.281	259.618
29	481.483	273.178

Circle Center At X = 86.582 ; Y = 448.384 ; and Radius = 432.111

Factor of Safety
*** 7.981 ***

Failure Surface Specified By 30 Coordinate Points

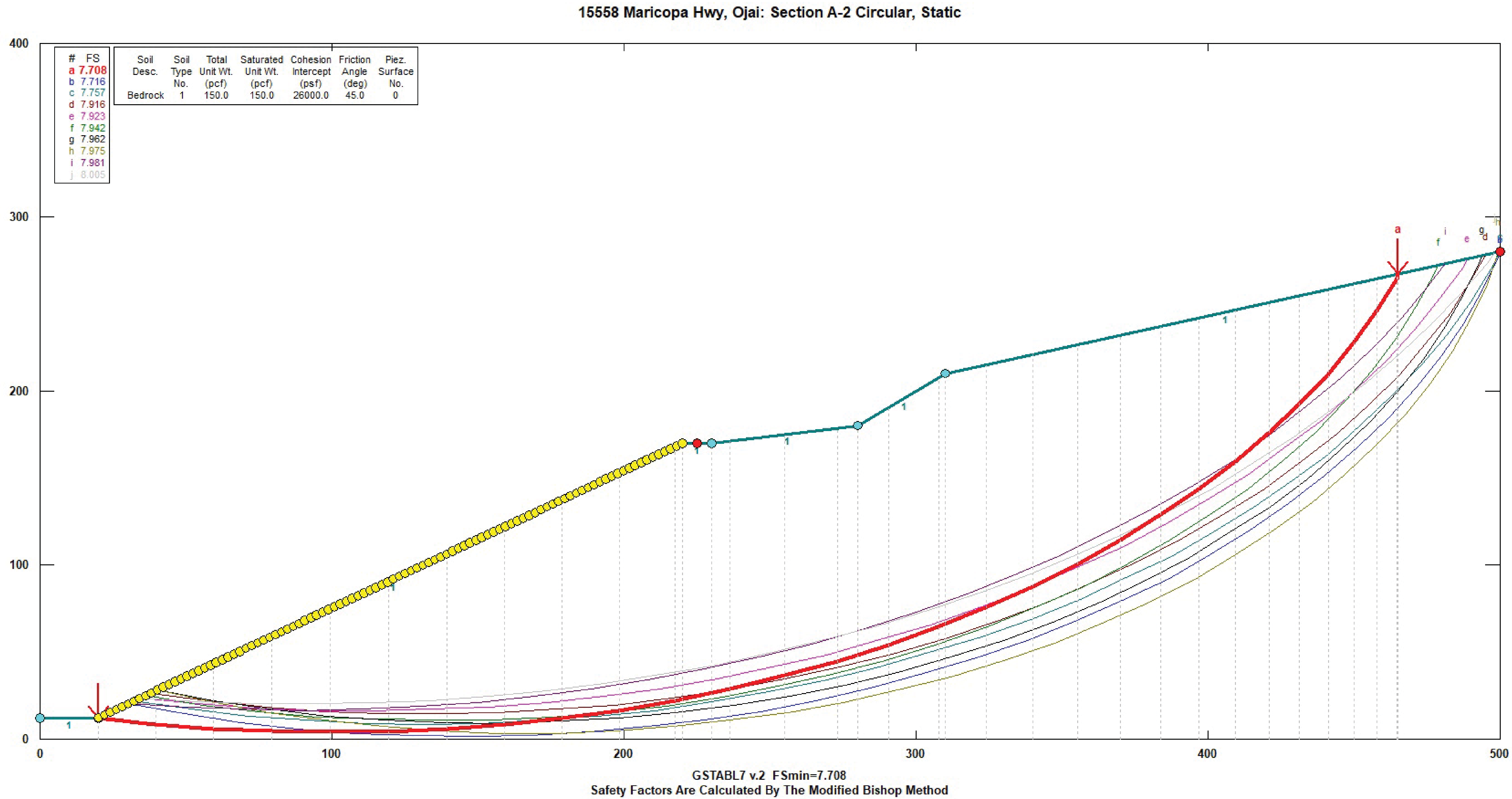
Point No.	X-Surf (ft)	Y-Surf (ft)
1	34.141	23.172
2	54.037	21.129
3	74.003	19.972

4	94.002	19.701
5	113.992	20.318
6	133.935	21.820
7	153.793	24.206
8	173.524	27.470
9	193.092	31.607
10	212.457	36.607
11	231.581	42.462
12	250.426	49.159
13	268.956	56.685
14	287.134	65.026
15	304.923	74.165
16	322.290	84.084
17	339.200	94.764
18	355.620	106.184
19	371.516	118.320
20	386.859	131.150
21	401.617	144.648
22	415.763	158.787
23	429.267	173.539
24	442.103	188.877
25	454.246	204.768
26	465.673	221.183
27	476.360	238.088
28	486.287	255.450
29	495.433	273.236
30	498.243	279.353

Circle Center At X = 90.155 ; Y = 470.175 ; and Radius = 450.499

Factor of Safety
*** 8.005 ***

**** END OF GSTABL7 OUTPUT ****



15558 Maricopa Hwy, Ojai: Section A-2 Circular, Static
FS
a 7.708
b 7.716
c 7.757
d 7.916
e 7.923
f 7.942
g 7.962
h 7.975
i 7.981
j 8.005
Soil Desc. | Soil Type No. | Total Unit Wt. (pcf) | Saturated Unit Wt. (pcf) | Cohesion Intercept (psf) | Friction Angle (deg) | Piez. Surface No.
Bedrock | 1 | 150.0 | 150.0 | 26000.0 | 45.0 | 0
GSTABL7 v.2 FSmin=7.708
Safety Factors Are Calculated By The Modified Bishop Method

APPENDIX II

NORFLEET CONSULTANTS REPORT DATED DECEMBER 5, 2011

NORFLEET CONSULTANTS

Engineering
Geology
Hydrogeology
Geophysics

6430 Preston Ave.
Suite A
Livermore, CA 94551
(925) 606-8595

December 5, 2011

Mr. L. Mosler
Mosler Rock Ojai Quarry
Box 502
Newbury Park, CA 91319

Proj. No. 111882

RE: Slope Stability Study
For the Ojai Quarry
Reclamation Plan
Ojai, CA

Dear Mr. Mosler,

At your request, we have completed our slope stability evaluation for the Reclamation Plan for the Mosler Rock Ojai Quarry Project in Ojai, California. This study evaluates the stability of the final reclaimed slope geometry.

Our scope of work included:

- Site meetings with quarry personnel and site visits to the quarry.
- Compilation, review and summary of available pertinent geologic and geotechnical documents, to support slope design analysis and recommendations for a quarry Reclamation Plan.
- Numerical evaluation of cross-sections for slope stability in static and pseudo-static loading conditions of the proposed reclamation slope geometry.
- Discussions with quarry personnel about the implications of the findings of this study.
- Preparation of this report.

The intent and purpose of this report is to provide a summary of the geologic and geotechnical issues as they pertain to long-term, global slope stability of the final slope geometries at reclamation (after quarrying has ceased) consistent with SMARA requirements. Working and interim slope stability were not evaluated. We understand that an engineering firm currently provides those services. Our fieldwork was performed in November, 2011.

GEOLOGIC SETTING

The quarry is located on undeveloped land of the Los Padres National Forest within the Topatopa range, and is adjacent to State Highway 33 (Rt 33) and the north fork of Matilija Creek (Figures 1 and 2). It is about 4 miles north of the city of Ojai in Ventura County. Eocene sandstones of the Matilija formation are mined in the quarry.

The area was mapped in 1928 by Kerr and Schenck and again by Dibblee (1982). Dibblee's structural mapping is general only. It does not show the detailed structural complexities within the ramp zone. The depostional environment of the sandstone was discussed by Link (1975). Squires (1999) did a detailed stratigraphic analysis of the Matilija sandstone at the Matalija Hot Springs with an auxiliary section opposite the quarry.

The quarry is located in the core of large thrust ramp (called the Matilija Overturn by Kerr and Schenck). The thrust ramp extends diagonally (southeast-to-northwest) across the range, forming a large fold. The ramp fold axis is quasi-vertical, exposing a cross-section of the ramp (in plan view). Ramp development caused rotation, faulting, fracturing, shearing, and bedding plane slip along the sandstone/siltstone beds.

SITE GEOLOGY

Field descriptions are based on the exposures in the quarry at the time of our site visits in late 2011. This is an active quarry. As mining progress, features described in this report may be destroyed while new geologic features will become visible. With a few exceptions, the quarry beds dip steeply (80 to 85 degrees SE) and strike ~N30E. The beds young to the southeast. The quarry face has an approximate bearing of N40W.

The quarry is located on the lower part of a southwest sloping steep ridge (Photos 1 and 2). The current quarry (active and reclaimed) is about 650 feet wide and long with an elevation change of about 500 feet. The undisturbed ground above the quarry slopes 33 to 36 degrees (1.54-1.4 to 1) while the ground surface adjacent to the north side of the lower part of the quarry slopes about 45 degrees (1 to 1). There were no obvious indications of large-scale slope failures in the surrounding natural slopes.

In the quarry, the Matilija formation consists of interbedded sandstones and siltstones (Photo 3). Sandstone beds vary from a foot or so thick to massive beds more than 30 feet thick. The sandstones are fine- to coarse-grained and contain few obvious depositional features. The siltstones are thin bedded (an inch or less) and form zones a few inches thick to more than 20 feet thick. The sandstones are light brown in color while the siltstones are dark brown (blackish looking). The sandstones are hard enough that they have to be blasted.

The stratigraphy of the Matilija formation was evaluated by Link (1975). The lower Matilija formation crops out in the quarry and consists of two lithofacies: distal and proximal turbidites. The distal turbidite lithofacies is a deep water flysch sequence. It consists of thin-bedded, graded sandstones with thin siltstone/silty clay interbeds. They exhibit a classic fining-upwards Bouma sequence. The sandstone beds typically have sharp lower boundaries and can contain mudstone clasts. They are blanket-like turbidites. The proximal turbidite lithofacies overlies the distal zone. The proximal turbidites contain thick lower sandstone beds (3 to 45 feet thick) with a slight internal coarsening upward in grain size. This zone resembles channel-like turbidites and are thought to have formed within a submarine-fan complex. See Link(1975) for further details.

For mapping purposes, the rocks within the pit were separated into three domains (A, B, and C, Figure 2). Domains are used as geomechanical units (GMU's). Domains A and B are part of the distal turbidite lithofacies and Domain C is part of the proximal turbidite lithofacies.

Domain A is located at the northern side of the quarry (Photo 1). It consists of thick (3 to 30 feet) sandstone beds and thin siltstone beds (most under 1 foot thick; Photo 3). It appears to contain two fining upward sequences (from north to south), each about 150 feet thick. The upper part of each sequence contains thicker and more numerous siltstone beds while the basal part contains thick sandstone beds with scattered, thin siltstone beds. Domain B is a narrow zone (~100 ft wide) near the middle of the quarry (Photos 2 and 4). It consists mainly of siltstone beds less than 1 inch wide with occasional sandstone beds up to a few feet wide. It is more erodable than the other domains and forms a broad gully that extends up and down the slope. The siltstones are easily broken apart with a rock hammer (and sometimes by hand) and can be excavated with machinery. Domain C is located at the southern side of the quarry (Photos 2 and 5). It consists of massive sandstone units with few, thin siltstone beds. It is about 200 feet thick. In this area, bedding can be difficult to identify even in fresh exposures. At the ground surface, these sandstones erode into large boulders.

There is a sub-domain at the uphill end of Domain A. This area consists of extensively fractured sandstone that appears to be part of a fault/shear zone. It has a triangular shape and is informally called the triangle zone (TZ in Figure 2, Photo 6). No siltstones were visible within this zone. The sandstone has fractured into large blocks of all sizes, ranging from a foot on a side to blocks 10 feet or more on a side. It has the characteristics of a large gravel pile and has about a 70 foot high steep face (45 to 60 degree slope). This is the only sandstone area that can be excavated without blasting. This area was mapped by PML and is identified on their geologic map as a "scattered boulder" zone.

Rocks in the quarry are fractured/jointed/sheared/faulted to varying levels. All of these features will be referred to as joints unless specifically described otherwise. It appears that bedding plane slip was concentrated in the siltstone beds. It is not known how much stratigraphic shortening occurred. The thickness of the main siltstone bed on the west side of Rt 33 is more than double the thickness of the main siltstone zone (Domain B) in the quarry (Photo 13). Structural relationships on either side of Rt 33 suggests that a fault extends partially through the north end of the river valley, and it may be difficult to project stratigraphic correlations across Rt 33.

We observed a fault at the upper part of Domain A (above bench 3, Photo 7). The fault is exposed in a naturally occurring gully that existed prior to any quarrying. The strike and dip of the fault is N25W 55SW. About 200 feet of the fault plane exposed in a gully. The gully is 20 to 30 feet deep and the fault plane forms the south side of the gully. We do not know the uphill extension of the fault. The fault could be traced down into the upper road (part of bench 3) that cuts across the quarry, but not further. The structural orientation of the fault suggests that it extends downhill into the siltstone zone (Domain B).

We observed bedding plane slip (a fault) in the middle of Domain A (Photos 3 and 8). The upper part of this fault appeared to widen out into a triangular shape at the base of the triangle zone. The structural relationship between this fault and the triangle zone is unknown.

We observed one and possibly two faults in Domain C, and there are likely others. These faults are quasi-parallel to bedding. These faults have weather into deep crevasses filled with sand (Photo 5). We did not observe faults that cut across bedding.

Residual soils a few feet thick overlie bedded sandstones and siltstones in Domains A and B. In the fractured rock (sub-domain A) and massive sandstones (Domain C), bedrock is overlain by sands and sandstone corestones forming a zone that is 10 to 50 feet thick (a saprolite[1]; Photos 9). The boundaries between soil, saprolite, and bedrock are gradational, but thin. We did not observe visibly weathered bedrock even though weathering on a microscopic level exists. We did not observe obvious alteration/mineralization of bedrock. One of the weathering effects on both the sandstones and siltstones is that as weathering increases, joint spacing and persistence is reduced and joint density increases. The above descriptions are based on our visual field observations.

We measured joints along the quarry roads at various locations throughout the quarry. Data collected included joint orientation, termination, spacing, persistence, type, width, shape, roughness, and filling. The poles to the joint orientation data were plotted on stereonets to evaluate the potential for wedge and planar failures daylighting in the quarry walls. This data was used to estimate strength envelopes for the sandstones and siltstones.

The majority of the joints are thin (most less than 1/8 inch wide to tight; Photos 5, 10, 11, and 12). Most joints were not filled, but some contained a thin fill. Occasional slickenslides were observed. Virtually all of the sandstone units have been blasted. Blasting widened many of the joints and locally increased joint density. The majority of the observed joints dipped out of the quarry faces. Most dip between 30 and 45 degrees. The dip direction of most joints is perpendicular (± 20 degrees) to the quarry face. No bedding parallel joints within the sandstones were observed. No free/flowing water was observed in the quarry. No indications of long-term, historic water flow were observed in the quarry.

Schmidt hammer (type N) readings were taken at several locations in the sandstone units. The readings were corrected as described in Basu and Ayding (2004). The compressive strength ranged from 7,000 to 8,000 psi (48 to 70MPa). These values are consistent with hammer tests (Brown, 1981). Hammer strikes indicate that the intact rock has a grade of R4 to R5 (Hoek and Brown, 1997; Hack and Huisman, 2002). The Schmidt hammer readings have an inherent, sample bias towards testing larger, stronger rocks. We performed a few Schmidt hammer tests on the siltstones. The compressive strength is in the range of 1000 psi (144,000 pcf). These

[1] Saprolite traditionally refers to weathered rock that has lost much of its mechanical strength, but retains its original rock fabric. The primary minerals have altered and clay has developed (Anand and Paine, 2002, p 16-20; Graham and Rossi, 2010). Saprock is included within our usage of Saprolite. We use the term in this study to describe deeply weathered rock that contains sands and sandstone corestones.

values should be considered an approximation only. The values were at the low end of the scale of the hammer and the siltstones were loose and finely fractured, making it difficult to find good surfaces to test.

RQD values vary with the Domain. The RQD of Domain B (the siltstone zone) horizontally and vertically is 0 to 10. The RQD of Domain C (the massive sandstone) horizontally and vertically is 80 to 100. The RQD would be less in a fault/shear zone. The RQD of Domain A (interbedded sandstones and siltstones) is variable because of the anisotropic nature of the zone. The overall RQD is between 40 and 60, with higher and lower values depending on the location. In a horizontal direction, RQD is controlled by sandstone/siltstone bed thicknesses, joint density and minor changes in the scan line orientation and location. In a vertical direction, RQD values are controlled by joint density within a single sandstone bed. RQD would be close to 0 in the siltstones.

The California Geological Survey (CGS) Seismic Hazard Zone Report for Matilija quadrangle contains material properties. The Matilija sandstone was not directly tested, but the phi angle was estimated at 38 degrees. No cohesion value was listed. These values represent near-surface, weathered sandstone (10 to 40 feet from the ground surface) instead of less weathered (stronger) sandstones. No landslides were shown within the Matilija sandstone units in the vicinity of the quarry.

No historic air photographs were evaluated.

Seismicity

The Matilija Quadrangle was evaluated by the California Geological Survey for earthquake-induced landslides and liquefaction potential (CGS, 2003). No direct physical properties for the Matililja Sandstone were listed. CGS assumed a phi angle of 38 degrees, but no cohesion value was listed. For a 1.5:1 slope (66% grade), the earthquake induced landslide hazard was considered medium. The CGS estimated that the quarry area has a 10 percent chance in 50 years of experiencing a PGA of 0.51 to 0.53g (firm rock conditions).

Groundwater

The quarry is on the side of a steep hill. No springs are known in the surrounding hillside. We did not observe damp zones in the quarry rock exposures or indications of historic water flow from the rock faces. The geologic setting of the quarry indicates that it is not susceptible to liquefaction.

The term “saturated zone” or groundwater table is commonly applied to soils and sedimentary basin fill material in which there is a porous, granular matrix (silt, sand, gravel) where water can fill open, interconnected pores. The sandstones are somewhat porous but do not have a sufficiently open pore structure that would allow the development of a widespread “saturated zone”. Groundwater flow through pores or microfractures within the intact rock mass is considered minimal. The primary flow paths are through the joints and fractures (a dual porosity model).

There is likely deep groundwater (below the elevation of the North Fork of the Matilija stream), but there is no indication of a long-term groundwater table in the quarry area at elevations that would affect slope stability. The majority of rainfall seeps into the ground. It flows in unsaturated conditions though the saprolite and then into joints within bedrock. Temporary, localized perched water tables likely develop. They cause rock falls of all sizes, but no large-scale landslides have occurred. Large rock falls occur during heavy rains but not during the dry season. For this reason, groundwater was not included within the slope stability models.

Historic Stability Evaluation

The previous slope stability report was issued on July 25, 1988, by Pacific Materials Laboratory (hereinafter referred to as PML), their file no. 88-6253-3. At that time, the disturbed area was about 3 acres, and a steep rock cut (~0.8:1 slope, with a maximum height of ~285 feet) had been made at the lower northwest corner of the quarry (adjacent to the north end of the current bench 1). That face still exists and has not been significantly modified by the current operator. The PML report evaluated the potential slope stability of “future rock quarry areas” (PML, p. 2). Quarried slopes existing at the time were not evaluated.

PML measured the orientation of 157 joints and plotted the joint data on a stereonet (PI diagram, Figure 3) and contoured the data with a 1 percent counting circle. They identified three primary joint sets (Table 1) and several minor joint sets. All their data appears to have measured uphill of the current bench 2. Their geologic map suggests that little joint data was collected from cuts/exposed rock within areas that had been mined.

Table 1 Primary joint sets identified in the PML report

Set Number	Dip bearing	Strike and Dip
1	110/35SW	N70W 35SW
2	104/44SW	N76W 44SW
3	118/37SW	N62W 39SW

PML indicated that these joint sets were systematic, had a spacing of 1 to 5 feet, and were traceable for 5 to 75 feet. They used the first two joint sets in their slope stability analysis.

PML performed unconfined compressive strength tests on three sandstone samples. The unit weight of the samples varied from 157.2 to 159.7 pcf and the UCS varied from 14,649 to 16,164 psi (~2,000,000 psf/ ~96 MPa)

PML performed direct shear tests on joints in four sandstone samples. Each sample was tested under saturated conditions at confining loads of 1000, 2000, and 4000 psf. The joint friction angles varied from 48 to 67 degrees and cohesion was 0, except for one sample that had a cohesion of 500 pcf(?). This sample had the largest friction angle (67 degrees).

Based on their analysis, PML believed that the critical stability factor was translational failure along persistent rock joints. In their slope stability analysis, they assumed that joint set numbers

1 and 2 (Table 1) extended the full height and width of the slope (cutting across the siltstone beds), creating two potential planar failure surfaces along which translational failure could occur (35 and 44 degrees). Material properties assigned to these potential failure surfaces were C=0, and a friction angle (Phi) of 48 degrees. They ignored effects of the siltstone beds and they did not evaluate non-planar failure mechanisms. They modeled the failure surfaces separately, ignoring cross-cutting effects of the two joint sets. They placed the joints at critical locations in the cross sections. It is not known if joints were actually mapped at those locations.

They modeled four slope profiles (from north to south): H-K, D-G, A-C, and L-M. Table 2 is a summary of the modeling results for each cross-section.

Table 2 Results of PML slope stability analyses. All models used C=0, Phi =48, rock unit weight of 158 pcf, and dry conditions (no water)

Section	Joint Dip	FS (Factor of Safety)
H-K	35	not modeled
H-K	46	1.07
D-G	35	1.59 (two depths modeled-same FS for each depth)
D-G	44	not modeled
A-C	35	not modeled
A-C	44	1.15 (three depths modeled-same FS for each depth)
L-M	no failure surfaces modeled	

Profiles D-G and A-C are adjacent to each other and are semi-parallel. It appears that profile D-G was used to model the 35 degree failure surface and profile A-C was used to model the 44 degree failure surface. On their 1994 maps, cross-section T (on the map) appears to be the same as cross-section A-B in the 1988 report, and cross-section J (on the map) appears to be the same as cross-section H-K in the 1998 report. Both assumed failure surfaces shown on the 1994 maps dip at 44 degrees, but the assumed failure surface F is shallower than the assumed failure surface C.

Their stability analysis of section H-K is misleading. This cross-section modeled the stability of undisturbed ground just north of the quarry. The FS was 1.07. This indicates that the slope is marginally stable and could fail at any time. This is correct, because the undisturbed ground in this area is failing. However, only the rock near the ground surface is failing, and it is failing with a toppling mechanism with movement to the north away from the quarry (out of the plane of the cross-section). There is no failure (actual or incipient) along persistent joint surface as shown in the model. The large rock face just south of this cross-section is still there, and no persistent, continuous joints or global failure are visible.

PML made a fundamental assumption: that joint surfaces extend both across and up the slope as single, continuous features. For their modeling purposes, they assumed that both 35 and 44 degree joints dipped out of the slope at a specific location. They knew that joints with these orientations occurred throughout the quarry face and that the assumed failure surfaces shown on their cross-sections were just one of many quasi-parallel joints that existed both above and below their assumed failure surfaces. There was nothing unique about their assumed failure surfaces.

We observed similarly orientated joints, but those joints are not persistent. They did not extend long distances either up or cross-slope. Cross-slope, the joints are confined to one or two beds (in the range of 3 to 10 feet wide). The up-slope length can be much longer (up to 50-100 feet) but most are much shorter. Instead of there being widespread planar surfaces (as assumed by PML), there are numerous shorter, discontinuous joints separated by intact rock bridges. These rock bridges provide additional support that increases rock slope stability.

PML recognized the effect that these joints might have on the quarry slope stability, but techniques were not available at that time to allow them to evaluate slope stability in a structurally complex, jointed rock mass. Their analyses were done in 1988 with a combination of hand calculations and a simple Fortran/Basic computer program. They preformed the only analyses they could at the time, which was a simple, planar failure analysis. They recognized the limitations of their analysis and their modeled joint surfaces were always clearly marked "assumed geologic failure planes".

The PML slope stability analysis is a friction angle analysis (C=0). If the friction on the joint surface is larger than the joint dip, no movement will occur on the joint. The greater the joint friction angle (with respect to the joint dip), the greater the FS. PML assumed a joint friction angle of 48 degrees. This is why the FS for a 35 degree joint dip is larger than the FS for a 44 degree joint dip. It also means that there is little margin for error in estimating the joint friction angle. Small variations in the joint friction angle when it is near to the joint dip can cause the calculated FS to quickly go to 1 or less.

Slope Stability Considerations

The final quarry will have a triangular shape, with the upper point of the final quarry being at the high point (about 1900 foot elevation) and the base at about 1100 foot elevation. The triangular shape of the quarry means that the final reclaimed rock slopes will have a variable height that ranges from about 200 feet to about 650 feet with from 4 to 20 benches. The 1994 plans stated that benches will be 10 feet wide with bench faces having a 30 foot maximum height and a maximum slope of 45 degrees (1:1). The overall slope cannot exceed 1.5 to 1.

Potential rock slope failure modes include:

Raveling, rock falls;
Structural failure along geologic discontinuities (joints, faults, and active-passive wedges);
Rock mass controlled – failure through intact rock or across the rock mass fabric;
Toppling, and composite modes, involving two or more of the above.

Raveling

Raveling is the widespread degradation of a rock slope face by progressive, long-term loss of smaller sized material. This material eventually collects at the base of the slope in debris piles. There is a gradation between raveling, rock falls, and structurally controlled failures. In this report, we restrict the term raveling to the random, widespread loss of smaller sized material (a few inches to a few feet) throughout a slope face over time.

We observed raveling throughout the slope face. Raveling was common in exposed siltstone beds. The fallen material ranged from less than an inch to several feet in size, with the majority of the material appearing to be under a foot in size. The fallen material was angular and did not appear to roll long distances. The current condition of the face could provide a reasonable estimate of the future raveling potential of the final quarry slopes.

Structural Failure

Structural failures are small to larger-scale failures such as wedge and planar failures along existing discontinuities (joints and faults) rather than through the rock mass itself. Long-term raveling of a weak zones within saprolite can leave wedge-shaped scars that mimic structural wedge failures, but this concentration of raveling are not be considered a structural failure for the purposes of this report.

PML measured and plotted over 150 joint measurements, Figure 3. The raw data is not available. We spot measured joints throughout the quarry and observed the same primary joint sets that PML did. The data indicate that the joint/cut face orientation will be conducive for planar and wedge failures. A stereonet analysis (such as the PML graph) is only a geometric analysis of possible wedge failures. It does not provide information about factors of safety or probabilities of failure. Key factors such as joint persistence, spacing, or material properties cannot be included in a stereonet analysis. The existing data (PML and others) is a subset of the overall joint population. That data was contoured, but the contours are not statistically significant. It would require a much larger number of joints measurements (700 or more) to allow a statistical evaluation of joint sets.

On cut slopes steeper than about 33 degrees (1.5 to 1) in Domain A, wedge and block failures will occur in the sandstone beds. These types of failure are typically confined to one or two beds, and the size of the failure will be related to bed thickness. The siltstones fail by raveling. The sandstone beds in Domain C are thick with few siltstone beds. We did not observe noticeable wedge or planar failures in Domain C. An equipment operator indicated that it was difficult to pull blocks from a fresh, blasted sandstone face. We did not observe large scale structural failures in the quarry. The observed small-scale/size failure style is consistent with low joint persistence.

We reviewed the joint data for the potential for toppling failure but did not perform a specific toppling analysis. The orientation of the beds with respect to the quarry face is not conducive to toppling failure (the quarry face is perpendicular to the strike of the beds). Naturally occurring toppling failure may occur in undisturbed ground north of the at the lower part of the quarry

(Photo 3). The upper sandstone beds appear to topple north, away from the quarry. This movement is not related to quarrying activities. Indications of this movement were mapped as an extension fracture zone on the PML map. It is possible that the apparent toppling is related to structural deformation, and is not related to near-surface gravity induced movement.

Rock Mass Failure

In this failure mode, the rock mass fails along circular or quasi-circular paths through intact rock or across the jointed rock mass, not along discontinuities. In this failure mode, the rock mass is evaluated using Mohr-Coloumb (MC) parameters derived from a Hoek-Brown (HB) analysis. Slope stability was evaluated using conventional Limit Equilibrium Method (LEM) analysis. This analysis assumes that the rock behaves as a homogeneous, isotropic mass even though the rock contains numerous, random, intersecting joints. When modelling rock slopes, the phi and cohesion values are estimated, average, non-directional parameters and we will refer to these as equivalent parameters. Depending on the number and nature of the discontinuities, intact rock pieces will translate, rotate, or crush in response to stresses imposed on the rock mass. The conditions for circular failure are more satisfied in heavily-jointed rock masses.

GSTABL7 was used to evaluate the Factor of Safety (FS) for various slope orientations and material properties. We performed both static and pseudo-static (seismic) slope evaluations. Bishop's method of slices was used to evaluate circular failure modes. We used a PGA of 0.53g to evaluate slope stability for seismic loading (pseudo-static analysis).

Under the Uniform Building Code (UBC), the minimum static FS for slopes where human occupancy is planned is 1.5, and 1.1 for pseudo-static conditions. Based on the use of the site after reclamation as open space, with no engineered structures or concentrated public access, we propose that a static FS between 1.3 and 1.5 is adequate for the proposed open space end use. Table 3 lists the significance of various Factors of Safety according to Sowers (1979, p. 587).

Table 3
Significance of the Factor of Safety (Sowers, 1979, p. 587)

Factor of Safety	**Significance**
Less than 1.0	Unsafe
1.0 to 1.2	Questionable safety
1.3 – 1.4	Satisfactory for cuts and fills
1.5- 1.75	Safe for dams

For LEM stability evaluation purposes, a single rock type (sandstone) was used in the stability analyses. The soil and saprolite layers were ignored in the analysis because they are either too thin or localized to have a significant effect on global slope stability. We do not know the thickness of the saprolite above the existing cuts. If a thick (> 50 feet) saprolite layer is encountered, that layer would have to be individually evaluated for local stability.

The final quarry shape will be triangular in shape with the peak of the triangle being at the highest elevation. This means that slope length is dependent on where the slope profile in defined. In this study, the longest/highest slope was modeled (approximately at cross-section A in the 1988 PML report, cross-section J in the 1994 plans, and cross-section A in the 2011 plans). If this slope is stable, the shorter slopes should also be stable (with respect to a LEM analysis). For the most part, the undisturbed ground surface adjacent to the top of the quarry slopes uphill from the quarry. It appears that all spoils will be stored within the quarry, not above the top of the quarry.

Three general rock types (Domains A, B, and C) are exposed in the quarry. It appears that the highest slope will be cut in Domain A (interbedded sandstones and siltstones). The beds in all domains strike quasi-perpendicular, out of the quarry face. In Domain A, sandstones make up roughly more than about 70 percent of the unit (the percentage decreases from north to south). Domain C is a massive sandstone unit, and sandstone appears to make up more than 80 to 90 percent of the unit. Domain B contains 70 to 90 percent siltstone, depending on location.

In the LEM analysis, we modeled Domain A. The overall mechanical strength of the units in Domain C is greater than those in Domain A because of the lack of siltstones and greater joint spacing. If Domain A is stable, Domain C should also be stable. Domain C was not modeled. The natural slope of the siltstones is currently about 1.5:1. We did not observe obvious slope failures in Domain B and none have been reported in previous studies. Since the final slopes are projected to be 1.5:1, the existing siltstone slopes should be stable from a global slope stability perspective.

Table 4 lists the various sandstone rock mass parameters determined for Domain A. These parameters are based on data collected in the quarry.

Table 4: Sandstone rock mass parameters[2].

RQD = 40 to 60 (based on scan line measurements)
GSI = 40 to 50 (good quality; Hoek and Brown [1997, table 5] or Marinos and Hoek, [2000, table 9])
(Mi=17 ±5, from Hoek [2000, table 11.3] or Cai [2010])
Rmi =3 to 5 (high)
RMR_{basic} = 68 to 78 (good)
SMR = 30[3] (bad).

Duran and Douglas (2000) compiled slope height verses slope angle charts for rock slope correlated with GSI and RMR values (their figure 4a). For a 200 meter high slope[4] and a GSI of 30 to 40, the chart shows that both benched slope angles (overall slope dip of ~45 degrees [1:1]

[2] There is a fundamental difference between the GSI parameter and the other rock mass parameters. The GSI parameter was designed to be used as part of an overall Hoek-Brown strength envelope evaluation. It is not intended to be a stand alone rock mass parameter. It does not include joint parameters except for an estimate of joint sets and spacing. It does not include groundwater or intact rock strength. The other parameters were designed to be stand alone rock mass parameters. Most were designed to evaluate underground workings.

[3] SMR is a Slope Mass Rating. This parameter was designed to evaluate a slope for planar and wedge failures. The SMR rating does not take into account joint persistence and provides little information about the potential for global slope instability. Widespread small/localized block and planar failure occur though out the Ojai quarry slope faces.

[4] The overall slope has a maximum height of 850 feet (~260 meters). The charts are only valid for GSI's between 30 and 40.

and overall slope dip of ~39 degrees [1.5:1]) would be stable. These charts are preliminary and only provide a general guide to slope stability. In the paper, there is no discussion about groundwater or what ‘moderate pressure’ means (their figure 4b).

Table 5 lists the initial strength properties used in this analysis. The rock slope was analyzed by the generalized Hoek-Brown (HB) strength relationships using the program RocLab (RocScience, 2007). The HB strength relationship uses various parameters (GSI, mi, uniaxial rock compressive strength, jointing parameters) to determine a strength envelope for the jointed rock mass. Then based on the stresses applied to the slope (height dependent), equivalent Mohr-Coulomb (MC) phi angle and cohesion values were calculated (Hoek, et al, 2002). The PML report measured the unconfined compressive strength of the sandstones at about 15000 psi (~2,000,000 pcf). Our Schmidt hammer evaluation suggested that the unconfined compressive strength (USC) was about half this value (~1,000,000). We used the lower USC value in our sandstone analysis to be conservative. The Schmidt hammer based USC for the siltstone is estimated to be in the range of 1000 psi (144,000 pcf).

Other parameters used in the HB evaluation were either developed from data from the PML report, measured during our fieldwork or from tables/diagrams provided in Hoek and Brown (1997 and 2000). Hoek (1983, p. 11) discusses the parameters[5]. There are two sets of initial MC values in Table 5. Both assume 100 percent of either sandstone or siltstone. The high sandstone values were calculated for a full slope failure (650 foot disturbed height) and the low values were calculated for a bench failure (200 foot height). The high and low siltstone values are based on 200 and 100 foot slope heights.

Table 5
Assumed Initial Shear Strength Properties
The GSI values in bold were used as the initial starting values
The Mohr-Coulomb values are equivalent values only.

Material Type (Layer)	MC Values low slope	MC Values high slope	Hoek-Brown Strength values	Unit Weight (pcf)
Sandstone	200 ft height 11 ksf (C_{eqv}) 51^0 (ϕ_{eqv})	650 ft height 26 ksf (C_{eqv}) 45^0 (ϕ_{eqv})	UCS=1,000,000 psf (~48 MPa) GSI=**40**-55 Mi =17	150
Siltstone	100 ft height 2.1 ksf (C_{eqv}) $30\ ^0$ (ϕ_{eqv})	650 ft height 4 ksf (C_{eqv}) $18\ ^0$ (ϕ_{eqv})	UCS=144,000 psf (~4.8 MPa) GSI=**25**-30 Mi =7	130
Fill	C=0 Phi= 35^0		N/A	120

[5] Other papers that discuss these parameters include: Colak and Unlu (2004); Read, Perrin, and Richards (2006); Suorineni, Chinnasane, and Kaiser (2009); Cai (2010); and Saroglou and Tsimabaos (2008). For reference, the UCS of concrete is about 720,000 psf (5000 psi).

LEM Results

Two slope configurations were modeled. The first was 750 foot high total slope (containing a disturbed slope height of 650 feet) with an overall 1.5:1 slope. This included the proposed benches (10 ft wide) and cut slopes (30 height, 1:1 slope). The second included various face angles in 100 and 200 foot high slopes.

In both configurations, the cross-section extended above the highest elevation of interest. Then, a series of stability analyses were run with varying rock material values to evaluate overall slope stability. The geologic/structural complexities of this site make it impossible to test for or model the actual rock properties/geometry. Instead, representative rock mass properties were initially determined, then an evaluation of a variation of those properties was made.

The intent was to evaluate a range of material values to find lower-bounds for the material values that would meet the required FS. If the lower-bound material values that met the minimum FS became unrealistic (reducio ad absurdem), then reasonable, higher range material values would be acceptable. This method also provides an estimate of the robustness of the strength values. Both C and Phi values were varied. This method follows after Hamman and Curran (2009) and Stewart (2000).

Full Slope Configuration Evaluation

The results of our LEM slope stability analyses for the full slope are listed in Table 6. The LEM results (slope configuration, material properties, and critical failure surfaces) are shown in Figures 4 to 9. We assumed total stress conditions and groundwater levels were below the base of potential failure surfaces. Static and Pseudostatic Factors of Safety were calculated using a Bishop simplified method. A PGA of 0.53 was used in the pseudostatic evaluation.

Table 6
FS values for 1.5:1 slope.
Overall Slope height is 750 feet

Value Levels	Material properties		Static FS	Pseudostatic FS	Figure
	HB values	Equiv. MC values			
Sandstone value	UCS=1,000,000 psf GSI=50 Mi =17	26000 psf (C_{eqv}) 45 ^{0} (ϕ_{eqv})	4.0	3.0	4, 5
SS-SltSS Value	1,000,000 psf GSI=30 Mi =17	14000 psf (C_{eqv}) 31 ^{0} (ϕ_{eqv})	2.3	1.7	6, 7
Theoretical Low SS-Slt Values	400,000 psf GSI=40 Mi =17	7000 (2000) psf (C_{eqv}) 44 ^{0} (40^0) (ϕ_{eqv})	2.3 (1.6)	1.7 (1.1)	8
Siltstone	UCS=144,000 psf GSI=25 Mi =7	4000 psf (C_{eqv}) 17 ^{0} (ϕ_{eqv})	0.94	-	9

The sandstone strength values in Table 6 are for a 100 percent sandstone jointed rock mass. The sandstone-siltstone values are an estimate of a 70-30 percent sandstone to siltstone jointed rock mass. The theoretically low sandstone-siltstone values were used to evaluate lower limit FS for short slopes. The siltstone strength values are for a 100 percent siltstone. In the field, the siltstones are interbedded with sandstones of varying thickness. The sandstones will increase the overall strength of Domain B siltstones.

Figure 10 is a graph of a full slope, FS stability field for Domain A rock types. It is based on a LEM failure analysis. The axes are Phi and C values, and the 1.5 and 1.0 FS lines are plotted. This graph indicates that for a 1.5 to 1 slope, pure sandstone and siltstone-sandstone rock masses will be stable for this slope height. It suggests that the inherent strength of these rocks means that there is a wide range of Phi and C values for which the slope is stable. There are also ranges of Phi and C values that cannot exist for this rock type (a high C, low Phi value range and a low C and low Phi value range). The siltstones have a low FS. This is consistent with field observations. The siltstones form valleys that rarely exceed a 1.5 to 1 slope. It is likely that the natural FS of Domain B is in the range of 1.1 to 1.5

The FS from the PML translational failure analysis (C=0 and Phi =48 degrees) plots just below the 1.5 FS line. The PML FS is slightly lower than a FS from the LEM analysis (for a C=0, Phi=48) because the LEM analysis failure surface is slightly curved and longer.

Bench Configuration Evaluation

Several specific slope geometries were evaluated using the SS-Slt material properties.

Figure 11 shows a model of the full slope with a 200 foot high, 0.5 to 1 cut at the toe of the slope. It has a FS of 2 using the SS-Slt material values shown in Table 6.

Figures 12 is a model of a 250 foot high slope with a 150 foot high 0.75 toe cut. This models the existing cut slope at the lower part of the north end of the quarry. The initial slope has a FS of over 3. Figure 13 shows the same slope with a 50 foot high, 1 to 1 toe buttress. The buttress increases the FS of the slope by about 0.03.

Figures 14 and 15 are models of a 200 foot high slope that has a 1 to 1 slope face. The FS in Figure 14 is 4.1 for SS-Slt material values. The FS in Figure 15 is 1.85 using theoretically very low SS-Slt material values.

Figures 16, 17, and 18 are models of the a 75 foot high slope that has a 0.7 slope face. Theoretically very low SS-Slt material values are used in these models. The FS for Figure 16 is 2.28. Figure 17 is a model of the same slope with a 50 foot toe buttress. The buttress increases the FS about 0.25. Figure 18 is a model of the same buttress, but the modeling limits were restricted to the buttress. It shows that the FS of the buttress itself is 1.23.

These models suggest that the existing rock can sustain cuts with slopes steeper than 1.5 to 1. The addition of a structural buttress adds little to the overall slope stability. In fact, the buttress will have the lower FS than the adjacent rock cut. Unless extensive sub-surface drainage systems are installed in a buttress, the buttress could have a much higher failure probability that the rock slopes.

Composite Mode Failure

A composite mode failure assumes that there is a series of persistent, high-angle joints/beds that dip parallel to the slope. The failure couples movement along appropriately orientated, persistent joint/bed planes with failure across intact rock between the joints/beds. This failure method is well known in bedded sedimentary units (Aydan et al, 1992; Stead and Eberhardt, 1997) where beds dip out of a slope (bedding plane failure). This is what PML modeled.

This failure mode is based on a specific slope-joint/bed geometric relationship. The joints/beds dip 10 to 20 degrees steeper than the slope face and the joint/bed strike is ±20 degrees of the slope face strike. Many joints in the Ojai quarry meet this criteria. The criteria also requires individual joints to extend hundreds of feet (for a slope the size of the Ojai quarry). We did not observe any indication that widespread persistent joints exist in the Ojai quarry. Bedrock has well defined bedding, but bedding strike is perpendicular to the quarry face.

With persistent joints, a block search method can be used in the LEM models. However, the lack of persistent joints means that the strength reduction technique discussed in the previous section simulates the effect of numerous small joints.

CONCLUSIONS

It is our opinion that the planned reclamation slope configurations (1.5:1) will result in permanent slopes which will have an acceptable stability for the proposed open space end use. The slopes stability analyses indicate that using reasonable lower bound strength values for the various rock and soil types, the static factors of safety exceed 1.3. Since the strength values used in the analyses are considered to be representative strengths, we believe that the calculated Factors of Safety (in the 3 to 4 range for global stability) are acceptable. These high FS values suggests that the inherent strength of these rocks is large enough that there is a wide range of strength (Phi and C values) for which the slope is stable and our analysis is robust. The siltstone beds in Domain B likely have a long-term FS of 1.1 to 1.5. This is consistent with field observations. If the long-term intended use of the reclaimed site changes from open space use, performing additional studies relating to in-situ rock and soil strengths may be warranted to better define the final, as-constructed Factors of Safety.

The intact rock has a high strength, and local face stability will be controlled by joint patterns. Small-scale wedge failures should be expected to develop on the cut rock faces. Based on field observations and measured joint orientations, we do not anticipate large-scale wedge failures (50 to 100 feet in size). If slope parallel, persistent joints are encountered as quarrying proceeds, large-scale failure (wedge or planar) of benches could occur.

It appears that if a soil buttresses is used to provide structural support for a cut, it will only provide a minor increase in slope FS. Unless subsurface drainage provisions are installed in the buttresses, the buttress will have a much lower FS that the rock slope itself and will tend to fail before the rock slopes fail.

This was a global evaluation, based on estimated rock properties for a benched, overall 35 to 45 degree slope. The slope configurations were provided by the client and supporting data were from publicly available sources and a limited field investigation and mapping program. No physical rock testing/analysis was preformed. If slope angle variations are desired, they can be individually evaluated when the excavation nears the final quarry boundary. It is likely that rock properties would have to refined either by testing or additional studies. Such an evaluation would have to be performed by appropriately licensed professionals experienced in rock slope evaluation and analysis.

LIMITATIONS

This study and conclusions assume that the material properties and the nature of bedrock and the observed orientations of joints and shears on the existing quarry slopes described in this report are representative of the actual conditions on the proposed final cut slopes. This study assumes that groundwater conditions will remain as observed and will have no impact on the overall stability of the final slopes.

As quarry excavation progresses, we recommend that rock and groundwater conditions should be monitored to confirm the assumed conditions. We also recommend that joint/fault mapping be conducted as needed.

This analysis was based on the materials observed in the field and listed in Table 1. If shear zones or additional rock types are encountered, the effect of these units on both interim and final slope stability should be evaluated in a timely manner. This analysis is not valid for other rock types or other areas.

The Public Resources Code (PRC), Title14, Article 9, Section 3704, states that lead regulatory agencies shall require formal slope stability investigations whenever design-slopes approach or exceed *critical gradient*. Critical gradient is defined as the maximum unsupported slope which can be maintained under the most adverse conditions. The term "most adverse conditions" is not an engineering term and it is not defined in the regulations. Our calculations were performed using conservative, reasonable assumptions about adverse natural conditions. The final design slopes are considered not to approach or exceed the critical gradient.

The express purpose of this slope stability investigation is to provide for public safety. The regulations do not require that the final design slopes be brought into compliance with Uniform Building Code (UBC) requirements for engineered slopes.

The analysis, conclusions, and Factors of Safety are not valid for evaluation of working slopes.

The analysis, conclusions, and Factors of Safety determined in this report are based on the final slope geometries that were provided to us by Mosler Rock Ojai Quarry. If changes are made to the final slope geometry, then the conclusions and recommendations presented in this report should be considered invalid by all parties. We should be allowed to review and prepare written responses to comments to this report or to changes in the final slope geometry. If necessary, we will prepare modified recommendations after a review of the proposed changes. Additional field and laboratory testing work may be required for us to develop any modifications to our recommendations.

This report was prepared at the request of, and for the exclusive use of the addressee. Release to any other company, concern, or individual is solely the responsibility of the addressee. We have employed generally accepted geological, engineering geology, and civil engineering procedures for this type of study. Our observations, professional opinions and conclusions were made using that degree of care and skill ordinarily exercised, under similar conditions, by engineering geologists, and civil engineers practicing in this area at this time. The opinions and/or recommendations presented in this report could be subject to revision should additional information become available. Norfleet consultants expressly denies any third party liability arising from the unauthorized use of this report.

The opinions and/or recommendations presented in this report could be subject to revision should additional information become available. The timing and location of events reported to us by the owners or their representatives were not independently confirmed.

Yours Truly,

S. Figuers

NORFLEET CONSULTANTS
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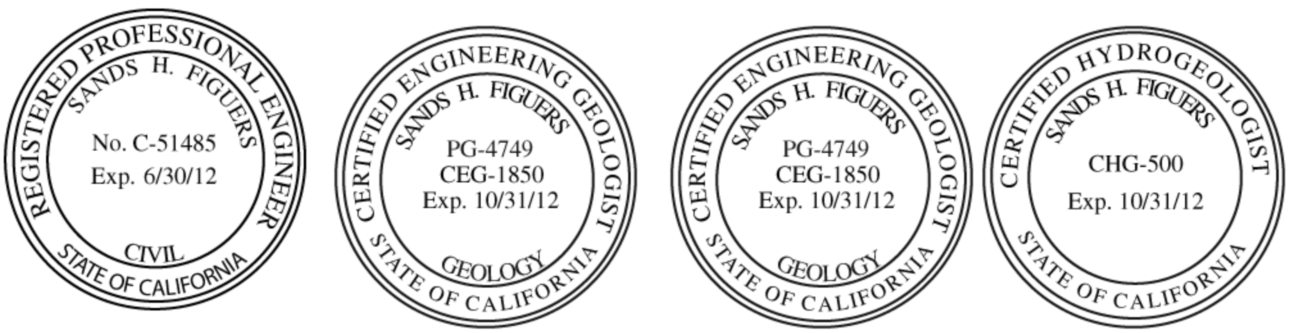

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Photo 1: The northern part of the quarry, Domain A (looking north).

Photo 2: The southern part of the quarry (looking east). Siltstone beds of Domain B form the valley in the upper part of the photograph. Domain C sandstones are being mined in the area to the right.

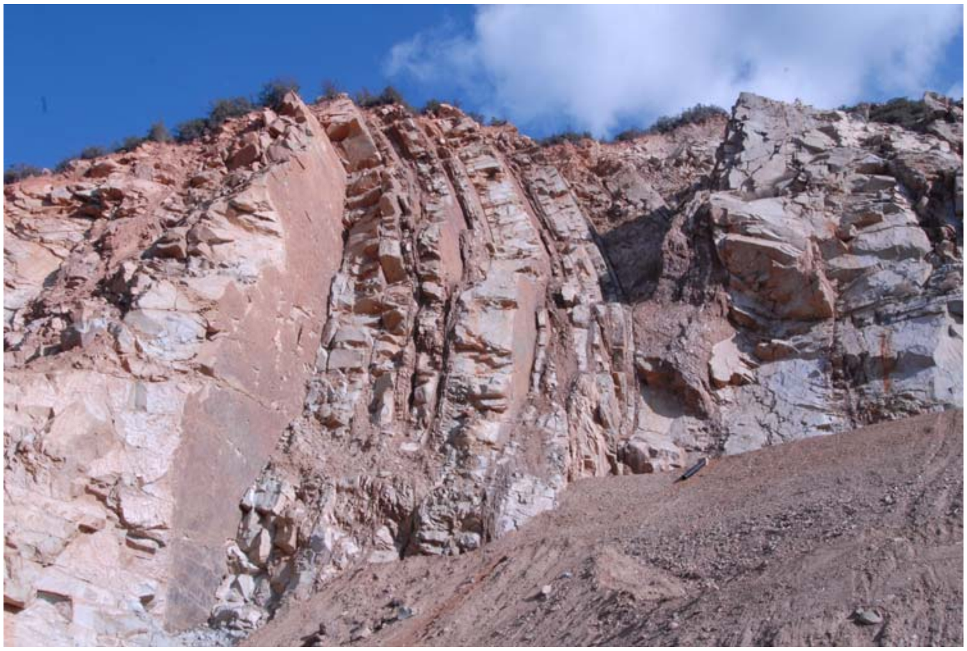

Photo 3: Sandstone beds at the northern end of the quarry (Domain A). There are thin siltstone beds between most of the sandstone beds. Even though jointing is pervasive, few joints extend across multiple beds.

Photo 4: The siltstone beds in Domain B. Note the interbedding of siltstone and sandstone.

Photo 5: Thick sandstone beds in Domain C (at the south end of the quarry). This area was blasted. Note the wider spacing of the joints. The valley on the left is likely a fault zone. It is unknown if it is a bedding plane fault.

Photo 6: The triangle zone at the top of Domain A. This is the natural condition of the rock (structurally fractured). It has not been blasted.

Photo 7: The fault plane at the top of the quarry. This is a naturally occurring gully. It has not been mined. The triangle zone (Photo 6) is located just to the left of this photograph.

Photo 8: A fault zone in the upper part of Domain A (triangle shape). The Triangle Zone (Photo 6) is located up-slope of this area.

Photo 9: A typical weathering profile above the sandstones in Domain A.

Photo 10: Jointing patterns in Domain A sandstones.

Photo 11: A joint surface in Domain C sandstones.

Photo 12: Jointing patterns in thicker sandstone beds in Domain A.

Photo 13: The siltstone bed on the other (west) side of Rt 33 from the quarry. This bed is more than double the thickness of the siltstone bed in the quarry. This may be the result of structural thickening. The sandstones on the right have rotated about 40 degrees counter-clockwise with respect to the sandstones on the left. The sandstones on the left have a strike and dip similar to the sandstones in the quarry.

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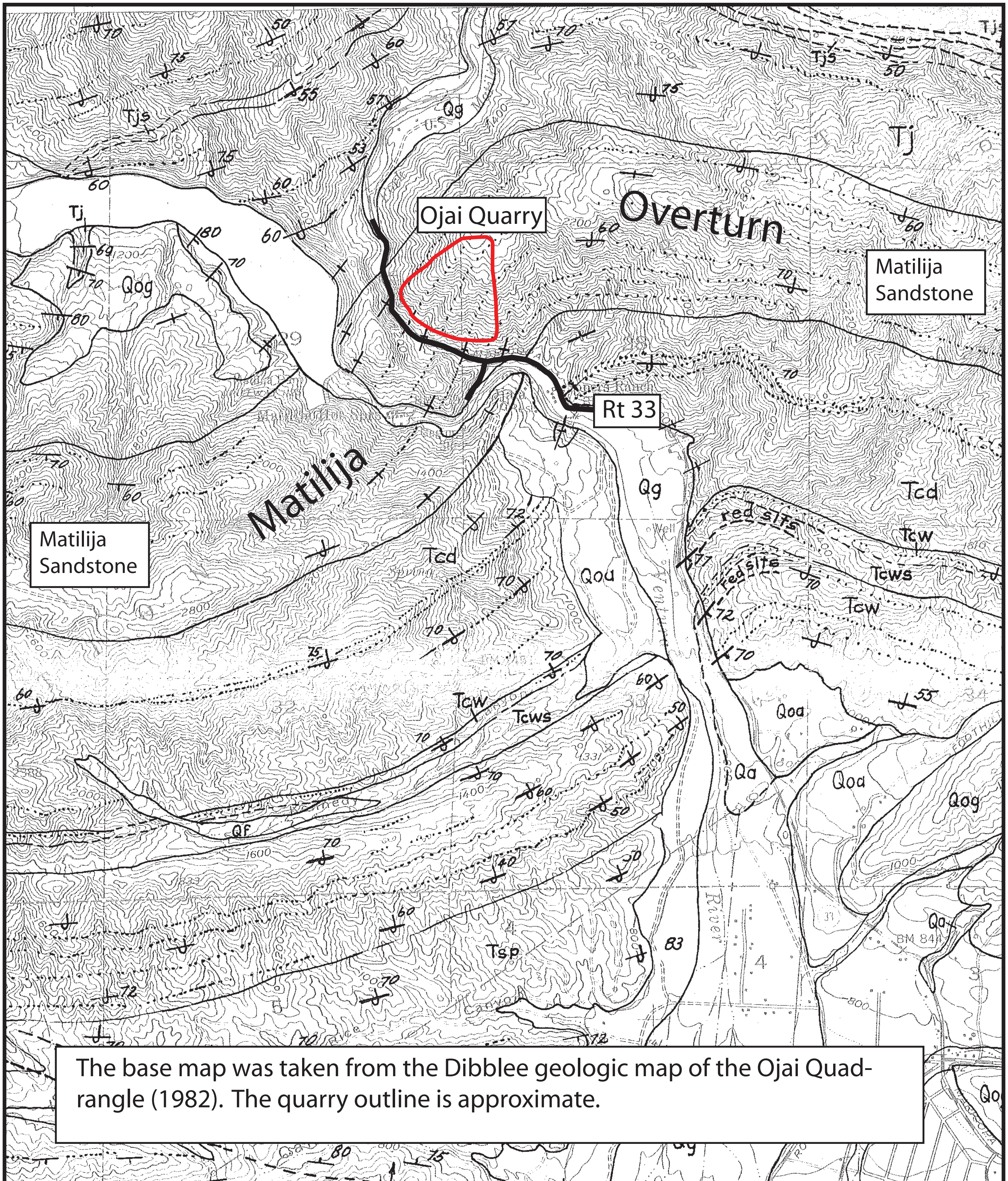
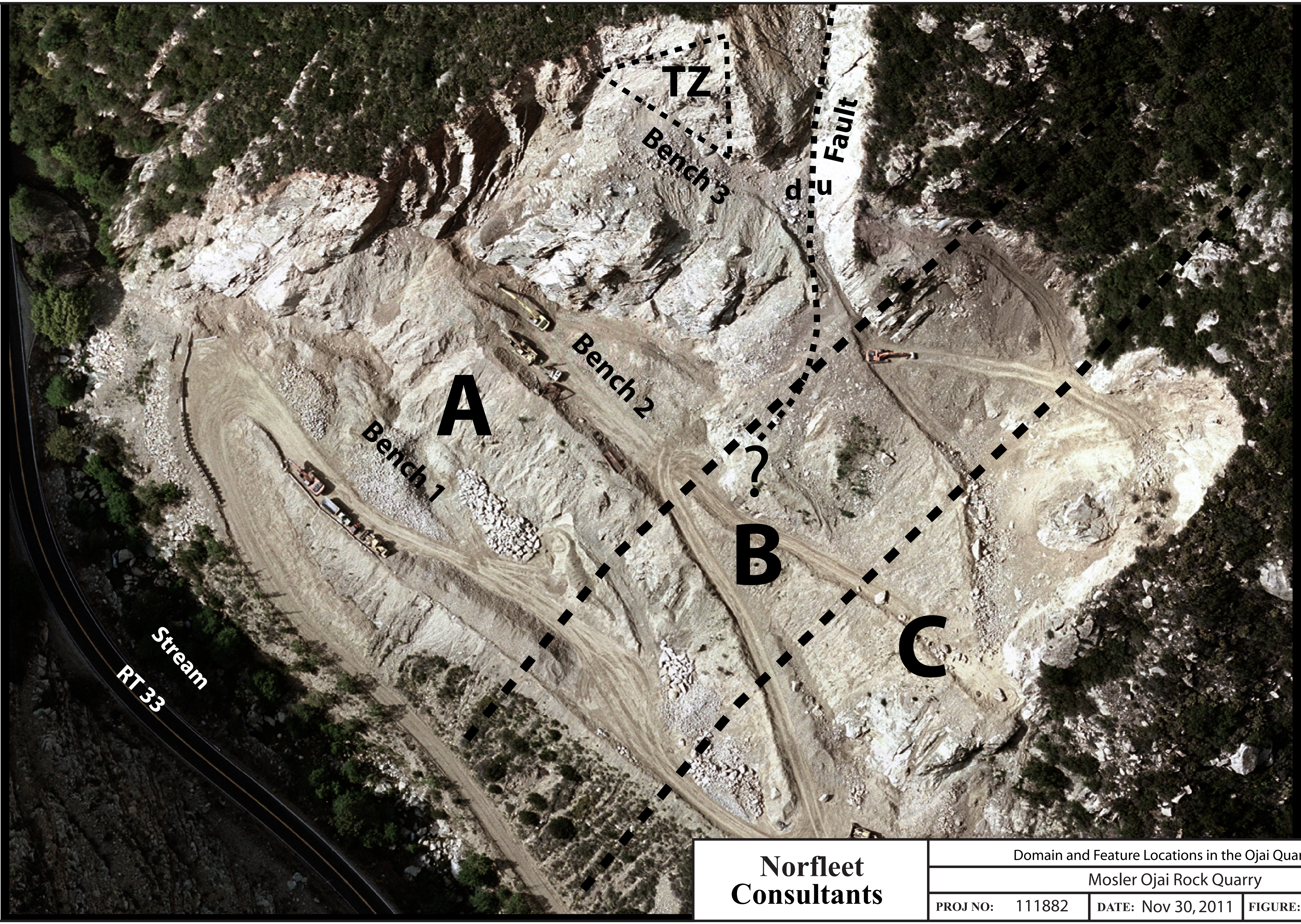


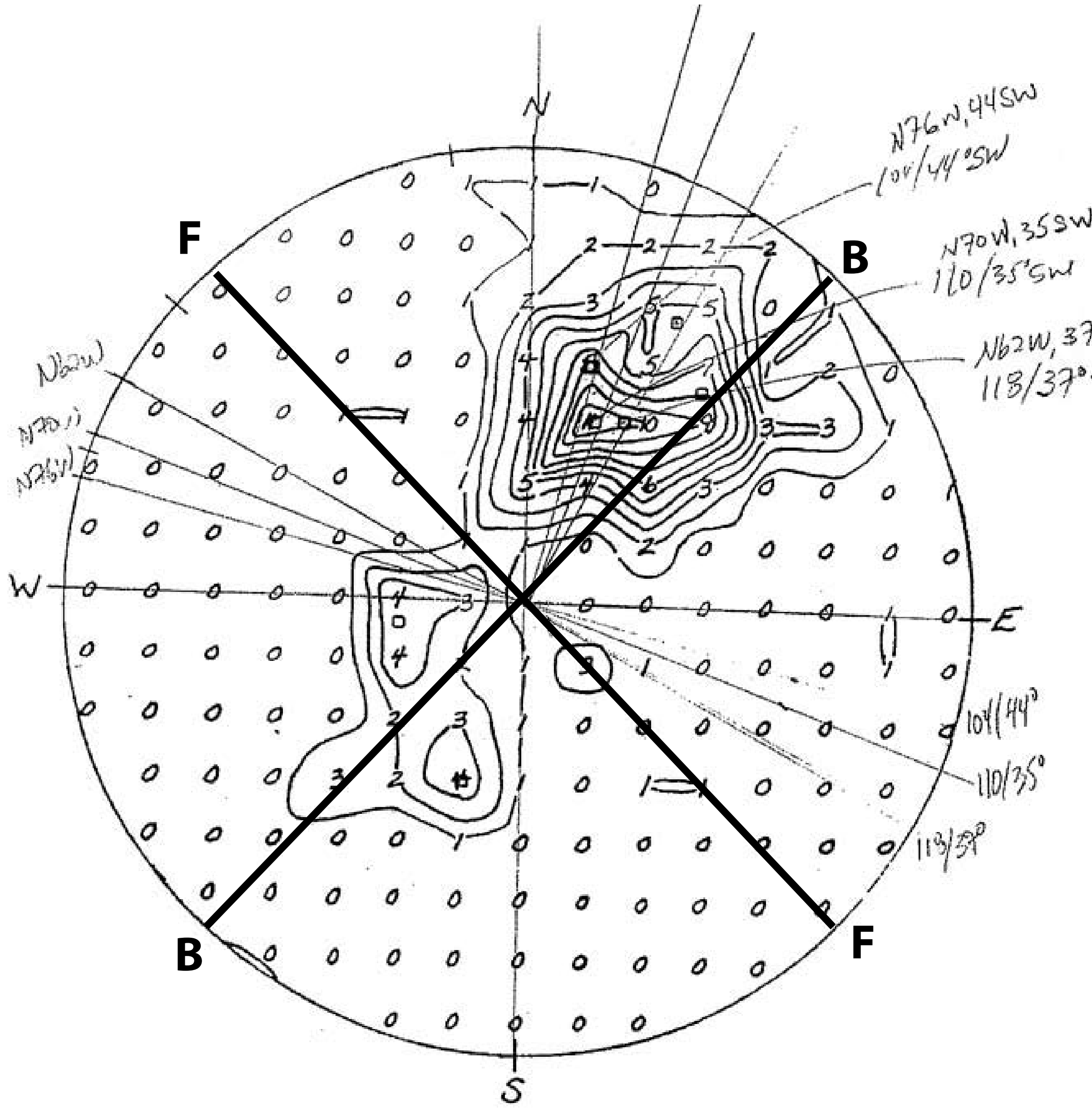
The base map was taken from the Dibblee geologic map of the Ojai Quadrangle (1982). The quarry outline is approximate.

Norfleet Consultants	Location and Geologic Map of the Quarry Area
	Mosler Ojai Rock Quarry
	PROJ NO: 111882 — DATE: Nov 30, 2011 — FIGURE: 1



Norfleet Consultants

Domain and Feature Locations in the Ojai Quarry	
Mosler Ojai Rock Quarry	
PROJ NO: 111882	DATE: Nov 30, 2011	FIGURE: 2



The PML plot of joint data on a stereonet (poles to the planes). The approximate bearing of the quarry face (F, ~N40W) and the strike of bedding (B, ~N40E) are shown. Note that the strike of bedding is close to perpendicular with the quarry face, and the strike of most joints is within 20 degrees of parallel to the quarry face.

Norfleet Consultants	PML Stereonet Showing Joint Data				
	Mosler Ojai Rock Quarry				
	PROJ NO: 111882	DATE: Nov 30, 2011	FIGURE: 3		

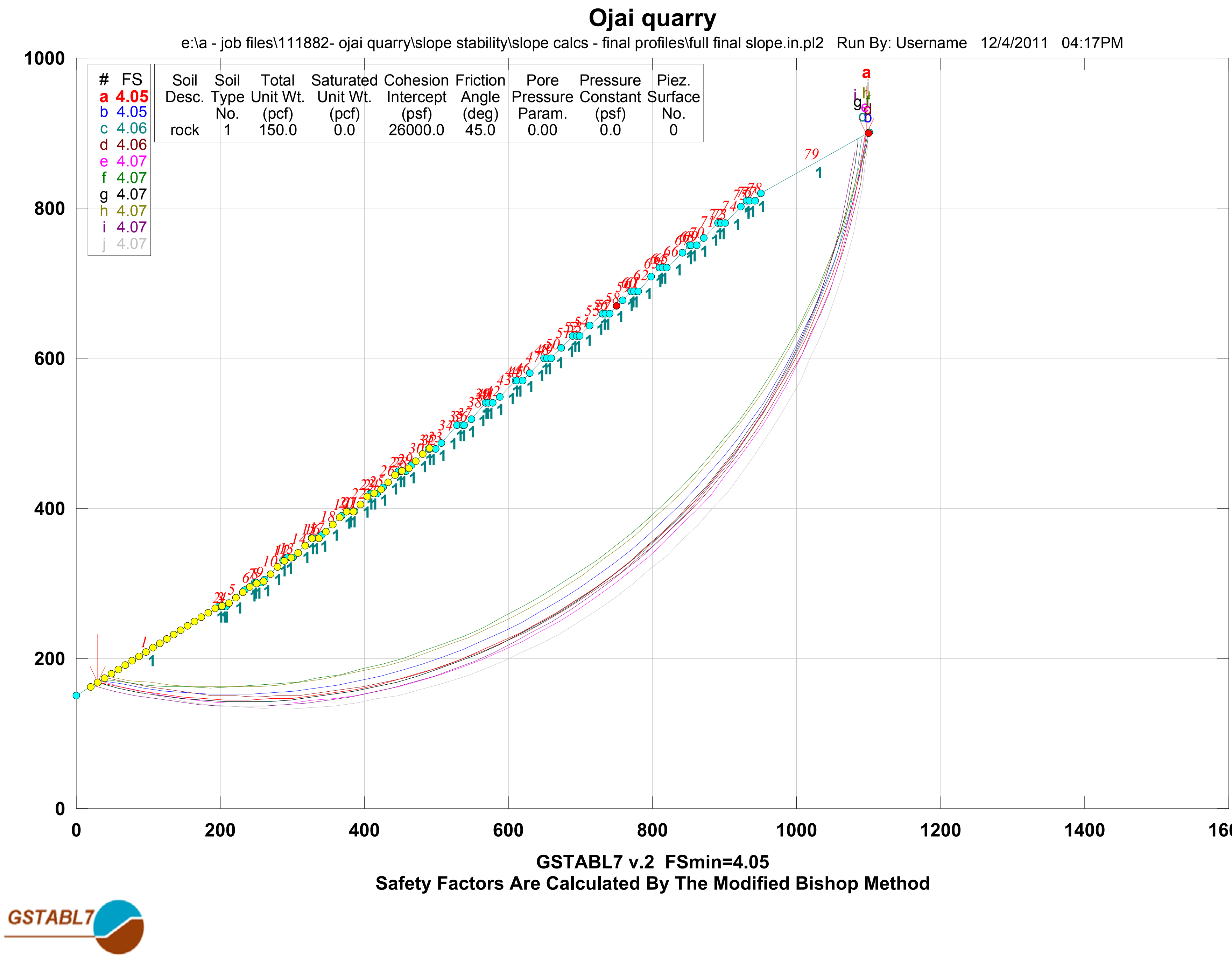


Figure 4. LEM analysis of full slope (750') of100% sandstone.

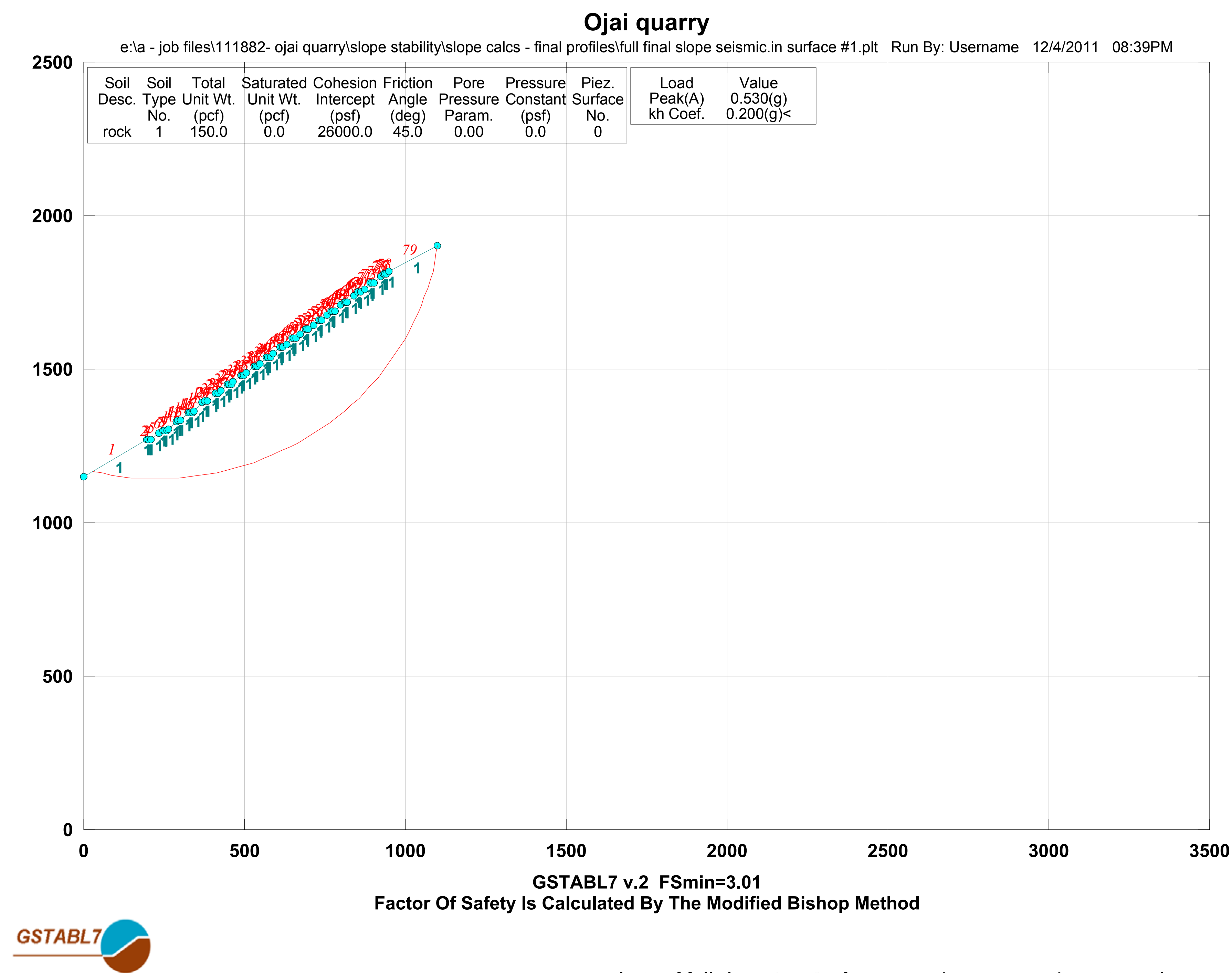


Figure 5. LEM analysis of full slope (750’) of100% sandstone, pseudostatic evaluation.

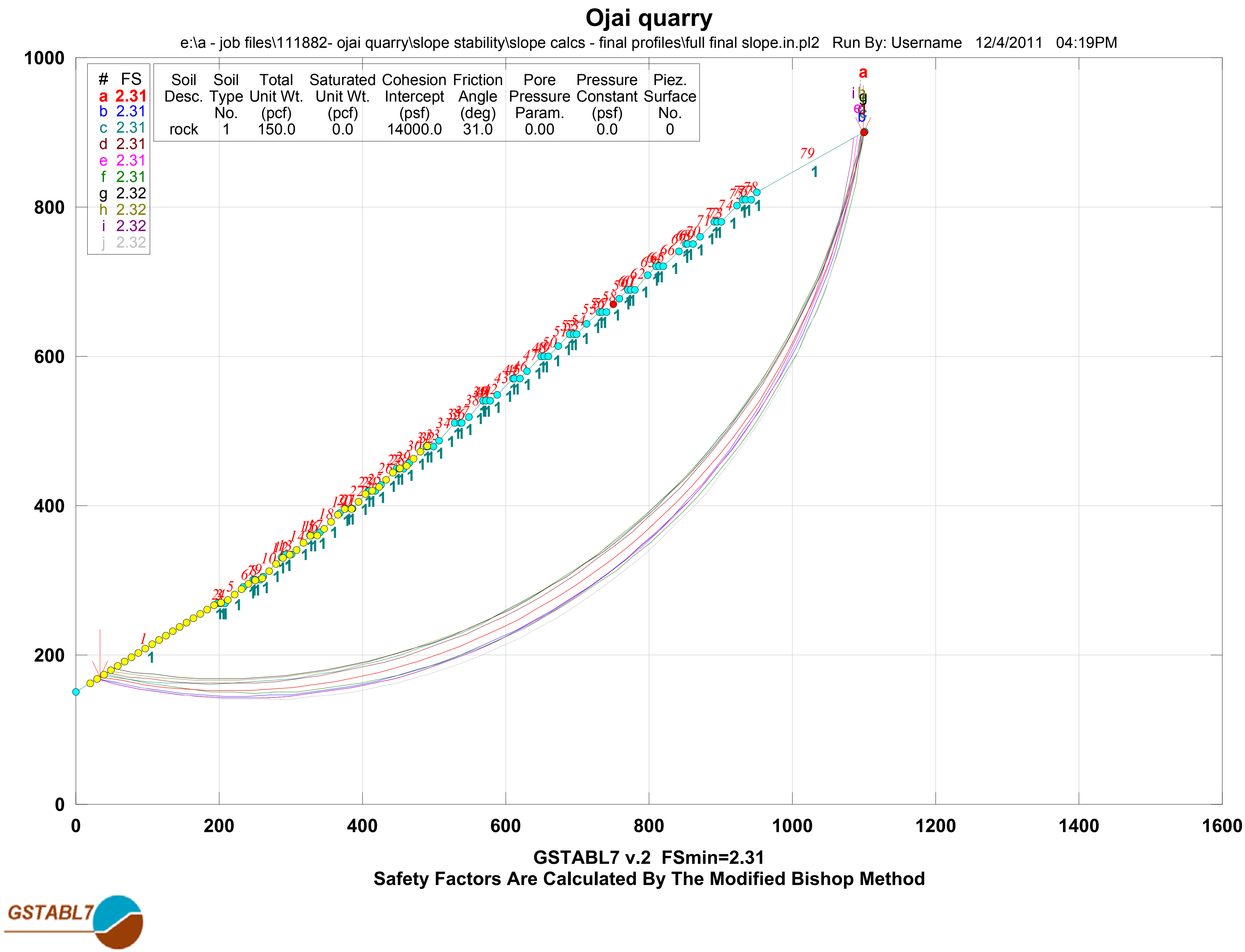


Figure 6. LEM analysis of full slope (750′) of sandstone-siltstone combination.

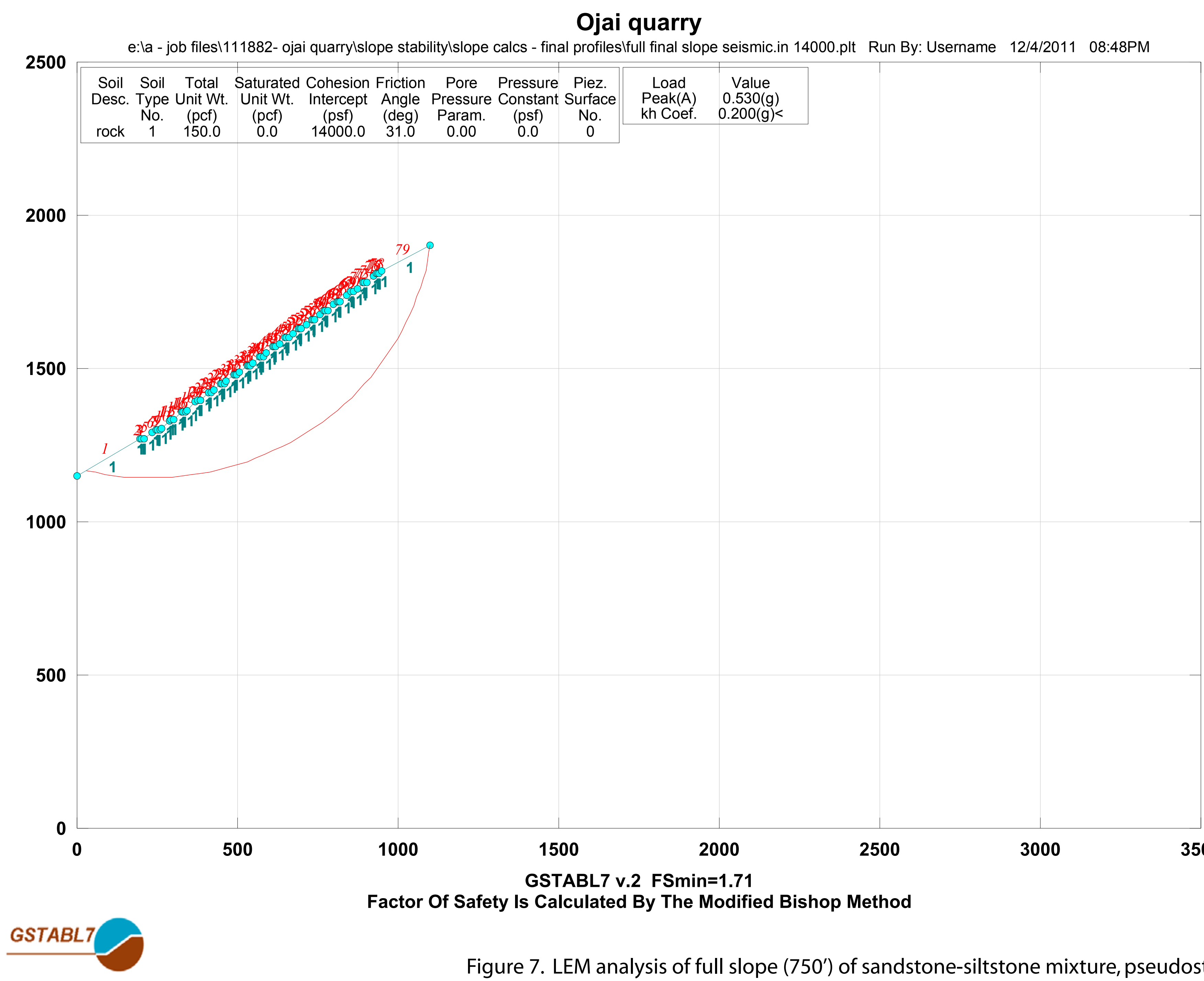


Figure 7. LEM analysis of full slope (750′) of sandstone-siltstone mixture, pseudostatic.

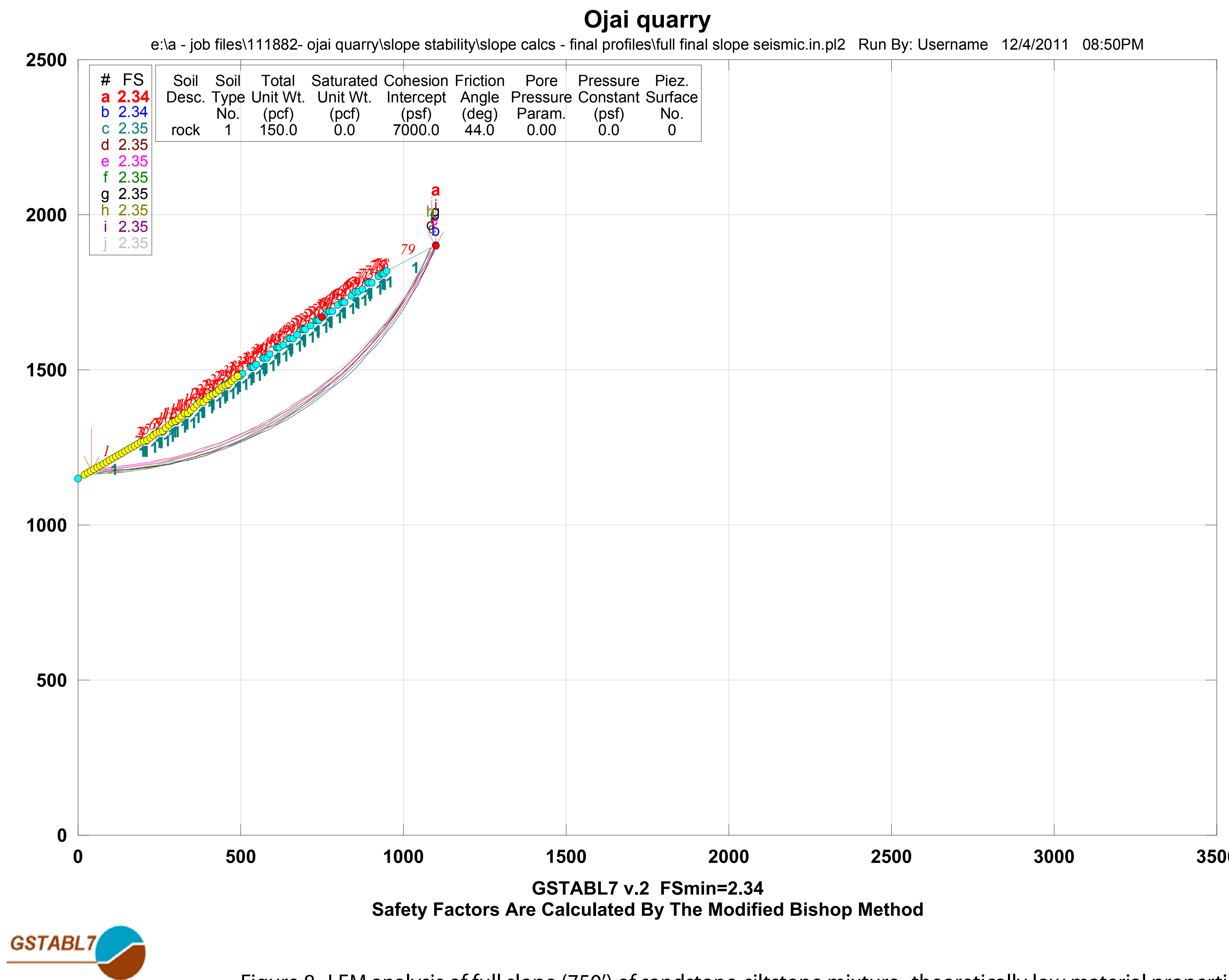


Figure 8. LEM analysis of full slope (750') of sandstone-siltstone mixture, theoretically low material properties.

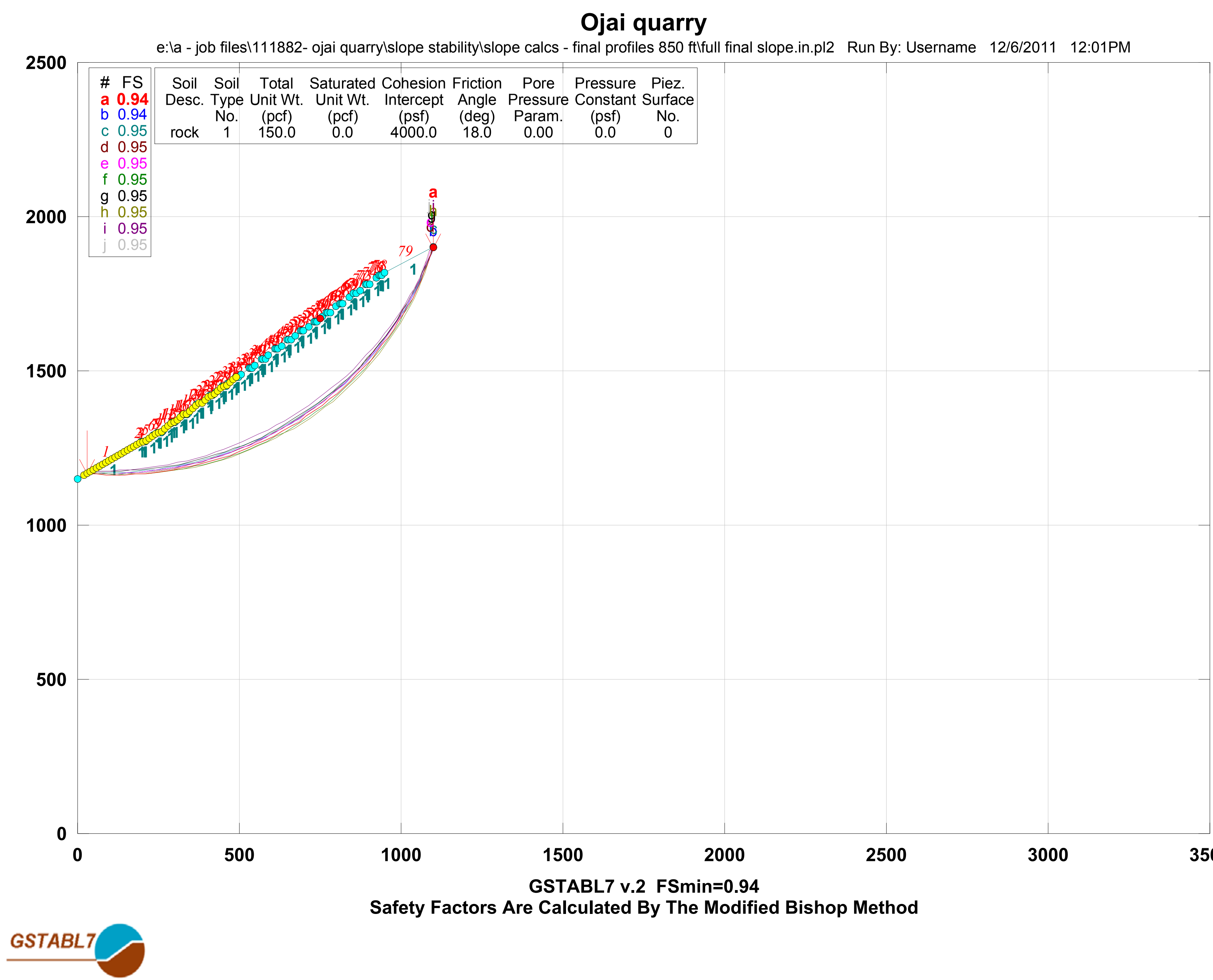
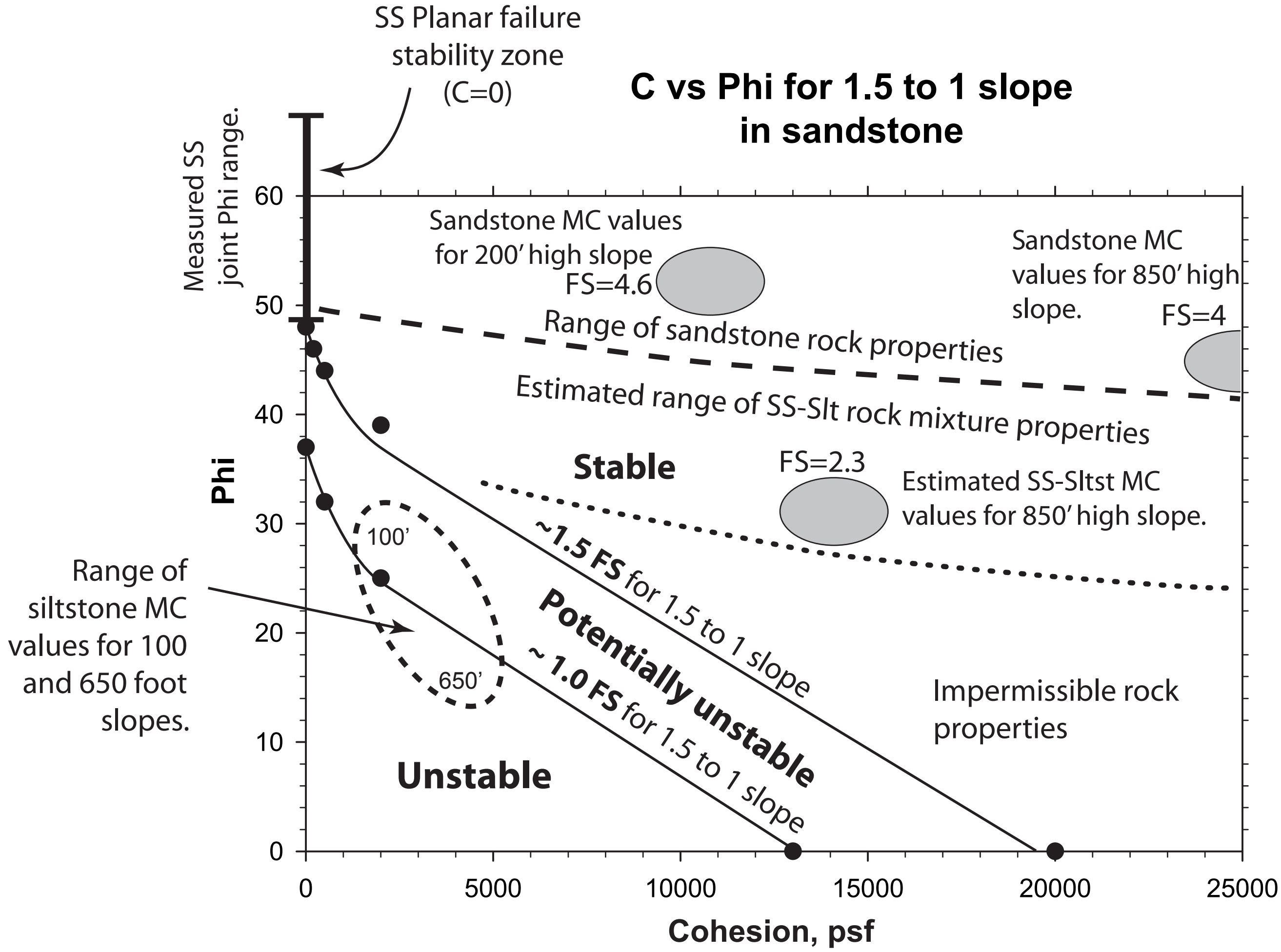


Figure 9. LEM analysis of full slope (750′) of siltstone.



This graph illustrates the relationship between the sandstone rock properties and the Factor of Safety for failure on a 1.5 to 1 slope. A Hoek-Brown analysis (GSI) was used to detemine the sandstone strength curve. Equivalent Mohr-Coloumb properties (C and Phi) were then calculated for 850 and 200 foot high slopes from that curve. Using the MC values, a series of Bishop stability analysis were run to determine the 1.5 and 1.0 FS limits. An estimated range of siltstone MC properties is shown in the lower left side of the graph. The estimated SS-Sltst value is a reduction of the sandstone MC values to take into account interbedding of sandstones and siltstones.

This diagram is only valid for the evaluated bedrock/face orientations and rock conditions at the Ojai quarry as discussed in this report.

Norfleet Consultants	Sandstone Factor of Safety Stability Field, 1.5 to 1 slope		
	Mosler Ojai Rock Quarry		
	PROJ NO: 111882	DATE: Nov 30, 2011	FIGURE: 10

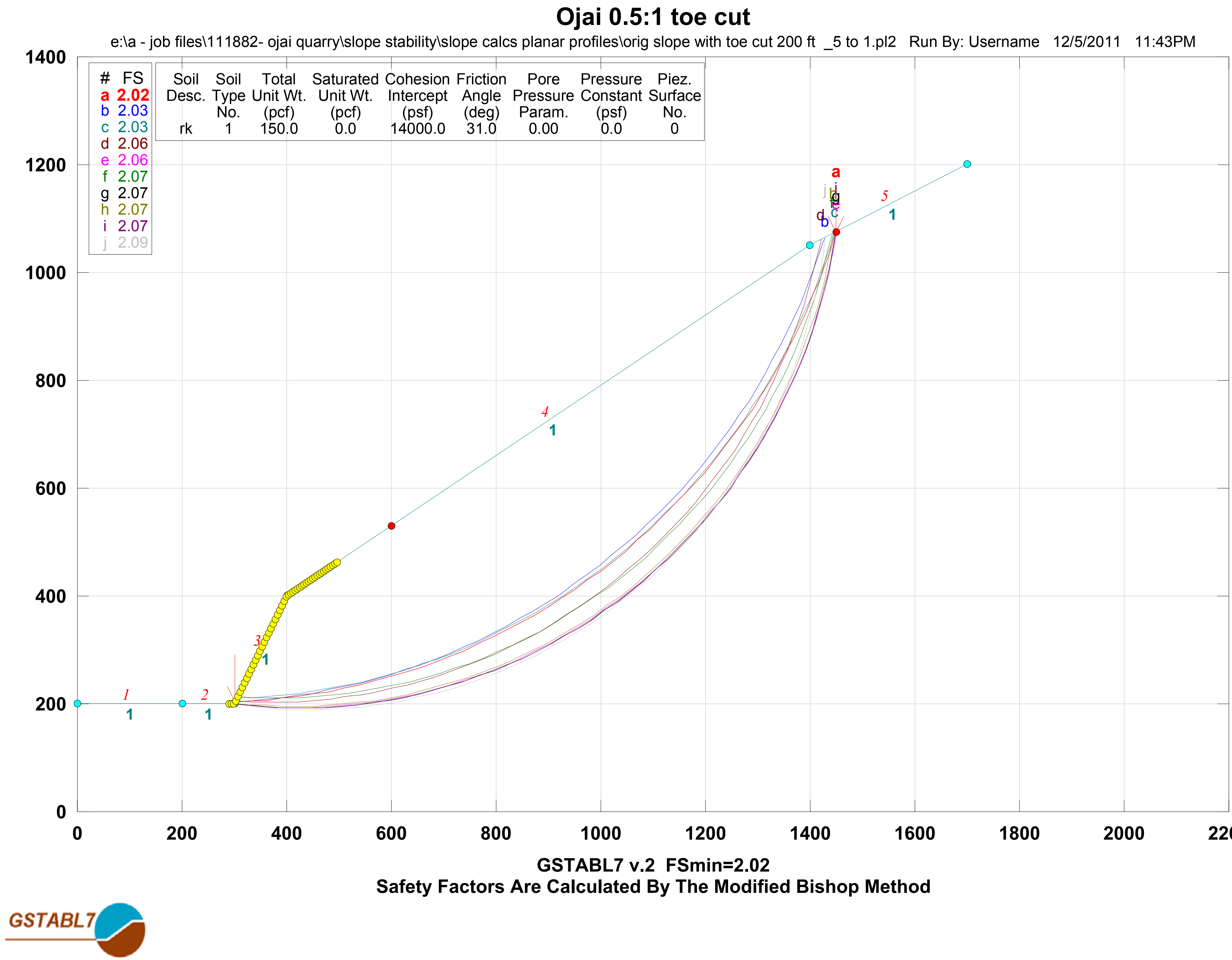


Figure 11. LEM analysis of full slope (750’) in SS-Slt with a 200 ft high cut (0.5 to 1) at the toe of the slope.

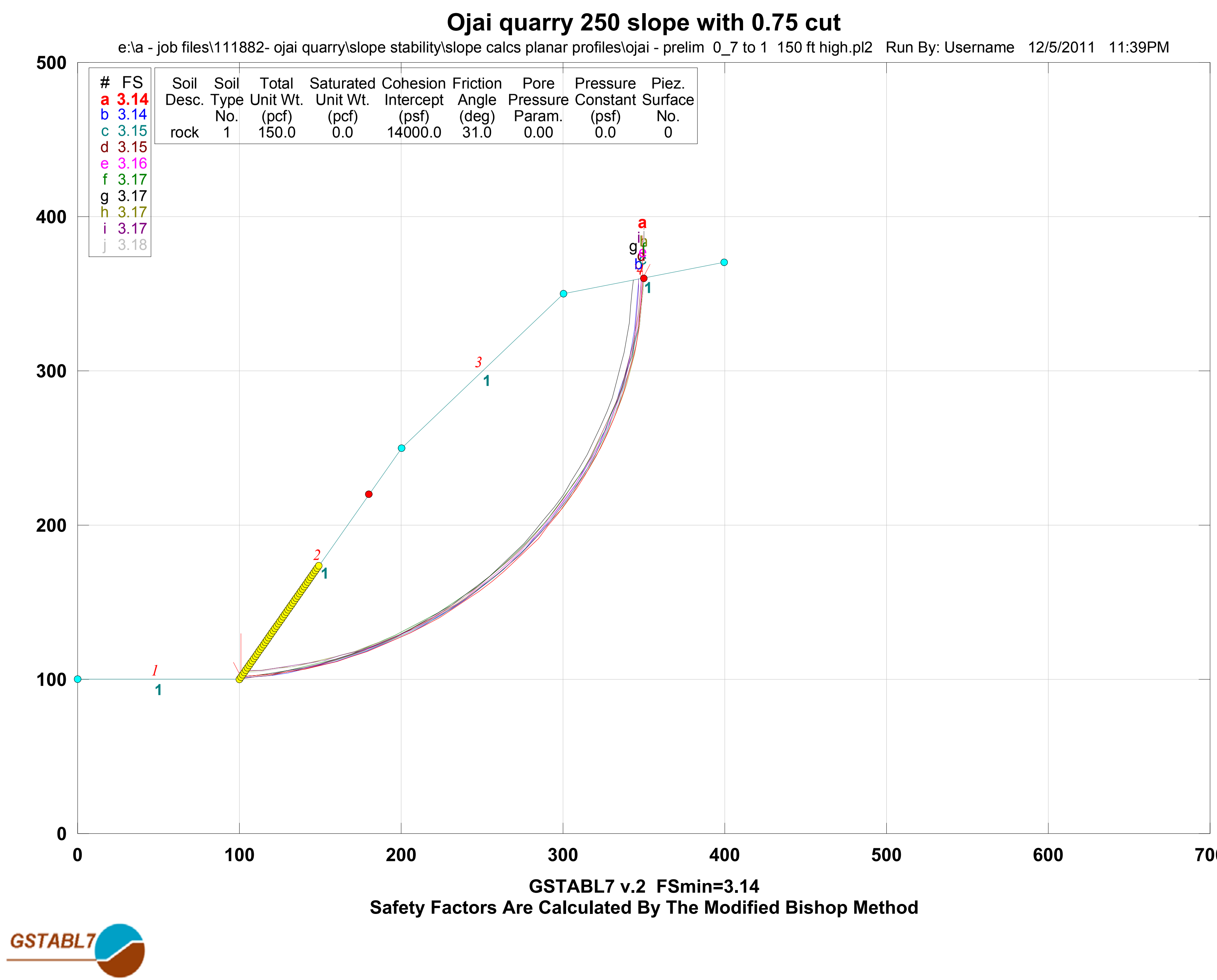


Figure 12. LEM analysis of 250 ft high bench in SS-Slt with a 75 ft high cut (0.75 to 1) at the toe of the slope.

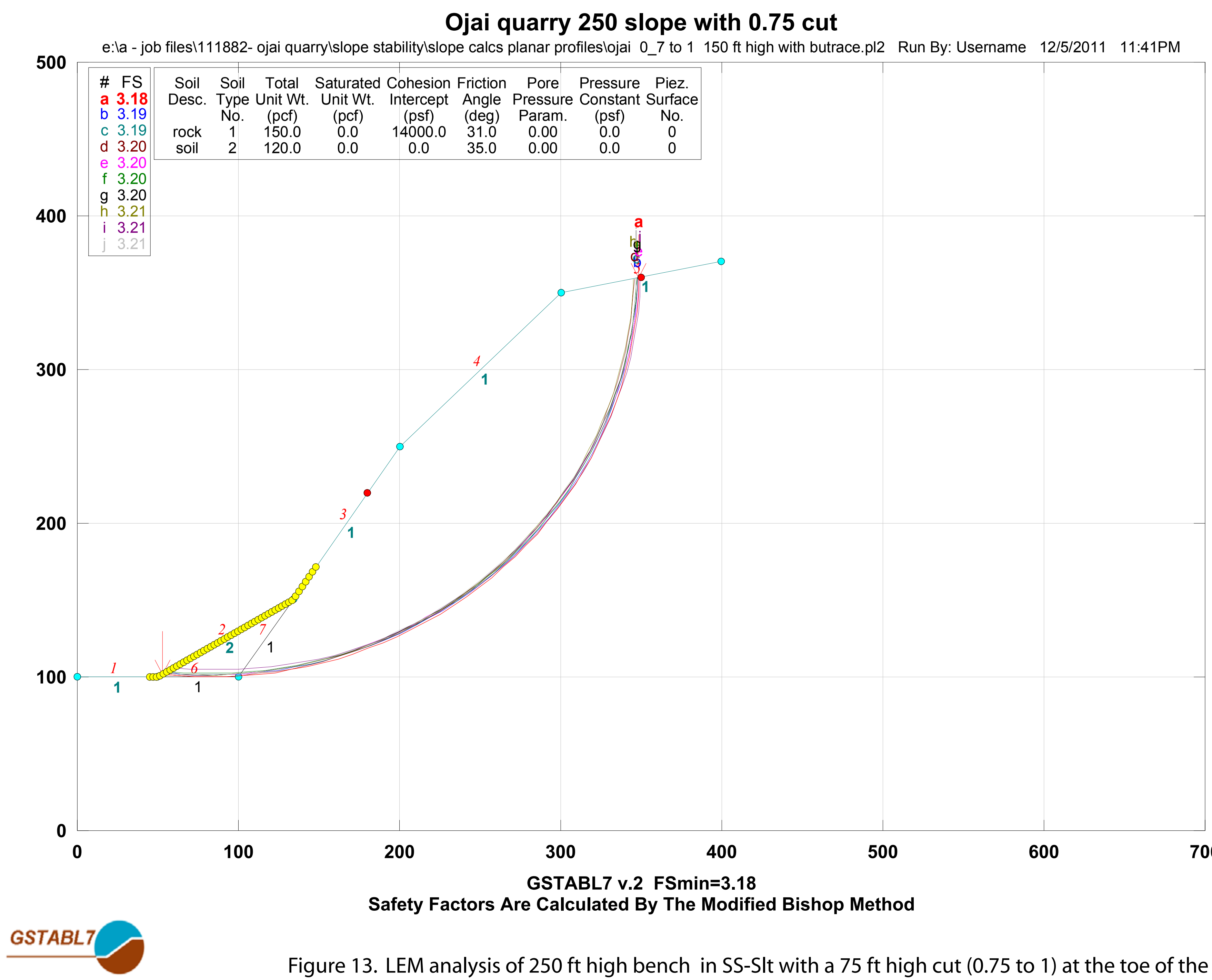


Figure 13. LEM analysis of 250 ft high bench in SS-Slt with a 75 ft high cut (0.75 to 1) at the toe of the slope. A 50 ft high buttress has been placed at the toe of the slope.

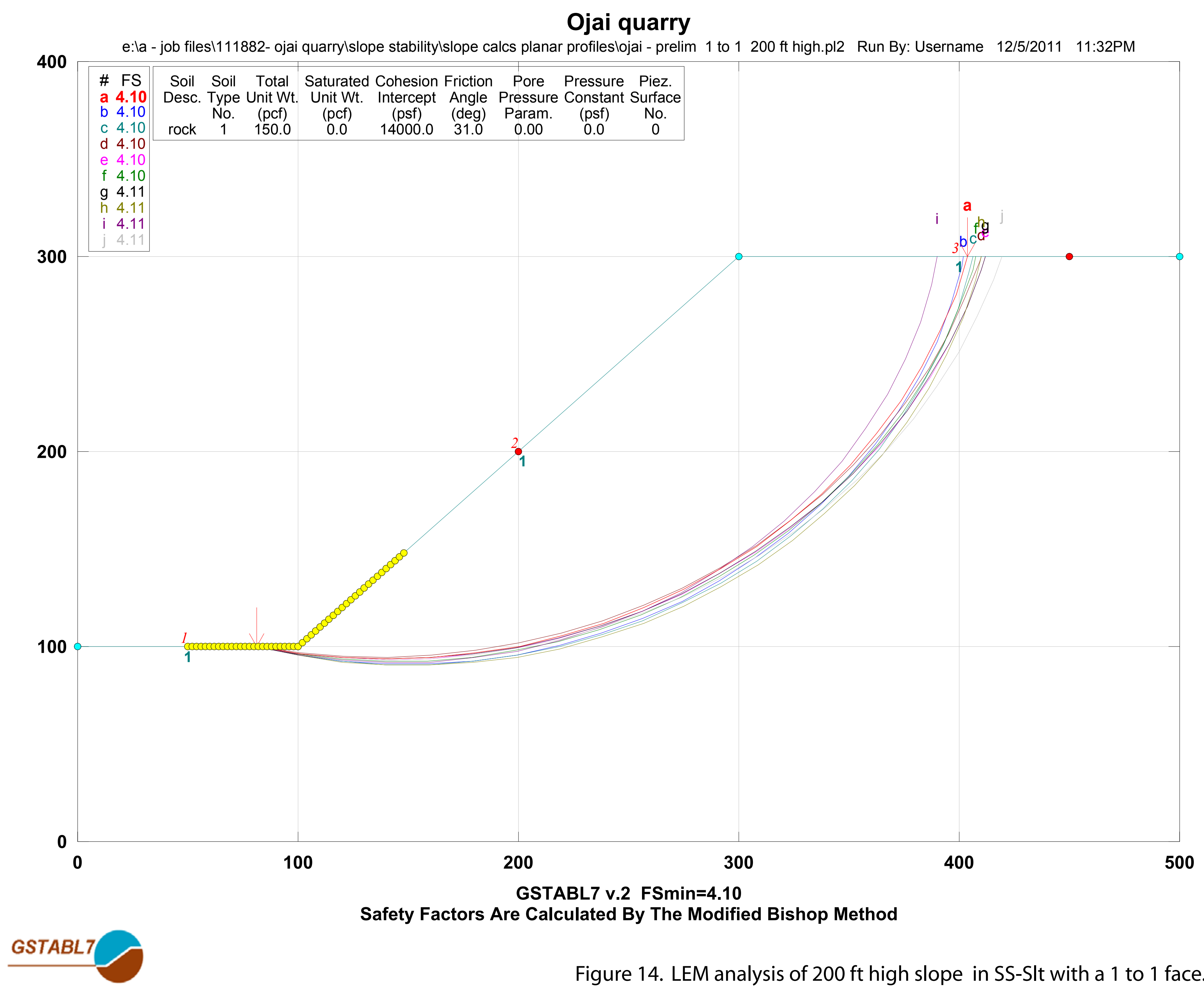


Figure 14. LEM analysis of 200 ft high slope in SS-Slt with a 1 to 1 face.

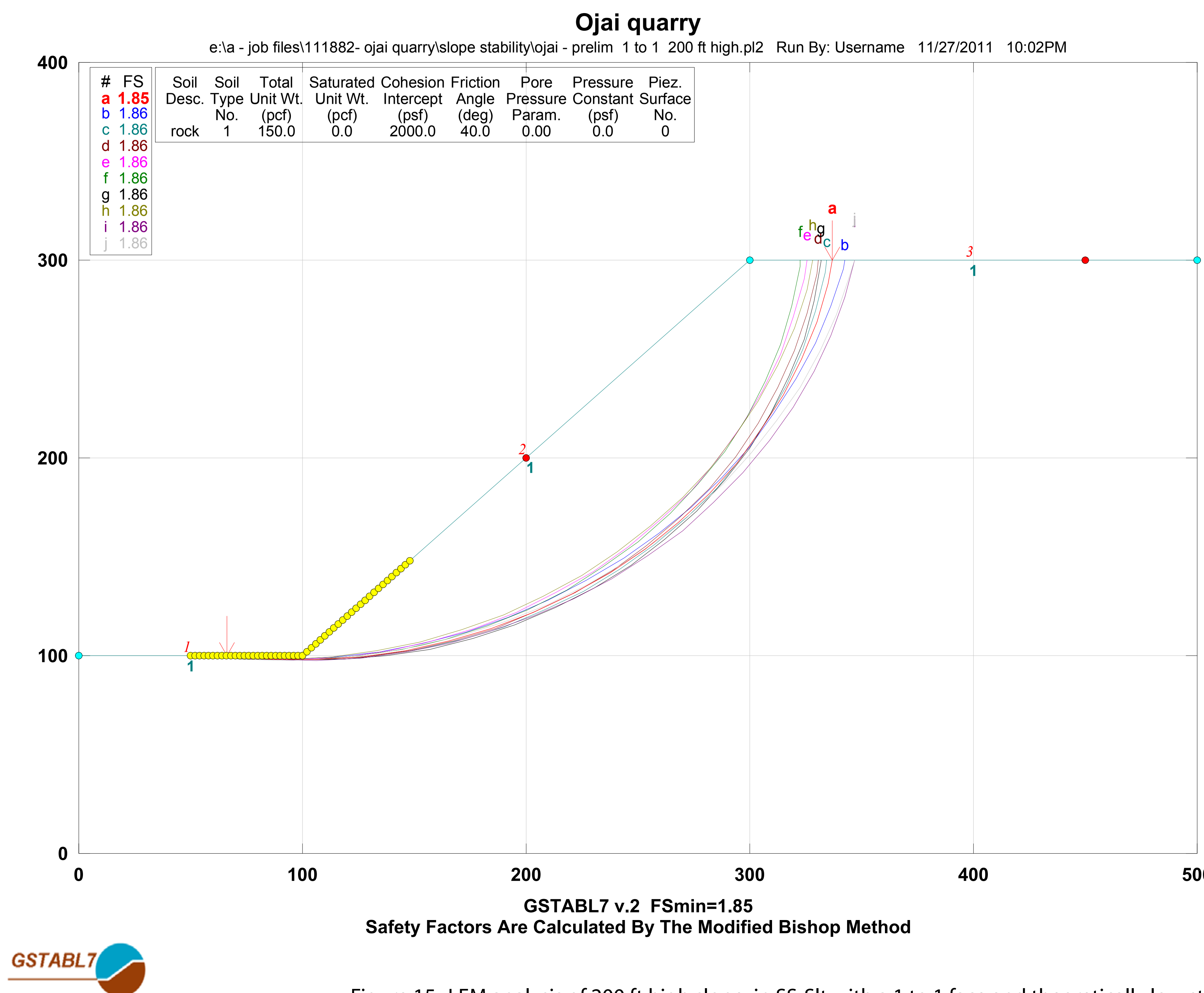


Figure 15. LEM analysis of 200 ft high slope in SS-Slt with a 1 to 1 face and theoretically low strength.

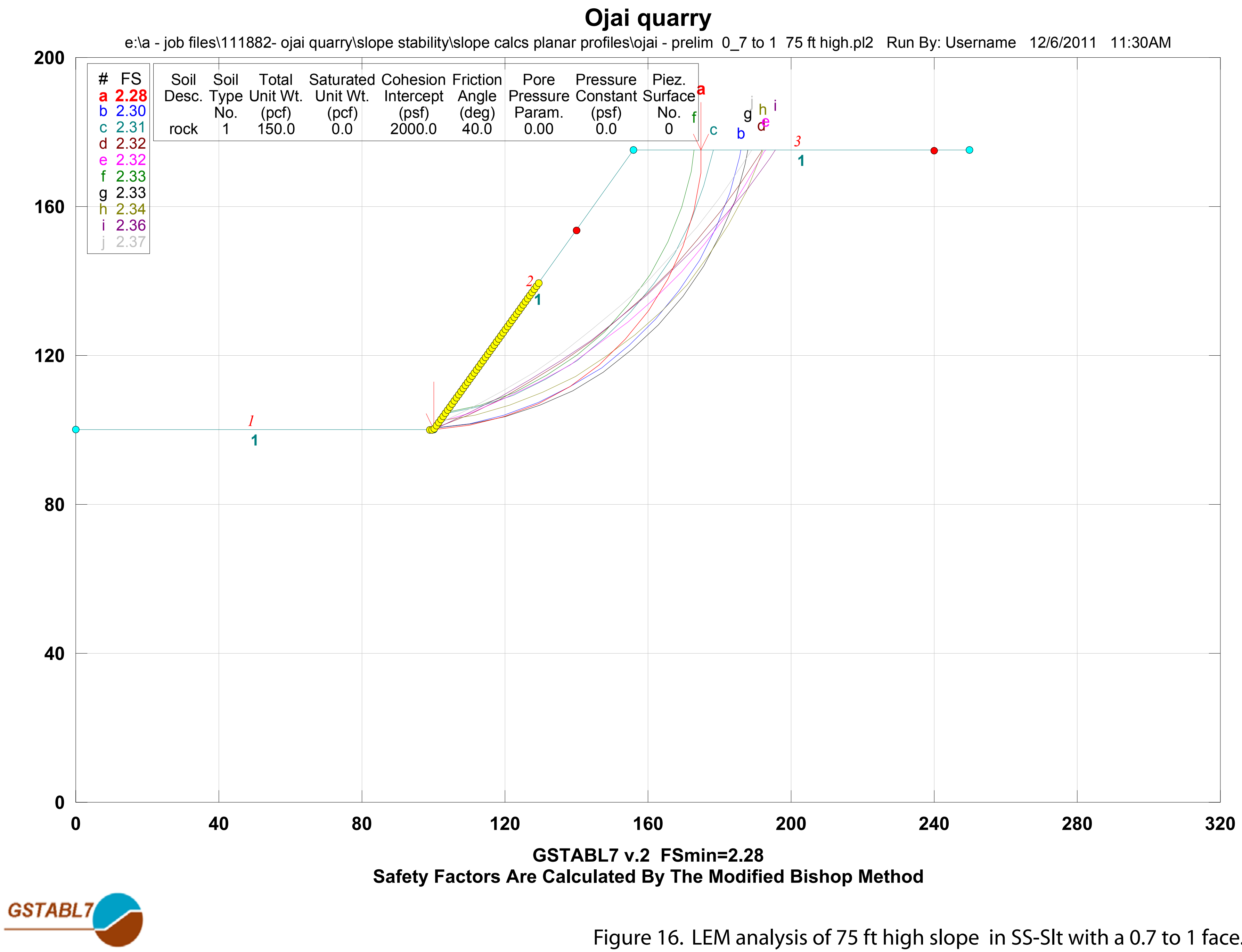


Figure 16. LEM analysis of 75 ft high slope in SS-Slt with a 0.7 to 1 face..
Theoretically very low material strengths are used.

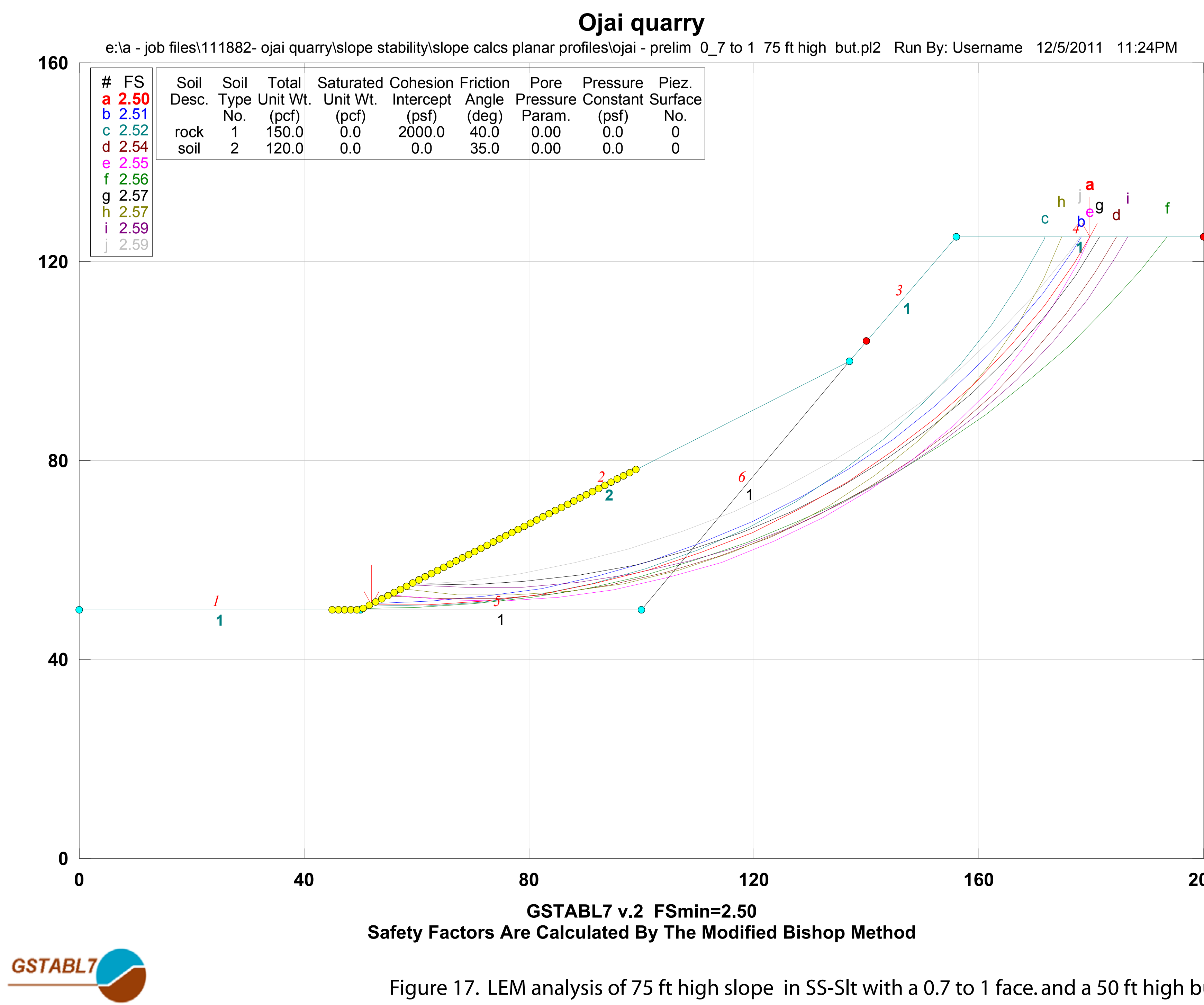


Figure 17. LEM analysis of 75 ft high slope in SS-Slt with a 0.7 to 1 face. and a 50 ft high buttress. Theoretically very low material strengths are used.

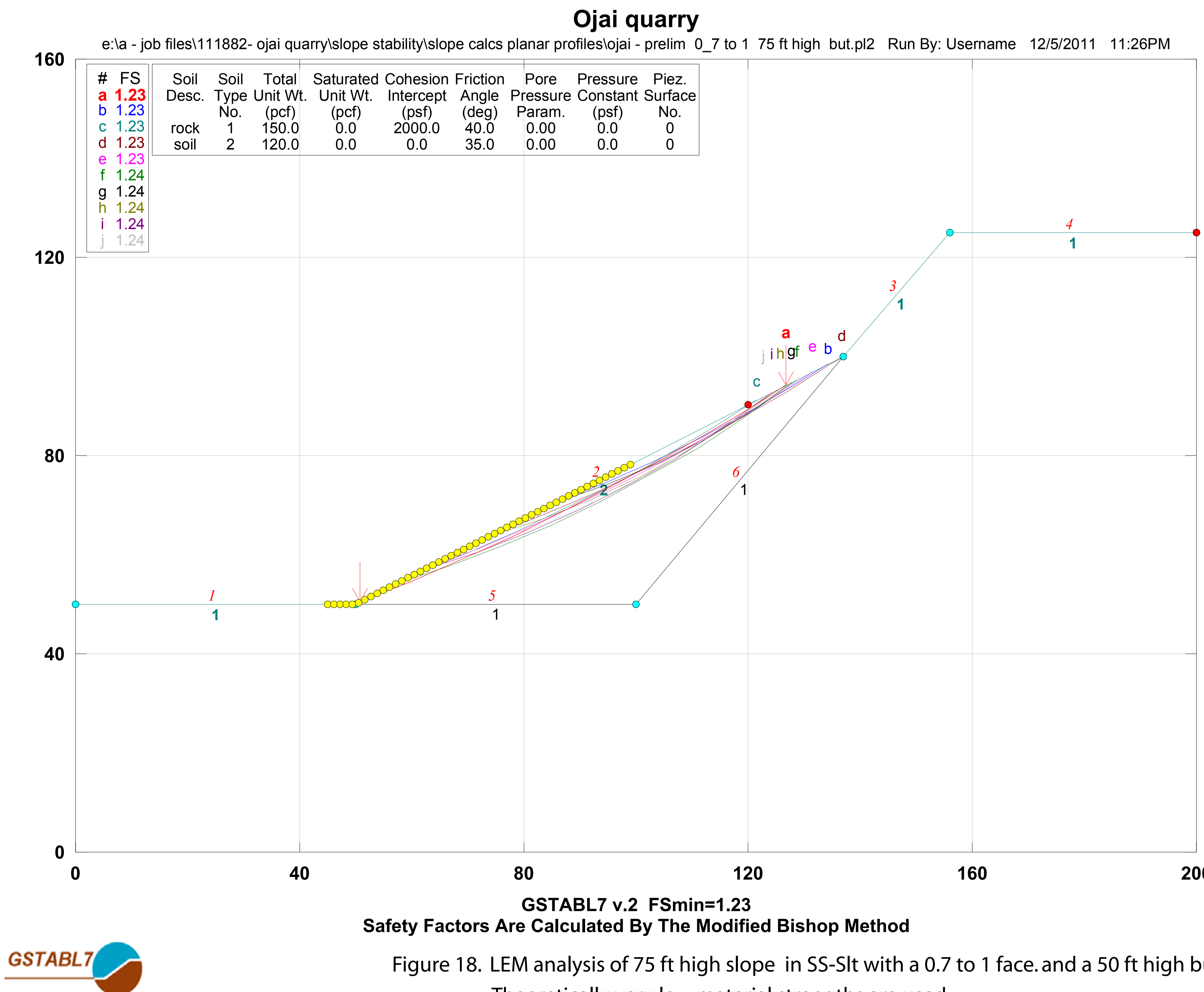
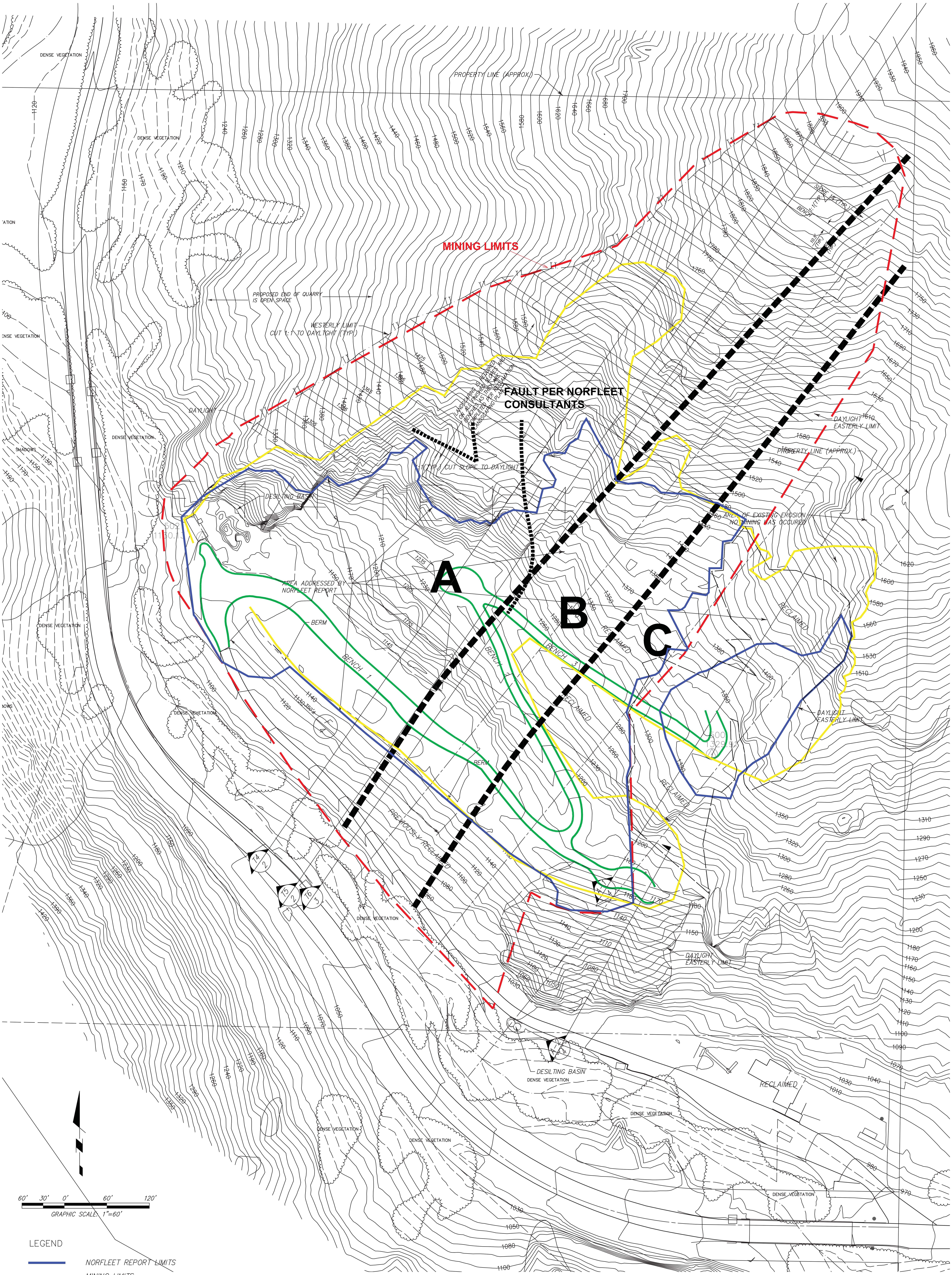


Figure 18. LEM analysis of 75 ft high slope in SS-Slt with a 0.7 to 1 face. and a 50 ft high buttress.
Theoretically very low material strengths are used.
The failure limts were restricted to the buttress.

APPENDIX III

RECLAMATION PLAN / GEOTECHNICAL MAP AND CROSS-SECTIONS



LEGEND

(blue line)	NORFLEET REPORT LIMITS
(red dashed line)	MINING LIMITS
(green line)	ACCESS ROADS
(yellow line)	ACTIVITY LIMITS (CURRENT)
A, B, C	MATILIJA DOMAINS (GMU'S) PER NORFLEET REPORTS

DOMAIN A - MATILIJA SANDSTONE AND LESSER THIN SILTSTONE

DOMAIN B - SILTSTONE AND LESSER SANDSTONE

DOMAIN C - THICKLY BEDDED SANDSTONE AND LESSER THIN SILTSTONE BEDS

CONTOURS ARE BASED ON AERIAL SURVEY BY JDS - AUGUST 2019

SEE SHEET 2 & 3 FOR CROSS SECTIONS
SEE SHEET 4 FOR TYPICAL DETAILS

2019

PLATE 1	GOLD COAST GEOSERVICES, INC.		
	GEOTECHNICAL MAP OJAI QUARRY		
DATE: 06-05-2020	SIZE: D	CLIENT: MOSLER	REV:
FILE NO: GC18-092902	SCALE: 1" = 60'	DRAWN BY: IM	APPROVED BY: SJH

5251 VERDUGO WAY, SUITE J * CAMARILLO, CA 93012 * (805) 484-5070

REGISTERED PROFESSIONAL ENGINEER FREDERICK T. GIROUX No. C 057289 Exp. 12-31-21 CIVIL STATE OF CALIFORNIA

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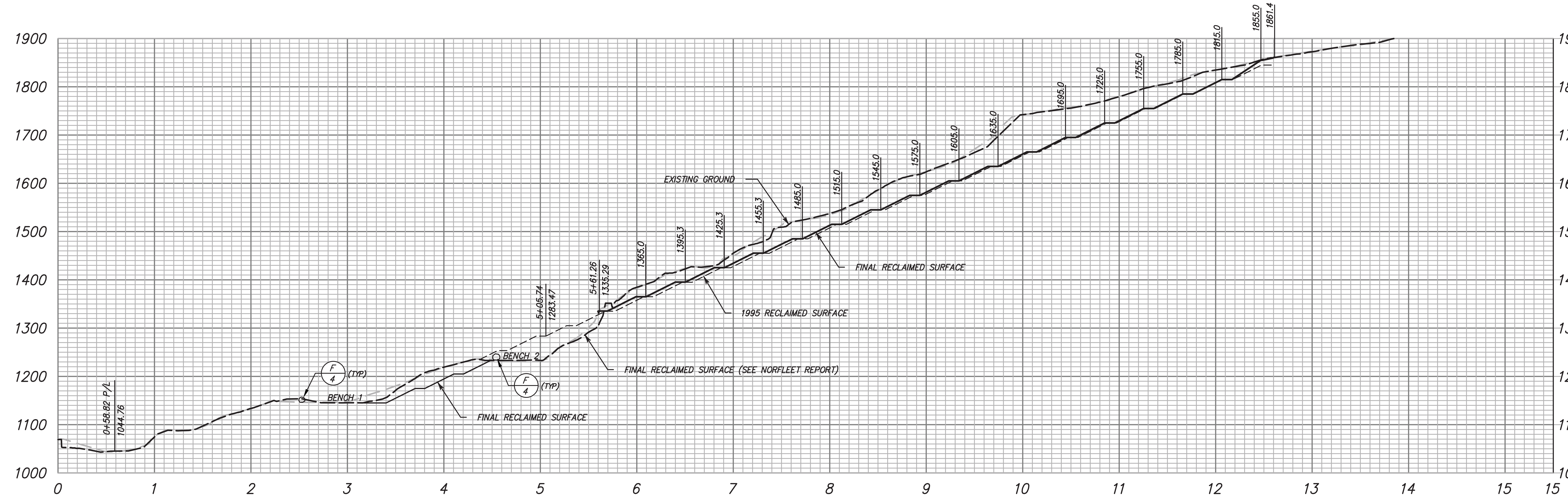
VENTURA, CALIF. 93003
PHONE 805/654-6977
FAX 805/654-6979

SCALE: 1"=60' | J.N.: MOS02.4059
DATE: 2/22/2019 | DWG. NAME:

RECLAMATION PLAN FOR OJAI QUARRY

HWY 33
City of Ojai

COUNTY OF VENTURA | STATE OF CALIFORNIA



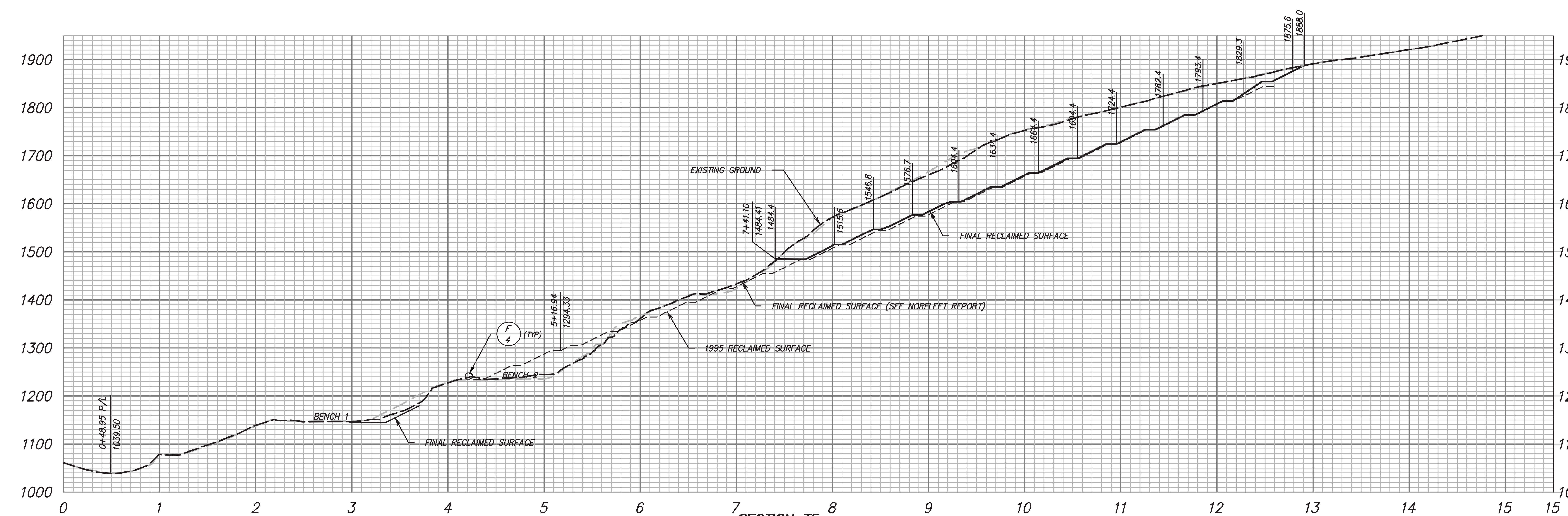
SECTION T4
HORZ SCALE: 1" = 60'
VERT SCALE: 1" = 30'

RECLAMATION NOTES

1. ALL ACCESS ROADS SHALL BE GRADED TO DRAIN INTO HILLSIDE WITH BOULDERS PLACED ALONG OUTSIDE OF ROADWAY, AS SHOWN IN DETAIL F, SHEET 3.
2. ALL ACCESS ROAD DRAINAGE CANAL/DITCHES SHALL BE CONSTRUCTED ON EXISTING BEDROCK
3. THIS RECLAMATION PLAN WAS PREPARED BASED ON THE QUARRY EXCAVATION SCHEME AS SHOWN ON SHEET 1 (QUARRY PLAN), BUT DUE TO POSSIBLE CHANGES IN QUARRY OPERATIONS DUE TO CHANGE IN STRUCTURAL GEOLOGY OF UNDERLYING STRATA, THIS RECLAMATION PLAN MAY BE REVISED ACCORDINGLY, SUBJECT TO THE REVIEW AND APPROVAL OF THE LEAD AGENCY.
4. QUARRY EXCAVATION SHALL BE UNDER THE OBSERVATION OF AN ENGINEERING GEOLOGIST WHO SHALL PROVIDE PERIODIC INSPECTION ON AT LEAST AN ANNUAL BASIS OF MEASURES TO MITIGATE QUARRY SAFETY AND TO AID IN IDENTIFICATION OF ANY CHANGES IN TERRAIN DISTURBANCE WITHIN OR ADJACENT TO QUARRY SITE. ANY CHANGE IN SLOPE PERFORMANCE OR EROSION/SEDIMENTATION CONDITIONS MAY REQUIRE REVISION TO THIS RECLAMATION PLAN. RESULTS OF THE ANNUAL INSPECTION SHALL BE SUMMARIZED IN A REPORT PREPARED BY THE ENGINEERING GEOLOGIST.
5. QUARRY EXCAVATION SHALL BE LIMITED TO 30 FOOT MAX BENCHES WITH TEMPORARY QUARRY EXCAVATION SLOPE NO TO EXCEED 60 DEGREE ANGLE OF REPOSE, WITHOUT WRITTEN APPROVAL BY THE ENGINEERING GEOLOGIST. TEMPORARY SLOPES ARE DEFINED AS SLOPES GRADED WITHIN THE PREVIOUS 12 MONTHS. FINAL SLOPES SHALL NOT EXCEED A 45 DEGREE ANGLE OF REPOSE AND SHALL HAVE 10 FOOT WIDE BENCHES EVERY 30 VERTICAL FEET, UNLESS APPROVED BY THE ENGINEERING GEOLOGIST AND THE LEAD AGENCY. NO PERCHED BOULDERS SHALL EXIST AT ANY TIME ON THE SITE.
6. WARNING SIGN INDICATING QUARRY HAZARD AND POSSIBLE ROCKFALL DANGER SHALL BE POSTED ALONG HIGHWAY 33 BELOW THE QUARRY SITE. WARNING SIGN SHALL ALSO BE POSTED INDICATING NO RECREATIONAL USE OF CREEK BELOW QUARRY SITE.
7. THE WESTERLY EDGE OF THE QUARRY SITE SHALL BE SLOPED AND BERMED TO PREVENT ANY MATERIALS FROM ROLLING DOWN THE NATURAL SLOPE INTO HIGHWAY 33, OR MATILIJA CREEK. IN THE EVENT THAT QUARRY MATERIALS FALL INTO MATILIJA CREEK, SAID MATERIALS SHALL BE REMOVED IMMEDIATELY BY CONTRACTOR.

QUARRY NOTES

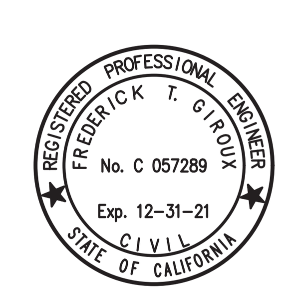
1. THIS PLAN WAS PREPARED TAKING INTO CONSIDERATION THE FINDINGS AND RECOMMENDATIONS OF PACIFIC MATERIALS LABORATORY, INC REPORT DATED JULY 25, 1988, ALONG WITH REPORTS PREPARED BY GOLD COAST GEOSERVICES, DATED DECEMBER 7, 2018 AND BY NORFLEET CONSULTANTS, DATED JULY 2015.
2. PRIOR TO ANY QUARRY EXCAVATION, ANY ON-SITE PERCHED BOULDERS OR LAND/ROCK SLIDES UPSLOPE THAT POSE DANGER TO ANY DOWNSLOPE QUARRY EXCAVATION SHALL BE REMOVED FIRST.
3. QUARRY EXCAVATION SHALL COMMENCE FROM TOP OF SLOPE, PROCEEDING DOWNWARD ACCORDING TO BENCH DETAIL D, SHEET 3.



SECTION T5
HORZ SCALE: 1" = 60'
VERT SCALE: 1" = 30'

2019

SEE SHEET 1 FOR SITE PLAN
SEE SHEET 4 FOR TYPICAL DETAILS



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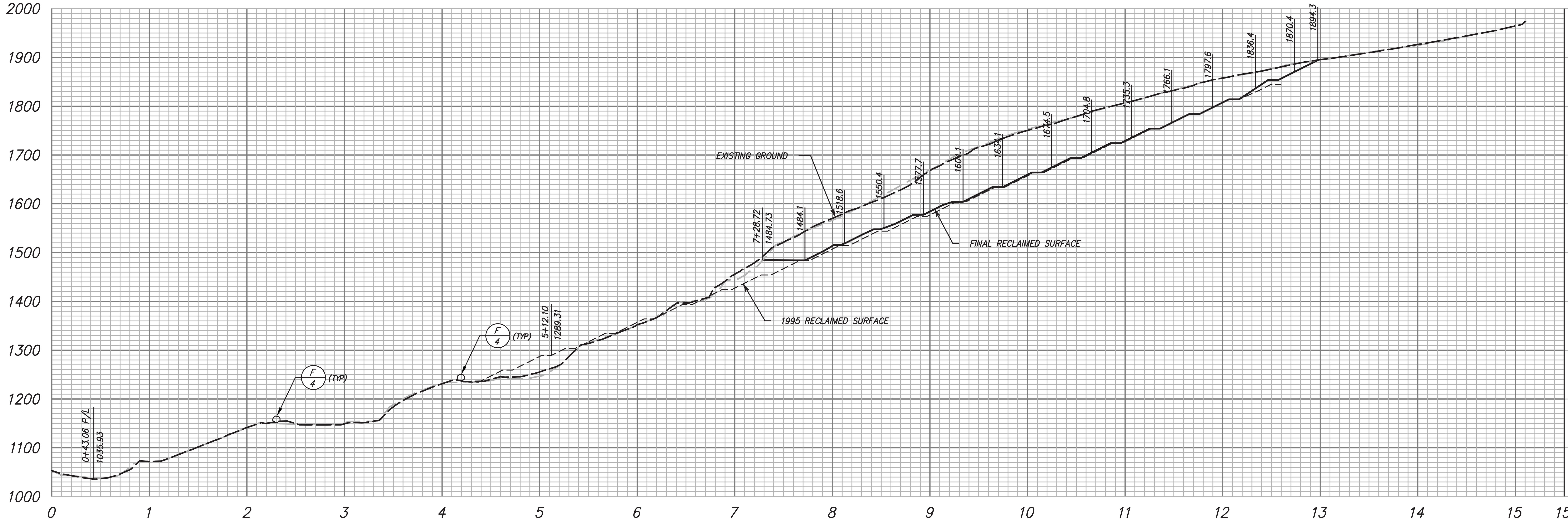
FAX 805/654-6979

SCALE: 1"=60'
DATE: 9/5/2019
J.N.: MOS02.4059
DWG. NAME: 4059_2019 Rec Plan - Sections.dwg

RECLAMATION PLAN
FOR
OJAI QUARRY

HWY 33
City of Ojai
COUNTY OF VENTURA
STATE OF CALIFORNIA



SECTION T6
HORZ SCALE: 1" = 60'
VERT SCALE: 1" = 30'

RECLAMATION NOTES

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7. THE WESTERLY EDGE OF THE QUARRY SITE SHALL BE SLOPED AND BERMED TO PREVENT ANY MATERIALS FROM ROLLING DOWN THE NATURAL SLOPE INTO HIGHWAY 33, OR MATILIJA CREEK. IN THE EVENT THAT QUARRY MATERIALS FALL INTO MATILIJA CREEK, SAID MATERIALS SHALL BE REMOVED IMMEDIATELY BY CONTRACTOR.

QUARRY NOTES

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3. QUARRY EXCAVATION SHALL COMMENCE FROM TOP OF SLOPE, PROCEEDING DOWNWARD ACCORDING TO BENCH DETAIL D, SHEET 3.

2019

REGISTERED PROFESSIONAL ENGINEER
FREDERICK T. GIROUX
No. C 057289
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA

SEE SHEET 1 FOR SITE PLAN
SEE SHEET 4 FOR TYPICAL DETAILS

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SCALE: 1"=60'
J.N.: MOS02.4059
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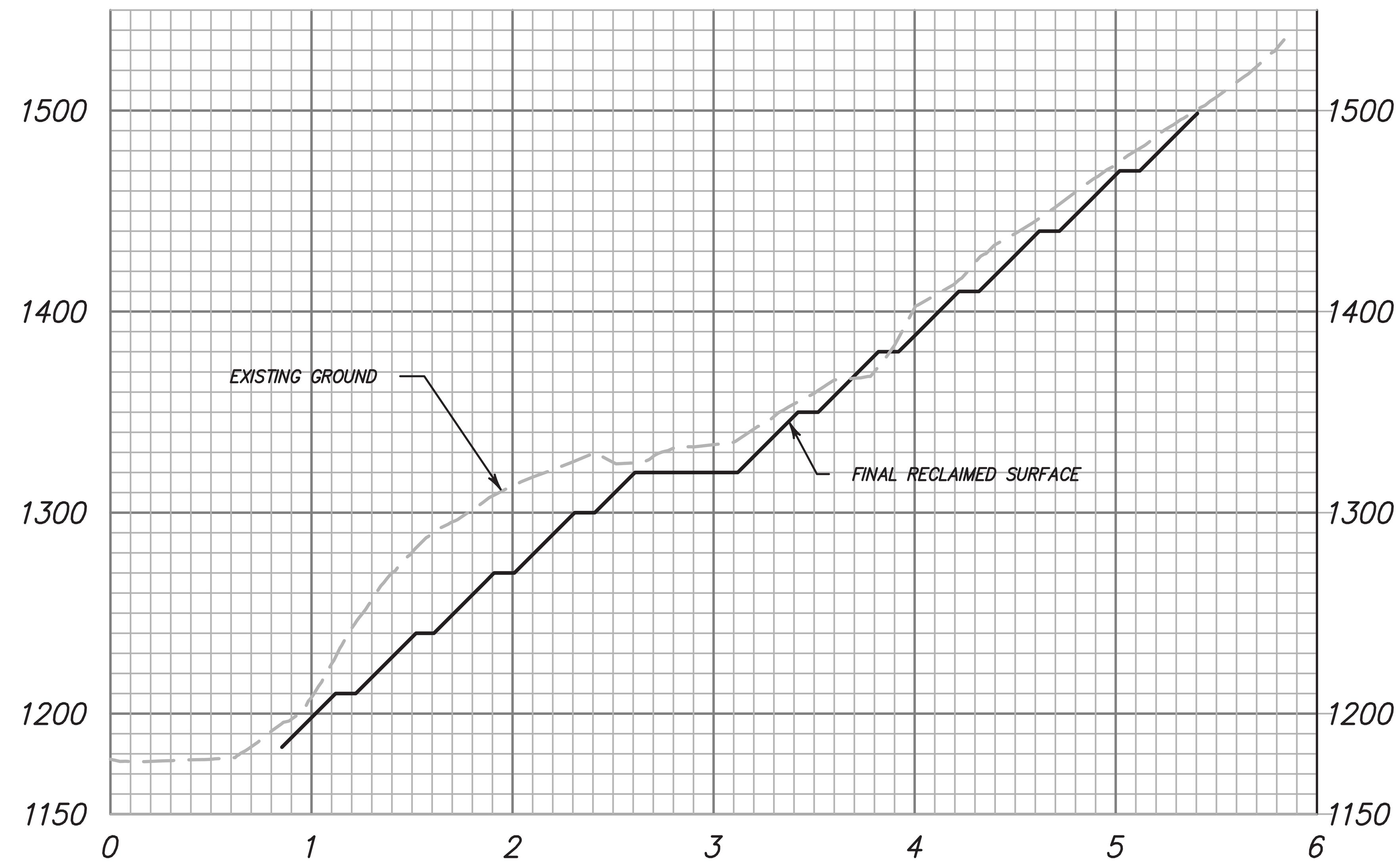
DWG. NAME: 4059_2019 Rec Plan – Sections.dwg

RECLAMATION PLAN
FOR
OJAI QUARRY

HWY 33
City of Ojai
COUNTY OF VENTURA
STATE OF CALIFORNIA



SECTION A-1
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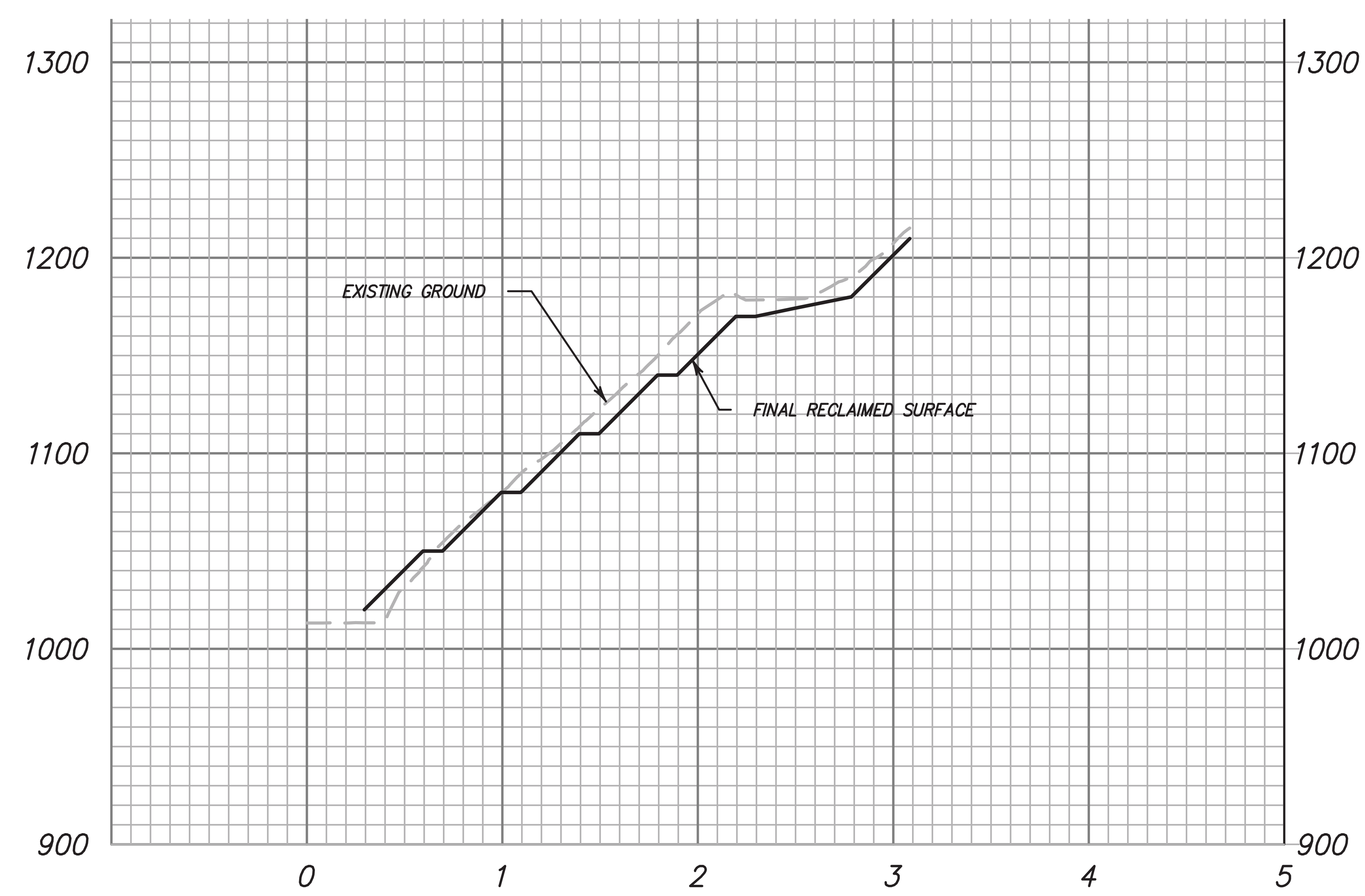

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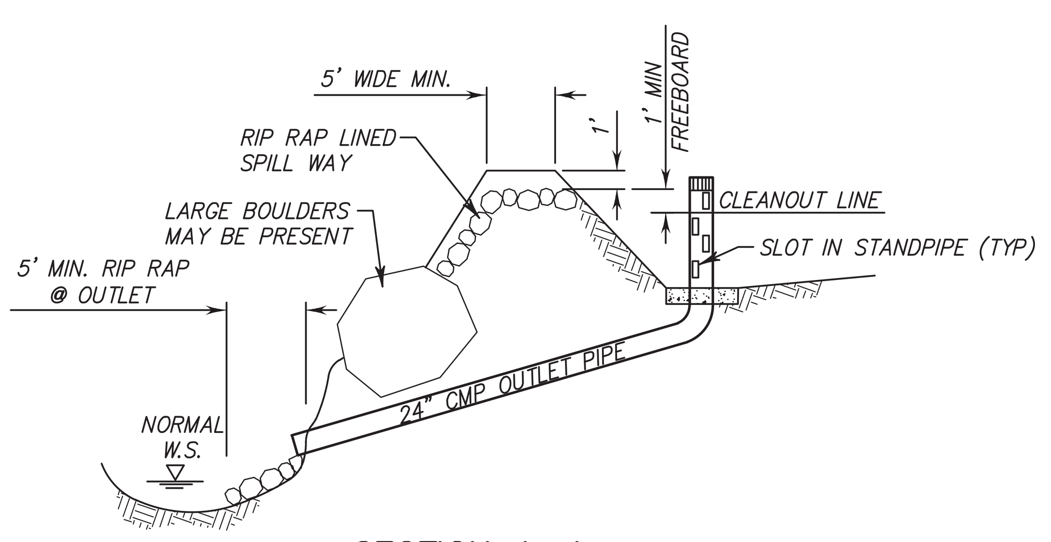

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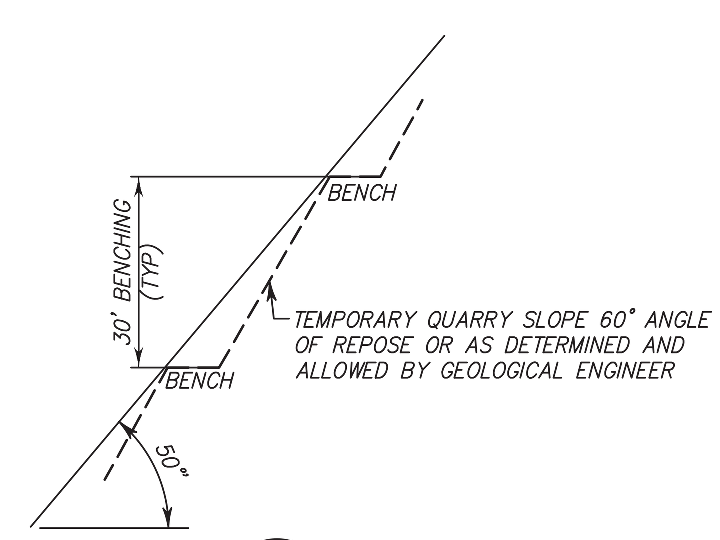
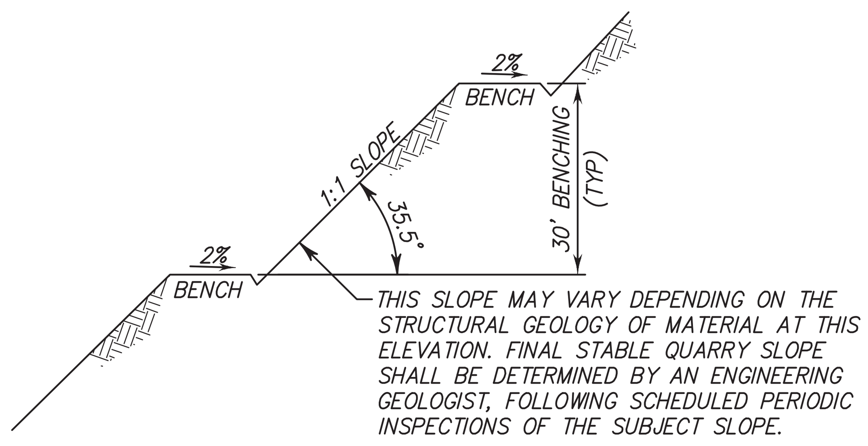
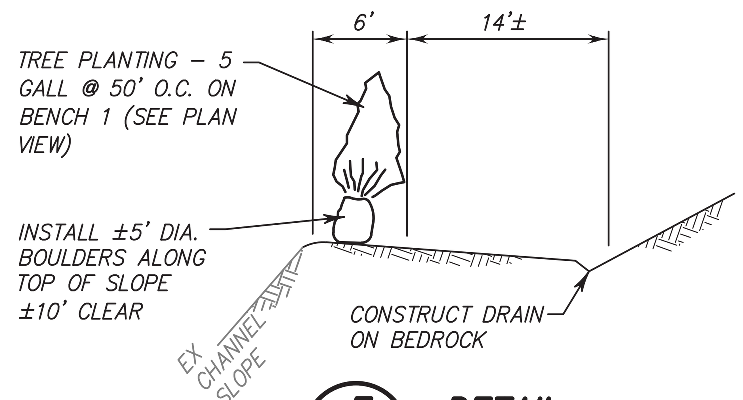
NOT TO SCALE



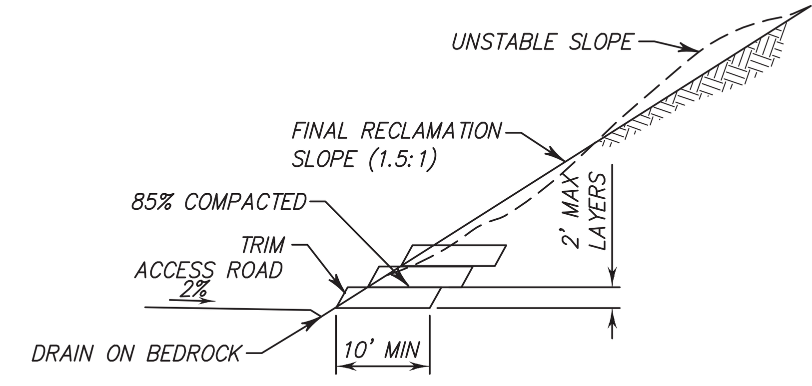
D BENCH DETAIL
NOT TO SCALE



E FINAL BENCHING DETAIL
NOT TO SCALE



F DETAIL
NOT TO SCALE



H DETAIL
NOT TO SCALE
WORK PROCEDURE ON EXISTING UNSTABLE SLOPE

Jan 21, 2020

SEE SHEET 1 FOR SITE PLAN
SEE SHEET 2 & 3 FOR SECTIONS

2019

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RECLAMATION PLAN
FOR
OJAI QUARRY

HWY 33
City of Ojai

COUNTY OF VENTURA
STATE OF CALIFORNIA

SCALE: 1"=60'
J.N.: MOS02.4059
DATE: 9/5/2019
DWG. NAME: 4059_2019 Rec Plan - Sections.dwg

NORFLEET CONSULTANTS

Engineering
Geology
Hydrogeology
Geophysics

6430 Preston Ave.
Suite A
Livermore, CA 94551
(925) 606-8595

January 15, 2018

Ventura County Planning Dept
800 S. Victoria Ave
Ventura CA 93009

Proj. No. 131882.3

RE: Geologic/Slope Review
Ojai Quarry
Ojai, CA

Dear Sirs,

At Mr. Mosler's request, We are providing an updated geologic/slope stability review for the Ojai Quarry.

Our scope of work included:

- Review of ground photographs of the quarry taken between February, 2017 and January, 2018 and a revised aerial topographic map of the quarry, dated August 30, 2017.
- Review of our previous geologic and geotechnical documents concerning slope conditions in the quarry.
- Discussions with Mr. Mosler.
- Preparation of this report.

The intent and purpose of this report is to provide a discussion of geologic and slope stability conditions in the quarry as of January 5, 2018.

GEOLOGIC SETTING

The quarry is located on undeveloped land of the Los Padres National Forest within the Topatopa range, and is adjacent to State Highway 33 (Rt. 33) and the north fork of Matilija Creek (Figure 1). It is about 4 miles north of the city of Ojai in Ventura County. Eocene sandstones and siltstones of the Matilija formation are mined in the quarry.

The quarry is located in the core of a large thrust ramp (called the Matilija Overturn by Kerr and Schenck, 1928). The thrust ramp extends diagonally (southeast-to-northwest) across the range, forming a large fold. The ramp fold axis is quasi-vertical, exposing a cross-section of the ramp (in plan view). Ramp development caused rotation, faulting, fracturing, shearing, and bedding plane slip along and across the sandstone/siltstone beds.

County of Ventura
Planning Director Hearing
Case No. PL18-0136
Exhibit 3e - Geologic Slope/Stability Review

The area was mapped in 1928 by Kerr and Schenck and again by Dibblee (1982). Dibblee's structural mapping is general only. It does not show the detailed structural complexities within the ramp zone. The depositional environment of the sandstone was discussed by Link (1975). Squires (1999) did a detailed stratigraphic analysis of the Matilija sandstone at the Matalija Hot Springs with an auxiliary section opposite the quarry.

SITE GEOLOGY

Field descriptions are based on the exposures in the quarry at the time of our site visits in December 5, 2011, on June 5, 2013, and February 2014. See those reports for details of the geology and slope stability. This is an active quarry. As mining progress, features described in this or previous reports may be destroyed while new geologic features will become visible. With a few exceptions, the quarry beds dip steeply (80 to 85 degrees SE) and strike ~N30E. The beds young to the southeast. The quarry face has an approximate bearing of N40W.

The quarry is located on the lower part of a southwest sloping steep ridge. The current quarry (active and reclaimed) is about 650 feet wide and long with an elevation change of about 500 feet. The undisturbed ground above the quarry slopes 33 to 36 degrees (1.54-1.4 to 1) while the ground surface adjacent to the north side of the lower part of the quarry slopes about 45 degrees (1 to 1). There were no obvious indications of large-scale slope failures in the surrounding natural slopes and road cuts.

In the quarry, the Matilija formation consists of interbedded sandstones and siltstones. Sandstone beds vary from a foot or so thick to massive beds more than 30 feet thick. The sandstones are fine- to coarse-grained and contain few obvious depositional features. The siltstones are thin bedded (an inch or less) and form zones a few inches thick to more than 20 feet thick. The sandstones are light brown in color while the siltstones are dark brown (blackish looking). The thicker sandstone beds are hard/strong enough that they have to be blasted. No free/flowing water was observed in the quarry. No indications of long-term, historic water flow was observed in the quarry.

Previous Studies

The previous condition survey of the Ojai Quarry was issued by AGS, Inc., on February 22, 2011 (their report number 8922). That report identified locations of perched boulders and discussed progress on their removal, potential for rock falls, and mining activities within various parts of the quarry. They noted that no rock bolts had been installed and no buttress fills had been constructed. Four landslides were identified. Three were shallow, within colluvium (AGS areas 3 and 9), and the fourth was located at the upper northeast corner of the quarry (AGS area 8). It was unclear from the AGS report in what material the fourth landslide was located. AGS noted that surface erosion from winter rains had reduced the size of those landslides.

Norfleet Consultants prepared a slope stability study (December 5, 2011) as part of the reclamation plan for the quarry. For this study, the quarry geology was re-evaluated, structural information (joints) was collected and the overall stability of the quarry slopes and proposed fills was evaluated.

A point of contention between the operator and the County is the meaning of notes on the proposed cross-section (C) in the original reclamation plans (Hovell and Piloarski Engineering, September, 1994?), Figure 1. One note read "Quarry Tailings Disposal Area." Below, another note read "Temp. Stockpiling & Loading of Rocks Area." Both notes had arrows pointing to newly cut benches. There no indication that the notes refer to the final, reclaimed slope configuration. The operator believes that the notes allow the temporary storage of tailings on an as needed basis to a maximum depth specified in the notes during mining. The County believes that these notes specify the final, reclaimed configuration of the quarry slope. They believe that all benches must eventually be filled with engineered fill to the configuration shown in the notes.

This quarry has virtually no area for long- or short-term storage of spoils/tailings. The benches are the only locations where material can be stored temporarily or long-term.

Norfleet Consultants prepared an annual slope stability review study (dated July 2, 2013). The focus of this evaluation was the rock fall potential from the active mining at the southeast corner of the quarry. Recommendations were provided to the quarry operator to reduce the potential for rocks leaving the active quarrying area.

The RWQCB was concerned that rocks or soil/silt from the quarry could enter Matilija Creek during large rainfall events. The Norfleet Consultants study (February 3, 2014) evaluated those concerns.

During the winter of 2016-17, we kept in contact with Mr. Mosler to track effects of the heavy El Nino rains on the quarry. We reviewed photographs of the quarry taken by Mr. Mosler during January and February, 2017. The rains cleared the slopes of minor debris and caused some small rocks (up to 1 foot in diameter) to move down the hill. No equipment damage was reported, the roadways/benches were not damaged, no soil or rock landslides were reported, the catchment basins and de-silting operations appeared to work as intended, and no material was reported to have entered the creek. No report was issued.

Current Quarry Conditions

Active mining shifted to the upper part of the southeast area of the quarry in the spring of 2012, and has continued to this day. Mining in other parts of the quarry ceased in late 2011.

The active mining area a ridge of massive, clean sandstone beds that have to be blasted. The ridge was initially about 125 feet long and rose 30 to 40 feet above the existing quarry floor. Prior to mining, parts of this ridge rose 10 to 20 feet above the surrounding natural ground surface. The beds dip about 80 degrees to the southeast and tilt into the quarry. The beds vary in width from 1 to 15 feet. The beds are jointed, and joint spacing correlates with bed thickness. In the thicker beds, joint spacing is 3 to 12 feet. In the thin beds (<2 feet), joint spacing is less than 1 foot. No groundwater or indications of groundwater were observed in or around this area. The quarry was burned by the Thomas fire in late 2017. No equipment damage was reported. There was no indication that the fire damaged quarrying operations. No mud/soil slides in the quarry were reported during the recent rains (January 10-20, 2018).

Early on, two access roads were cut to access the top of the ridge to allow top down mining. The operator created a level pad at the base of the downhill side of the ridge to catch falling rock. This area has been reduced to a gentle slope. Because it is an active mining area, it has a greater rock fall risk than surrounding area. The operator recognizes this risk and appears to have organized his activities to reduce the rock fall potential.

Existing cut slopes in the northern part of the quarry are higher and steeper. Rock falls have been and will continue to be a concern throughout this area. Seismically induced rock falls could occur. We did not observe obvious areas of incipient large-scale slope failure or areas of noticeable slope changes in other parts of the quarry. We did not observe indications of groundwater flow from the faces/joints of the quarry.

The stability of the quarry slopes were described and analyzed in our report dated December 5, 2011. In our opinion, mining activities since 2011 have not altered the slope stability analyses or conclusions presented in our 2011 report. The conclusions in the 2011 report are still valid.

In our 2011 report we stated that "The addition of a structural buttress [engineered soil fill in the cut benches] adds little to the overall slope stability. In fact, the buttress will have the [sic] lower FS than the adjacent rock cut. Unless extensive sub-surface drainage systems are installed in a buttress, the buttress could have a much higher failure probability than the rock slopes." Cut rock slopes, with benches (but no buttress fills), had factors of safety between 1.8 to 4. Buttress fills increased the slope FS from 0.08 to 0.23 (depending on rock properties and slope configuration). Buttress fill FS was in the 1.23 range.

Placing engineered fills in the benches would provide little additional structural support to the cut slopes. However, because the quarry fill material is sandy/silty with little to no cohesion, increased quarry-wide soil erosion could likely occur during winter rains. This could present significant long-term siltation and water quality problems for Matilija Creek.

The source of fill material need to create the buttresses is unclear. Virtually all mined material is sold. There are no tailing piles on the Ojai quarry property that could be used to create buttress. This suggests that A), fill would have to be brought in from other quarries. This would create a significant increase in truck traffic through Ojai. Or B), material from the Mosler quarry could be crushed to create the volume of needed fill material. A crushing plant would have to be set up, but it is unclear if there is room for such a plant. The plant would likely have to be wet to meet local air quality board requirements. This raises additional problems. There is no room for de-silting ponds, and then there is the problem of silt disposal. Also unknown is the extent of additional mining needed to create the fill.

LIMITATIONS

If the quarry operator observes suspicious/unusual slope movement indicators (an increase in localized rock falls, widening of joints, loud cracking noises, seemingly minor block movement, etc.), he should contact us immediately.

This report was prepared at the request of, and for the exclusive use of the addressee. Release to any other company, concern, or individual is solely the responsibility of the addressee. We have employed generally accepted geological, engineering geology, and civil engineering procedures for this type of study. Our observations, professional opinions and conclusions were made using that degree of care and skill ordinarily exercised, under similar conditions, by engineering geologists, and civil engineers practicing in this area at this time. The opinions and/or recommendations presented in this report could be subject to revision should additional information become available. Norfleet Consultants expressly denies any third party liability arising from the unauthorized use of this report and makes no warranty, either expressed or implied

The opinions and/or recommendations presented in this report could be subject to revision should additional information become available. The timing and location of events reported to us by the owners or their representatives were not independently confirmed.

Yours Truly,

S. Figuers

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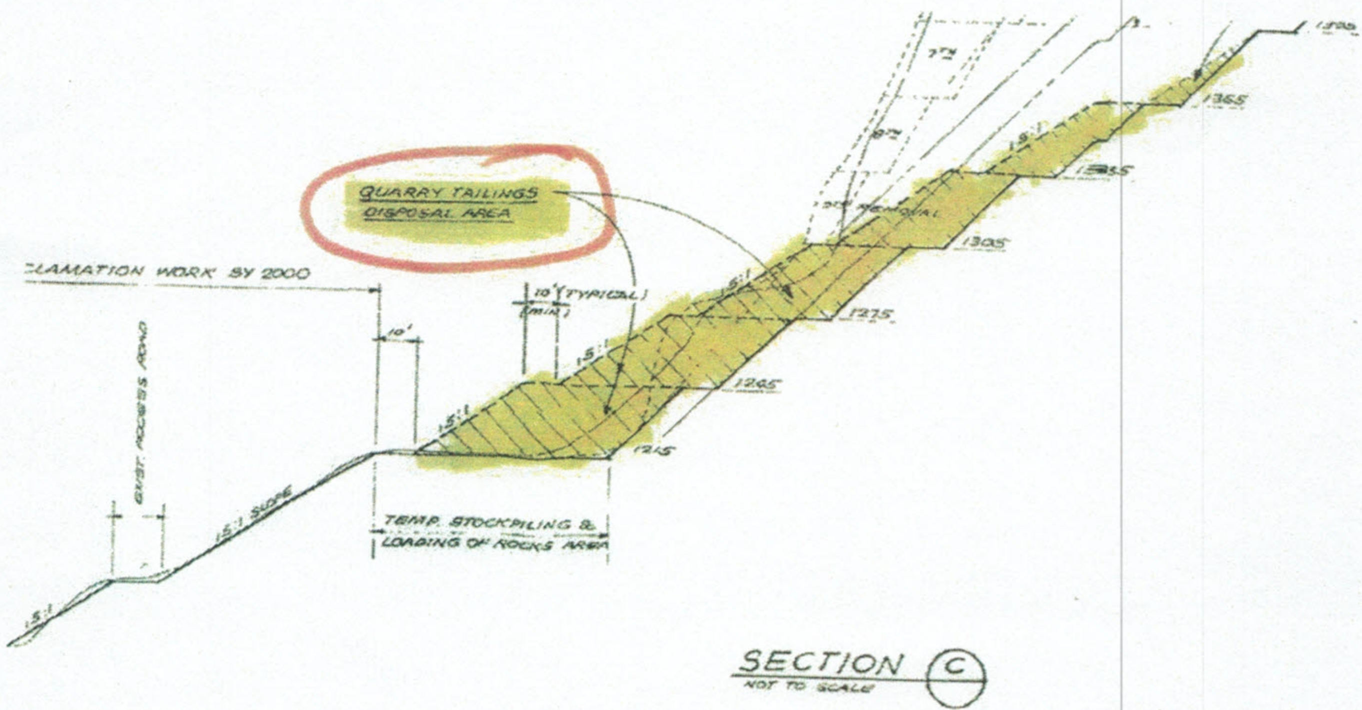
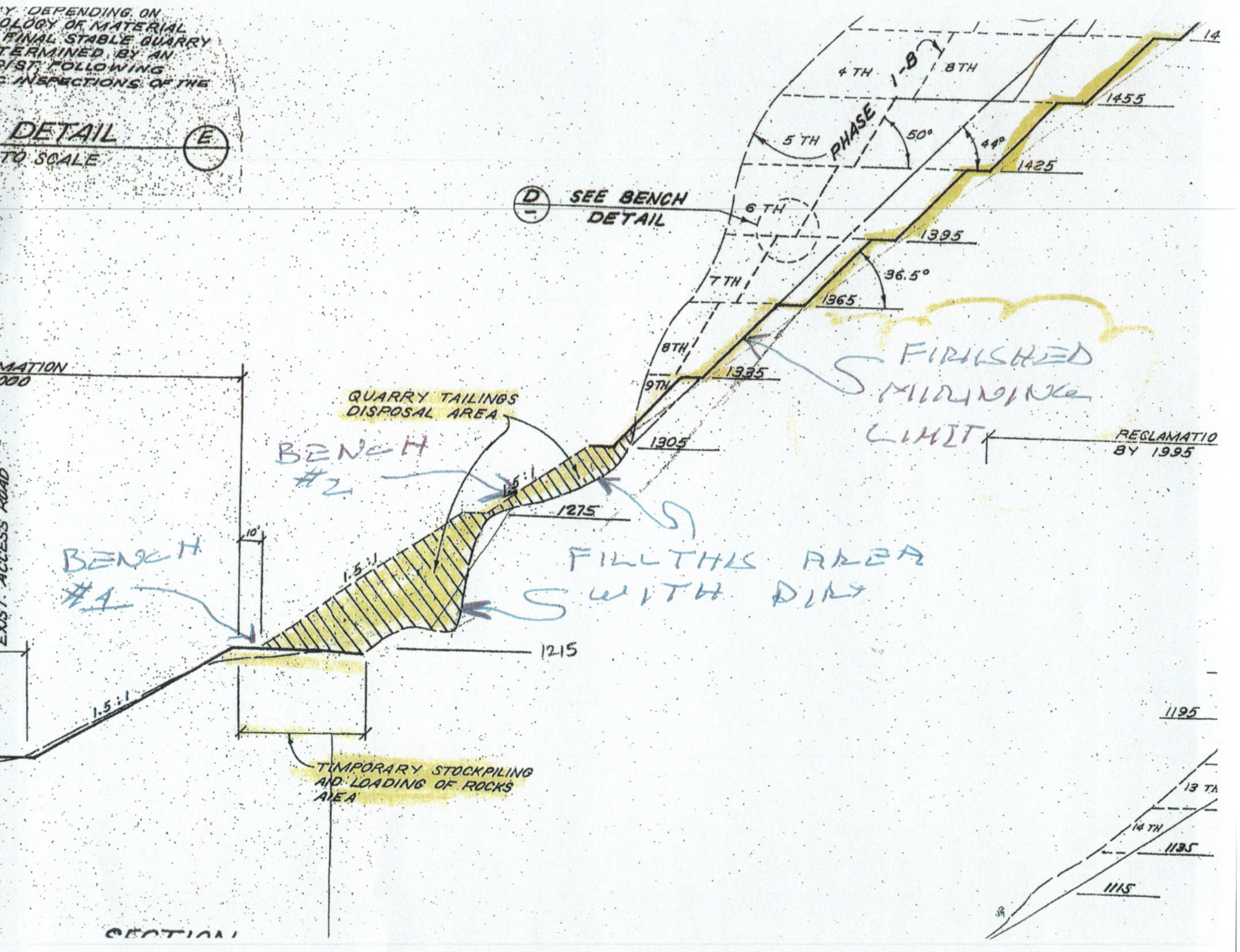


Figure 1: The Hovell and Piloarski Engineering cross-section C



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TEMPORARY STOCKPILING AND LOADING OF ROCKS AREA
SECTION

MOSLER ROCK OJAI QUARRY

OJAI, CA

(WDID: 4 56I019388)

STORM WATER POLLUTION PREVENTION PLAN

(SWPPP)

Prepared by:

Ashworth Leininger Group
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Camarillo, CA 93010
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August 2020

County of Ventura
Planning Director Hearing
Case No. PL18-0136
Exhibit 3f - Stormwater Pollution Prevention Plan

Storm Water Pollution Prevention Plan

Table of Contents

List of Appendices

Plan Approval and Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Legally Responsible Person (LRP) or Duly Authorized Representative (DAR)

Signature of LRP or DAR

Date

Wet signature copy maintained onsite

Section 1 Introduction

Regulatory Background

This SWPPP was designed to comply with California's General Permit for Storm Water Discharges Associated with Industrial Activities (General Permit) Order No. 2014-0057-DWQ (NPDES No. CAS000001) issued by the State Water Resources Control Board (State Water Board) and effective July 1, 2015 and most recent revision to the General Permit, Order No. 2015-0122-DWQ. In accordance with the General Permit, Section X.A, this SWPPP contains the following required elements:

- Facility Name and Contact Information;
- Site Map;
- List of Industrial Materials;
- Description of Potential Pollution Sources;
- Assessment of Potential Pollutant Sources;
- Minimum Best Management Practices (BMPs);
- Advanced BMPs, if applicable;
- Monitoring Implementation Plan (MIP);
- Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation); *and,*
- Date that SWPPP was initially prepared and the date of each SWPPP Amendment, if applicable.

When any of the following conditions occur, termination of coverage under the General Permit will be requested by certifying and submitting a Notice of Termination (NOT) via Storm Water Multiple Application and Report Tracking System (SMARTS):

- Operation of the Facility has been transferred to another entity;
- The Facility has ceased operations, completed closure activities, and removed all industrial related pollutant generating sources; or
- The Facility's operations have changed and are no longer subject to the General Permit.

The SWPPP and all of the provisions of the General Permit will be complied with until a valid NOT is received and accepted by the State Water Board. In accordance with Section II.C.2 of the General Permit, in the case of a change in facility ownership, the new Discharger (buyer) will be notified of the General Permit applications and regulatory requirements for permit coverage by the prior Discharger (seller).

Industrial General Permit Amendment – Total Maximum Daily Loads (TMDLs)

The General Permit amendment, effective July 1, 2020, includes new requirements for dischargers located within a watershed for which a TMDL has been approved by the U.S. EPA. If applicable, new requirements include TMDL Numeric Action Levels (TNALs) and Numeric Effluent Limitations (NELs). Mosler Rock Ojai Quarry does not discharge to a water body or watershed identified in Attachment E Table E-2 of the 2020 General Permit, and is therefore not a Responsible Discharger subject to additional TMDL-specific permit requirements.

Section 2 SWPPP Fact Sheet

The table below provides a summary of General Permit requirements.

Table 1 : SWPPP Requirement / Compliance Overview

GENERAL INFORMATION	
Name	Mosler Rock Ojai Quarry
Address	15558 Maricopa Highway, Ojai, CA 93023
Facility WDID	4 56I019388
Contact Person	Larry Mosler, Owner
Phone No.	(805) 498-1093
SIC Code(s)	1499
NAICS Code	212399 (All Other Nonmetallic Mineral Mining)
Operating Hours	Monday – Friday, 7am – 3pm *Note: Due to dangerous conditions during rain events, such as risk of falling rocks, no operations are conducted during storm events.*
ERA Level	Baseline
Responsible Discharger	N/A; does not discharge to impaired waterbody listed in Attachment E of the Permit
PERMIT INFORMATION	
Permit Number	CAS000001, Order No. 2014-0057-DWQ amended by 2015-0122-DWQ
Effective Date	July 1, 2020
Receiving Water	Matilija Creek
POLLUTION PREVENTION TEAM	
Team Members	Owner Quarry operators
MONITORING	
Monthly Visual Examinations	
Frequency	1/month
Observation	All non-storm water discharges (NSWDs) & sources, BMPs, exposed areas, potential pollutant sources near drainage area
Written Record	Yes, refer to Appendix C
Sampling Visual Examinations	
Frequency	During sampling (conducted during operating hours and daylight hours to ensure safe conditions)
Observation	Floating/suspended material, discoloration, odor, other indicators in storm water
Written Record	Yes, refer to Appendix D
Storm Water Sample Collection	
Frequency	2 Qualifying Storm Events (QSEs) during each half of the reporting year (July 1 – December 31 and January 1 – June 30) – **4 total for compliance year**
Baseline and SIC Code Sampling Requirements	pH, Total Suspended Solids (TSS), and Oil Grease
303(d) Water Body Impairments	dissolved oxgen (eutrophic/low dissolved oxygen); E.coli and enterococcus (indictor baterica, fecal cToliform, and total colifom); mercury (metals screen); nitrate, nitrite, total nitrogen, total phosphorus, and dissolved oxygen (nutrients); total dissolved solids (TDS)
Additional Sampling Parameters	TDS

Written Record	Yes, refer to Appendix D
Sampling Locations	SP-001 and SP-002
Sampling Result Submittal	Via SMARTS within 30 days of receipt of all analytical data from lab
REPORTING AGENCIES	
State Agency	State Water Resources Control Board (SWRCB)
Local Agency	Regional Water Quality Control Board (RWQCB), Los Angeles, Region 4
Local Agency Address	Los Angeles Regional Water Quality Control Board 320 W. Fourth Street, Suite 200 Los, Angeles, CA 90013
Local Agency Telephone #	(213) 576-6600
REPORT SUBMITTAL	
Frequency	Annual (by July 15th)
Format	Electronic via SMARTS database
RECORDKEEPING (Retain for 5 years)	
Files to be Maintained (may be requested by regulatory agency)	Annual Reports from SMARTS (checklist and any explanations) Monitoring Records QA/QC Records and Results Calibration Records (for onsite monitoring equipment) Weather Reports (determination of QSEs) Employee Training Records BMP Implementation Records Spill and Clean-up Related Records Records of Sampling and Analysis Information Records of Visual Observations Inspections, Tracking, and Follow-up Response to Observations including Identification of SWPPP Revisions, if needed Annual Evaluation
ADDITIONAL INFORMATION	
Authorized Non-Storm Water Discharges	Some NSWDs are allowed if discharges are in compliance, do not contain significant amount of pollutants, and BMPs and monitoring are in-place. Non-storm water discharges are reported and described annually as part of the Annual Report. Authorized NSWDs include the following: • Fire hydrant flushing; • Potable water sources; • Drinking fountain water; • Atmospheric condensates (e.g., air conditioning); • Irrigation drainage; • Landscape watering; • Springs; • Groundwater; • Foundation or footing drainage; • Sea water filtration; and • Incidental windblown mist from cooling towers.

Section 3 Facility Information

Facility Description

Mosler Rock Ojai Quarry (Mosler Rock) is an active stone mining facility located just north of Ojai CA. The entire property encompasses 30 acres, of which approximately 13 acres involves active mining operations. The mine produces a wide variety of finished and unfinished rock products for construction, landscaping, and decorative purposes. Facility operations as it applies to Attachment A of the General Permit are classified under Miscellaneous Nonmetallic Minerals with SIC code 1499.

Facility Location and Receiving Water

The facility is located at 15558 Maricopa Hwy in Ojai, CA on a hillside that has a natural grade to the west and south. The area around the Facility consists of mainly rocky hills and creeks. Site map is provided in Appendix A, including an area map that provides the site location relative to surrounding areas.

Storm water flows from the Facility into Matilija Creek, which borders the facility on the south and west. This receiving water is within the Ventura River HUC-10 watershed, which has the following 303(d) impairments: dissolved oxgen (eutrophic/low dissolved oxygen dissolved oxgen (eutrophic/low dissolved oxygen); E.coli and enterococcus (indictor baterica, fecal coliform, and total colifom); mercury (metals screen); nitrate, nitrite, total nitrogen, total phosphorus, and dissolved oxygen (nutrients); total dissolved solids.

Facility Drainage Areas

Drainage areas are locations where all runoff that flows over the ground surface exits the site through the common discharge location, or outfall. Mosler Rock was constructed to flow to three outfalls. Each drainage area (DA) is discussed below:

Table 2: Drainage Area Physical Description

DA	Industrial Activities conducted in DA	BMPs	Physical Characteristics	Run-on Impact
1	Stone cutting, material storage and transfer, truck weighing	Minimum & Advanced BMPs	Located near bottom of hill; storm water flows south to berm into constructed drain and weir tank prior to discharge on steep slope above Matilija Creek	Yes
2	Material storage and transfer	Minimum & Advanced BMPs	Access road from DA 1 to mining area (DA3). Storm water flows to south side of road and discharges after second of two sedimentation basins.	No
3	Stone mining	Minimum & Advanced BMPs	Steep hillside and unpaved access road. Storm water flows along banked swales north to desilting basin. Discharge only occurs when desilting basin fills high enough to reach outfall structure.	No

Storm Water Run-On from Offsite Areas

Run-on has the potential to occur from the neighboring property to the east near the fuel shed. A sandbag berm has been constructed to divert run-on and prevent it from entering the industrial area of the property.

Section 4 Description of Potential Pollutant Sources

Mosler Rock produces a wide variety of stone and rock products, both unfinished and finished. Activities with potential storm water exposure include industrial processes, material storage and handling, dust and particulate generating activities, spills and leaks, NSWDs, and erodible surfaces. Each of these are described below in more detail and applicable BMPs are detailed in Section 7 and in Appendix C of the SWPPP.

Industrial Processes

Stone Mining

Stone is mined primarily on the upper portions of the hillside using a combination of heavy equipment and rock splitting. Explosives are no longer used at the facility; rather, a powder called Dexpan is mixed with water and is placed into pre-drilled holes in the rock. This mixture expands and splits the rock in a more controlled fashion. Mined rocks and stones are transported from the mining are (DA3) to the lower area of the site for further processing and shipment.

The facility's conditional use permit (CUP) allows for up to 20 truck shipments per day of product. On average, the facility ships five or less truckloads per day.

Stone Cutting

There are three stone saws that cut the rocks and stone to various specifications. Water is used to lubricate and cool as part of the cutting process; this water is captured in a floor drain and is treated in a sedimentation tank and reused, and is not discharged from the site. The cut rock is transferred to the material storage and transfer area to await shipment via truck.

Material Storage and Handling

The facility maintains a fleet of tractors, loaders, forklifts, trucks, and other vehicles to transport heavy stones as needed throughout the site. Diesel fuel is stored in the fuel shed and vehicles are fueled in this area. The fuel shed also contains a waste oil tank. Mined rock and stone from the upper slopes are transported to the lower areas (DA1) for cutting, processing, storage, and shipment. Prior to shipment, finished products are staged on heavy-duty pallets waiting to be loaded onto trucks. Rock dust may be stored in a pile awaiting bulk shipment.

Dust and Particulate Generating Activities

Generation of dust is a potential pollutant source throughout most of the facility as it is a natural hillside and largely unpaved. In particular, earthmoving and other mining activities on the upper slopes of the facility have potential to create dust. In addition, stone cutting generates fine rock dust. Several BMPs have been implemented to minimize the potential impact of dust and particulate on storm water throughout the facility. Rock dust is stored in bulk near the material storage area; however, rock dust is much more dense than normal soil and therefore erosion from this area is minimal.

Significant Spills and Leaks

There have been no significant spills within the past 5 years at Mosler Rock.

Non-Storm Water Discharges

Potential NSWDs at the facility may include dust control watering. The General Permit allows NWSDs so long as they:

- Are authorized per Section IV of the General Permit;
- Do not cause erosion;
- Do not carry other pollutants;
- Are not prohibited by the local municipal separate storm sewer system; *and*
- Do not require a separate NPDES Permit from the Regional Water Board.

Any observation of an authorized NSWD (e.g., dust control water) is reported in the Annual Report and documented on the Monthly Visual Observation Form (Appendix C). Authorized NSWDs exposure is minimized using BMPs described in Appendix C. NSWDs that are not authorized under the General Permit are prohibited; this includes discharges from equipment washing.

Soil Erosion

A majority of the site is unpaved and there is significant potential for soil erosion. Several erosion and sediment control BMPs and advanced BMPs have been implemented to minimize soil erosion.

Section 5 Pollutant Source Assessment

The potential storm water pollutant sources at the site are managed to minimize storm water pollution from industrial materials and activities at the facility. Below are summary descriptions of outdoor facility activities that may potentially impact storm water discharges.

Locations of potential pollution sources are provided on the site map in Appendix A; a list of industrial materials is provided in Appendix B; BMPs to address these potential pollutants is provided below in Section 7 and a checklist to aid in proper BMP implementation is provided in Appendix C.

Table 3: Pollutant Source Assessment Summary

Activity/Material	Activity/Material Location	Potential Pollutant(s)
Earthmoving and rock/ stone mining, use of Dexpan	Mining Area	TSS, pH, TDS
Use of tractors, loaders, forklifts, trucks, and other vehicles	Facility-wide	TSS, oil & grease
Storage of final materials prior to shipment, both on pallets and in bulk (rock dust), and transfer and loading of these materials	Material storage and transfer area	TSS, oil & grease
Stone cutting	Cutting area	TSS, TDS
Diesel fuel storage and vehicle fueling	Fuel shed	Oil & grease
Waste oil storage	Fuel shed	Oil & grease

Based on the required parameters and the pollutant source assessment above, the sampling suite for the facility includes:

- pH;
- TSS;
- TDS; *and,*
- Oil and grease.

If a monthly visual observation, storm event visual observation, or sampling results indicate additional pollutants may be present, this pollution source assessment and sampling suite shall be updated accordingly.

Section 6 Pollution Prevention Team

Facility staff that have been designated as Pollution Prevention Team members and their responsibilities and duties are listed in the table below. This table will be updated as needed when there are changes to staff responsibilities. All team members, in addition to various staff assisting team members with storm water duties, will be trained to perform the duties assigned to them with respect BMPs and the MIP that are discussed in Sections 7 and 8, respectively. The pollution prevention team employee training log is included in Appendix F.

Table 4: Pollution Prevention Team Members & Responsibilities

Title	Responsibilities
Owner	Legally Responsible Person; all compliance activities under the General Permit including maintaining SWPPP, monitoring, BMP implementation, recordkeeping, and reporting
Quarry operators	Assisting owner with BMP implementation and monitoring

Section 7 Best Management Practices

Minimum BMP Overview

Best management practices are procedures that are in place to reduce the possibility of materials coming in contact with storm water and therefore the possibility of the release of industrial pollutants to waters of the State. The General Permit discusses two types of BMPs: minimum BMPs and advanced BMPs. Minimum BMPs are required by all facilities to the extent feasible; in the event that any of the required minimum BMPs are applicable but cannot be implemented, an explanation and alternative are required. Advanced BMPs are required when minimum BMPs are not effective in meeting action levels and/or effluent limitations. This section describes site features and administrative BMPs implemented by the facility, and Appendix C includes a checklist of specific actions performed to ensure proper implementation of BMPs; this checklist is part of the monthly visual observation. Between this section and Appendix C, all BMPs are implemented to the extent they are applicable and feasible.

Required minimum BMPs are listed below:

- Good Housekeeping;
- Preventative Maintenance;

- Spill and Leak Prevention and Response;
- Material Handling and Waste Management;
- Erosion and Sediment Controls;
- Employee Training Program; and,
- Quality Assurance and Record Keeping.

The specific BMP categories in place for each potential pollutant are listed in the table below:

Table 5: Potential Pollutants and Associated BMPs

Potential Pollutant	BMP Implemented
Oil & grease	Spill and leak prevention and response, preventative maintenance, employee training, exposure minimization
pH	Spill and leak prevention and response, materials handling and waste management, employee training
TSS	Good housekeeping, materials handling and waste management, employee training, erosion and sediment controls, advanced BMPs
TDS	Good housekeeping, materials handling and waste management, employee training, erosion and sediment controls, advanced BMPs

Minimum BMPs

The BMPs implemented by the facility are described below. These BMPs address the activities and potential pollutants described above in Table 3.

Table 6: Minimum BMPs

Type	Permit Citation	Description
Good Housekeeping	X.H.1.a.i	Generally, the facility is maintained in good condition to minimize sediment runoff. BMPs listed in the BMP inspection checklist ensure facility is well-maintained.
	X.H.1.a.ii-iii	The principle material that may be tracked at the facility is dirt and dust. Erosion control BMPs are in place to minimize the occurrence of dirt and dust tracking.
	X.H.1.a.iv X.H.1.a.vii	Vehicle washing generally does not occur onsite; if any vehicles are hosed down, wash water is contained onsite.
	X.H.1.a.v-vi	Rock dust is stored in a pile outdoors; however, this material is very dense and is not prone to wind or rain erosion. BMPs are reviewed as part of the monthly inspection checklist to ensure this pile is contained.
	X.H.1.a.viii-ix	N/A: storm water from non-industrial areas flows directly downhill to the south; contact with any industrial areas is minimized.
Preventative Maintenance	X.H.1.b.i-iv	Preventative maintenance BMPs are in place to minimize the potential of leaks from equipment. Onsite vehicles are checked daily for leaks and any issues are repaired as soon as feasible.

Type	Permit Citation	Description
Spill and Leak Prevention, Matl. Handling and Waste Management	X.H.1.c.i-iv X.H.1.d.v-vi	Diesel tanks are double-walled and spill response absorbent is located in the fuel shed. Fuel delivery trucks are also equipped with spill kits and drivers are trained in spill response.
Matl. Handling and Waste Management	X.H.1.d.i-ii	The primary industrial material used at the site is rock, stone, and soil. Erosion and sediment control BMPs are in place to minimize mobilization of these materials. Good housekeeping BMPs are in place to limit mobilization of dust from sawing and cutting activities. The only bulk storage material at the site is rock dust, which is very dense and is not prone to wind and soil erosion.
Matl. Handling and Waste Management	X.H.1.d.iii	N/A: No dumpsters or roll-offs are used at the site. A small trash bin is located near the scale, but it is not used to store any industrial materials.
Matl. Handling and Waste Management	X.H.1.d.iv	The site is graded such that storm water and flow directly south and away from stockpiled materials.
Erosion and Sediment Control	X.H.1.e.i-iii	Slopes at the site have been vegetated and rip rap has been installed over much of the surface to prevent erosion in DA1 and DA2. In DA3 upstream of the desilting basin, the road has been graded into the hillside and swales have been graded into the road to direct water to the desilting basin.
	X.H.1.e.iv	Run-on is diverted and prevented from coming onto the property near the fuel shed using sandbags.
Employee Training	X.H.1.f.i-v	Members of the pollution prevent team will be trained on the contents of the SWPPP and associated BMP, monitoring, reporting, and recordkeeping requirements.
Quality Assurance and Recordkeeping	X.H.1.g.i-ii	Completion of monthly inspection, QSE monitoring, sample evaluations, and annual comprehensive site compliance evaluations by appropriate staff ensure compliance procedures are reviewed regularly and revised as necessary. In addition, lab reports are reviewed for accuracy and sufficiently sensitive test methods prior to uploads to SMARTS. The SWPPP is regularly reviewed for accuracy and updated as necessary.
Quality Assurance and Recordkeeping	X.H.1.g.iii	All stormwater related documents, including BMP records, training records, and spill cleanup records are maintained onsite with the facility storm water files for a minimum of five (5) years.

Advanced BMPs

Advanced BMPs are required when the minimum BMPs described above do not reduce or prevent pollutants in storm water discharges. Section X.H.2 of the General Permit requires dischargers to implement advanced BMPs to the extent feasible to reflect best industry practice. The facility implements advanced BMPs as indicated below.

Table 7: Advanced BMPs

Item No.	Type	General Permit Citation	Description
1	Exposure Minimization	X.H.2.b.i	The fuel shed and the bridge saw are located under cover.
2	Treatment Control, Discharge Reduction	X.H.2.b.iii	DA3 drains to a desilting basin, which allows particulates to settle prior to discharging from the site. In addition, DA2 drains to two detention basins in series prior to discharge from the facility. Both the desilting basin and the detention basins allow storm water to infiltrate into the ground, thereby reducing the volume of runoff. As needed, accumulated silt and dirt at the bottom of these basins is removed to ensure adequate capacity.

Temporary Suspension of Activities

If the facility plans to temporarily suspend industrial activities for ten (10) or more consecutive calendar days during a reporting year, the site may also suspend monitoring if it is infeasible to conduct monitoring while industrial activities are suspended (e.g., the facility is not staffed, or the facility is remote or inaccessible) and the facility has been stabilized with appropriate BMPs to achieve compliance with this General Permit during the temporary suspension of the industrial activity. Once all necessary BMPs have been implemented to stabilize the facility, the facility will need to upload appropriate information into SMARTS.

Section 8 Monitoring Implementation Plan (MIP)

This Monitoring Implementation Plan provides detailed guidance below on how monitoring is to be performed. This MIP addresses the following objectives:

1. Identify the monitoring team;
2. Describe discharge and sampling locations;
3. Describe visual observation and visual observation response procedures;
4. Describe sample collection and handling procedures; *and*
5. Analytical requirements.

Monitoring Team

The monitoring team is comprised of the Pollution Prevention Team members responsible for monitoring (see Section 6).

Discharge and Sampling Locations

Storm water discharge and sampling location(s) are shown on the Site Map in Appendix A. These locations are summarized below:

Table 8: Sampling Location Summary and Rationale

DA	Discharge Location (DL)	DL Required for Sample Collection	Alternate Sampling (if any)	Representative Discharge (if any)	No Sampling Justification (if any)
1	Outfall 001	Yes	Yes	--	—
2	Outfall 002	Yes	--	--	—
3	Outfall 003	No	--	—	Safety

As indicated above, samples are collected at SP-001, which is immediately upstream of Outfall 001. This location was selected due to accessibility issues. Outfall 001 is located on a steep hillside and is inaccessible due to dense vegetation; SP-001 is the inlet to the Outfall 001 discharge pipe and is easily accessible.

At Outfall 003, samples are not able to be collected because sampling is dangerous at this location. Outfall-003 is located directly beneath a vertical cliff and erosion during rain events exacerbates this danger significantly. Large boulders are prone to falling down the hillside and landing in the area where sampling would need to occur. As such, concrete barriers are placed around the area to prevent access. Outfall 003 directs water down the steep hillside to Matilija Creek. The point of entry to the creek would require crossing the creek during heavy rain events, which is unsafe as well. We note that Outfall 003 is located at the outlet weir of the desilting basin; during most rain events, the level in the basin does not reach the height of the outlet and therefore discharge does not occur except during heavy, prolonged rain events.

To aid in sample collection, photographs and descriptions of the sampling locations are provided below:

<u>SP-001 – Pipe Inlet:</u>
Obtain a storm water sample as water flows into the pipe inlet upstream of Outfall 001.

<u>Sampling Point 2 – Effluent Pipe Inlet:</u>
Obtain a storm water as the water leaves at the second sedimentation basin:

Visual Observation and Sampling Procedures

Visual observations will be conducted monthly and during sampling events. Procedures for observations, sample collection, and observation response actions are outlined below.

Monthly Visual Observations (non-storm water)

Once each calendar month, complete the BMP Inspection Checklist and Monthly Visual Observation Log (Appendix C). Instructions for completing these forms are outlined below:

1. Complete the BMP Inspection Checklist by observing BMPs implemented at the site. Throughout the last month, were BMPs implemented as planned? Have any failed? Do any need maintenance?
2. Observe each drainage area and document observations in the Monthly Visual Observation Log. Specifically, look for spills, leaks, uncontrolled pollutant sources, and non-storm water discharges. If possible, identify the sources of any of these items.
3. Note any observed industrial pollutant source and provide a description.
4. ***If there are any BMP and/or storm water issues to address, complete Visual Observation Response Actions*** as needed.
5. If visual observations could not be conducted, provide an explanation. Sign and date the Monthly Visual Observation Log.

Sampling Event Visual Observation and Collection Procedures

Samples should be collected during at least 4 qualifying storm events (QSEs) each year. Two of these sampling events should fall in each half of the reporting year (July 1 to December 31 and January 1 to June 30). Note that ***sampling is excused in the case of dangerous storm conditions (e.g., flooding or electrical storms).***

A QSE is a precipitation event that:

- Produces discharge from at least one drainage area; *and,*
- Is preceded by 48 hours with no discharge from any drainage area.

If the QSE requirements listed above are satisfied, a sample should be collected. During sampling events, complete the Sampling Event Observation Log (Appendix D). Exceptions to sampling (e.g. unsafe conditions, no discharge, etc.) should be documented in the Sampling Event Observation Log.

Instructions for completing the Sampling Event Observation Log and sample collection are outlined below:

1. **Observe the discharge.** Be sure to look for any sign of pollutants in runoff. If helpful, fill up a clear water bottle or mason jar to observe the quality of storm water and use to complete the Sampling Event Observation Log in Appendix D.
2. **Collect the sample.** Useful tips for sample collection include:
   - Be sure to sample in the right location. Sampling locations are shown on the site map (Appendix A).
   - Always wear gloves during sample collection.
   - Do not sample in stagnant areas with little flow.

- Be careful to grab a clean sample in areas where there is adequate flow. If flow is too shallow, find a location where it is deeper or find an alternative way to sample.
- Prevent sample contamination. Keep the sample lid clean ***(do NOT scrape the sample container on the ground)*** and do not touch the sample bottle opening.
- Do not overfill the sample bottle. This is particularly important for bottles with preservative.
- Train any additional sampling staff as appropriate.

3. **Measure the sample's pH and record in the Sampling Event Observation Log**.
   If using a pH PROBE: Calibrate the pH probe according to the manufacturer's directions. Use of at least two pH buffers (pH 7 and 10) is recommended. Rinse the probe with sample water, then fully submerge the probe in the sample. Wait for the meter to equilibrate (this is when the pH reading stops fluctuating). Gently stir the probe if it takes a long time to equilibrate, but be careful to not agitate the sample as this may cause a change in pH. Record the calibration and pH reading in the Sampling Event Observation Log. Be sure to store the pH probe according to manufacturer instructions.
   If using pH litmus PAPER: Not applicable. Facilities subject to Subchapter N, Mineral Mining and Processing Effluent Limitation Guideline (ELG) are not eligible to use litmus paper.
4. **Preserve samples** as specified in Table 11.
5. **Fill out the sample's Chain of Custody (COC)** form (example provided in Appendix D).
6. **Have the samples analyzed by the lab for the appropriate constituents:** pH is analyzed in the field within 15 minutes of sample collection, and all other parameters will be analyzed by the certified laboratory. The testing laboratory should *receive samples within 48 hours* of the physical sampling (unless otherwise required by the laboratory). The Discharger may deliver the samples to the laboratory, arrange for the laboratory to pick up the samples, or overnight ship the samples to the laboratory.
7. **Wait for the laboratory's analytical results and then complete the Storm Water Sampling Evaluation Form.** Instructions for filling out the Storm Water Sampling Evaluation Form (provided in Appendix E) are listed below:
   - Compare the analytical results to the values on the Evaluation Form. Did storm water samples exceed any levels/limits?
   - Consider the potential reasons for any exceedance. Do you think a change in operations and/or BMPs might prevent this exceedance in the future?
   - Is the MDL and RL listed in the lab report sufficient when compared to the NAL/TNAL?
   - Would this change of operations and/or BMPs require a SWPPP amendment?
   - Remember, more detailed notes will help to determine the cause of any exceedances.
8. **Upload and certify analytical results via SMARTS within 30 days of receiving the analytical results.** Be sure to review the uploaded data for accuracy, as these results are used by regulatory agencies to determine compliance, and are available to the public.

Visual Observation Response Procedures

If, during visual observations, any parameters in the table below are identified, the associated response actions should be taken as soon as possible.

Table 9: Visual Observation Summary

Area	Parameters to Identify during Observation	Response Actions
Drainage Area	• Spills • Leaks • Uncontrolled pollutant sources • Non-storm water discharges	• Report deficiency observations to the Pollution Prevention Team Leader • Identify and implement appropriate response actions • Determine if the SWPPP must be updated • Verify completion of response actions • Document response actions
BMPs	• BMPs that require maintenance • Failed BMPs • BMPs that may fail to operate	
Discharge Locations	• Look for visible pollutants in storm water discharges	

Sample Parameters & Analytical Requirements

The table below assess the applicability of parameters to be sampled in Ojai Quarry's storm water sampling location.

Table 10: Sampling Parameters Applicability

Requirement	Applicability
pH, TSS, and oil and grease (Section XI.B.6.a-b)	*Applicable:* pH, TSS, and oil and grease are sampled at this facility.
Additional parameters based on pollutant assessment (Sections XI.B.6.c and XI.B.6.e)	*Applicable:* TDS is sampled at the facility.
Parameters based on SIC code (Section XI.B.6.d)	*Not applicable*: no additional parameters are required.
Additional parameters required by the Water Board (Section XI.B.6.f)	*Not applicable*: no additional parameters are required.
Discharges subject to Subchapter N (Section XI.B.6.g)	*Applicable:* this facility is subject to Subchapter N Part 436 (Mineral Mining and Processing) Subpart B (Crushed Stone Subcategory). This subchapter includes an ELG for pH to be within 6.0-9.0 s.u.

The table below lists the analytical requirements for the required sampling parameters, including NALs/TNALs as applicable and test procedures specified in 40 CFR 136. The analytical methods indicated below are expected to be sufficiently sensitive as required by General Permit Section XI.B.10.

Table 11: Analytical Requirements

Parameter	Test Method	Reporting Units	Annual NAL	Instantaneous Maximum NAL	Preservation	Analyze within
pH	EPA 150.1 (meter)	pH units	N/A	6.0 – 9.0*	None	Immediately, ≤ 15 minutes
TSS	SM 2540D	mg/L	100	400	Cool, 6°C	7 days
Oil & Grease	EPA 1664A	mg/L	15	25	Cool, 4°C, HCl or H_2SO_4 to pH<2	28 days
TDS	SM 2540C	mg/L	N/A	N/A	Cool, 6°C	7 days

*Also represents the ELG for pH pursuant to 40 CFR Part 436 Subpart B.

NALs, TNALs, NELs, and ELGs

The General Permit contains three types of action levels or effluent limitations as described below:

Table 12: NALs, TNALs, and NELs

Type	Definition (per General Permit Attachment C)	Applicable to Facility?	Exceedance Type[1]
Numeric Action Level (NAL)	Pollutant concentration levels used to evaluate if best management practices are effective and if additional measures are necessary to control pollutants. NALs are not effluent limits. The exceedance of an NAL is not a permit violation.	Yes	Instantaneous maximum and/or annual average
TMDL Numeric Action Level (TNAL)	Pollutant concentration levels used to evaluate if best management practices are effective and if additional measures are necessary to control pollutants to comply with applicable TMDLs. All TNALs translated from a Waste Load Allocation are instantaneous maximums, and are set forth in the TMDL Compliance Table in Attachment E of the General Permit. The exceedance of a TNAL is not a permit violation.	No	Instantaneous maximum
Numeric Effluent Limitation (NEL)	Numerical limit, an exceedance of which is a violation of this General Permit	No	Instantaneous maximum
Effluent Limitation Guidelines (ELG)	40 CFR Part 436 Subpart B includes a daily maximum and a 30-day average pH limitation of 6.0 s.u. to 0.9 s.u.	Yes	Daily max, 30-day average

1. Refer to Section 9 for definition of instantaneous maximum and annual average NAL exceedances.

Section 9 Reporting

Annual

For each reporting year, the Annual Report will be certified and submitted via SMARTS no later than July 15th following each reporting year (July 1 – June 30). The Annual Report will include:

- A Compliance Checklist (presented as the Annual Evaluation, Appendix E) indicating whether or not the Discharger complies with and has addressed all General Permit requirements;
- An explanation of any non-compliance of requirements within the reporting year, as indicated in the Compliance Checklist;
- Identification of SWPPP amendments made within the reporting year; *and*
- Date(s) of the Annual Evaluation.

Sampling Results

Once all analytical results from a sampling event are received from the laboratory, they shall be reported electronically via the SMARTS database within 30 days of the report date.

Exceedance Reporting

Exceedance Response Actions

Exceedance Response Actions (ERAs) apply to NALs and TNALs. Sampling results will be compared to the two types of NAL/TNAL values in Table 11, above, to determine whether either type of NAL/TNAL has been exceeded for each applicable parameter. The two types of exceedances that must be reported are discussed below:

- **An annual NAL exceedance** occurs if the average concentration of all sampling and analytical reports for the reporting year exceeds the corresponding annual NAL value in Table 11.
- **An instantaneous maximum NAL/TNAL exceedance** occurs when two or more analytical results from samples for any single parameter within a reporting year exceed the instantaneous maximum NAL/TNAL value (for TSS and O&G) or are outside the instantaneous maximum NAL/TNAL range for pH.

Either type of NAL/TNAL exceedance causes a change in compliance status and triggers the requirement to complete an Exceedance Response Action (ERA). Each NAL and TNAL must be evaluated individually, even if a single parameter has both an applicable NAL and TNAL.

Table 13: ERA Overview

Facility Status	How Status is Obtained	Deliverable	Due Date	QISP Assistance Required
Baseline	All permitted facilities begin at Baseline status	Annual Report	July 15	No
Level 1	First annual or instantaneous maximum NAL/TNAL exceedance for a given parameter	Annual Report	July 15	No
		Level 1 ERA Evaluation	October 1	Yes
		Level 1 ERA Report	January 1	Yes
Level 2	Second NAL/TNAL exceedance for same parameter in a subsequent reporting year	Annual Report	July 15	No
		Level 2 ERA Action Plan	January 1	Yes
		Level 2 ERA Technical Report	January 1*	Yes

* *Due by January 1 of the year following submission of the Level 2 ERA Action Plan.*

The only way to return to Baseline status is when the results from four (4) subsequent consecutive QSEs indicate no NAL/TNAL exceedance(s). This is true for either Dischargers in Level 1 or Level 2 status.

Level 1 and Level 2 Requirements

Facilities entering Level 1 or 2 status must perform the ERAs detailed below, as applicable. Facilities should aim to remain in or return to Baseline status, as Level 1 and 2 status require escalating and potentially costly evaluation, BMP development and implementation, and reporting activities.

Level 1 Status:

A facility enters Level 1 status on July 1 following the reporting year during which the annual and/or instantaneous maximum NAL/TNAL exceedance(s) occurred (e.g., for exceedances during the 2019-2020 reporting year, facilities enter Level 1 status on July 1, 2020). Level 1 facilities must, in addition to the annual report, prepare and submit a Level 1 ERA Evaluation and Report.

The ***Level 1 ERA Evaluation*** must:

- be completed with the assistance of a QISP by October 1;

- include evaluation of the industrial pollutant source(s) at the facility that are or may be related to the NAL or TNAL exceedance(s);
- include evaluation of all drainage areas; *and*
- identify corresponding BMPs in the SWPPP and any additional BMP and SWPPP revisions necessary to prevent future NAL/TNAL exceedances and to comply with the requirements of the General Permit.

The ***Level 1 ERA Repor***t must:

- be prepared by a QISP;
- summarize the findings of the Evaluation;
- discuss revision of the SWPPP as identified in the Evaluation;
- discuss implementation of any revised or additional BMPs for each parameter that exceeded an NAL/TNAL as identified in the Evaluation; *and*
- be certified and submitted via SMARTS by January 1 following commencement of Level 1 status, including the QISP's identification number, name and contact information, and also the date of BMP implementation.

Notably, if the site conducts sampling prior to October 1 and the implementation of revised/additional BMPs identified in the Level 1 ERA Evaluation has not occurred, sampling results for any applicable parameter(s) will not be included in the calculations of annual average or instantaneous NAL or TNAL exceedances in SMARTS.

Level 2 Status:

A facility enters Level 2 status on July 1 following the reporting year during which a Level 1 parameter exceeds the annual and/or instantaneous maximum NAL, or TNAL (e.g., if a facility is in Level 1 for zinc during the 2019-2020 reporting year, additional zinc NAL/TNAL exceedances will trigger Level 2 status beginning July 1, 2021). Level 2 facilities must, in addition to the annual report, prepare and submit a Level 2 ERA Action Plan and Technical Report.

The ***Level 2 ERA Action Plan*** must:

- be prepared by a QISP;
- identify the Demonstration(s) outlined at XII.D.2.a through c of the General Permit that the facility has selected to perform for each new Level 2 NAL or TNAL exceedance[1]:
    - **Industrial Activity BMPs Demonstration**: Show which additional BMPs will be implemented to eliminate NAL/TNAL exceedances (treatment must be considered).
    - **Non-Industrial Pollutant Source Demonstration**: Demonstrate that exceedances are due solely to non-industrial pollutant sources (e.g., run-on, aerial deposition, etc.).
    - **Natural Background Pollutant Source Demonstration**: Demonstrate that exceedances are due solely to natural background sources (e.g., naturally-occurring in soil).

[1] A new Level 2 NAL exceedance is any Level 2 NAL exceedance for: 1) a new parameter in any drainage area, or 2) the same parameter that is being addressed in an existing Level 2 ERA Action Plan in a different drainage area (General Permit XII.D.1.a).

- include a schedule and detailed description of tasks required to complete the selected Demonstration(s);
- address all drainage areas with Level 2 NAL or TNAL exceedance(s);
- be certified and submitted vis SMARTS by January 1 following the reporting year during which the NAL/TNAL exceedance(s) occurred; *and*
- be fully implemented *as soon as practicable* as and no later than 1 year after submission.

The ***Level 2 ERA Technical Report*** must:

- be prepared by a QISP;
- contain all information required for the selected Demonstration(s) in the Level 2 ERA Action Plan as specified in XII.D.2.a through c of the General Permit;
- be certified and submitted vis SMARTS by January 1 of the reporting year following the Level 2 ERA Action Plan submittal (e.g., 18 months after Level 2 status); *and*
- once submitted, be updated yearly with the annual report to address additional NAL or TNAL exceedances of the same parameter and same drainage area.

Facilities may submit a Level 2 ERA Action Plan or ERA Technical Report before entering Level 2 status if information is available to adequately prepare the Report and perform the required Demonstrations described in XII.D.2.a through c of the General Permit. However, the facility is automatically placed in Level 2 status in accordance to the Level 2 ERA schedule upon early submission of either of these materials. Facilities choosing the Industrial Activity BMPs Demonstration that continue to have NAL/TNAL exceedances, and facilities that choose to perform the Non-Industrial or Natural Background Pollutant Source Demonstrations, will remain in Level 2 status. If necessary, facilities may be granted a single time extension for up to six months for submittal of the Level 2 ERA Technical Report upon request (General Permit XII.D.5.a).

Water Quality Based Corrective Actions

Water Quality Based Corrective Actions (WQBCAs) are required when a NEL is exceeded. It is a Responsible Discharger's responsibility to determine when a WQCBA is needed. A WQBCA must consist of the following:

- An evaluation of the facility to identify pollutant source(s) associated with industrial activity and whether BMPs described in the SWPPP have been properly implemented; *and,*
- An assessment of the SWPPP and its implementation to determine whether additional BMPs or SWPPP implementation measures are necessary to reduce or prevent pollutants in industrial storm water discharges

Documentation of the WQBCA must be certified and submitted via SMARTS as soon as feasible or upon the due date provided by the Regional Water Board. A WQBCA may be combined with ERA Reporting if the same parameters are addressed, although this may require submittal in SMARTS more than once. Documentation based on the evaluation described above must include an assessment that:

- Additional BMPs and/or SWPPP implementation measures have been identified and included in the SWPPP to meet applicable NELs; or
- No additional BMPs or SWPPP implementation measures are required to reduce or prevent pollutants in industrial storm water discharges to meet applicable NELs.

The Regional Water Board may reject a Responsible Discharger's WQBCA and/or request additional sampling documentation.

Section 10 Record Retention

All reports, logs, and other SWPPP-related documentation will be retained at the facility for five (5) years from the date of document generation/submittal. These documents will be available to all employees during operating hours and will be made available for review by regulatory agency staff and any other interested parties upon request.

Section 11 General Permit Cross-Reference Table

The table below provides a cross-reference of the general requirements listed in Section A of the General Permit (Permit No. CAS000001) with the location of the information within this SWPPP.

Table 14: General Permit Cross-Reference Table

Requirement	Permit Reference	Document Location
General Plan Requirements		
Signed Certification	II.A	Page 1
Pollution Prevention Team	X.D.1	Section 6
Existing Facility Plans	X.D.2	Section 3
Facility Site Map	Section X.E	Appendix A
Facility boundaries	X.E.3.a	
Drainage areas	X.E.3.a	
Direction of flow	X.E.3.a	
On-facility water bodies	X.E.3.a	
Areas of soil erosion	X.E.3.a	
Nearby water bodies	X.E.3.a	
Municipal storm drain inlets	X.E.3.a	
Points of discharge	X.E.3.b	
Sampling locations	X.E.3.b	
Structural control measures	X.E.3.c	
Impervious areas	X.E.3.d	
Location of directly exposed materials	X.E.3.e	
Locations of significant spills and leaks	X.E.3.e	
Areas of industrial activity	X.E.3.f	
Storage areas/storage tanks	X.E.3.f	
Shipping and receiving areas	X.E.3.f	
Fueling areas	X.E.3.f	
Vehicle and equipment storage/maintenance	X.E.3.f	
Material handling/processing	X.E.3.f	
Waste treatment/disposal	X.E.3.f	
Dust or particulate generation	X.E.3.f	
Cleaning and material reuse	X.E.3.f	
Other areas of industrial activities	X.E.3.f	
List of Industrial Materials	X.F	Section 5 & App. B
Quantity and frequency of each material listed		

Requirement	Permit Reference	Document Location
Storage location Receiving and shipping location Handling location		
Description of Potential Pollution Sources	X.G.1	Section 4
Industrial processes	X.G.1.a	
Material handling and storage areas	X.G.1.b	
Dust & particulate generating activities	X.G.1.c	
Significant spills and leaks	X.G.1.d	
Non-storm water discharges	X.G.1.e	
Erodible surfaces	X.G.1.f	
Assessment of Potential Pollutant Sources	X.G.2	
Narrative assessment of likely sources of pollutants	X.G.2.a	Section 5
Narrative assessment of likely pollutants present in storm water discharges	X.G.2.a	Section 5
Identification of additional BMPs	X.G.2.b	Section 7
Identification of drainage areas with no exposure	X.G.2.c	Section 3
Identification of additional parameters	X.G.2.d	Section 5
Minimum Best Management Practices	X.H.1	Section 7 & Appendix C
Good housekeeping	X.H.1.a	
Preventative maintenance	X.H.1.b	
Spill response	X.H.1.c	
Material handling and waste management	X.H.1.d	
Erosion and sediment controls	X.H.1.e	
Employee training program	X.H.1.f	
Quality assurance and record keeping	X.H.1.g	
Advanced Best Management Practices	X.H.2	Section 7 & Appendix C
Implement advanced BMPs at the Facility	X.H.2.a	
Exposure minimization	X.H.2.b.i	
Storm water containment and discharge reduction	X.H.2.b.ii	
Treatment control	X.H.2.b.iii	
Other advanced BMPs	X.H.2.b.iv	
Temporary Suspension of Activities	X.H.3	Section 7
BMPs necessary for stabilization of the Facility	X.H.3	N/A
BMP Descriptions	X.H.4	
Pollutant that a BMP reduces or prevents	X.H.4.a.i	Section 7
Frequency of BMP implementation	X.H.4.a.ii	Section 7 & Appendix C
Location of BMP	X.H.4.a.iii	Section 7 & Appendix C
Person implementing BMP	X.H.4.a.iv	Section 6
Procedures/maintenance/instructions for BMP implementation	X.H.4.a.v	Section 7 & Appendix C
Equipment and tools for BMP implementation	X.H.4.a.vi	Section 7 & Appendix C
BMPs needing more frequent inspections	X.H.4.a.vii	Section 7 & Appendix C
Minimum BMP/applicable advanced BMPs not implemented at the Facility	X.H.4.b	Section 7
BMPs implemented in lieu of minimum or applicable advanced BMPs	X.H.4.c	N/A
BMP Summary Table	X.H.5	Section 7 & Appendix C
Design Storm Standards for Treatment Control BMPs	X.H.6	N/A

Requirement	Permit Reference	Document Location
Volume-based BMPs	X.H.6.a	N/A
Flow-based BMPs	X.H.6.b	N/A
Monitoring Implementation Plan	X.I.	
Team members assisting in developing the MIP	X.I.1	Section 8
Summary of visual observation procedures, locations, and details	X.I.2	Section 8
Justifications if applicable for: alternative discharge locations, representative sampling reduction, or qualified combined samples	X.I.3	Section 8
Procedures for field instrument calibration	X.I.4	Section 8
Example of Chain of Custody	X.I.5	Appendix D
Annual Comprehensive Facility Compliance Evaluation	XV	Appendix E
Review of all visual inspection and monitoring records and sampling and analysis results conducted during the previous reporting year	XV.A	
Visual inspection of all areas of industrial activity and associated potential pollutant sources	XV.B	
Visual inspection of all drainage areas previously identified as having no-exposure to industrial activities and materials in accordance with the definitions in Section XVII of the General Permit	XV.C	
Visual inspection of equipment needed to implement the BMPs	XV.D	
Visual inspection of any structural and/or treatment control BMPs	XV.E	
Review and assessment of all BMPs for each area of industrial activity and associated potential pollutant sources	XV.F	
Assessment of other factors needed to complete the information described in Section XVI.B	XV.G	

Section 12 **SWPPP Revision Log**

This SWPPP will be amended or revised as needed. Revisions should be made when there are:

- Major changes to site characteristics (e.g., area exposed to storm water);
- BMPs revisions or updates (e.g., suspension of industrial activities for ten or more consecutive calendar days may require BMP revisions for General Permit compliance);
- Changes in industrial operations which may affect the discharge of pollutants (e.g., conversion of underground storage tank to aboveground storage tank, etc.);
- Any changes to the parties responsible for implementing the SWPPP; or
- Other scenarios for which the Qualified Industrial Storm Water Practitioner (QISP) deems changes necessary.

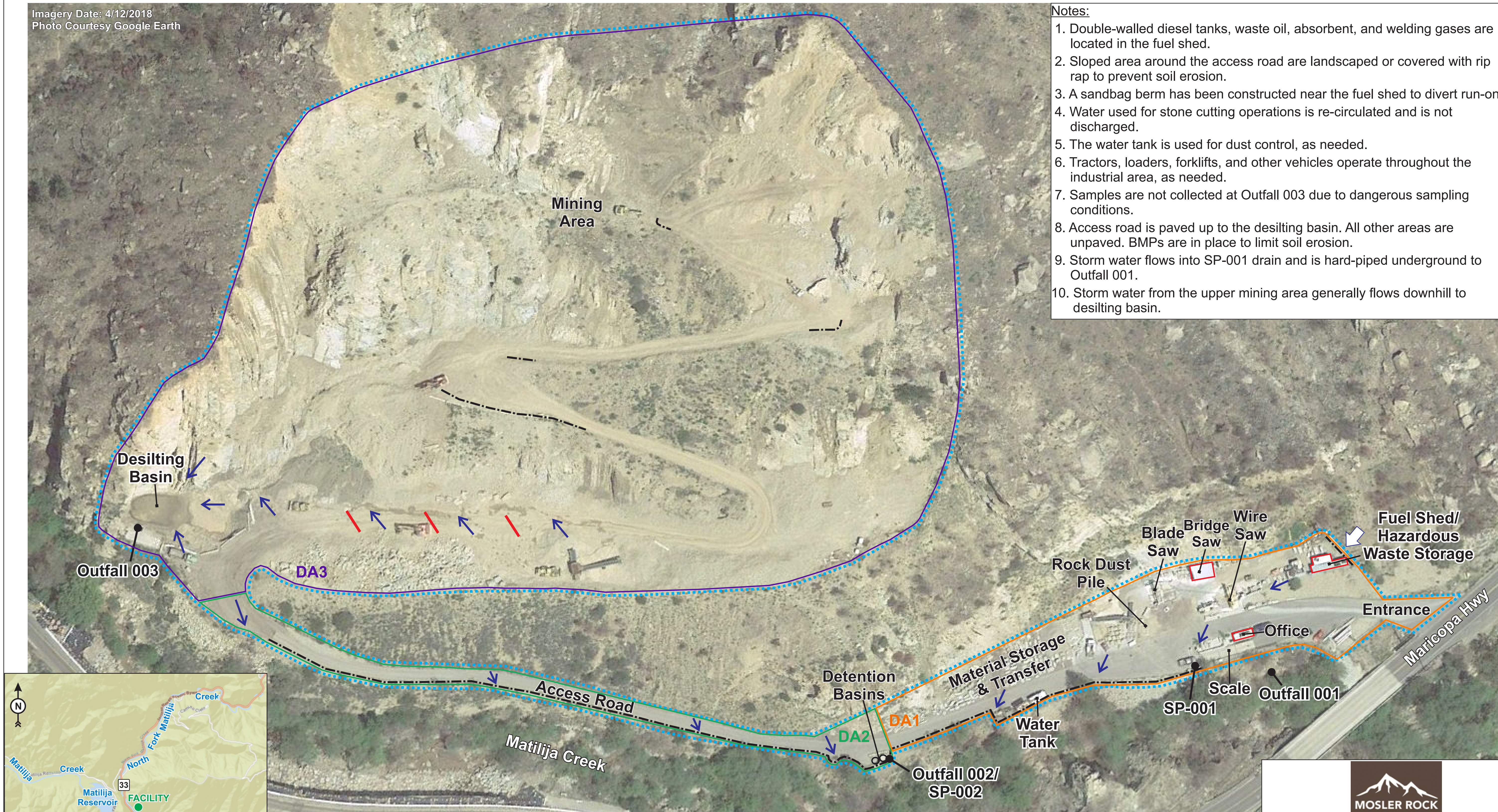
SWPPP amendments must be certified and submitted by the LRP or the DAR via SMARTS within 30 days whenever the SWPPP contains significant revisions. With the exception of significant revisions, SWPPP changes will be certified and uploaded to SMARTS once every three (3) months in the reporting year.

Note: The State Water Board stated that the determination of what constitutes a "significant revision" is to be made by the discharger. In general, any onsite operational change that can affect the quality and quantity of stormwater discharge should be considered significant.

Table 15: SWPPP Revision Log

Revision No.	Date	Section(s)	Description of Amendment
0	8/31/2020	Entire Plan	Initial Plan

Appendix A: Site Map



Notes:
1. Double-walled diesel tanks, waste oil, absorbent, and welding gases are located in the fuel shed.
2. Sloped area around the access road are landscaped or covered with rip rap to prevent soil erosion.
3. A sandbag berm has been constructed near the fuel shed to divert run-on.
4. Water used for stone cutting operations is re-circulated and is not discharged.
5. The water tank is used for dust control, as needed.
6. Tractors, loaders, forklifts, and other vehicles operate throughout the industrial area, as needed.
7. Samples are not collected at Outfall 003 due to dangerous sampling conditions.
8. Access road is paved up to the desilting basin. All other areas are unpaved. BMPs are in place to limit soil erosion.
9. Storm water flows into SP-001 drain and is hard-piped underground to Outfall 001.
10. Storm water from the upper mining area generally flows downhill to desilting basin.

LEGEND

Industrial Operation Area	DA# Drainage Area
Swale	Berm
Storm Water Flow	Covered Area
Run-On	

0 80 160 240 320 400 FEET

N E S W

MOSLER ROCK

MOSLER ROCK OJAI QUARRY
15558 MARICOPA HIGHWAY
OJAI, CA 93023
PHONE: (805) 498-1093

MOSLER ROCK OJAI QUARRY

DWG #: SWPPP-1 | DATE: 8/26/2020

Appendix B: List of Industrial Materials

LIST OF INDUSTRIAL MATERIALS

The following table lists industrial materials handled at the facility and identifies materials that have a reasonable potential to contribute significant pollutants to stormwater or may contact stormwater in the event of a spill or leak. Shipping and receiving may occur on a daily basis; quantity of materials stored varies daily.

Industrial Activity	Associated Pollutants	Material Storage Method	Location of Material / Shipping Receiving	Potential Pollutant Pathway to Stormwater; Outfall
Earthmoving and rock/ stone mining	TSS	N/A, represents natural rock mined at the facility	Located throughout property	Runoff directly down the hillside to the south and west; Outfalls 001, 002, and 003.
Rock splitting using Dexpan (expansive cement)	TSS, pH	Powder in bucket or box	Received and stored in DA1	Runoff directly downhill to desilting basin.
Use of tractors, loaders, forklifts, trucks, and other vehicles	TSS, oil & grease	Outdoors	Used throughout property	Runoff directly down the hillside to the south and west; Outfalls 001, 002, and 003.
Storage of final materials prior to shipment, both on pallets and in bulk (rock dust), and transfer and loading of these materials	TSS, oil & grease	Outdoors; material storage and transfer area	Material storage and transfer area	Runoff across access road to berm, then flows along access road to Outfall 001.
Stone cutting	TSS	N/A	Blade saw, bridge saw, wire saw (see site map)	Runoff across access road to Outfall 001.
Diesel fuel storage and vehicle fueling	Oil & grease	Indoors within fuel shed	Fuel shed	Area is unpaved, most storm water will infiltrate. During heavy events, will flow across access road to Outfall 001.
Waste oil storage	Oil & grease	Indoors within fuel shed	Fuel shed	Area is unpaved, most storm water will infiltrate. During heavy events, will flow across access road to Outfall 001.

Appendix C: Monthly Visual Observation Log and BMP Inspection Checklist

Monthly Visual Observation Log				
Facility Name: **Mosler Rock Ojai Quarry**				
Date and Time of Inspection:				
Weather				
Describe weather at the time of inspection:				
NSWD Observations* *(prior, current, or potential NSWD)*				
Were any authorized non-storm water discharges observed?	Yes ☐	No ☐		
Were any **unauthorized** non-storm water discharges observed?	Yes ☐	No ☐		
If yes to either, identify source:				
Outdoor Industrial Equipment and Storage Area Observations				
Complete Monthly BMP Inspection Report	Yes ☐	No ☐		
List all Drainage Areas below:	**Were any potential sources of industrial pollutants observed?**			
DA1: Entrance and Handling Area	Yes ☐	No ☐	NA ☐	
DA2: Access Roadway	Yes ☐	No ☐	NA ☐	
DA3: Mining Area & Desilting Basin	Yes ☐	No ☐	NA ☐	
Comment on any deficiencies observed in drainage areas. Are BMPs adequate or should SWPPP be amended?				
Exception Documentation *(explanation required if inspection could not be conducted)*				
Inspector Information				
Inspector Name:	Inspector Title:			
Signature:	Date:			

BMP Inspection Checklist

Name of Inspector: ____________________________________

Date & Time of Inspection: ______________________________

Instructions: Perform a monthly facility-wide site inspection and address each item below. If necessary, initiate corrective actions as soon as possible.

BMP Inspection Checklist		
BMP Description	**Drainage Area**	**Comments and Corrective Action Needed**
The pipe inlet at SP-001 is clear of leaves and other debris. Sweep prior to rain events and as-needed.	DA1	
The south side of the road leading to SP-001 is clear of leaves, dirt, and other debris.	DA1	
The rock dust pile is contained and not tracked towards south side of the road.	DA1	
Dust from stone cutting is cleaned as-needed.	DA1	
Rip rap and gravel near the saws is in good condition and prevents tracking of dirt onto the access road.	DA1	
No evidence of diesel fuel leaks is present near the fuel shed and surrounding area.	DA1	
The fuel shed contains an adequate supply of spill response materials.	DA1	
Sandbag berms near the fuel shed are in good condition.	DA1	
If feasible, scrap equipment is stored within the fuel shed, under a tarp, or under cover, and is not stored outdoors.	DA1	
Ensure any water used for dust control or hosing down vehicles does not discharge from the site.	DA1	
Detention basins near SP-002 are in good condition. This includes ensuring adequate depth and ensuring the inlet and outlet are free of leaves, sediment, and debris.	DA2	
The rip rap and vegetation along the access road is in good condition and prevents soil erosion from occurring.	DA1, DA2	
The access road asphalt is in good condition and is not damaged or otherwise in need of repair.	DA1, DA2	
The desilting basins have adequate depth and outfall structure is in good condition and clear of debris.	DA3	
The swales along the dirt road in the upper mining area are effective at directing the storm water north towards the hillside and into the desilting basin.	DA3	
Tractors and other vehicles are in good condition and are not leaking oil, hydraulic fluid, or fuel.	DA1, DA2, DA3	

Appendix D: Sampling Event Visual Observation, COC, Sample Evaluation, pH Calibration Log

Sampling Event Observation Log			
Facility Name: **Mosler Rock Ojai Quarry**			
Date and Time of Inspection:			
Approximate time discharge began:			
Has the site discharged storm water within the last 48 hours? Yes ☐ No ☐ *Note: A QSE must be preceded by 48 hours with no discharge from any drainage area.			
Sampling Event Observations			
If yes to any items below, provide description to identify location and probable cause.			
Observation	**SP-001**	**SP-002**	**Probable Cause**
Odor Yes ☐ No ☐			
Floating material Yes ☐ No ☐			
Trash/ debris Yes ☐ No ☐			
Suspended material Yes ☐ No ☐			
Oil Sheen Yes ☐ No ☐			
Discolorations Yes ☐ No ☐			
Turbidity Yes ☐ No ☐			

pH Measurement Information
☐ pH Meter ID No./Description: Calibration Date/Time:

Field pH Measurements		
Discharge Location ID	pH	Time
SP-001:		
SP-002:		

Exception Documentation *(explanation required if inspection could not be conducted)*

Inspector Information	
Inspector Name:	Inspector Title:
Signature:	Date:

CHAIN OF CUSTODY RECORD

CAPCO Analytical Services

2978 Seaborg Ave., Unit 4, Ventura, CA., 93003
Tel 805 644 1095 ♦ Fax 805 644 9947

Page 1 Of 1

CLIENT NAME: Mosler Rock Ojai Quarry	**PROJECT:** Storm Water
MAILING ADDRESS: 2280 Moonridge Ave	PHONE: 805-498-1093
Newbury Park, CA 91320	FAX:
	EMAIL: larry@moslerrocks.com
PROJECT MANAGER Larry Mosler	SAMPLER

ANALYSES REQUESTED

Turn around Time

- [ ] Same Day Rush
- [ ] 24 Hour Rush
- [ ] 48 Hour Rush
- [ ] 72 Hour Rush
- [x] Standard TAT
- [ ]
- [ ]

LAB ID	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION	# OF CONT.	TSS - SM2540D	Oil and Grease - HEM - 1664A	TDS - SM2540C											
1			RW	SP-001	2	x	x	x											Field pH:
2			RW	SP-002	2	x	x	x											Field pH:

RELINQUISHED BY	DATE / TIME	RECEIVED BY
RELINQUISHED BY	DATE / TIME	RECEIVED BY
RELINQUISHED BY	DATE / TIME	RECEIVED BY

Comments

Preservatives:

Oil and Grease: HCl or H2SO4 to pH<2

SAMPLE TYPE CODE:
AQ=Aqueous
NA= Non Aqueous
SL = Sludge
DW = Drinking Water
WW = Waste Water
RW = Rain Water
GW = Ground Water
SO = Soil
SW = Solid Waste
OL = Oil
OT = Other Matrix

SPECIAL REQUIREMENTS / BILLING INFORMATION

P.O. Number:

COC version 042707

STORM WATER SAMPLING EVALUATION

For each Qualifying Storm Event sampled, compare the results from the storm water sample to the NAL/TNAL/NELs as applicable. Make sure the laboratory has completed the appropriate methods and complete the questionnaire below.

Parameter	SP-001 Results	SP-002 Results	Instantaneous NALs	Annual NALs	TNALs	NELs
Oil & Grease			25 mg/L	15 mg/L	n/a	n/a
pH			6.0 – 9.0 s.u.	n/a	n/a	n/a
TSS			400 mg/L	100 mg/L	n/a	n/a

Evaluator's Name:	Title:
Date & Time of Sample:	Date of Evaluation:
Sample Location(s):	
Were analytical test results uploaded to SMARTS within 30 days of receipt? ☐No ☐Yes	
Do any of the analytical test results exceed the levels/limits listed above: ☐No ☐Yes If no, you may stop here. If yes, please complete the rest of this form.	
Which results are exceedances? Specify parameter and sample location.	
For each exceedance, what are the expected cause(s) and/or pollutant source(s)? Explain whether each is considered either (i) an industrial material and/or activity, or (ii) non-industrial.	
Explain any BMP discrepancies that may have caused or contributed to the exceedance(s).	
Describe corrective actions taken.	
Describe any SWPPP revisions needed based on the corrective actions taken.	
Additional comments:	

pH METER CALIBRATION LOG

A pH meter must be calibrated before each monitoring event in order to ensure that it is reading pH correctly. To calibrate the pH meter, use at least two of the buffer solutions provided by the meter manufacturer that have a known pH (use the solution with a pH of 7.0, and another with either a pH of 4.0 or 10.0, or both). To calibrate the meter, remove the cap from your pH probe, rinse the meter's probe with distilled water, dip the probe into a small container of the buffer solution, and follow manufacturer instructions to calibrate the meter. Record the calibration on this form as instructed (i.e., record the pH reading or check off that the calibration has been completed using that solution). Rinse the probe again with distilled water, repeat calibration with the other buffer solution(s), and document calibration on this form.

Date	Time	pH 4	pH 7	pH 10	Initials of Employee	Comments

Appendix E: Annual Evaluation

ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The purpose of this evaluation is to annually review your facility's storm water compliance program and identify any changes that may be necessary. This evaluation should be used as a guide when completing the Compliance Checklist portion of the Annual Report to be submitted via SMARTS by July 15th of each reporting year.

Instructions: Complete the following checklist once per reporting period (July 1 – June 30). Evaluations must be conducted within 8-16 months of each other. The SWPPP and monitoring program shall be revised and implemented, as necessary, within 90 days of the evaluation. If any item is not applicable, write "N/A" next to the item**. Explanations should be attached for any "NO" answers**.

Annual Comprehensive Site Compliance Evaluation Checklist

Evaluator Name:	**Title:**
Date:	**Time Evaluation Began:**

Previous Reporting Year Review

Review the documents generated during the previous reporting year. Example documents include (General Permit Section XV.A):

- ☐ Visual inspection records
- ☐ Monitoring records
- ☐ Sampling and analysis results

Explain any potential pollutant sources or industrial activity that has not been inspected:

Potential Sources and Industrial Activities

Conduct a visual inspection of all areas of industrial activity and associated potential pollutant sources (General Permit Section XV.B):

- ☐ Areas where spills and leaks occurred last year
- ☐ Outdoor wash and rinse areas
- ☐ Process/manufacturing areas
- ☐ Loading, unloading, and transfer areas
- ☐ Waste storage/disposal areas
- ☐ Dust/particulate generating area
- ☐ Vehicle fueling/maintenance areas
- ☐ Building repair, remodeling, construction areas
- ☐ Erosion areas
- ☐ Material storage areas
- ☐ Vehicle/equipment storage areas
- ☐ Truck parking and access areas
- ☐ Rooftop equipment areas
- ☐ Non-storm water discharge generating areas

Explain any area or item above that has not been inspected to verify the SWPPP site map is up-to-date:

Annual Comprehensive Site Compliance Evaluation Checklist

Drainage Areas

Conduct a visual inspection of all drainage areas previously identified as having no-exposure to industrial activities and materials in accordance with the definitions in General Permit XVII (General Permit XV.C).

Explain any of these drainage areas that have not been inspected:

BMP Inspections

Visually inspect the following BMP-related equipment or areas (General Permit XV.D and XV.E):

☐ Equipment required to implement BMPs ☐ Structural control BMPs
☐ Treatment control BMPs

Explain any BMP-related equipment or area that was not inspected:

BMP Review

Review the following sections of the SWPPP related to BMPs (General Permit XV.F):

☐ Section 7 (Best Management Practices)
☐ Appendix C (monthly BMP Inspection Checklist)

Is each BMP:

- adequate in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges? ☐ YES ☐ NO
- being implemented? ☐ YES ☐ NO

If the answer to either of the above questions is "No", revise the BMPs and SWPPP, and document revisions accordingly.

Annual Report Review

Review other factors needed to complete the Annual Report as described in General Permit XVI.B (General Permit XV.G):

☐ General Permit Compliance Checklist
☐ Identification (including page numbers and sections) of all revisions made to the SWPPP within the reporting year
☐ Date(s) of the Annual Evaluation
☐ Explanation of non-compliance requirements in this Annual Comprehensive Site Compliance Evaluation Checklist)

Explain why any factors of the Annual Report were not reviewed:

Annual Comprehensive Site Compliance Evaluation Checklist

Certification Statement

I certify under penalty of law that this document all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those person(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: ____

Signature: ____ Date: ______________

Title: ____

Appendix F: Employee Training

All Pollution Prevention Team members are trained on all aspects of the SWPPP, including:

- Overview of the Industrial General Permit;
- Overview of Facility operations, receiving water, 303(d) pollutants of concern, the storm water team members and roles and responsibilities;
- Potential pollutant sources and potential pollutants from industrial operations at the facility;
- Best Management Practices, including minimum practices and advanced BMPs;
- Definition of NALs, TNALs, NELs, and ELGs for specific parameters; Baseline, Level 1, and Level 2 status; and implications to ongoing BMPs and SWPPP updates;
- Monitoring, including monthly visual inspections, qualified storm water event sampling, and annual compliance inspections;
- Reporting; *and*
- Quality assurance and recordkeeping.

In addition to annual formal instruction, on the job training is routinely performed to address issues that may be identified. Formal training is documented, and records of this training retained for 5 years, together with other related SWPPP materials.

MOSLER ROCK OJAI QUARRY
15558 Maricopa Hwy, Ojai CA
Industrial Storm Water Pollution Prevention Plan

Training Attendance Form

Date: ________________

Trainer: ____

Subject of Training: ____

____

____

Attendee Name (Print Name)	Attendee Signature

File completed form with the storm water files.

EXHIBIT 4
EIR ADDENDUM
CEQA Guidelines Section 15164

Ojai Quarry
Reclamation Plan Amendment
Case No. PL18-0136

A. BACKGROUND INFORMATION:

Entitlement: Reclamation Plan for a mining facility (Case No. PL18-0136)
Applicant: Larry Mosler, representing GraLar LLC.
Property Owners: GraLar, LLC.
Location: The project site is located at 15558 Maricopa Hwy (SR 33), near the intersection of South Matilija Road and State Route 33, near the City of Ojai, in the unincorporated area of Ventura County.
Assessor's Parcel Number: 009-0-090-16 and 009-0-090-18
Lot Size: 34.61 acres
General Plan Land Use Designation: Open Space (10-Acre Minimum) and Agricultural (40-Acre Minimum)
Zoning Designation: OS-160 ac (Open Space, 160-Acre Minimum Lot Size)

B. PROJECT DESCRIPTION:

The applicant requests that a Reclamation Plan Amendment (RPA) be approved to authorize changes in the final reclaimed configuration of the Ojai Quarry.

The current approved Reclamation Plan for the Ojai Quarry is comprised of the 1995 Reclamation Plan (Exhibit 10) and the 2012 Reclamation Plan Compliance Amendment (Exhibit 9). Because excavation and material removal occurred below the Final Reclaimed Surface (FRS) depicted in the 1995 plan, reclamation of the site in accordance with the approved plan could not be achieved without the backfilling of the over-excavated areas. Approximately 97,000 cubic yards of material would have to be placed in the over-excavated area to create the approved FRS.

The proposed RPA would allow the existing ground surface in the over-excavated area to constitute a part of the FRS. This would eliminate the requirement for the placement of 97,000 cubic yards of fill.

The proposed project does not include any other substantial changes in the reclamation requirements to be applied to the mined lands at the subject facility. No changes in the operational limitations established by CUP PL15-0118 are proposed or would be authorized by the requested RPA.

C. STATEMENT OF ENVIRONMENTAL FINDINGS:

History of Regulatory Actions and CEQA Review:

The project site has been used intermittently as a rock quarry since 1939. At that time, it was known as the "Maricopa Placer Claim". The original owner, Schmidt Construction, Inc., leased the site in 1948 and purchased it in fee in 1962.

In 1974, the mine operator applied for a Conditional Use Permit (CUP) to authorize continued surface mining activities at the site for a 20-year period. On January 15, 1976, the County Planning Commission granted CUP 3489 and certified an Environmental Impact Report (EIR) prepared in accordance with CEQA.

In 1981, the Planning Commission granted a modified CUP (CUP 3489-1) to extend the effective period of the permit by 5 years and approved a Reclamation Plan Amendment. The Planning Commission determined that the original EIR adequately addressed the potential impacts of the modified project.

On June 1, 1995 the Planning Commission granted a modified CUP (CUP 3489-2) to authorize an expansion of the area subject to mining excavation and to extend the effective term of the permit by an additional 20 years. A revised Reclamation Plan was also approved at this time. As part of these actions, the Commission certified a subsequent EIR ("1995 EIR"). The EIR identified potentially significant project-specific and cumulative impacts related to aesthetics (visual), biology/sedimentation, geology/soils and traffic.

On April 17, 2012, the Planning Director approved a Reclamation Plan Compliance Amendment (RPCA) required to address areas located outside of the previously approved 1995 Reclamation Plan boundary that had been disturbed by mining activities. A Permit Adjustment (Case No. LU11-0080) was also granted to authorize minor changes in facility operations. As part of the actions taken on April 17, 2012, the Planning Director approved the EIR Addendum as satisfying the environmental review requirements of CEQA.

On November 13, 2012, the RPCA was considered on appeal by the Board of Supervisors. The Board denied the appeal, approved the RPCA, and found that the EIR Addendum had been prepared in compliance with the applicable requirements of the California Environmental Quality Act (CEQA).

On December 3, 2014, the Planning Director granted a Permit Adjustment (Case No. PL14-0088) of CUP LU11-0080 (an adjustment of CUP 3489-2). With this action, stormwater pollution control measures set forth in a Consent Decree and Settlement Agreement entered into by the Permittee and Santa Barbara Channelkeeper organization were incorporated into the CUP and Reclamation Plan for this mining facility. The pollution control measures incorporated into the authorized facility include:

1. Paving of the haul road from the facility entrance to the upper detention basin
2. An increase in the volume of the upper detention basin to 1,000,000-gallon capacity; and
3. Replacement of the lower detention basin with an 18,000-gallon capacity weir tank during the rainy season (October through April) of every calendar year.

The incorporation of the stormwater control measures into the project was found by the Planning Director to be exempt from environmental review in accordance with Section 15301 of the CEQA Guidelines.

On March 7, 2017, the Board of Supervisors granted modified CUP No. PL15-0118 to authorize mining operations to continue at the Ojai Quarry for an additional 30-year period ending in 2046. As part of this action, the Board approved an Addendum to the 1995 EIR as satisfying the environmental review requirements of CEQA. The previously approved Reclamation Plan for this mining facility was not revised as part of this land use permit action by the Board. The approved Reclamation Plan continues to be comprised of the 1995 plan as augmented by the 2012 Reclamation Plan Compliance Amendment (RPCA).

<u>Environmental Review of the proposed project:</u>

The proposed Reclamation Plan Amendment (RPA) would allow the existing ground surface in the over-excavated area to constitute a part of the FRS. This would eliminate the current requirement for the placement of 97,000 cubic yards of fill. The RPA would also serve to apply the current reclamation standards set forth in the SMARA statutes and regulations over the area subject to the 1995 Reclamation Plan. In any case, the current requirements for site revegetation, drainage, erosion and sedimentation control would remain in effect.

The proposed project does not include any other substantial changes in the reclamation requirements to be applied to the mined lands at the subject facility. No changes in the operational limitations established by CUP PL15-0118 are proposed or would be authorized by the requested RPA.

The existing certified environmental document (i.e. the 1995 EIR as augmented by the 2012 EIR Addendum) addresses the key issues of the mining facility's effects on visual resources, biological resources (including the endangered steelhead trout), creek sedimentation and slope stability (e.g. rockfall). The issue of slope stability, however, is further addressed in the proposed RPA as this is relevant to the proposed change in the Final Reclaimed Surface (FRS).

The RPA incorporates technical reports prepared by California-licensed geologists and engineers. These reports document that the slopes that would remain after implementation of the proposed RPA would meet established standards of slope stability.

Section 15164(a) of the CEQA Guidelines (Title 14, California Code of Regulations, Chapter 3) states that the decision-making body shall prepare an addendum to a previously certified EIR if some changes or additions are necessary, but none of the conditions described in Section 15162 of the CEQA Guidelines calling for the preparation of a subsequent EIR have occurred.

The conditions described in Section 15162 of the CEQA Guidelines which require the preparation of a subsequent EIR are provided below, along with a discussion as to why a subsequent EIR is not required:

1. **Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects [§15162(a)(1)];**

   The proposed RPA would replace the current approved Reclamation Plan. The only substantial change in site reclamation that would be allowed under the RPA is a change in the configuration of the Final Reclaimed Surface (FRS) for the Ojai Quarry. Under proposed the RPA, the current over-excavated areas of the quarry would become part of the final reclaimed surface and the current requirement to place 97,000 cubic yards of fill would be largely eliminated.

   The proposed change in FRS configuration would not substantially alter the appearance of the Ojai Quarry (at the time of final reclamation) from public views along the adjacent State Highway 33. This is because the over-excavated areas are not prominently visible from the highway under current conditions and would be screened by required vegetation planted as part of reclamation of the site.

   The other major issue pertinent to the proposed RPA is slope stability. This issue is addressed by State-licensed geologists and engineers in reports included in the RPA. Based on the information provided in these reports, the current slopes proposed to remain after site reclamation meet established standards of stability. The slopes in question were created by mining excavation that occurred more than 30 years ago. No substantial slope failure has occurred over this period.

   In terms of biological resources, the proposed RPA continues to require revegetation of the slopes that would remain after mining excavation ceases. The over-excavated area would serve a beneficial post-mining purpose as an additional sediment trap to limit siltation of nearby Matilija Creek. Siltation would also be minimized by eliminating the grading activities that would be required to place the currently required 97,000 cubic yards of fill.

No substantial changes are proposed in the existing permitted mining facility. This facility is authorized to be in operation until 2046. The authorized area subject to mining excavation would not change with the implementation of the proposed RPA.

The proposed change in the approved Reclamation Plan will not result in any new physical effects on the environment that were not analyzed in the certified 1995 EIR as augmented by the 2012 EIR Addendum. Thus, there will be no new environmental effects or increase in the severity of previously identified significant effects.

Based on the above discussion, major revisions of the previous EIR and Addendum are not required.

2. **Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects [§15162(a)(2)]; or,**

With one exception, there have been no substantial changes in land use or environmental circumstances in the vicinity of the Ojai Quarry since certification of the EIR in 1995. There has been no substantial new development or other land use changes in the vicinity of the quarry since that time.

The one exception involves the federal listing of the Southern California steelhead trout (Oncorhynchus mykiss) by the federal government as endangered in 1997. Critical habitat for the Southern California steelhead trout has been identified in Ventura County and includes the Ventura River and major tributaries (Matilija Creek-North Fork and San Antonio Creek) and the Santa Clara River and major tributaries (Sespe Creek and Santa Paula Creek). The north fork of Matilija Creek is located adjacent to the project site.

The potential effects of mining operations on aquatic habitat and fish in Matilija Creek, including sedimentation and the potential for rockfalls to block fish passage, were evaluated in the 1995 EIR. As acknowledged on pages 64-66 of the 1995 EIR:

> *"The California Department of Fish and Game considers streambeds and drainages, including but not limited to such blue line streams to be potentially significant fish and wildlife habitat. Currently, the potential exists for rockfall from the existing quarry operation to enter the Matilija Creek. This is considered an existing adverse condition."*

"… for purposes of this EIR, significant effects on rare of endangered plants or animals (or the habitat of such species), as well as substantial interference with resident or migratory fish or wildlife species, are considered to be significant adverse impacts."

"Given the significance of stream riparian and aquatic habitats, the potential for erosion/sedimentation due to implementation of the project is considered a significant adverse impact."

"The quarry slope as it currently exists within the project area has the potential for a major failure into the North Fork of Matilija Creek resulting in several adverse impacts. These include loss of riparian habitat through burial, loss of aquatic habitats through burial and/or siltation onsite and downstream and interruption of movement by fish and wildlife along the creek."

The 2012 EIR Addendum (pages 4, 5, and 6) also addresses the project's potential effects on Matilija Creek and the steelhead as follows:

"The original quarry operation created an unstable slope which has the potential for a rockfall that would impact quarry workers, Matilija Creek and Highway 33."

"All reclaimed slopes (both existing and proposed) will meet the slope stability standards set forth by the original Conditional Use Permit, Reclamation Plan and EIR. Therefore, the proposed modification will not result in any new significant environmental effects or an increase in the severity of previously identified impacts."

"… the proposed changes will not cause an impact to the creek and therefore could not affect the Southern California steelhead trout. The original project was conditioned to mitigate potential impacts to the creek by reducing sedimentation on-site. The project was also conditioned to mitigate any existing and potential geotechnical hazards. With both the biological and geotechnical mitigation measures in place, the proposed project will not involve any new significant environmental impacts or cause a substantial increase in the severity of the previously identified significant effects."

In addition, the 2012 EIR Addendum includes six letters of public comment that raise various issues involving potential impacts of the mining operation on biological resources (i.e. the steelhead trout). The January 2012 Southern California Steelhead Recovery Plan Summary prepared by the National Marine Fisheries Service is also included in the letters of public comment and incorporated into the Addendum. Staff responses to 46 specific public comments are included in the 2012 EIR Addendum that address each issue raised in the submitted letters.

As part of the consideration and approval of the 2012 EIR Addendum at the November 13, 2012 public hearing, the County Board of Supervisors implicitly determined that none of these public comments constituted or identified substantial evidence [as defined in Section 15064(f)(5) of the CEQA Guidelines] of a potentially significant impact that would result from the continued operation of the Ojai Quarry for a 30-year period ending in 2046. At the November 13, 2012 hearing, the Board of Supervisors made specific findings that *"the Addendum to the Environmental Impact Report (EIR) has been prepared in compliance with applicable requirements of the California Environmental Quality Act (CEQA) and the CEQA Guidelines"* and that *"no subsequent or supplemental EIR is required…"*.

The changes in site reclamation included in the proposed RPA would not exacerbate erosion of the mined lands that would potentially increase sedimentation of Matilija Creek. The current requirements for site revegetation, drainage, erosion and sedimentation control would remain in effect. Thus, no new effect on the Steelhead would result from approval and implementation of the RPA. It is likely that sedimentation resulting from erosion at the mining site will be decreased by the elimination of the grading activities required to place 97,000 cubic yards of fill.

Based on the above discussion, there has been no substantial change in the circumstances such that major revisions in the 1995 EIR (as augmented by the 2012 EIR Addendum) are required.

3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the Planning Commission certified the previous EIR, shows any of the following:

a. The project will have one or more significant effects not discussed in the previous EIR [§15162(a)(3)(A)];

As discussed above, the Southern California steelhead trout (Oncorhynchus mykiss) was listed by the federal government as endangered in 1997. However, the proposed change in the Reclamation Plan does not involve an expansion of the mining excavation area or operational intensity of the surface mining activities. The current requirements for site revegetation, drainage, erosion and sedimentation control would remain in effect. Thus, the project would not result in any new effects on the aquatic habitat in Matilija Creek.

While the Southern California steelhead trout was federally listed as endangered after the 1995 EIR was certified, the biological impacts of the project were analyzed and mitigation measures were identified to reduce the potential impacts on all riparian wildlife and habitat in the 1995 EIR and 2012 EIR Addendum.

Furthermore, the National Marine Fishery Service announced its intent to review the coastal steelhead for special status in May 1993, before the 1995 EIR was certified. Information regarding the critical state of the steelhead trout was available during the preparation and certification of the 1995 EIR. The impacts on the steelhead trout and other riparian habitat were addressed in the biology assessment for the project and the impacts identified were found to be potentially significant. With the incorporation of the identified mitigation measures into the conditions of approval, the residual impacts were determined to be less than significant.

In summary, no new information of substantial importance has been identified that requires a major revision of the 1995 EIR as augmented by the 2012 EIR Addendum.

b. Significant effects previously examined will be substantially more severe than shown in the previous EIR [§15162(a)(3)(B)];

No aspect of the proposed changes in site reclamation included in the proposed RPA have been identified that would result in a new potentially significant effect on the environment or exacerbate a significant effect previously identified in the 1995 EIR. No expansion of this facility or increase in operational intensity is proposed. Truck traffic associated with product export will remain at the currently permitted level of 20 truckloads (40 one-way trips) per operational day.

Based on the above discussion, the environmental effects of the operation of Ojai Quarry will not be more severe than disclosed in the previous EIR.

c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative [§15162(a)(3)(C)];

No mitigation measures or alternatives previously found to be infeasible have been identified that are now feasible. No expansion of this facility or increase in operational intensity is proposed. Truck traffic associated with product export will remain at the currently permitted level of 20 truckloads (40 one-way trips) per day. The proposed change in site reclamation requirements will not result in any new physical effects on the environment that were not analyzed in the certified 1995 EIR (as augmented by the 2012 Addendum). No new mitigation measures are warranted.

d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative [§15162(a)(3)(D).

No mitigation measures or alternatives different from those presented in the previous 1995 EIR (as augmented by the 2012 EIR Addendum) have been identified. No expansion of this facility or increase in operational intensity is proposed. Truck traffic associated with product export will remain at the currently permitted level of 20 truckloads (40 one-way trips) per day. The visual character of the site after reclamation will not substantially change with implementation of the proposed RPA. The proposed RPA will not result in any new potentially significant effects on the environment that were not analyzed in the certified 1995 EIR (as augmented by the 2012 EIR Addendum). No new mitigation measures are warranted.

Based on the information provided above, there is no substantial evidence on the record that requires the preparation of a subsequent EIR. The decision maker shall consider this Addendum to the adopted 1995 EIR prior to making a decision on the project.

C. PUBLIC REVIEW:

Pursuant to the CEQA Guidelines §15164(c), this Addendum to the Environmental Impact Report (EIR) does not need to be circulated for public review and comment, and shall be included in, or attached to, the adopted EIR.

Prepared by:

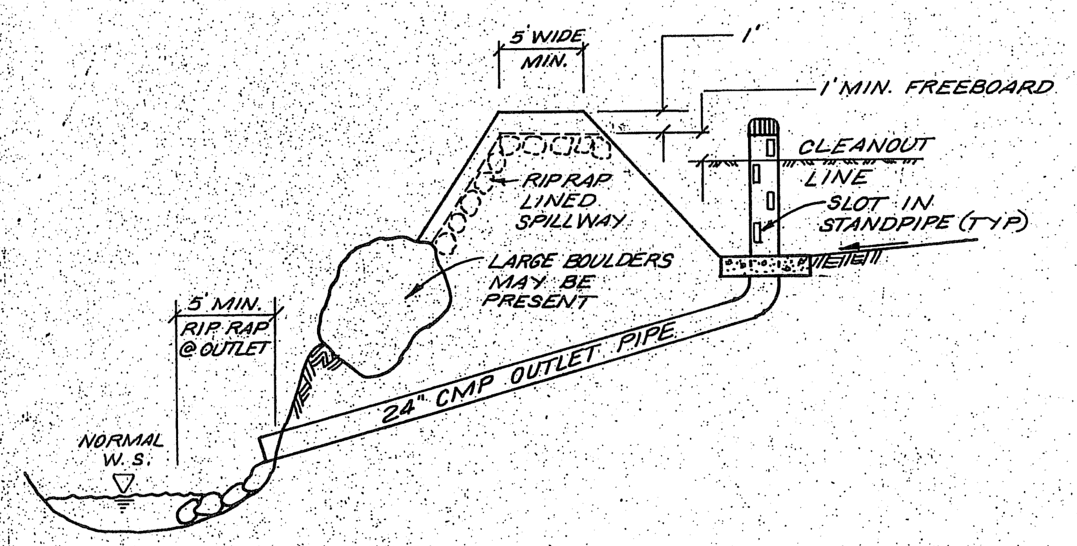
M Fogg

Mindy Fogg, Manager
Commercial and Industrial Permits

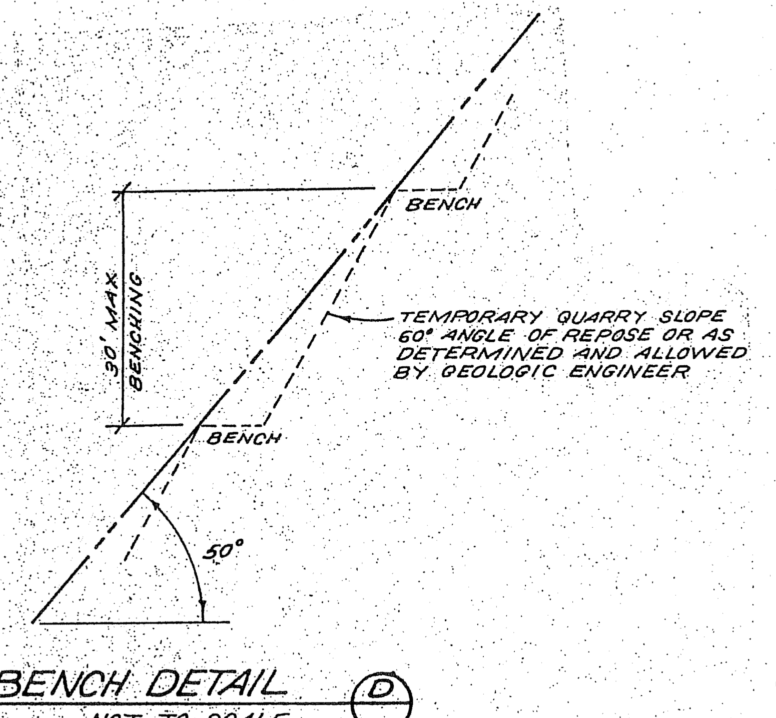
County of Ventura
Planning Director Hearing
Case No. PL18-0136
Exhibit 5 - 1995 Reclamation Plan


VENTURA COUNTY PLANNING DIVISION
CERTIFICATION OF APPROVAL
Permit No. CUP3489-2
Exhibit No. 5
Date Approved 6-1-95
Approval Body Bl. Dir. Pl. Comm.
Authorized Signature Date
* DESILTING BASIN SHALL BE SIZED BY THE CIVIL ENGINEER AND APPROVED BY THE SOILS ENGINEER
GRAPHIC SCALE
1" = 50'
* CONST. DESILTING BASIN WITH OUTLET STANDPIPE AND RIPRAP LINED SPILLWAY PER SECTION A-A (CONC LINED SPILLWAY IN LIEU OF SILT FENCE PER E.I.R. REQUIREMENTS) LOCAL, STATE & FEDERAL AGENCIES SHALL HAVE ACCESS TO THE OUTLET, UPON REQUEST FOR THE PURPOSE OF WATER QUALITY TESTING OF SITE RUNOFF
UPPER LIMIT OF RECLAMATION BY DECEMBER 2000
SCATTERED ROCK AREA
ROCKS PILES
NATURAL ROCK SLOPE THIS PORTION
MATCH LINE WITH SHEET 3 OF 4
ROCK LOADING AREA (FLAT)
ACCESS ROAD
TOP OF SLOPE
UPPER LIMIT OF RECLAMATION BY 1995
RECONTOUR EXISTING SLOPE
RECONTOUR EXIST. SLOPE
PLACE PIPE UNDERGROUND BELOW THIS POINT
DAYLIGHT LINE
EXIST. SCALE
INSTALL 36" CMP DRAINPIPE
BENCH DRAIN FLARED INLET WITH CONNECTOR (TYP)
5' Ø BOULDERS TO SUPPORT UNCERTIFIED FILL PARKING AREA
PERMANENT HINGE POINT BERM. NO RUNOFF FROM QUARRY TO CROSS BERM. CONTRACTOR TO REPAIR EXIST. BERM AS REQUIRED. TRACK ROLL EXIST. BERM ENTIRE LENGTH & LANDSCAPE SLOPE TO TOE PER LANDSCAPING PLAN
APPROXIMATE LIMITS OF EXIST. UNCERTIFIED FILL
MATILIJA CREEK NORTH FORK
EXIST. TREES & 5' DIA. BOULDERS ALONG TOP OF ACCESS RD. BERM. REPLACE TREES AS REQUIRED DURING THE LIFE OF THE QUARRY
INSTALL ±5' DIA. BOULDERS ALONG TOP OF SLOPE ±10' CLEAR
TOP OF BERM
MARICOPA ROAD
STATE R/W
MATCH LINE WITH SHEET 3 OF 4
APPROX. ℄
APPROVED: PACIFIC MATERIALS LABORATORY
BY:
GE 664
5-15-95
REG. NO. (EXP. 3-31-99) DATE
REGISTERED PROFESSIONAL ENGINEER DOUGLAS C. PAYNE GE 664 Exp. 3-31-99 GEOTECHNICAL STATE OF CALIFORNIA
SHEET TITLE
RECLAMATION AND EROSION CONTROL PLAN CURRENT MINE SITE
PROJECT
SCHMIDT CONSTRUCTION QUARRY
HWY 33 OJAI, CA.
PROJECT NO. 1146-05.2
SCALE 1" = 50'
DATE SEPT. 1994
DRAWN BY
CHECKED BY D.N.
DRAWING NO.
HOVELL AND PILARSKI ENGINEERING
P.O. BOX 479
SIMI VALLEY, CALIFORNIA 93062
(805) 522-1900
GERALD F. HOVELL, RCE 33118 (EXP. 6-30-98)
9-6-94 DATE
2 OF 4 SHTS
REGISTERED PROFESSIONAL ENGINEER GERALD FRANCIS HOVELL No. 33118 Exp. 6-30-98 CIVIL STATE OF CALIFORNIA


PRECISE LOCATION OF DOWNDRAIN TO FOLLOW EXISTING TOPOGRAPHY. LAY PIPE ON GROUND SURFACE, ANCHOR PIPE @ 50' INTERVALS MAX. CLOSER IF FIELD CONDITIONS WARRANT IT
BENCH DRAIN FLARED INLET WITH CONNECTOR (TYP)
INSTALL 24" CMP DOWNDRAIN
INSTALL 18" CMP DOWNDRAIN
INSTALL 12" CMP DOWNDRAIN
LANDSCAPING IS REQUIRED ON ALL FINISHED SLOPES AND BENCHES AS THEY ARE COMPLETED, PER RECLAMATION LANDSCAPING PLAN
PROPOSED END USE OF QUARRY IS OPEN SPACE
SCATTERED ROCKS AND BOULDERS
GEOLOGIC SECTION (SEE SECTION I, SHEET 4 OF 4) AS REFERENCE ONLY
MATCHLINE WITH SHEET 2 OF 4
VENTURA COUNTY PLANNING DIVISION
CERTIFICATION OF APPROVAL
Permit No. CUP 3489-2
Exhibit No. 6
Date Approved 6-1-95
Approval Body Pl. Dir. PL Comm.
B Painter 6-8-95
Authorized Signature Date
GRAPHIC SCALE
1" = 50'
APPROVED: PACIFIC MATERIALS LABORATORY
BY:
GE 664 5-15-95
REG. NO. (EXP. 3-31-99) DATE
REGISTERED PROFESSIONAL ENGINEER DOUGLAS C. PAPAY GE 664 Exp. 3-31-99 GEOTECHNICAL STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER GERALD FRANCIS HOVELL No. 33118 Exp. 6-30-98 CIVIL STATE OF CALIFORNIA
SHEET TITLE
RECLAMATION AND EROSION CONTROL PLAN EXPANSION AREA
PROJECT
SCHMIDT CONSTRUCTION QUARRY
HWY. 33 OJAI, CA.
HOVELL AND PILARSKI ENGINEERING
P.O. BOX 479
SIMI VALLEY, CALIFORNIA 93062
(805) 522-1900
GERALD F. HOVELL RCE 33118 (EXP. 6-30-98) 9-6-94 DATE
PROJECT NO. 1146-05.2
SCALE 1" = 50'
DATE SEPT. 1994
DRAWN BY
CHECKED BY
DRAWING NO.
3 OF 4



SECTION A-A
NOT TO SCALE



BENCH DETAIL (D)
NOT TO SCALE

RECLAMATION NOTES:

1.0 ALL ACCESS ROADS SHALL BE GRADED TO DRAIN INTO HILLSIDE WITH BOULDERS PLACED ALONG OUTSIDE OF ROADWAY AS SHOWN IN DETAIL (F).

2.0 ALL EXISTING SLOPES WHERE QUARRY TAILINGS (UNCERTIFIED FILL) WERE USED SHALL BE INSPECTED BY THE ENGINEERING GEOLOGIST TO VERIFY ITS SLOPE STABILITY. IF FOUND UNSTABLE, SAID SLOPE SHALL BE REWORKED USING CERTIFIED FILL TO A STABLE 1.5:1 SLOPE. SEE DETAIL (H). PLANT TREES OR NATIVE SHRUBS WHERE SHOWN ON RECLAMATION PLAN, SHEET 2 OF 4.

3.0 ALL ACCESS ROAD DRAINAGE CANAL/DITCHES SHALL BE CONSTRUCTED ON EXISTING BEDROCK.

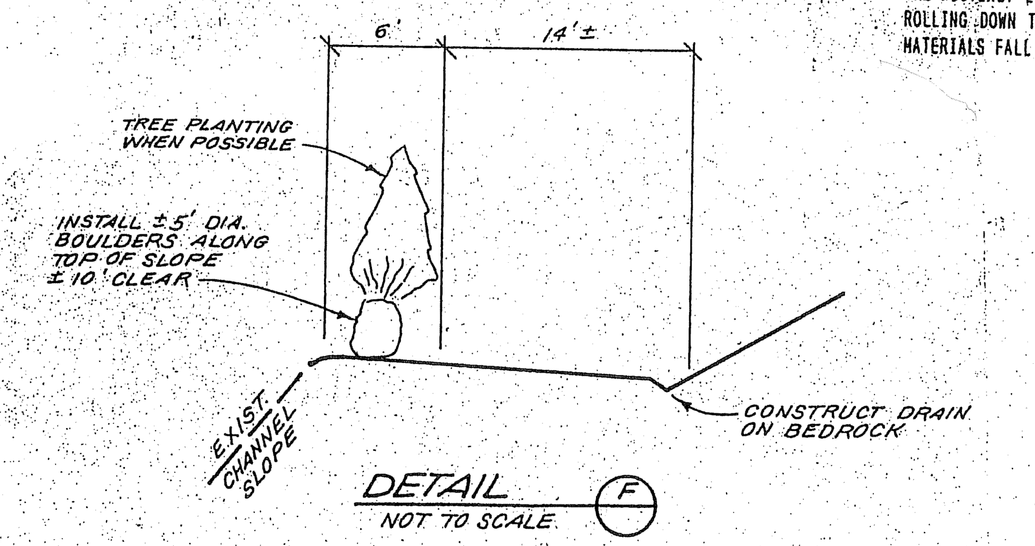
4.0 THIS RECLAMATION PLAN WAS PREPARED BASED ON THE QUARRY EXCAVATION SCHEME AS SHOWN IN THE QUARRY PLAN, BUT DUE TO POSSIBLE CHANGES IN QUARRY OPERATIONS DUE TO CHANGE IN STRUCTURAL GEOLOGY OF UNDERLYING STRATA, THIS RECLAMATION PLAN MAY BE REVISED ACCORDINGLY, SUBJECT TO THE REVIEW AND APPROVAL OF THE LEAD AGENCY.

5.0 QUARRY EXCAVATION SHALL BE UNDER THE OBSERVATION OF AN ENGINEERING GEOLOGIST WHO SHALL PROVIDE PERIODIC INSPECTION ON AT LEAST AN ANNUAL BASIS OF MEASURES TO MITIGATE QUARRY SAFETY AND TO AID IN IDENTIFICATION OF ANY CHANGES IN TERRAIN DISTURBANCE WITHIN OR ADJACENT TO THE QUARRY SITE. ANY CHANGE IN SLOPE PERFORMANCE OR EROSION/SEDIMENTATION CONDITIONS MAY REQUIRE REVISION TO THIS RECLAMATION PLAN. RESULTS OF THE ANNUAL INSPECTION SHALL BE SUMMARIZED IN A REPORT PREPARED BY THE ENGINEERING GEOLOGIST.

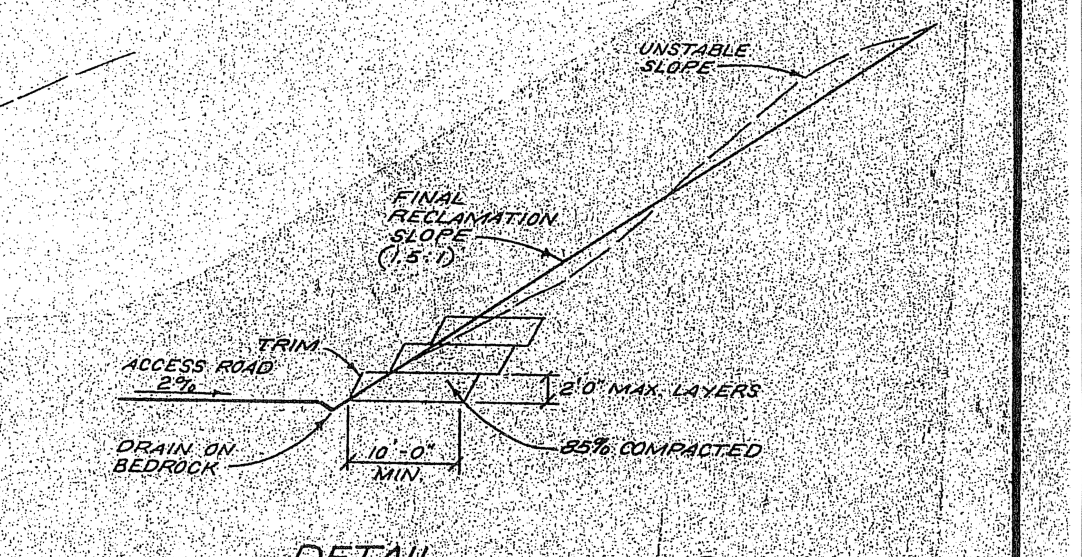
6.0 QUARRY EXCAVATION SHALL BE LIMITED TO 30 FOOT MAX. BENCHES WITH TEMPORARY QUARRY EXCAVATION SLOPE NOT TO EXCEED 60 DEGREE ANGLE OF REPOSE. TEMPORARY SLOPES ARE DEFINED AS SLOPES GRADED WITHIN THE PREVIOUS 12 MONTHS. FINAL SLOPES SHALL NOT EXCEED A 45 DEGREE ANGLE OF REPOSE AND SHALL HAVE 10 FOOT WIDE BENCHES EVERY 30 VERTICAL FEET. NO PERCHED BOULDERS SHALL EXIST AT ANY TIME ON THE SITE.

7.0 WARNING SIGN INDICATING QUARRY HAZARD AND POSSIBLE ROCKFALL DANGER SHALL BE POSTED ALONG HIGHWAY 33 BELOW QUARRY SITE. WARNING SIGN SHALL ALSO BE POSTED INDICATING NO RECREATIONAL USE OF CREEK BELOW QUARRY SITE.

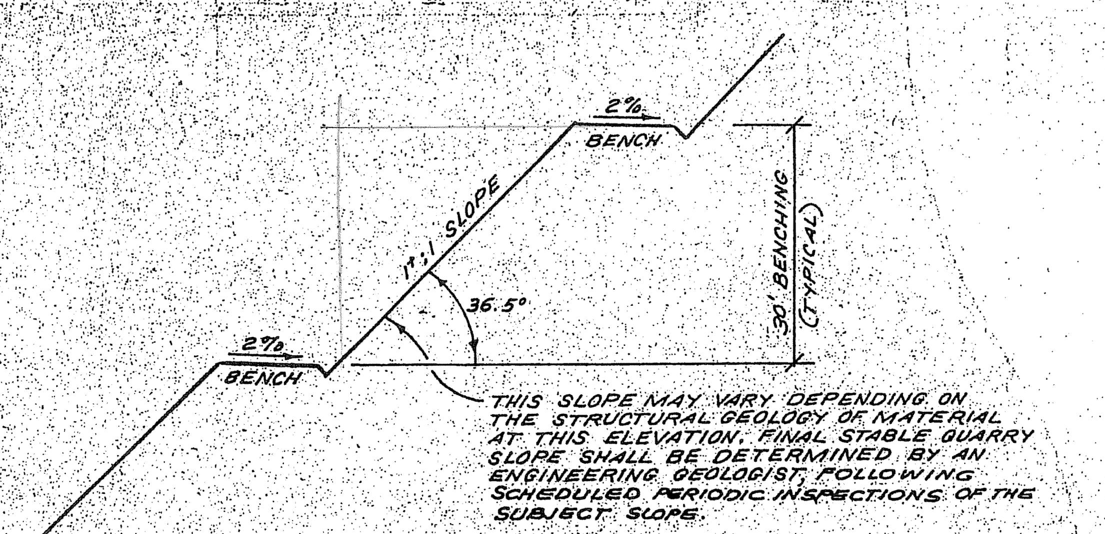
8.0 THE WESTERLY EDGE OF THE QUARRY SITE SHALL BE SLOPED AND BERMED TO PREVENT ANY MATERIALS FROM ROLLING DOWN THE NATURAL SLOPE INTO HIGHWAY 33 OR MATILIJA CREEK. IN THE EVENT THAT QUARRY MATERIALS FALL INTO MATILIJA CREEK, SAID MATERIALS SHALL BE REMOVED IMMEDIATELY BY CONTRACTOR.



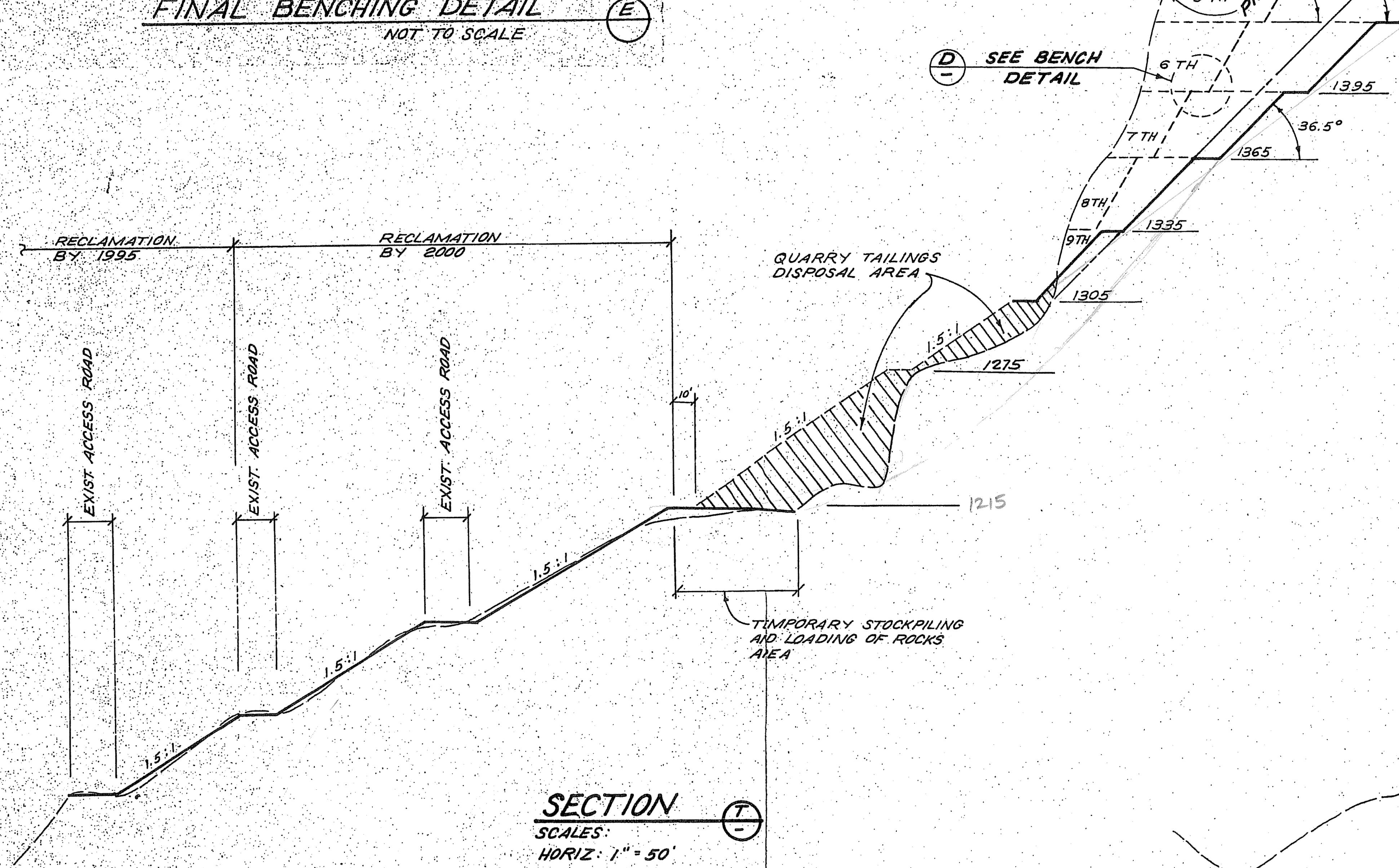
DETAIL (F)
NOT TO SCALE



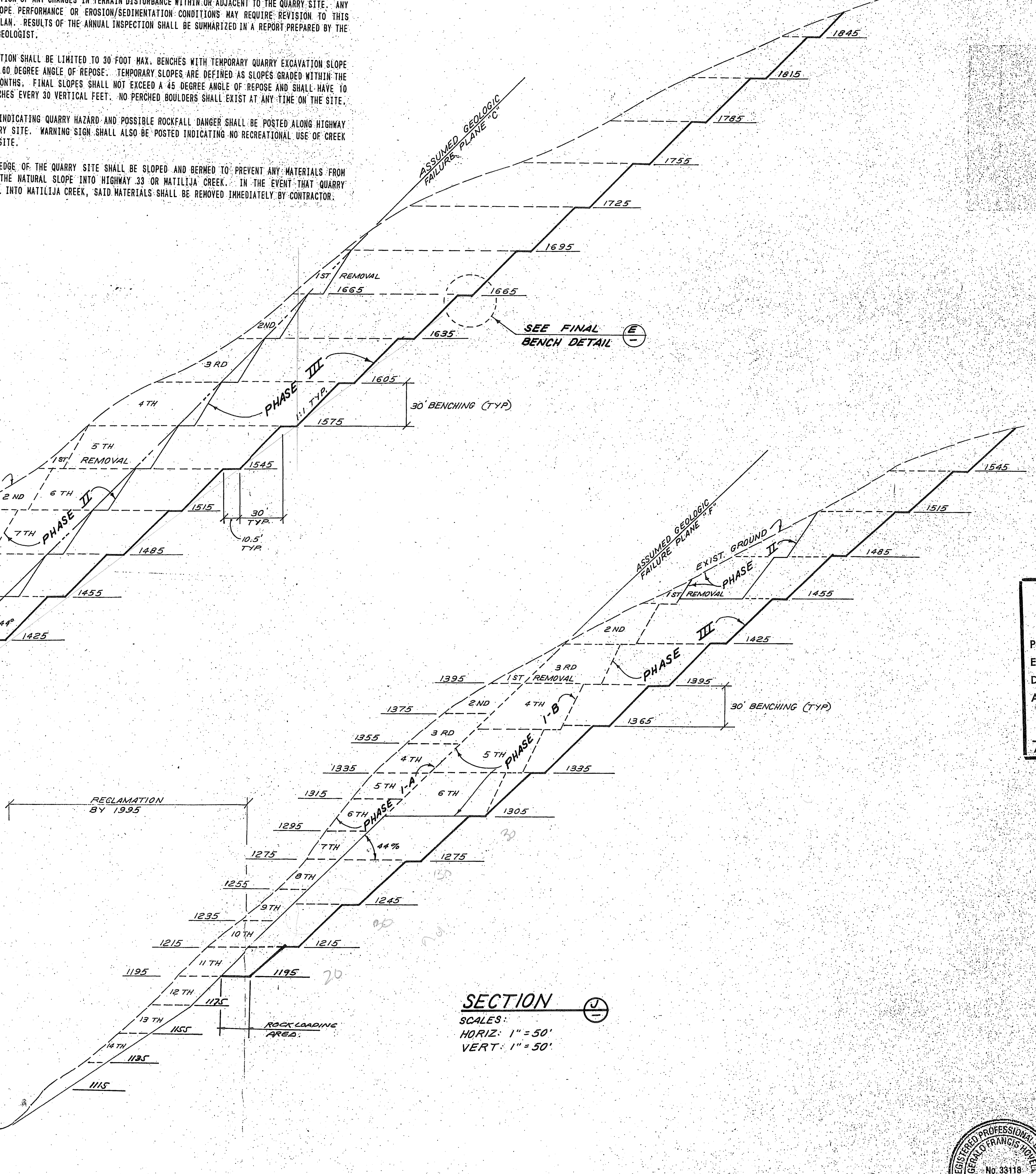
DETAIL (H)
WORK PROCEDURE ON EXISTING UNSTABLE SLOPE



FINAL BENCHING DETAIL (E)
NOT TO SCALE



SECTION (T)
SCALES:
HORIZ: 1" = 50'
VERT: 1" = 50'



SECTION (J)
SCALES:
HORIZ: 1" = 50'
VERT: 1" = 50'

QUARRY NOTES:

1.0 THIS PLAN WAS PREPARED TAKING INTO CONSIDERATION FINDINGS AND RECOMMENDATIONS OF PACIFIC MATERIALS LABORATORY INC. REPORT DATED JULY 25, 1988.

2.0 PRIOR TO ANY QUARRY EXCAVATION, ANY ON-SITE PERCHED BOULDERS OR LAND/ROCKSLIDES UPSLOPE THAT POSE DANGER TO ANY DOWNSLOPE QUARRY EXCAVATION SHALL BE REMOVED FIRST.

3.0 QUARRY EXCAVATION SHALL BE DONE IN STAGES. INITIAL STAGE SHALL BE LIMITED TO PHASE I EXCAVATION AS FOLLOWS:

STAGE		PURPOSE
3.01	PHASE 1-A	TO PREVENT ANY POSSIBLE FAILURE ALONG ASSUMED FAILURE PLANE "D" AND "A" AS SHOWN IN GEOLOGIC SECTION "D-E-F-G" AND "A-B-C" RESPECTIVELY. (ENCLOSURE "B-2" AND "B-1" OF PMLI REPORT DATED JULY 25, 1988).
3.02	PHASE 1-B	TO PREVENT ANY POSSIBLE FAILURE ON THE NORTHERLY SIDE OF THE QUARRY ALONG ASSUMED FAILURE PLANE "F". THIS ASSUMED FAILURE PLANE "F" IS SHOWN IN GEOLOGIC SECTION "H-I-J-K" OF SAME REPORT (ENCLOSURE "B-3"). NO ROCKSLIDE IS ANTICIPATED DURING QUARRY EXCAVATION. HOWEVER, IN THE EVENT ANY ROCKSLIDE OCCURS, SUCH ROCKSLIDE WILL BE TOWARDS THE QUARRY SITE AND SHALL NOT POSE ANY DANGER TO THE NEARBY MARICOPA ROAD.

4.0 QUARRY WORK ON PHASE I-A AND PHASE I-B CAN BE DONE TOGETHER. ALL QUARRY EXCAVATION SHALL COMMENCE FROM THE TOP OF SLOPE PROCEEDING DOWNWARD AND SHALL BE PERFORMED ACCORDING TO TYPICAL BENCH DETAIL (D).

VENTURA COUNTY
PLANNING DIVISION
CERTIFICATION OF APPROVAL
Permit No. CUP-3489-2
Exhibit No. 7
Date Approved 6-1-95
Approval Body ☐ Pl. Dir. ☑ Pl. Comm.
B. Paunter 6-8-95
Authorized Signature Date

REGISTERED PROFESSIONAL ENGINEER
DOUGLAS C. PAPAY
GE 664
Exp. 3-31-99
GEOTECHNICAL
STATE OF CALIFORNIA

APPROVED: PACIFIC MATERIALS LABORATORY
BY: Douglas C. Papay
GE 664
REG. NO. (EXP. 3-31-99) 5-15-95
DATE

NO.	DATE	REVISION	BY

SHEET TITLE: RECLAMATION GRADING DETAILS & NOTES

PROJECT: SCHMIDT CONSTRUCTION QUARRY
HWY. 33 OJAI, CA

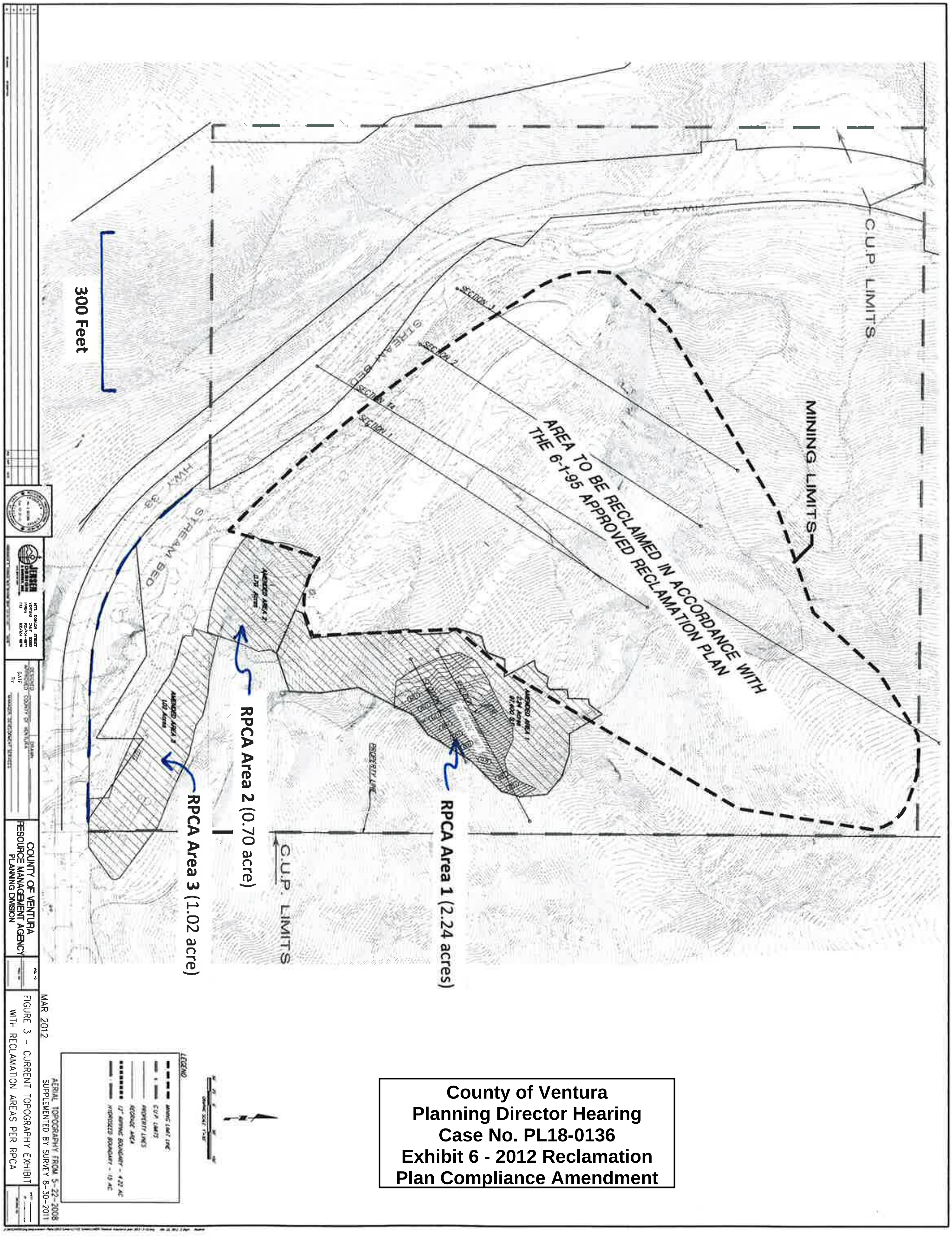
PROJECT NO. 1146-05.2
SCALE AS NOTED
DATE SEPT. 1994
DRAWN BY: C.
CHECKED BY: D.N.
DRAWING NO.

REGISTERED PROFESSIONAL ENGINEER
GERALD FRANCIS HOVELL
No. 33118
Exp. 6-30-98
CIVIL
STATE OF CALIFORNIA

HOVELL AND PILARSKI ENGINEERING
P.O. BOX 479
SIMI VALLEY, CALIFORNIA 93062
(805) 522-1900

Gerald F. Hovell 9-6-94
GERALD F. HOVELL RCE 33118 (EXP. 6-30-98) DATE

4 OF 4 SHTS



County of Ventura
Planning Director Hearing
Case No. PL18-0136
Exhibit 6 - 2012 Reclamation Plan Compliance Amendment

VENTURA COUNTY RESOURCE MANAGEMENT AGENCY

FINAL
ENVIRONMENTAL IMPACT REPORT

SCHMIDT ROCK QUARRY
VENTURA COUNTY

Prepared By:

EDAW, INC.

- Landscape Architecture
- Planning
- Urban Design
- Environmental Analysis
- Site Engineering
- Graphic Design

The Environmental Report Review Committee recommends that the decision-making body for the proposed project find that this document has been completed in compliance with the California Environmental Quality Act.

Jeff Walker

Chair, Environmental Report Review Committee

9/2/93

Date

FORWARD

This Final EIR for the Schmidt Rock Quarry CUP - 3489 (MOD2) project consists of the following documents:

- **Draft Environmental Impact Report (Draft EIR) document**
- **Response to Comments/Errata to Draft EIR document**

The **first document** contained within this Final Environmental Impact Report includes the Draft EIR dated March 19, 1993. The public review period for the Draft EIR established by the State Clearinghouse commenced on April 9, 1993 and expired on May 26, 1993. The County of Ventura accepted comment letters through June 2, 1993.

An asterick (✱) has been placed in the right-hand margins of this Draft EIR to indicate where modifications to the document have been made as a result of comments submitted during the public review period. The actual changes to the document are included in the Errata to the Draft Environmental Impact Report.

The **second document** contained within this Final Environmental Impact Report includes the Response to Comments document dated September 1, 1993. This document responds to comments that were received on the Draft EIR. This document also includes an errata section, which notes the modifications made to the Draft EIR as a result of comments received.

To facilitate the reader's review of this Final document, both the Draft EIR and Response to Comments documents contain their own original Tables of Contents.

DRAFT
ENVIRONMENTAL IMPACT REPORT
SCHMIDT ROCK QUARRY
CUP - 3489 (MOD 2)

STATE CLEARINGHOUSE NUMBER: 89032904

PREPARED FOR:

COUNTY OF VENTURA
800 SOUTH VICTORIA AVENUE
VENTURA, CALIFORNIA 93009
(805) 654-5192

PREPARED BY:

EDAW, INC.
1920 MAIN STREET, SUITE 450
IRVINE, CA 92714

MARCH 19, 1993

TABLE OF CONTENTS

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I. INTRODUCTION

GENERAL PURPOSE

This focused Environmental Impact Report (EIR) addresses potential environmental impacts of rock quarry activities in the Wheeler Springs area of Ventura County. The project has been proposed by Schmidt Construction, Inc. under Conditional Use Permit No. 3489 (Modification No. 2). The project is to be located adjacent and east of Highway 33 near Matilija Road in the County of Ventura. The applicant has requested the approval of a Conditional Use Permit (CUP No. 3489-Mod. 2) to allow for the continuation of existing quarry operations. The County of Ventura has required certification of a focused Environmental Impact Report.

The County of Ventura has principal responsibility for the project's approval and supervision. Consequently, the County is the Lead Agency for the preparation of this EIR. The materials contained in this EIR are intended to serve as an informational document for decisions to be made by the County of Ventura and other responsible agencies regarding the proposed project.

The EIR provides an overall analysis of potential impacts associated with implementation of the proposed project. The issues discussed within the EIR are those which have been identified in the course of extensive review of all potentially significant environmental impacts associated with the proposed project. This review included issuance of a Notice of Preparation (included in Appendix A of this document).

ENVIRONMENTAL PROCEDURES

This EIR has been prepared in accordance with the California Environmental Quality Act of 1970 (CEQA), as amended (Public Resources Code, Section 21000, et seq.) and the State Guidelines for Implementation of the California Quality Act of 1970, as amended (California Administrative Code, Section 15000, et seq.). This report complies with the rules, regulations, and procedures for implementation of the California Environmental Quality Act adopted by the County of Ventura.

The purpose of this analysis is to determine whether or not the proposed project may have a significant effect on the environment, either on an individual basis or cumulatively, and to identify feasible mitigation measures.

The State CEQA Guidelines require that each EIR contain certain areas of description and analysis. The following list identifies areas of particular interest and the corresponding sections in this EIR:

REQUIRED DESCRIPTION AND ANALYSIS	SECTION OF EIR
1. Summary (Section 15123 of Guidelines)	Section II
2. Description of Project (Section 15124 of Guidelines)	Section III
3. Description of Environmental Setting (Section 15125 of Guidelines)	Section IV, V
4. Environmental Impact (Sections 15126 and 15143 of Guidelines)	Section V
a. Significant Environmental Effects	
b. Effects Which Cannot Be Avoided	
c. Mitigation Measures	
5. Growth-Inducing Impacts (Section 15126 of Guidelines)	Section VI
6. Alternatives to the Proposed Action (Section 15126 of Guidelines)	Section VII

This EIR analyzes and assesses the significant environmental impacts of the revised project, and the cumulative impacts of such development coupled with other approved and reasonably foreseeable development in surrounding areas. It also identifies alternatives to the proposed project and discusses possible ways to reduce or avoid the potentially significant environmental impacts.

This EIR, as a final document pursuant to Sections 15089 and 15132 of the State CEQA Guidelines, will serve as the environmental informational document for all public and private activities and undertakings pursuant to or in furtherance of completion of the project. The County of Ventura Environmental Report Review Committee, as advisory body, and the Planning Commission as a decision making body, will consider the information in this document in the course of their deliberations.

The EIR has been focused as provided for in Section 15063(c)(3) of the CEQA Guidelines. The purpose of this action is to focus the environmental impact report on the effects determined to be significant, identify the effect determined not to be significant and explain the reasons for determining what effects would not be significant. This EIR will discuss potential traffic, biology/sedimentation, aesthetic/visual and geology/soils impacts of the proposed project.

The EIR assesses the environmental effects of the project as described in the Project Description. An Initial Study was prepared by the County of Ventura in December 1988. It is presented in Appendix A of this report. The Initial Study for CUP No. 3489 served to focus the scope of this Environmental Impact Report.

PROJECT HISTORY

The original CUP-3489 for the rock quarry was issued for the project in 1976. Subsequent to issuance of the CUP, the County discovered that the applicant never completed a reclamation plan for the project as required by the Surface Mining Reclamation Act (SMRA). In August of 1979, the applicant was notified that the mining permit was in jeopardy, for failure to comply with the regulations of SMRA.

The applicant responded on February 15, 1980 and indicated that he would comply with the conditions of the SMRA. In November of 1980 the applicant submitted a reclamation plan and filing fee. At this time, a modification to renew the permit was also submitted. This application was determined by the County to be complete on December 17, 1980. In response to the CUP modification request the Resource Management Agency on January 1981 decided to use a previous EIR that was prepared for the original mining permit in 1976 to satisfy environmental review requirements. In April 1981, it was discovered that the excavations at the quarry had gone outside the boundaries of the approved Reclamation Plan. The applicant was notified that a revised plan depicting the new project boundaries would have to be submitted by June 22, 1981. A revised reclamation plan was submitted to the County on May 11, 1981. The plan was subsequently refused by the Public Works Administration. A revised plan was then submitted on May 27, 1981.

A Planning Commission hearing was held to address the CUP modification on July 9, 1981. The modification to CUP 3489 was approved on July 19, 1981. This approval was granted for 5 years (through July 9, 1986) with the provision that the applicant could file a Minor Modification before July 9, 1986 and ask for an additional 5 years which would end July 9, 1991. This approval was based on the provision that the conditions of project approval had been accomplished and the proposed mining area would remain the same. Additionally, if the applicant wanted to expand the quarry operational area, he must apply by July 9, 1990 for a Major Modification.

An application for a Major Modification was submitted on March 17, 1986 requesting expansion of quarry operational area. This application remained incomplete for several months while the applicant was responding to Public Works Administration (PWA) requirements.

In January 1988, a revised quarry plan was submitted to the County. The plan was deemed incomplete on January 19, 1988 by the Public Work Administration. A revised plan was again submitted on May 5, 1988. On May 19, 1988 project applicant was notified that an acceptable geology report must be submitted to the Public Works Administration by August 1, 1988 or the County would close the case due to an incomplete application package. The applicant was notified again on July 25, 1988 reiterating that the case would absolutely be closed on August 1, 1988 unless a complete application was submitted. The case had been incomplete for a total of 2 years and 4 months.

On December 2, 1988 an acceptable geology report was received and the application was deemed complete. The staff of the County of Ventura determined that the proposed action constituted a project as defined by CEQA, the State CEQA Guidelines, and County policies. It was found that the project was not exempt from CEQA and the Guidelines. An Initial Study was completed on December 19, 1988 and a Notice of Preparation was circulated for public review on March 15, 1989.

The Initial Study (located in Appendix A) determined that the proposed project will have potential significant traffic, biology/sedimentation, aesthetic/visual and geology/soils effects on the environment and a focused EIR was required.

On March 20, 1989 the applicant submitted a revised Project Description questionnaire detailing the hours of truck operation. A modified site plan was submitted to the County on May 6, 1989. The site plan depicted that the boundaries of the proposed quarry would spill over onto U.S. Forest Service Land and adjacent property not owned by the applicant. The County notified the applicant on May 10, 1989 that the U.S. Forest Service and the adjacent property owner must co-sign the application.

In January 1990, the County re-initiated the EIR preparation process. Subsequently, all work efforts were stopped in August 1990 pending the completion of a modified site plan and a revised geology report. A modified site plan was required because the U.S. Forestry Service would not enter into an agreement necessary for quarry operations to occur within their boundaries. The applicant decided to modify the boundaries of the project to avoid Forest Service owned land for quarrying purposes.

In June 1992, a modified Quarry Operations Plan was submitted to the County of Ventura. Supplemental Geologic Reports were submitted in April, 1991 and February, 1993.

CONTACT PERSONS

The Lead Agency in preparing the Environmental Impact Report is the County of Ventura. The environmental consultant to the County is STA Planning, Inc. of Newport Beach, California. The project co-applicants are Schmidt Construction, Inc. of Canoga Park, California and South Coast Mining and Milling, Inc. of Palmdale, California. Preparers and contributors to the report are listed in Section VIII of this document. Key persons are as follows:

<u>**County of Ventura/Lead Agency**</u>:

Ms. Beth Painter
Planner II
County of Ventura
800 South Victoria Avenue
Ventura, California 93009
(805) 654-5192

<u>**Environmental Consultant**</u>:

Ms. Jayna Morgan
Director
Mr. Tim Gnibus
Ms. Sally Salavèa
Project Managers
EDAW, Inc.
1920 Main Street, Suite 450
Irvine, California 92714
(714) 660-8044

<u>**Project Applicant**</u>:

Mr. William Schmidt
Schmidt Construction, Inc.
7633 Loma Verde Avenue
Canoga Park, California 91304
(818) 340-8245

MAJOR ISSUES

The County of Ventura has identified several areas of possible environmental impact resulting from completion of the project in the December 19, 1988 Initial Study. This EIR identifies and evaluates these impacts on both a project-specific and cumulative basis. This EIR addresses in detail the following issues:

- Traffic
- Aesthetic/Visual
- Biology/Sedimentation
- Geology/Soils

II. SUMMARY

EXECUTIVE SUMMARY

Project Location and Description

The proposed Schmidt Rock Quarry project is located on the east side of State Highway 33 (Maricopa Highway) approximately 900 feet northwest of Matilija Road, and about 3 1/4 miles northwest of the City of Ojai, in Ventura County, California.

The Schmidt Rock Quarry Environmental Impact Report analyzes the traffic, biology/sedimentation, aesthetic/visual and geology/soils impacts of the proposed project. The project consists of continuing the existing 4 acres of rock quarry and expanding by an additional approximate 9 acres.

Previous Environmental Documentation

An EIR has previously been performed on the proposed project site for a previous expansion of the quarry. The EIR is incorporated by reference into this report and is summarized below. Additionally, there have been two technical reports performed on the site analyzing geotechnical and soils conditions, and archaeological conditions.

Ventura County Environmental Resource Agency, 1975. Draft Environmental Impact Report for Conditional Use Permit 3489. Prepared for Schmidt Construction, Inc., Canyon Country, CA.

Pacific Materials Laboratory, 1988. Geotechnical Exploration for Schmidt Ojai Quarry. Prepared for Schmidt Construction Co., Canoga Park, CA.

MacFarlane Archaeological Consultants, 1989. Phase I Archaeological Reconnaissance 34.6 acre, Schmidt Quarry. Prepared for Schmidt Quarry, Ojai, California.

Summary of Draft EIR for Conditional Use Permit 3489. The Draft Environmental Impact Report for CUP 3489 provides an analysis of the environmental impacts associated with quarry operations on a 34.61 acre site located adjacent and east of Highway 33, approximately 3.25 miles northwest of the City of Ojai, California. The analysis was based on an expected extraction of 80,000 tons of rock yearly from an estimated 2,400,000 tons. Environmental issues analyzed in the DEIR include: air quality; noise; traffic; flooding; water quality; geology; archaeology; plants and wildlife; sanitation; aesthetics; safety; police protection; fire protection; and energy. Additionally, treatment alternatives were suggested as requirements for conditions of approval. Mitigation measures proposed by the applicant were evaluated by County staff but were unclear in regard to timing, method of verification, implementing mechanism and responsible division. The EIR discusses the relationship between local short-term uses and enhancement of long-term productivity. It was concluded that the implementation of mitigation measures would reduce quasi-seismic effects, noise, dust, and flying debris from quarry operations, but it is doubtful that this type of operation would ever be able to blend in with its surroundings. The project's long term productivity would result in a local source of rock material which can be used for construction activities within the county.

Areas of Controversy

The County of Ventura has attempted to provide for public input into the preparation of the Draft EIR to identify issues and concerns. Their efforts have included distribution of a Notice of Preparation and Initial Study. There are four areas of controversy related to the Schmidt Rock Quarry EIR. The controversial issues identified were established through the preparation of an Initial Study for the project.

The following discussion summarizes the major areas of controversy:

1. The impact of project and non-project related traffic on the Maricopa Highway (State Route 33).

2. The impact of the proposed project on biological resources and the project's potential flooding and erosion impacts on existing flora and fauna of the North Fork of the Matilija Creek. Additionally, the impact on the Flood Control District's channels due to the transportation of waste material downstream by flood flow and the redeposition of this waste material in the lower reaches of the Ventura River.

3. The impact of the proposed project on the existing and future aesthetic and visual resources of the Maricopa Highway. This would include the following:

    a. Visibility of the proposed rock quarry expansion to urban areas, travel route users, and surrounding residences.

    b. Visibility of the project to residents in close proximity (one-half mile) to the site.

4. The impact to geology/soils conditions in the project area.

Required Actions

The following actions related to the project have yet to be taken:

- Certification of an Environmental Impact Report
- Approval of Conditional Use Permit

Environmental Impacts

The EIR evaluates the project's potential project specific and cumulative impacts related to traffic, biology/sedimentation, aesthetics/visual, and geology/soils impacts. The General Summary section of this EIR provides a summary of potential impacts, mitigation measures, and level of significance after mitigation for the above mentioned environmental topics. (See page 11).

Alternatives

Alternatives to the proposed project are listed below and are fully evaluated in a subsequent section of this EIR. The Alternative section provides a descriptive analysis and evaluation of each alternative. In addition, the Alternatives Summary Matrix on page 22 displays a comparison of each alternative's potential environmental impacts in comparison to the proposed project.

- No Project
- Alternative Project Location

Growth Inducing Impacts

Within Ventura County, the rock quarry project involves the continuation and expansion of an existing rock quarry. Given the extent of development which has already occurred and that which has been approved, it is unlikely that this project will have a significant growth-inducing effect. The rock quarry expansion is a reflection of growth presently occurring in the region. The project is a response to various types of development occurring throughout the region, market conditions, and evolving consumer demands.

SUMMARY OF UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

This project, in conjunction with other past, present, and reasonably foreseeable future projects, will incrementally contribute to a degradation of the visual quality of the surrounding area to those viewers in the foreground and middleground view zones on both a project-specific and cumulative basis.

SUMMARY OF IMPACTS MITIGATED TO A LEVEL LESS THAN SIGNIFICANT

The proposed project, in conjunction with other past, present, and reasonably foreseeable projects will incrementally contribute to the degradation of the visual quality in the surrounding area for viewers in the background view zone. With implementation of mitigation measures, these impacts will be reduced to a level less than significant. The proposed project will result in impacts to biological resources including vegetation/plant communities, and alteration of the North Fork of Matilija Creek. With implementation of mitigation measures, these impacts will be reduced to a level of insignificance. Impacts due to slope instability and earthquake activity have the potential to exist on the proposed project site.With implementation of mitigation measures, these impacts will be reduced to a level of insignificance.

SUMMARY OF IMPACTS FOUND NOT TO BE SIGNIFICANT

The County of Ventura prepared an Initial Study (located in Appendix A) to identify the effects of the proposed project which are potentially significant. Those topics which were determined not to be significant are stated below:

- Land Use
- Housing
- Mineral and Oil Resources
- Air Quality
- Growth Inducement
- General Plan Consistency
- Human Health
- Light and Glare
- Water Supply

Subsequent to preparation of the Initial Study, a comprehensive archaeological reconnaissance was performed by MacFarlane Archaeological Consultants on March 31, 1991. The study identified a rock shelter of possible cultural significance within the subject property. No evidence was observed which would positively identify the shelter as a prehistoric site; based on the nature of the shelter and its location, the study recommended that quarrying activities avoid this site location. A comparison between the proposed quarry plan and the location of the possible rock shelter indicate that the shelter is not located within the proposed quarry operational area. No impacts are anticipated.

The Initial Study and subsequent cultural resources survey served to focus the scope of this EIR to a discussion of traffic, biology/ sedimentation, aesthetic/visual, and geology/soils issues. This EIR has identified no significant traffic impacts associated with the project.

Resource	Description of Impact	Scope	Mitigation Measure	Level of Significance
Aesthetics/Visual	Implementation of the proposed project will result in impacts to viewers in the foreground and middleground view zones.	Project-Specific and Cumulative	1. Upon completion of each phase as identified in the Operations Plan (Exhibit 5) and the Reclamation plans (Exhibits 6, 7, and 8), landscaping shall be provided along Maricopa Highway at the entrance to the project site, above the Matilija Creek adjacent to the project site and along the access road to quarry operations. 2. Upon completion of each phase as identified in the Operations Plan (Exhibit 5) and the Reclamation plans (Exhibits 6, 7, and 8), the applicant shall landscape the site in a manner consistent with the natural character of the area. 3. Upon completion of quarry operations, the applicant shall provide landscaping to return the site to as natural a state as possible. 4. Prior to excavation, landscaping and irrigation plans shall be prepared in accordance with the Ventura County Guide to Landscape Plans. 5. During excavation, the process of benching as identified in the Operations Plan (Exhibit 5) and the Reclamation plans (Exhibits 6, 7, and 8), will continue to reduce the amount of exposed rock visible.	According to the Natural Forest Service criteria, impacts will remain significant and unavoidable.

Source: EDAW, Inc.

Resource	Description of Impact	Scope	Mitigation Measure	Level of Significance
	Implementation of the proposed project will result in impacts to viewers in the background view zone.	Project-Specific and Cumulative	Mitigation Measures 1 through 5 in the Aesthetics/ Visual section shall apply (same as above).	According to the Natural Forest Service Criteria, with implementation of Mitigation Measures 1 through 5, impacts will be reduced to a level less than significant.
Biology/Sedimentation	Implementation of the proposed project will result in the loss of all existing vegetation which consists of mixed chaparral.	Project-Specific and Cumulative	1. Upon completion of each phase as identified in the Operations Plan (Exhibit 5) and the Reclamation Plans (Exhibits 6, 7, and 8) all revegetation and landscaping shall utilize native species of trees, shrubs and groundcover only.	With implementation of Mitigation Measure 1, project-specific and cumulative will be reduced to a level less than significant.
	Although implementation of the project as proposed would greatly reduce the likelihood of a major slope failure, the potential for minor slope failure and runoff associated with the proposed project may alter the North Fork of the Matilija Creek (considered a blue line stream by the U.S. Department of Fish and Game) and result in erosion and downstream sedimentation impacts.	Project-Specific	2. Pursuant to Section 1601-1603 of the California State Fishing and Game Code, the California Department of Fish and Game shall be notified prior to any alteration of the blue line drainage traversing the property. The purpose of this notification is to allow the state to regulate alterations to streamed habitats, including, but not necessarily limited to, those drainages which are shown by a "blue line" in U.S.G.S. 7.5 minute quad sheets.	With implementation of Mitigation Measures 2 through 5, project-specific impacts will be reduced to a level less than significant.

Source: EDAW, Inc.

Resource	Description of Impact	Scope	Mitigation Measure	Level of Significance
			3. Prior to issuance of grading permits, the project engineer shall develop and implement erosion and siltation control plans, during all phases of quarry operations, to prevent erosion and siltation resulting in the transport of sediment into the drainages onsite and downstream to Matilija Creek where it may adversely impact riparian and aquatic habitat areas.	*
			4. Prior to the issuance of grading permits, the existing interface between the quarry operations and Matilija Creek shall be recontoured so as to provide a protective berm along, but outside, of the riparian habitat. The purpose of this berm would be to stop any minor failures or slumping from reaching the creek and creating a sedimentation problem.	*
			5. Prior to the issuance of grading permits, a silt fence shall be placed at the bottom of the berm recommended in Mitigation Measure 3 on the creek side, to prevent the run-off of water borne sediments from the berm into the creek.	*
<u>Geology/Soils</u>	As with the existing quarry operation, future impacts associated with implementation of the proposed project may result from seismic events.	Project-Specific	1. During quarry operations, bench backcut slopes shall be limited to a maximum of 20 feet in vertical height and laid back at a temporary repose not to exceed 60 degrees. Quarry tailings shall be placed in a systematic method downslope of the previous slope backcut to insure that buttressing of the previous bench backcut slopes exists prior to significant further upslope quarry activity.	With implementation of Mitigation Measures 1 through 12, project-specific impacts will be reduced to a level less than significant.

Source: EDAW, Inc.

*

Resource	Description of Impact	Scope	Mitigation Measure	Level of Significance
			2. During quarry operations, buttress fills shall be created in a near structural manner. This includes preparation of the area to receive fill by creating a level bench, placement of the material in such a manner as to obtain a degree of compaction in excess of 85 percent relative compaction with a final fill slope repose not to exceed 1.5:1.	
			3. As the previously-used quarry benches will be modified into switchback access roads, during quarry operations, care shall be taken to define the access roadway and to provide positive drainage and drainage devices as necessary to avoid downslope artificial fill erosion. This may include but is not limited to consideration of tightline conduits for direct drainage into Matilija Creek, limiting switchback road gradients, sloping switch-back roads back into the hillside and collection of free water drainage on previously cut bedrock formations in lieu of artificial fill and providing planting and irrigation systems on artificial fill slopes to protect their surfaces.	
			4. Two significant shallow-depth landslides are identified upslope of the present quarry area but within the proposed future quarry development. The removed materials may be stockpiled or used for artificial fill and/or buttressing. The limits of landslide removal shall be established by geologic inspection during grading removal.	

Source: EDAW, Inc.

Resource	Description of Impact	Scope	Mitigation Measure	Level of Significance
			5. During quarry operations, the integrity of the existing natural drainage surface located along the west side of the quarry shall be maintained by either closed conduit or open channel flow.	
			6. During quarry operations along the northwest boundary line where significant extension joint-crack openings exist, material shall either be removed or an engineered buttress shall be provided to prevent potential translation. The materials observed may be of significant use in quarry activity and may be better served by full removal down to a more competent, less steeply jointed bedrock zone as indicated on the geologic map. Limits of removal shall be established by geologic inspection during grading removal.	
			7. Final quarry slope repose shall be designed to match existing natural fracture orientations. Since orientations vary per given area, design shall include joint orientations indicated within the geotechnical report prepared by Pacific Materials Laboratory. Actual conditions encountered during quarry activities may require modifications to final slope repose. As a rule of thumb, the final quarry slopes shall be laid back to match existing joint attitudes so as to remove all unsupported fractured sandstone blocks. This condition appears to vary from 35 to 44 degrees and will result in quarry limits well beyond those indicated for the first phase of quarry development.	

Source: EDAW, Inc.

Resource	Description of Impact	Scope	Mitigation Measure	Level of Significance
			8. Prior to continuation of quarry operations, all areas where the natural quarry fracture planes are in excess of 44 degrees, shall be fully identified and these rock slabs be rock-bolted to stabilize units below with sufficient bolts to prevent downslope translation or stabilized in another acceptable manner to prevent translation.	
			9. Prior to removal of rock bolted slabs during quarry operations, new rock bolts will be required upslope to insure stability of increasingly steep slope conditions. Additionally, as a safeguard for quarry workers, well-anchored structural tension netting shall be installed upslope of all quarry areas prior to commencement of quarrying activities.	
			10. Prior to continuation of quarry operations, onsite perched boulders identified upslope of the current quarry activity shall be identified and removed.	

Source: EDAW, Inc.

Resource	Description of Impact	Scope	Mitigation Measure	Level of Significance
			11. Ongoing quarry activity shall be placed under the supervision of a certified engineering geologist and licensed land surveyor providing periodic inspection of measures to ensure quarry safety and to aid in identification of changes of lithology and/or geologic context which may occur during quarry excavation. Of particular significance is quarry work outside the currently proposed limits of Phase I quarry activity, as many upslope areas of concern are extremely steep and not presently readily accessible for confirmation of geologic conditions. An engineering geologist, on at least an annual basis shall be retained to provide progress geologic logging, reports, and recommendations pertaining to the structural geology of the subject site.	
			12. Prior to continuation quarry operations, the precariously steep backcut slopes within the current mining benches of the site shall be modified and backfilled to provide buttressing to maintain a near vertical bench backcut slope height of not to exceed 30 feet.	

Source: EDAW, Inc.

GENERAL SUMMARY OF IMPACTS
AND MITIGATION MEASURES (CONT'D)

Resource	Description of Impact	Scope	Mitigation Measure	Level of Significance
			Mitigation Measures 1 through 12 in the Geology/ Soils section shall apply (same as above).	With implementation of Mitigation Measures 1 through 12, project-specific impacts will be reduced to a level less than significant.
Traffic	No impacts are anticipated.	Not applicable	None necessary.	No impacts have been identified.

Source: EDAW, Inc.

ALTERNATIVES - SUMMARY OF IMPACTS

Topic	Proposed Project Impacts ✷	No Project	Alternative Project Location
AESTHETICS/VISUAL			
Project Impacts	Implementation of the proposed project will result in impacts to viewers in the foreground and middleground view zones.	No additional excavation or removal of vegetation beyond the permitted existing quarry operation would occur with this alternative. Alternative will avoid this impact.	The Mary Smith Quarry is visible from visitors to the adjacent cemetery and scattered residences in the area. Alternative will have a similar impact as the proposed project.
	Implementation of the proposed project will result in impacts to viewers in the background view zone.	No additional excavation or removal of vegetation beyond the permitted existing quarry operation would occur with this alternative. Alternative will avoid this impact.	The Mary Smith Quarry is visible from visitors to the adjacent cemetery and scattered residences in the area. Alternative will have a similar impact as the proposed project.
Alternative Impacts			
Anticipated aesthetic/visual impacts of Alternatives that are not impacts of the proposed project.	----	None	None
BIOLOGY/SEDIMENTATION			
Project Impacts	Implementation of the proposed project will result in the loss of all existing vegetation which consists of mixed chaparral.	No additional excavation or removal of vegetation beyond the permitted existing quarry operation would occur with this alternative. Alternative will avoid this impact.	Expansion of this site would require the removal of similar existing vegetation. Alternative will have a similar impact as the proposed project.

Source: EDAW, Inc.

Topic	Proposed Project Impacts ✱	No Project	Alternative Project Location
	Although implementation of the project as proposed would greatly reduce the likelihood of a major slope failure, the potential for minor slope failure and runoff associated with the proposed project may alter the North Fork of the Matilija Creek (considered a blue line stream by the U.S. Department of Fish and Game) and result in erosion and downstream sedimentation impacts.	No additional excavation or removal of vegetation beyond the permitted existing quarry operation would occur with this alternative, although the potential for sedimentation impacts to Matilija Creek will remain. Alternative will have greater impact than the project.	This alternative is not located on or near a blue line stream. Alternative will avoid this impact.
Alternative Impacts			
Anticipated biology/sedimentation impacts of Alternatives that are not impacts of the proposed project.	----	Alternative would allow the continued existence of unstable and unsafe slopes at the existing Schmidt rock quarry which would result in a major slope failure and cause adverse impacts on Matilija Creek including erosion and downstream sedimentation.	None
GEOLOGY/SOILS			
Project Impacts	As with the existing quarry operation, future impacts could result from seismic events.	This alternative would allow the existing unstable and unsafe slopes at the existing Schmidt Rock Quarry to remain. Alternative will have similar impact as the project.	Excavation at this site occurs on vertical hillsides similar to the proposed project. Depending on geological conditions, this alternative may experience impacts resulting from seismic events. Alternative will have similar impact as the project.

Source: EDAW, Inc.

Topic	Proposed Project Impacts ✷	No Project	Alternative Project Location
	The potential for slope failure exists during quarry activity.	This alternative would allow the existing unstable and unsafe slopes at the existing Schmidt Rock Quarry to remain. Alternative will have similar impact as the project.	Depending on geological conditions, this alternative has the potential for slope failure during quarry activity. Excavation at this site occurs on vertical hillsides similar to the proposed project. Alternative will have similar impact as the project.
Alternative Impacts			
Anticipated geology/soils impacts of Alternatives that are not impacts of the proposed project.	----	Alternative would allow the continued existence of unstable and unsafe slopes at the existing Schmidt rock quarry which could result in more severe impacts from seismic events and slope failure.	Alternative would allow the continued existence of unstable and unsafe slopes at the existing Schmidt rock quarry.
TRAFFIC			
Project-Impacts	No impacts have been identified.	This alternative will not result in an increase in truck trips or traffic. No impacts are anticipated.	This alternative would result in a similar amount of truck trips due to expansion of the site. Alternative will have similar impact as the project.
Alternative Impacts			
Anticipated traffic impacts of Alternatives that are not impacts of the proposed project.	----	None	None

Source: EDAW, Inc.

ALTERNATIVES - SUMMARY OF IMPACTS (CONT'D)

Topic	Proposed Project Impacts ✷	No Project	Alternative Project Location
ENVIRONMENTALLY SUPERIOR TO THE PROPOSED PROJECT	___	Similar	No
UNDER CONSIDERATION	___	Yes	No

Source: EDAW, Inc.

III. PROJECT DESCRIPTION

PROJECT LOCATION

The existing Schmidt Rock Quarry is located in the County of Ventura, California, approximately 3 1/4 miles northwest of the City limits of Ojai. The existing quarry operations occur adjacent and east of Highway 33, and begin about 900 feet northwest of Matilija Road. The project site is shown in its regional context on Exhibit 1. This exhibit depicts the subject property in relation to the major arterials and surrounding cities.

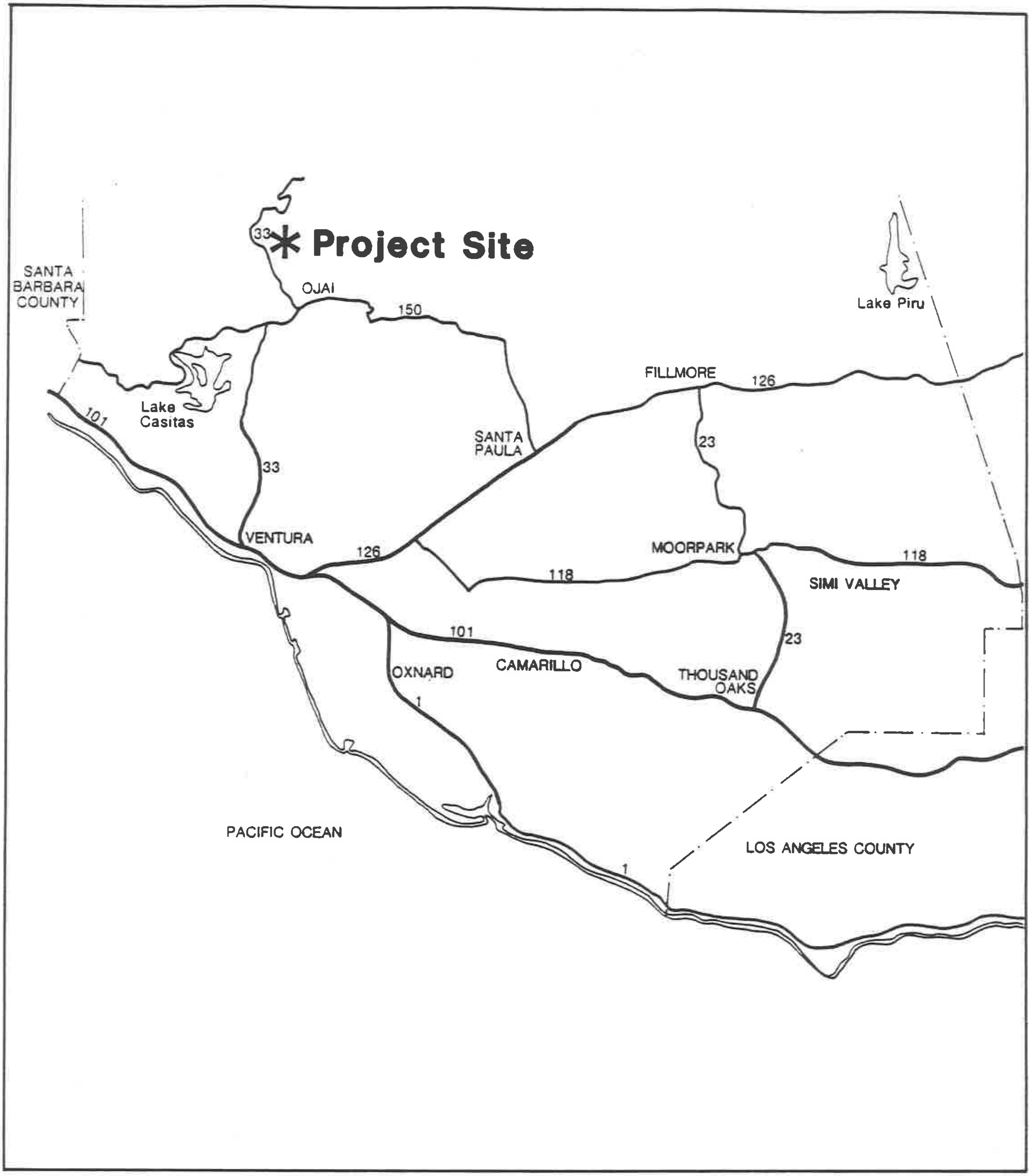
Access to the existing quarry off of the Maricopa Highway is via an existing dirt road. Exhibit 2 depicts the local vicinity of the existing quarry in relation to the proposed project expansion area. The project location is depicted on a U.S.G.S topographical map in Exhibit 3. The existing quarry permit area consists of approximately 4 acres. The applicant is proposing an expansion of the existing quarry permit area to encompass an additional 9 acres of quarry operational area.

The parcel which includes both the existing quarry and proposed expansion area is 34.6 acres and is designated assessor parcel number 010-0-180-275. In addition to the 34.61 acre parcel, the applicant owns an additional 141.9 acres in the surrounding area. This other property consists of assessor parcel numbers 09-0-090-010 (1.76 acres), 09-0-090-050 (31.17 acres), 09-0-090-060 (0.73 acres), 09-0-100-010 (10.60 acres), 09-0-100-030 (24.55 acres), 09-0-100-040 (12.17 acres), 10-0-180-310 (10.04 acres), and 10-0-180-410 (50.88 acres). Exhibit 4 illustrates the location of the aforementioned parcels in relationship to the parcel containing the existing and proposed quarry operations.

The areas surrounding the subject site include the Los Padres National Forest to the north and east. This land is owned by the U.S. Forest Service. The proposed quarry operations lie entirely within the boundaries of the subject property and do not infringe on adjacent forest service property. State Highway 33 is a main paved highway and the north fork of Matilija Creek is used for public recreational use. Both of these border the downslope (southwest) sides of the subject site. The Ventura County owned Matilija Park is located approximately 1,000 feet south of the site. *

PROJECT CHARACTERISTICS

The following describes the existing quarry operation area and the proposed expansion area (proposed project). Both of these areas are contained within the assessors parcel 010-0-180-275 (refer to Exhibits 2 and 4).



Source: EDAW, Inc.

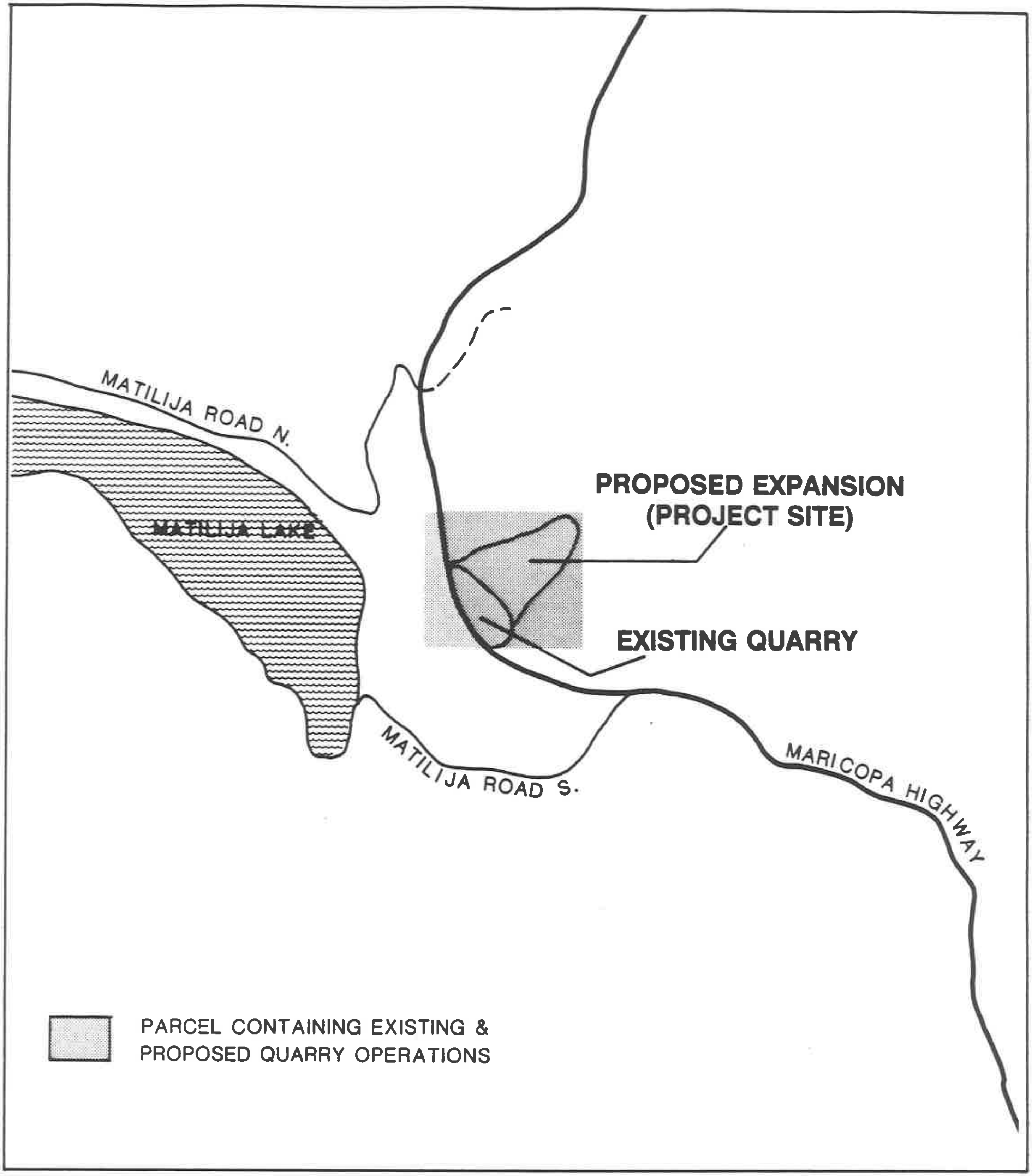
REGIONAL LOCATION

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 1



Source: EDAW, Inc.

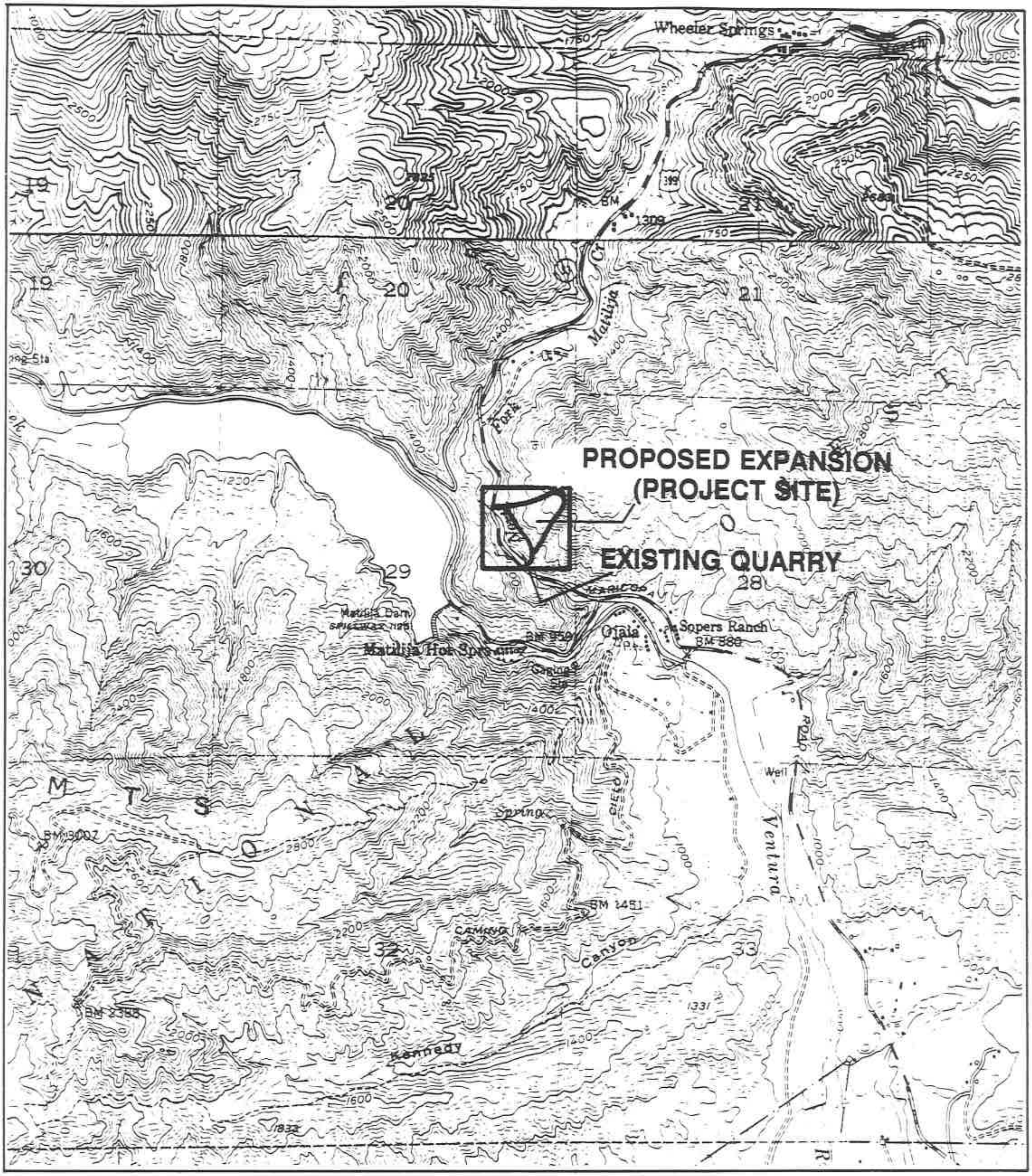
LOCAL VICINITY

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 2



Source: USGS Quad Map-Wheeler Springs & Matilija

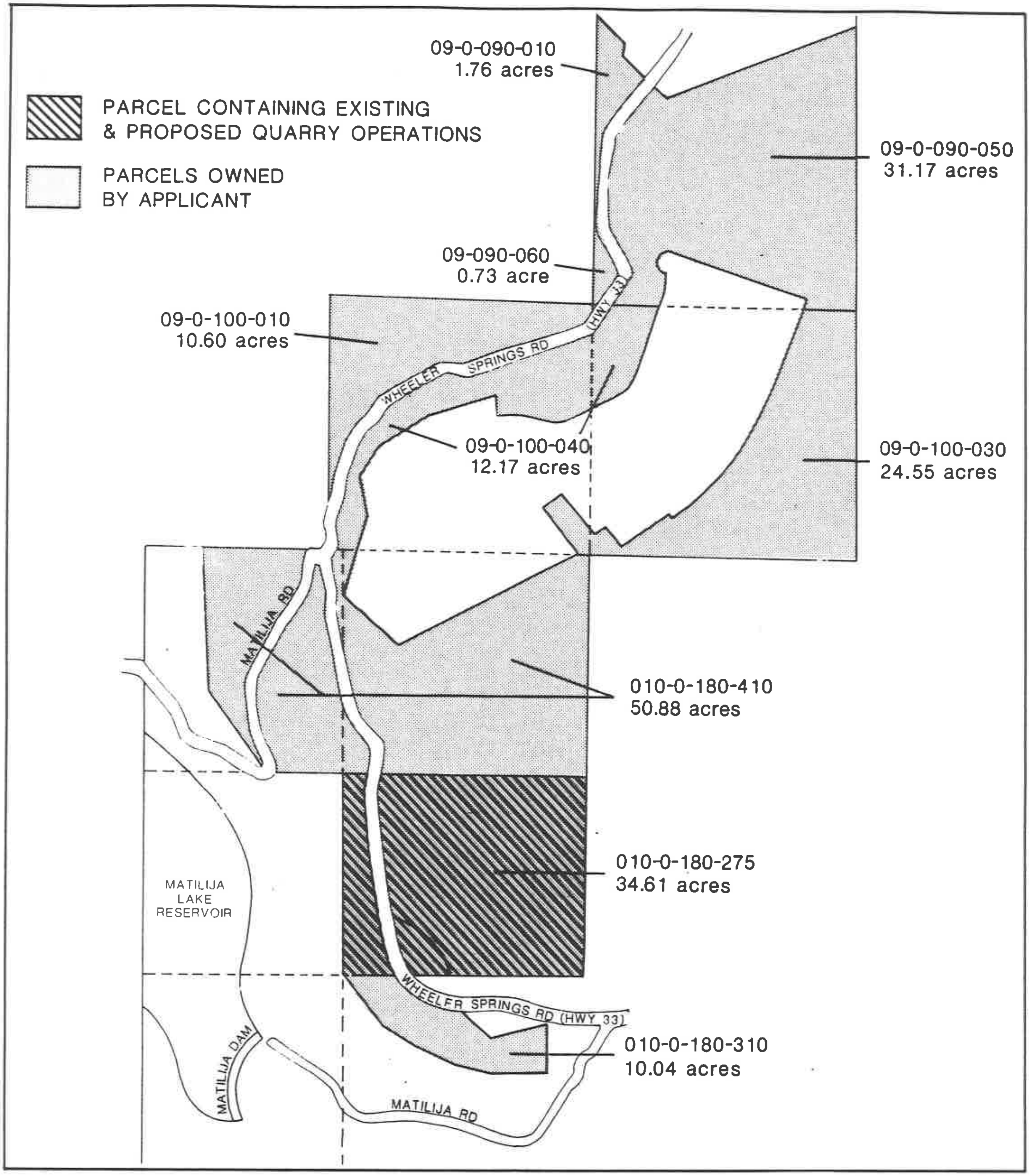
USGS MAP

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

0 2000'

Exhibit 3



Source: EDAW, Inc.

LAND OWNED BY APPLICANT

SCHMIDT ROCK QUARRY
County of Ventura

EDAW
No Scale

Exhibit 4

Existing Quarry Operations

Currently, 4 acres of the 34.61 acre parcel are permitted for mining activities and are being utilized for quarry operations. The remaining 30 acres of the site consist of vacant and mountainous land covered by a moderate growth of field grasses, chaparral and other vegetation, and are not within the existing mining permit area.

The existing quarry is located in the western area of the parcel. Significant cuts into the natural hillside within the quarry area have been made as a result of the mining activity. Previous mining activities at the existing quarry have resulted in unstable and unsafe hillside slopes on the parcel. One objective of the proposed project will be to assist in stabilizing this condition, thus mitigating potential existing hazards. *

The existing quarry areas below the working face/rock loading area consist of a system of dirt switchback roads leading down to the quarry entrance. The area currently being worked consists of a 0.8:1 or steeper rock slope precipice which undercuts the hillside. The quarry slopes contain rock overhangs and large boulders. The materials extracted from the quarry consist of large rocks and sandstone for production of rip-rap, crushed rock aggregate, and related stone products. Rip-rap is used for protection of storm facilities, channel lining and building seawalls. Rip rap produced by the quarry meets both the State and County standards and is sold primarily to the Ventura County Flood Control District. Other customers include the U.S. Army, U.S. Navy, Caltrans, local municipalities and some private individuals.

The existing quarry operates 5 days a week. The hours of operation are permitted between 7:00 a.m. and 7:00 p.m., with the exception that trucks are prohibited from driving through the City of Ojai between the hours of 8:00 a.m. and 9:00 a.m. on weekdays. This exception does not apply on days when Nordoff High School is not in session. The quarry employs a total of eight people, alternating with three workers per day. Currently, no more than twenty loaded trucks are permitted to travel through the City of Ojai on each day of permitted quarry operation. The nature and rate of production at the facility is dictated by market demand and the economy. Therefore, quarry operations are intermittent as opposed to continuous. Stockpile of materials occur at the site.

The typical production rate at the existing quarry ranges from 5,000 to 50,000 tons/year. The actual daily and annual rate of material production depends on weather, the season of the year, and market demand. Thus, there is a great variation in the rate of production from year to year. According to records kept by the applicant, annual production between 1980 and 1990 ranges from 1,996 tons of rock material in 1982 to 115,050 tons in 1983. The average annual production between 1980 and 1990 was approximately 41,347 tons of rock material and for the past four years (1987-1990) the annual average was 28,865 tons.

The type of mining utilized at the quarry is considered open pit including drill and blast techniques. Quarry operations require the placement of blasting charges in the rock face.

Once detonation occurs, the resulting explosion fractures the rock which is then loaded into waiting trucks. No waste is disposed of outside the permitted quarry area. Blasting occurs infrequently, on an as-needed basis, about once every two weeks. Quarry methods include sidehill and multi-bench extractions. This refers to the bench-like excavation cuts which occur in each phase of the reclamation plan on the side of the existing hill. The trucks are weighed and the rock is transported to construction sites throughout Ventura County.

Proposed Expansion

The operations plan for the proposed additional 9 acres which represent the next stage for quarry excavation is depicted in Exhibit 5. The 9 acres are contiguous to the existing 4 acre quarry area and continue operations upward into the hillside in a northeasterly direction. Phasing of the operation plan is discussed below.

The production rate of the proposed mining area would remain basically the same as that currently occurring at the existing quarry area (5,000 - 50,000 tons/year). The method of excavation would be the same as that practiced at the existing quarry (discussed earlier in this section). The operation plan as proposed, is the minimum amount of quarry work necessary to stabilize the existing slope.

The applicant plans to extract approximately 50,000 tons of rock yearly from an estimated 2,400,000 tons of reserves on the 9 acre site. The projected additional 9 acre quarry lifetime is currently estimated to be 50 years. Exhibit 5 illustrates the proposed staged grading plan for the proposed quarry area. The planned quarry slopes meet the safety requirements adopted by the County of Ventura. The plan was reviewed by the County and found to be geotechnically acceptable.

Excavation of the 9 acres will occur in three overall phases. Phasing is depicted in Exhibit 5. Each subsequent phase partially underlies the previous phase and continues operations upward and into the hillside. Phase IA is partially located within the existing quarry operations. This phase consists of approximately one acre, with one half of the area lying within the existing 4 acre quarry operation. Phase IB consists of approximately two additional acres. Phases II and III consist of approximately two and four new acres, respectively. With completion of Phase III, the quarry boundary will lie about 1,000 horizontal feet and 2,000 vertical feet distant from the crest of the nearby ridgeline.

The anticipated cubic yards of cut per phase has been estimated. The computer generated calculations for estimated cubic yards of cut are included in Appendix C. The cubic yards of cut have been converted to tons of cut utilizing a Rock Transport Weight conversion factor of 150 pounds per cubic foot. Phase I estimates approximately 290,000 tons of cut; Phase II estimates approximately 185,000 tons of cut; and Phase III estimates approximately 954,000 tons of cut. The total anticipated tons of cut are approximately 1,430,000.

Reclamation Plans

Plans are to reclaim a portion of the existing 4 acre quarry site by the end of 1995 and another portion by the end of 2000. The reclamation plan for the existing quarry is detailed in Exhibit 6. Exhibits 7 and 8 illustrate the reclamation plan for the proposed continuation area. These plans address disposal of mining tailings and waste, slope stability, re-vegetation and erosion control of Matilija Creek and Highway 33. The reclamation plans call for planting trees or native shrubs where possible to aid in slope stability and erosion control. Large boulders will be placed along existing switchback berms to control drainage. These reclamation plans will include protection devices such as sloping the westerly edge of the quarry site to prevent any materials from rolling into Matilija Creek or onto Highway 33, and the placement of warning signs indicating quarry hazard and possible rockfall danger. Exhibit 8A depicts reclamation and quarry notes. The ultimate physical condition of the entire quarry operational area will appear as graduated benches with a connecting road from bottom to top. ✱

PROJECT OBJECTIVES

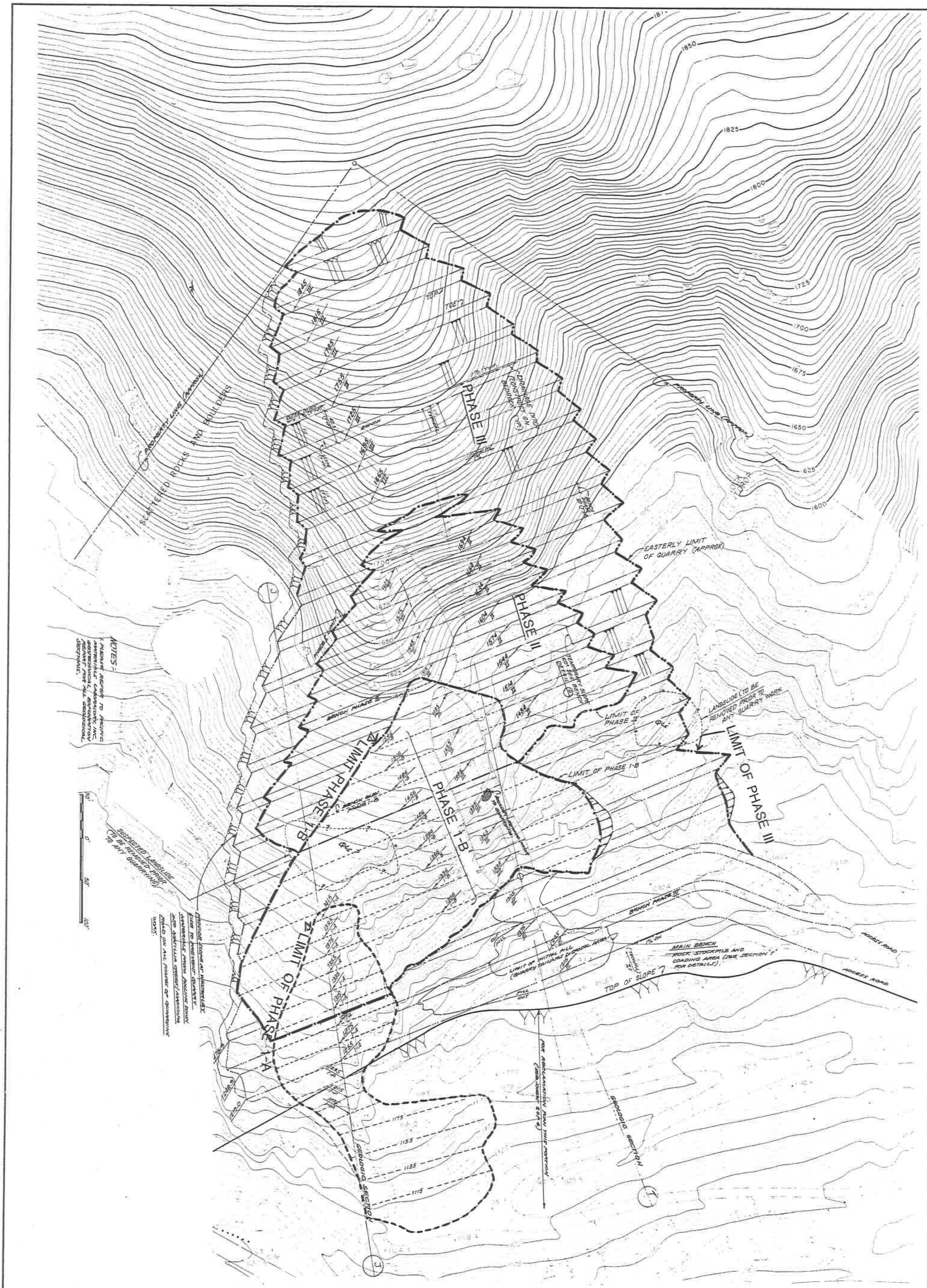
A statement of project objectives is required by Section 15124 of the California Environmental Quality Act. The project objectives of the applicant are:

- To continue to be the sole source provider of rock materials, including rip-rap and crushed rock aggregate, which meet both State and County standards for Ventura County and surrounding areas.
- To continue existing quarry operations and to expand the permit area by an additional 9 acres.
- To eliminate potential erosion hazards which may create runoff into the North Fork of the Matilija Creek.
- To continue excavation operations which meet the standards of the State Mining and Geology Board.
- To ensure proper phased reclamation after completion of quarry operations.

PROPOSED ACTIONS

Conditional Use Permit. The proposed project will require the modification of a conditional use permit, CUP No. 3489(Mod 2) in accordance with the County of Ventura Zoning Ordinance to continue quarry operations.

Certification of an Environmental Impact Report. Acceptance of an environmental document as having been prepared in compliance with the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and certification that the data was considered in the final decision on the project.



Source: LBH Engineering

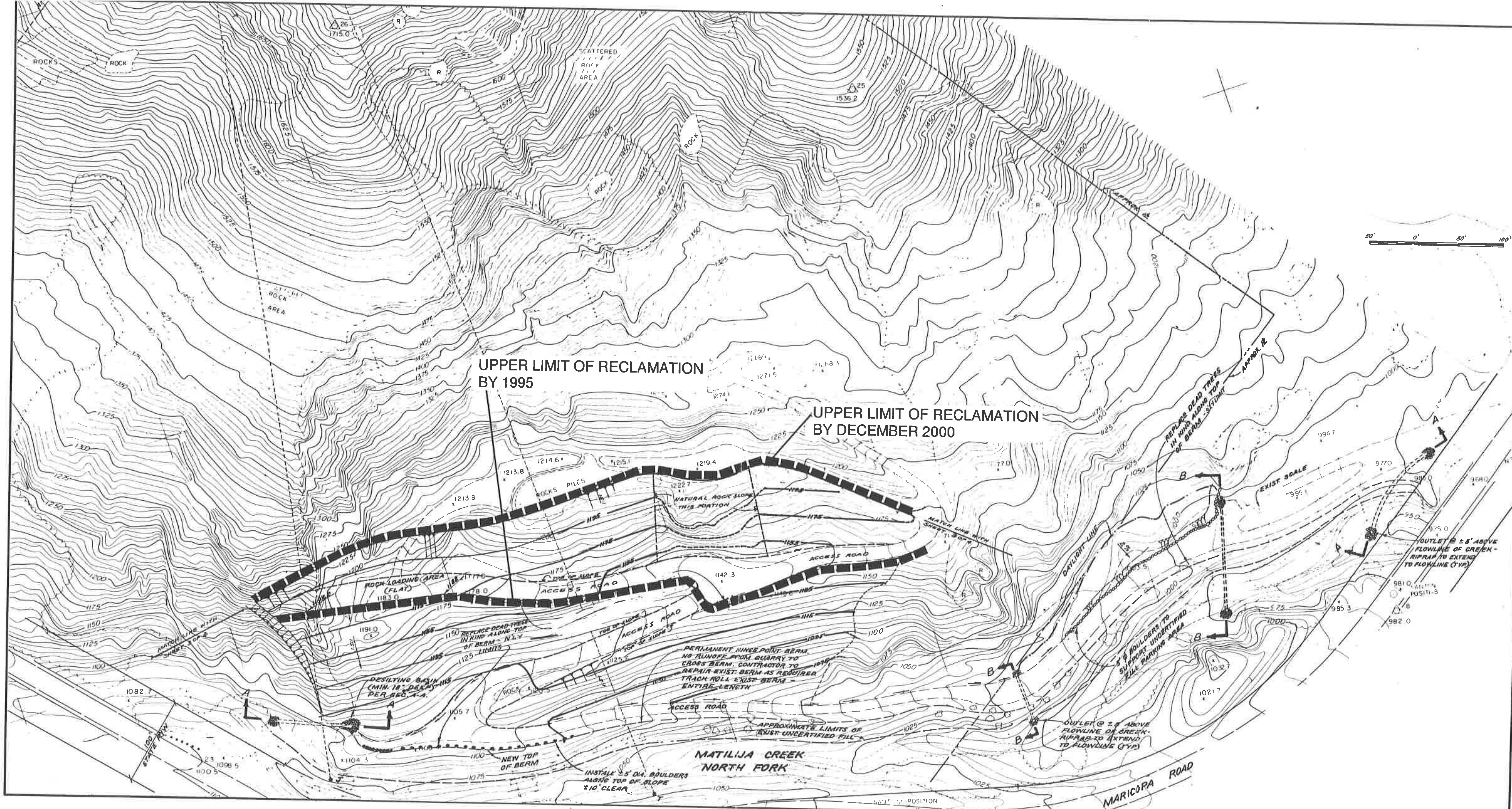
OPERATIONS PLAN

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 5



Source: LBH Engineering

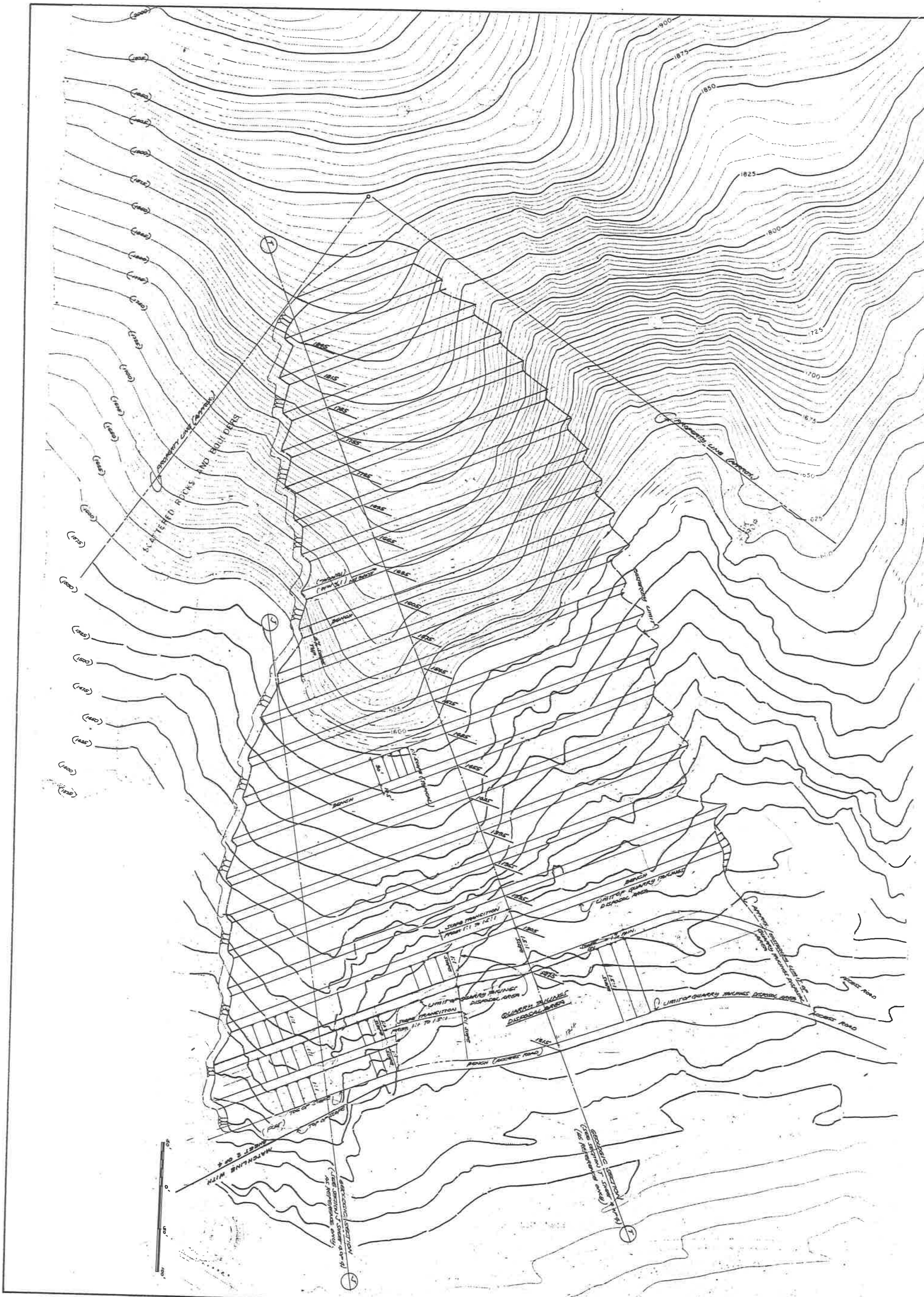
RECLAMATION PLAN FOR EXISTING OPERATIONS

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 6



Source: LBH Engineering

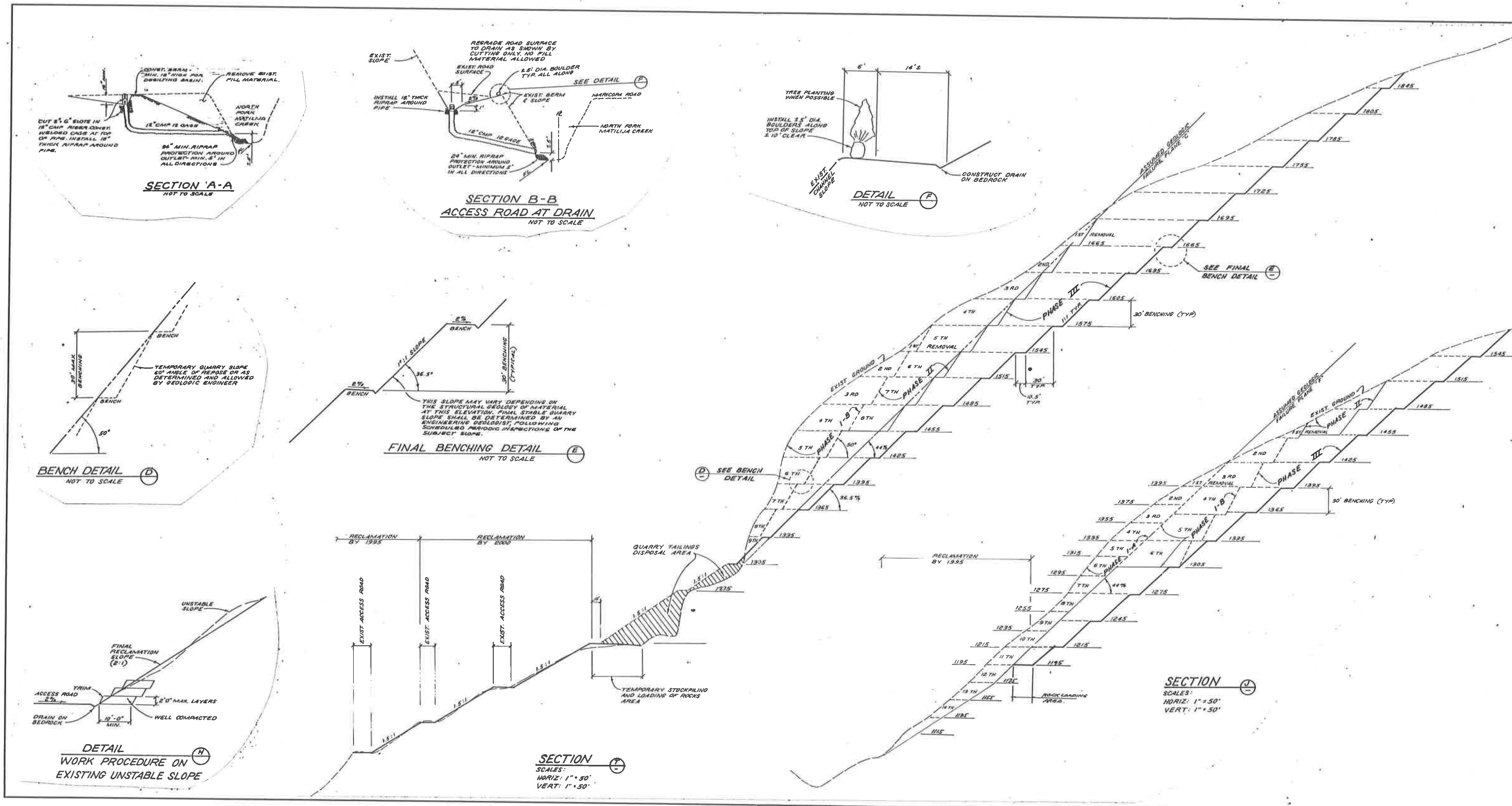
RECLAMATION PLAN FOR CONTINUED OPERATIONS

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 7



Source: LBH Engineering

RECLAMATION PLAN - CROSS SECTIONS AND DETAIL VIEWS

SCHMIDT ROCK QUARRY
County of Ventura

EDAW
No Scale

Exhibit 8

RECLAMATION NOTES:

1.0 ALL ACCESS ROADS SHALL BE GRADED TO DRAIN INTO HILLSIDE WITH BOULDERS PLACED ALONG OUTSIDE OF ROADWAY AS SHOWN IN DETAIL (F).

2.0 ALL EXISTING SLOPES WHERE QUARRY TAILINGS (UNCERTIFIED FILL) WERE USED SHALL BE INSPECTED BY THE ENGINEERING GEOLOGIST TO VERIFY ITS SLOPE STABILITY. IF FOUND UNSTABLE, SAID SLOPE SHALL BE REWORKED USING CERTIFIED FILL TO A STABLE 1:1 SLOPE. SEE DETAIL (H). PLANT TREES OR NATIVE SHRUBS WHERE SHOWN ON RECLAMATION PLAN, SHEET 2 OF 4.

3.0 ALL ACCESS ROAD DRAINAGE CANAL/DITCHES SHALL BE CONSTRUCTED ON EXISTING BEDROCK.

4.0 THIS RECLAMATION PLAN WAS PREPARED BASED ON THE QUARRY EXCAVATION SCHEME AS SHOWN IN THE QUARRY PLAN, BUT DUE TO POSSIBLE CHANGES IN QUARRY OPERATIONS DUE TO CHANGE IN STRUCTURAL GEOLOGY OF UNDERLYING STRATA, THIS RECLAMATION PLAN MAY BE REVISED ACCORDINGLY, SUBJECT TO THE REVIEW AND APPROVAL OF THE LEAD AGENCY.

5.0 QUARRY EXCAVATION SHALL BE UNDER THE OBSERVATION OF AN ENGINEERING GEOLOGIST WHO SHALL PROVIDE PERIODIC INSPECTION ON AT LEAST AN ANNUAL BASIS OF MEASURES TO MITIGATE QUARRY SAFETY AND TO AID IN IDENTIFICATION OF ANY CHANGES IN TERRAIN DISTURBANCE WITHIN OR ADJACENT TO THE QUARRY SITE. ANY CHANGE IN SLOPE PERFORMANCE OR EROSION/SEDIMENTATION CONDITIONS MAY REQUIRE REVISION TO THIS RECLAMATION PLAN. RESULTS OF THE ANNUAL INSPECTION SHALL BE SUMMARIZED IN A REPORT PREPARED BY THE ENGINEERING GEOLOGIST.

6.0 QUARRY EXCAVATION SHALL BE LIMITED TO 30 FOOT MAX. BENCHES WITH TEMPORARY QUARRY EXCAVATION SLOPE NOT TO EXCEED 60 DEGREE ANGLE OF REPOSE. TEMPORARY SLOPES ARE DEFINED AS SLOPES GRADED WITHIN THE PREVIOUS 12 MONTHS. FINAL SLOPES SHALL NOT EXCEED A 45 DEGREE ANGLE OF REPOSE AND SHALL HAVE 10 FOOT WIDE BENCHES EVERY 30 VERTICAL FEET. NO PERCHED BOULDERS SHALL EXIST AT ANY TIME ON THE SITE.

7.0 WARNING SIGN INDICATING QUARRY HAZARD AND POSSIBLE ROCKFALL DANGER SHALL BE POSTED ALONG HIGHWAY 33 BELOW QUARRY SITE. WARNING SIGN SHALL ALSO BE POSTED INDICATING NO RECREATIONAL USE OF CREEK BELOW QUARRY SITE.

8.0 THE WESTERLY EDGE OF THE QUARRY SITE SHALL BE SLOPED AND BERMED TO PREVENT ANY MATERIALS FROM ROLLING DOWN THE NATURAL SLOPE INTO HIGHWAY 33 OR MATILIJA CREEK. IN THE EVENT THAT QUARRY MATERIALS FALL INTO MATILIJA CREEK, SAID MATERIALS SHALL BE REMOVED IMMEDIATELY BY CONTRACTOR.

QUARRY NOTES:

1.0 THIS PLAN WAS PREPARED TAKING INTO CONSIDERATION FINDINGS AND RECOMMENDATIONS OF PACIFIC MATERIALS LABORATORY, INC. REPORT DATED JULY 25, 1988.

2.0 PRIOR TO ANY QUARRY EXCAVATION, ANY ON-SITE PERCHED BOULDERS OR LAND/ROCKSLIDES UPSLOPE THAT POSE DANGER TO ANY DOWNSLOPE QUARRY EXCAVATION SHALL BE REMOVED FIRST.

3.0 QUARRY EXCAVATION SHALL BE DONE IN STAGES. INITIAL STATE SHALL BE LIMITED TO PHASE I EXCAVATION AS FOLLOWS:

STAGE		PURPOSE
3.01	Phase 1-A	TO PREVENT ANY POSSIBLE FAILURE ALONG ASSUMED FAILURE PLANE "D" AND "A" AS SHOWN IN GEOLOGIC SECTION "D-E-F-G" AND "A-B-C" RESPECTIVELY. (ENCLOSURE "B-2" AND "B-1" OF PMLI REPORT DATED JULY 24, 1988).
3.02	Phase 1-B	TO PREVENT ANY POSSIBLE FAILURE ON THE NORTHERLY SIDE OF THE QUARRY ALONG ASSUMED FAILURE PLANE "F". THIS ASSUMED FAILURE PLANE "F" IS SHOWN IN GEOLOGIC SECTION "H-I-J-K" OF SAME REPORT (ENCLOSURE "B-3"). NO ROCKSLIDE IS ANTICIPATED DURING QUARRY EXCAVATION. HOWEVER, IN THE EVENT ANY ROCKSLIDE OCCURS, SUCH ROCKSLIDE WILL BE TOWARDS THE QUARRY SITE AND SHALL NOT POSE ANY DANGER TO THE NEARBY MARICOPA ROAD.

4.0 QUARRY WORK ON PHASE I-A AND PHASE I-B CAN BE DONE TOGETHER. ALL QUARRY EXCAVATION SHALL COMMENCE FROM THE TOP OF SLOPE PROCEEDING DOWNWARD AND SHALL BE PERFORMED ACCORDING TO TYPICAL BENCH DETAIL D.

Source: LBH Engineering

RECLAMATION AND QUARRY NOTES

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 8A

LEAD, TRUSTEE, AND INTERESTED AGENCIES

Lead Agency

In conformance with sections 15050 and 15367 of the State CEQA Guidelines, the County of Ventura is the Lead Agency for the project. The Lead Agency is defined as the "public agency which has the principal responsibility for carrying out or approving the project."

The Lead Agency contact is:

Ms. Beth Painter
Planner II
County of Ventura
800 South Victoria Avenue
Ventura, California 93009
(805) 654-5192

Trustee/Interested Agencies

Trustee Agencies are state agencies having discretionary approval or jurisdiction by law over material resources affected by a project. This EIR is also intended to provide environmental information to government agencies which may be involved in serving the project, or may otherwise have an interest in the development's environmental effects. These agencies include, but are not limited to the following:

Department of Fish and Game
330 Golden Shore, Suite 50
Long Beach, CA 90802
Contact: Kris Lal
(213) 590-5115

State Mining and Geology Board
1416 9th Street, Room 1326-A
Sacramento, CA 95814
Contact: Nancy Steiner
(916) 322-1082

U.S. Forest Service
6144 Calle Real
Goleta, CA 93117
Contact: Lawrence Bembry
(805) 683-6711

This EIR is intended to provide environmental information to a number of agencies which may be involved in serving the project, or may otherwise have an interest in the development's environmental effects. These interested agencies are listed below:

City of Ojai
401 South Ventura Street
Ojai, CA 93023
Contact: Bill Prince

RELATED PROJECTS

When analyzing the cumulative impacts of a project under Section 15130(b)(1)(A) of CEQA, the Lead Agency is required to discuss not only approved projects under construction, but also unapproved projects currently under environmental review with related impacts or which result in significant cumulative impacts.

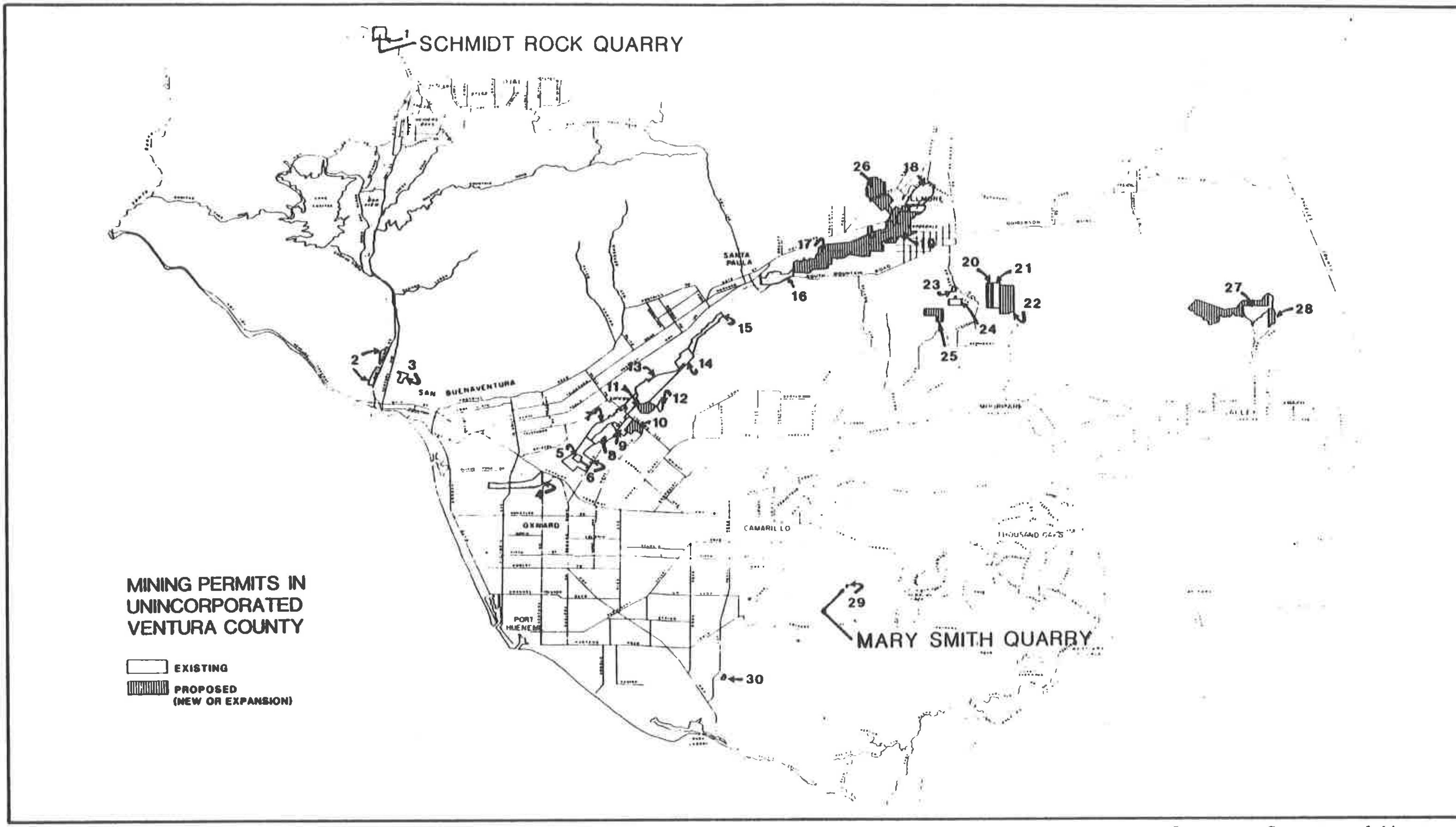
In the County of Ventura there are only two hard rock quarries: the Schmidt Rock Quarry (proposed project) and the Mary Smith Rock Quarry. The Mary Smith Rock Quarry is located approximately 40 miles to the southeast of the Schmidt Rock Quarry near the City of Camarillo. The quarry operates under CUP 3817 and has asked for an extension of current operations and approval to mine up to 86,000 tons/year. The quarry consists of 102 acres of which 62 are currently mined. The Mary Smith Rock Quarry is the only other quarry in the County besides the Schmidt Rock Quarry which is capable of producing rip-rap and crushed rock aggregate. The Mary Smith Quarry is not able to meet State specifications for rip-rap and crushed rock aggregate standards.

The remaining twenty-eight mining operations in the area which are listed in Table A and depicted in Exhibit 9, consist only of sand, gravel, and dirt mining operations. These mining operations are all located within the County of Ventura and primarily along the Santa Clara River. Exhibit 9 also depicts each operation in relationship to the Schmidt Rock Quarry and Table A lists them by CUP number. The legend indicates whether the project is existing or proposed (shaded area). Exhibit 9 also depicts the relationship of the proposed project (CUP-3489) to the Mary Smith Rock Quarry (CUP-3817).

TABLE A
RELATED PROJECTS

Location Map Number	Permit No.	Operator	Principal Products
1	CUP-3489-2	Schmidt Construction	stone (base, rip rap)
2	CUP-1088-4	S.P. Milling	sand & gravel (P.C.C., base)
3	V-2	Ventura Aggregates	clay/shale
4	CUP-4096	Agricultural Land Services, Inc.	landfill cover material
5	CUP-2425	S.P. Milling	process site for CUP-1942
6	CUP-1942	S.P. Milling	sand & gravel (P.C.C., base)
7	CUP-2006	Calmat	sand & gravel (P.C.C., base)
8	CUP-4294	Calmat	sand & gravel (P.C.C., base)
9	CUP-3785	Calmat	sand & gravel (P.C.C., base)
10	CUP-4623	Calmat	sand & gravel (P.C.C., base)
11	CUP-4596	S.P. Milling	low permeability soil for landfill uses
12	CUP-4391	S.P. Milling	soil & rock
13	CUP-1524	S.P. Milling	sand & gravel (P.C.C., subbase)
14	CUP-245-3	S.P. Milling	sand & gravel (P.C.C., base)
15	CUP-1812-2	S.P. Milling	sand & gravel (P.C.C., base)
16	CUP-3390-4	Granite Construction	sand & gravel (P.C.C.)
17	CUP-4539	Granite Construction	sand & gravel (P.C.C., base)
18	CUP-4185	Sespe Rock	sand & gravel (P.C.C.)
18	CUP-4185-1	Sespe Rock	expansion will be processing site for CUP-4580
19	CUP-4580	Sespe Rock	sand & gravel (P.C.C.)
20	CUP-4571	Quality Rock	sand & gravel (P.C.C., base)
21	CUP-4518	Quality Rock	sand & gravel
22	CUP-4633	Blue Star Ready Mix (formerly CUP-1328)	sand & gravel (P.C.C., base)
23	CUP-3451-3	Best Rock Products	decorative rock
24	CUP-4171	Best Rock Products	sand & gravel (P.C.C., base)
25	CUP-4517	Ortega Quarry	sand & gravel (P.C.C., base)
26	CUP-4668	S.P. Milling	sand & gravel
27	CUP-1367-2	C.Z.S. Corp.	sand & gravel (P.C.C., subbase)
27	CUP-1367-3	C.Z.S Corp.	sand & gravel (P.C.C., subbase)
28	CUP-4609	Tapo Rock & Sand (formerly CUP-3348)	sand & gravel (base)
29	CUP-3817	A.J. Sanders	stone (base, rip rap)
30	CUP-4681	Rancho Guadalasca	rock (roadbase & fill)
*	CUP-43	Calaveras Cement	gypsum & anhydrite
*	CUP-212	Pacific Lightweight Products	clay (bentonite), shale

Source: Plan. Div. Permit Files
* Not included on map - located in the north half of Ventura County
[1] To be determined during review



Source: County of Ventura

RELATED PROJECTS

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 9

IV. ENVIRONMENTAL SETTING

REGIONAL SETTING

The 34.61 acre parcel, which includes the existing 4 acre quarry and the 9 acre expansion area, and its surrounding environment, is characterized by ridgelines and valleys. For purposes of this EIR, the expansion area will be referred to as the proposed project site. The project site is located in the eastern Santa Ynez Mountains northwest of Ojai Valley. It is situated on the lower east face of the steep-sided canyon eroded by the north fork of Matilija Creek which intersects the Ventura River approximately 1,500 feet southeast of the subject site. Topographic relief measured from the crest of the ridge located upslope (northeast) of the site to Matilija Creek is roughly 1,030 feet.

The subject property is located in a mountainous area adjacent to the north fork of the Matilija Creek and Highway 33. The area is subject to flood hazards. In the past, flooding has resulted in damage to the adjacent roadway and bridge on Highway 33. Past storms have been responsible for transportation of rock material from the project area to downstream properties.

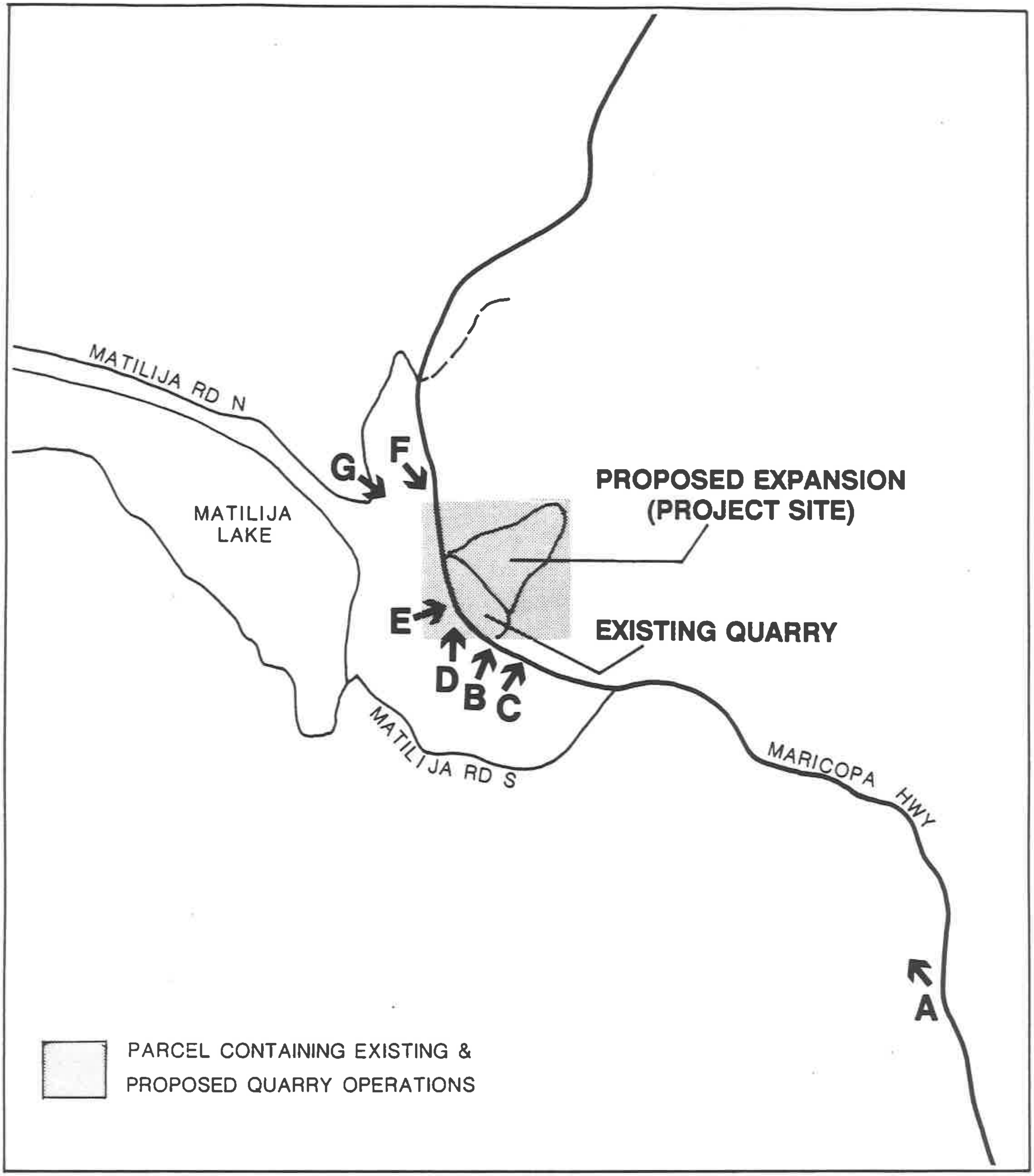
EXISTING AND SURROUNDING LAND USE

Slow vegetative growth occurs on the hard sandstone slopes which cover the quarry area. Artificial (tailing) fills support few shrubs, and the area is also largely barren. Natural slopes are covered by spotty patches of moderately dense shrub-like chaparral and field grasses.

The north fork of Matilija Creek forms the major through-flowing stream for drainage of a large watershed extending for several miles northeastward of the site into the Wheeler Gorge Area. Matilija Creek flows year-round and may be subject to overflow during periods of flooding and heavy rainfall. All site drainage presently flows in a relatively controlled manner to Matilija Creek.

The north folk of the Ventura River (Matilija Creek) is a habitat for planted and native trout populations. Past quarry operations according to the County Public Works Agency have hindered fish migrations. The California Department of Fish and Game reports that spawning in this section of the river has been reduced due to stream blockages and the effects of erosion.

Exhibit 10 (the Site Photo Index), Exhibits 11-16 illustrate the existing conditions of the existing quarry and the proposed project site. Exhibit 11 Site Photo A is a view of the existing quarry looking north from the Maricopa Highway approximately 2 miles south of the existing quarry. Site Photo B is a view of the existing quarry immediately off of the Maricopa Highway. Depicted in this view is the entrance to the project site, portions of Maricopa Highway, and equipment associated with existing quarry operations.



Source: EDAW, Inc.

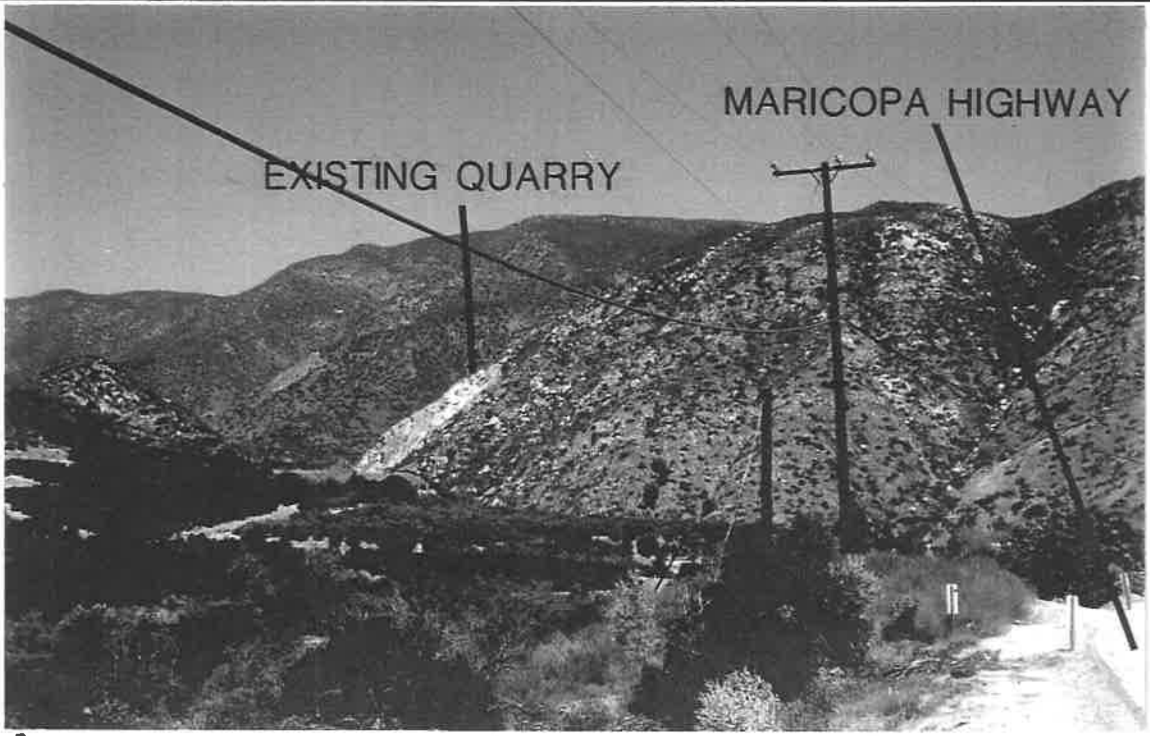
SITE PHOTO INDEX

SCHMIDT ROCK QUARRY
County of Ventura

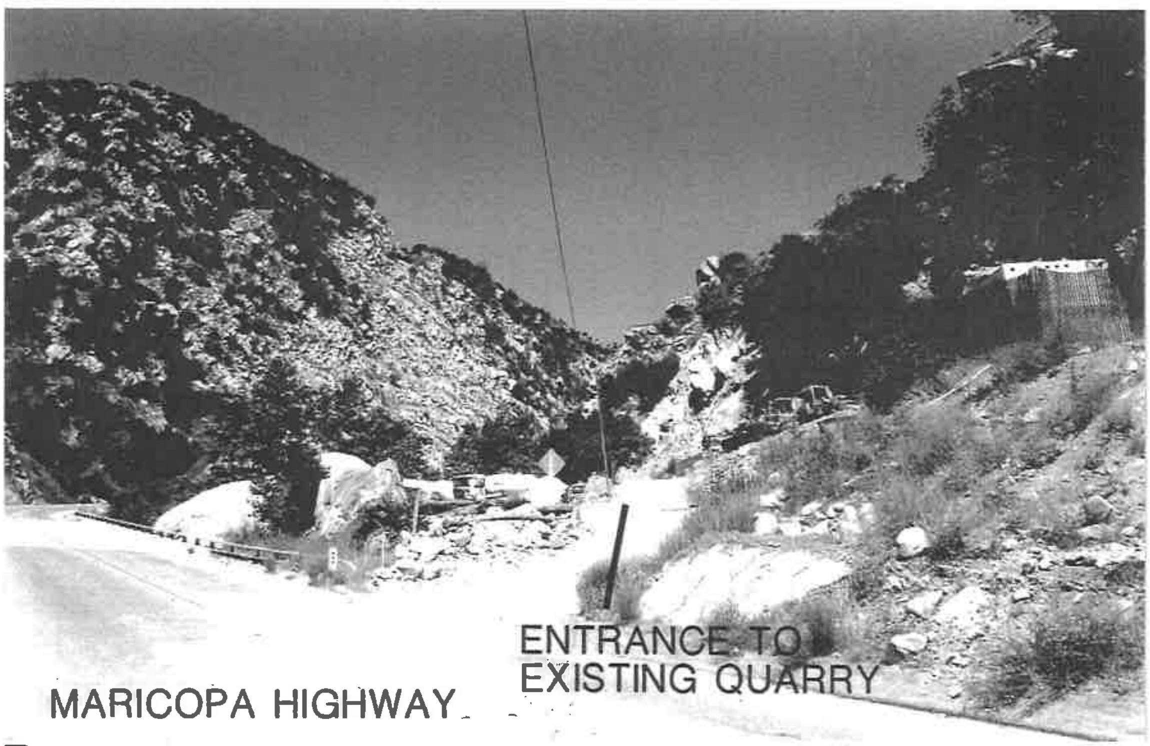
EDAW

No Scale

Exhibit 10



A VIEW OF EXISTING QUARRY LOOKING NORTH FROM MARICOPA HIGHWAY APPROXIMATELY 2 MILES SOUTH.



B VIEW OF ENTRANCE TO EXISTING QUARRY OFF MARICOPA HIGHWAY.

Source: EDAW, Inc.

SITE PHOTOS

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 11

Exhibit 12 Site Photo C is a view from the existing quarry's southern boundary line looking northeast. This view depicts the entrance to the existing quarry and equipment associated with quarry operations.

Exhibit 13 Site Photo D is a view of the existing quarry area looking northeast from northbound Maricopa Highway. Depicted in this view is the Matilija Creek, the Maricopa Highway and surrounding hillsides.

Exhibit 14 Site Photo E is a view of the existing quarry area looking east from the Maricopa Highway. Depicted in this view are Maricopa Highway, the Matilija Creek bed and equipment associated with Quarry operations.

Exhibit 15 Site Photo F is a view of the existing quarry area and the proposed project site looking southeast from southbound Maricopa Highway. Depicted in this view are the Maricopa Highway and the Matilija Creek.

Exhibit 16 Site Photo G is a view of the existing quarry area and the proposed project site looking southeast from an adjacent hillside, near north Matilija Road. This view depicts the existing quarry operation, portions of the Maricopa Highway, the surrounding hillsides and the Ojai Valley.

The surrounding area is National Forest land. These lands are heavily vegetated and serve as a wildlife habitat. The National Forest is also a recreational area that provides facilities for camping, hiking, fishing and swimming within its boundaries.

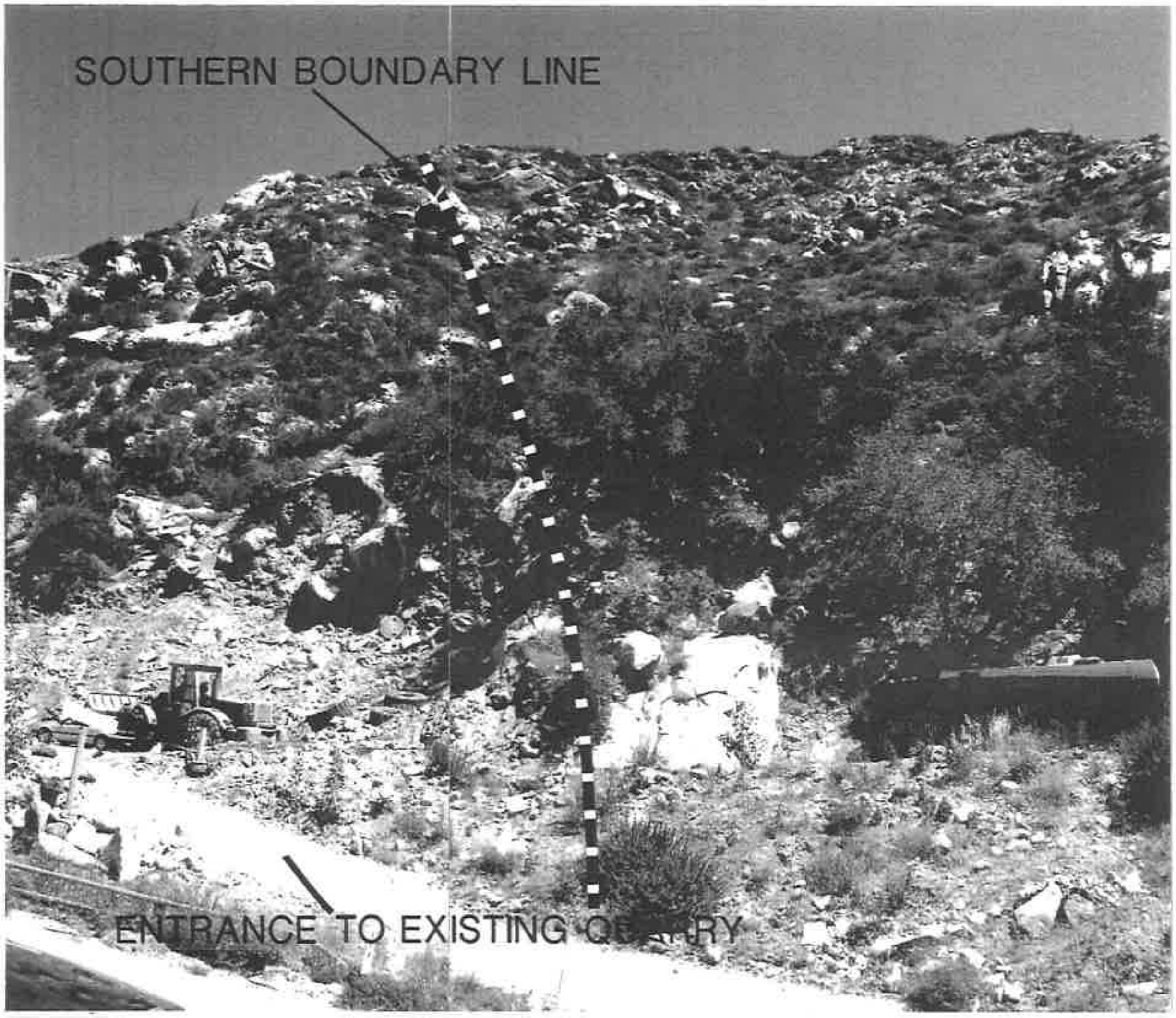
EXISTING CIRCULATION SYSTEM

Access to the existing quarry and the proposed project site is via the Maricopa Highway (State Route 33), which is a public roadway. Direct access to the project site is from an existing dirt road.

APPLICABLE POLICIES AND REQUIREMENTS

The following section is a summary of applicable policies and requirements that pertain to the project site. The proposed project site is located within the unincorporated area of Ventura County and outside the City of Ojai's Sphere of Influence. The plans and policies that pertain to the visual resources of this site include:

- County of Ventura General Plan
- County of Ventura Zoning Ordinance
- County of Ventura Scenic Highways
- Surface Mining and Reclamation Act (SMARA)



C VIEW FROM EXISTING QUARRY AREA'S SOUTHERN BOUNDARY LINE LOOKING NORTHEAST.

Source: EDAW, Inc.

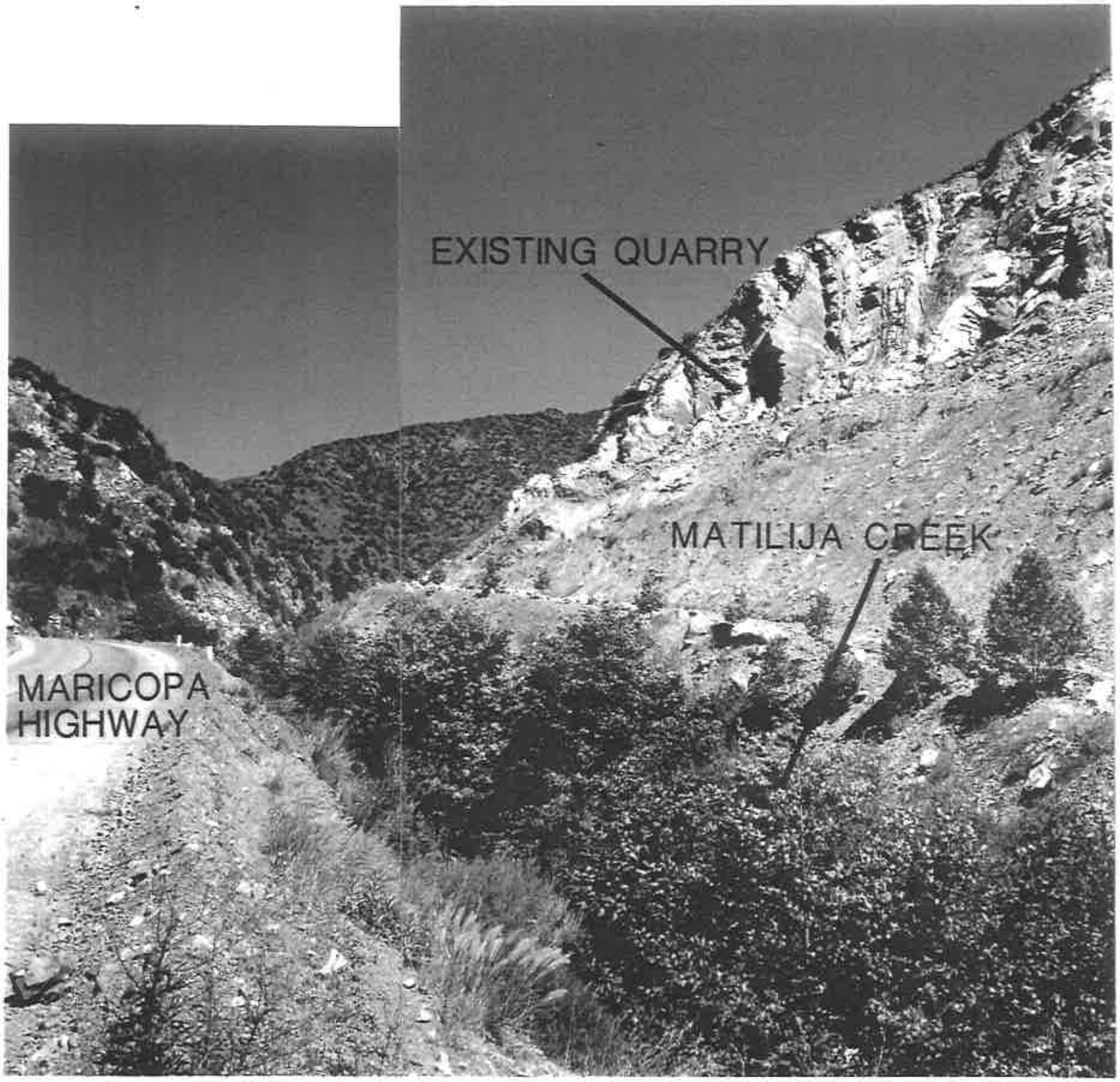
SITE PHOTOS

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 12



D VIEW OF THE EXISTING QUARRY AND MATILIJA CREEK LOOKING NORTHEAST FROM NORTHBOUND MARICOPA HIGHWAY.

Source: EDAW, Inc.

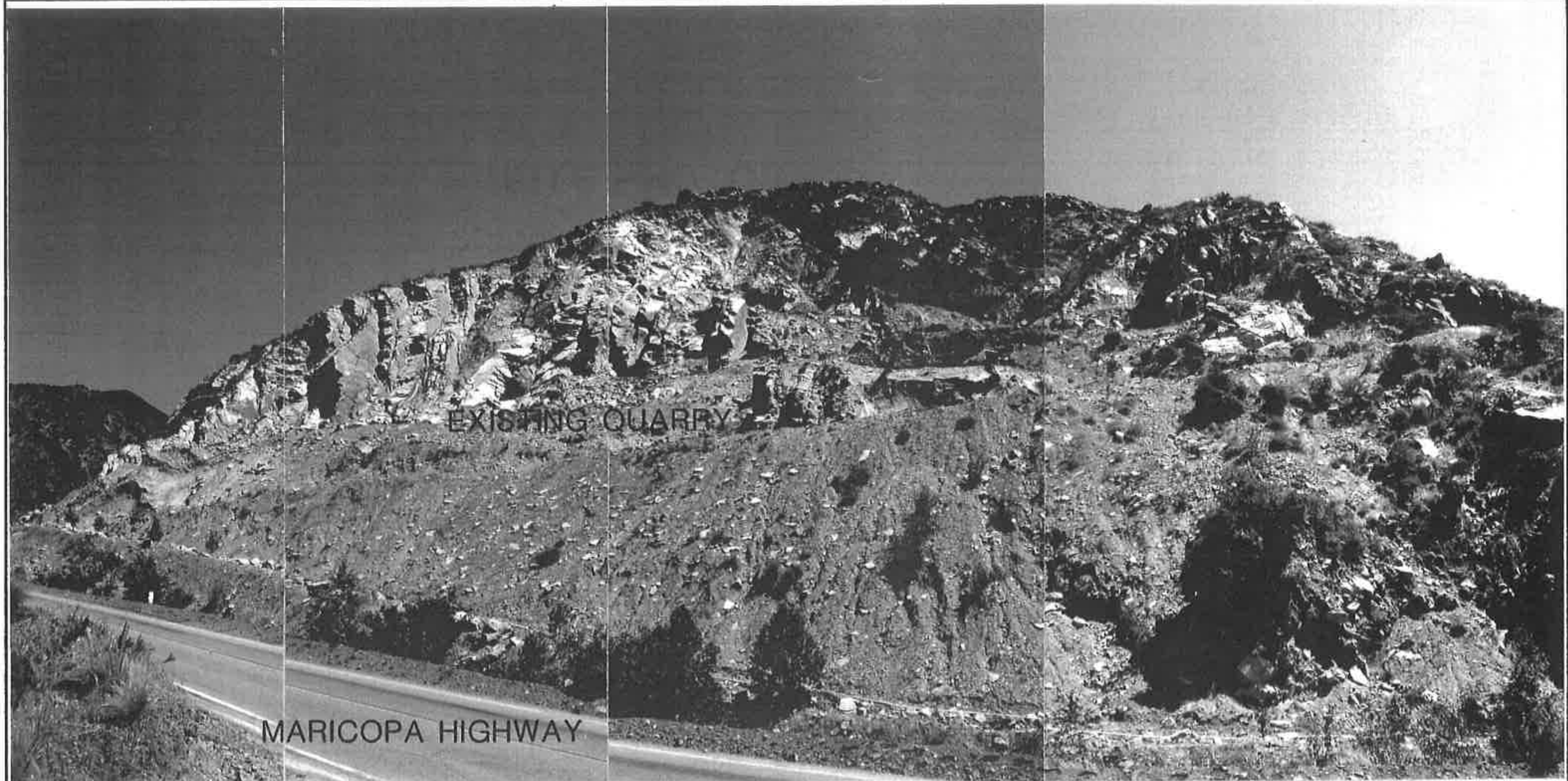
SITE PHOTOS

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 13



E VIEW OF EXISTING QUARRY LOOKING EAST FROM MARICOPA HIGHWAY.

Source: EDAW, Inc.

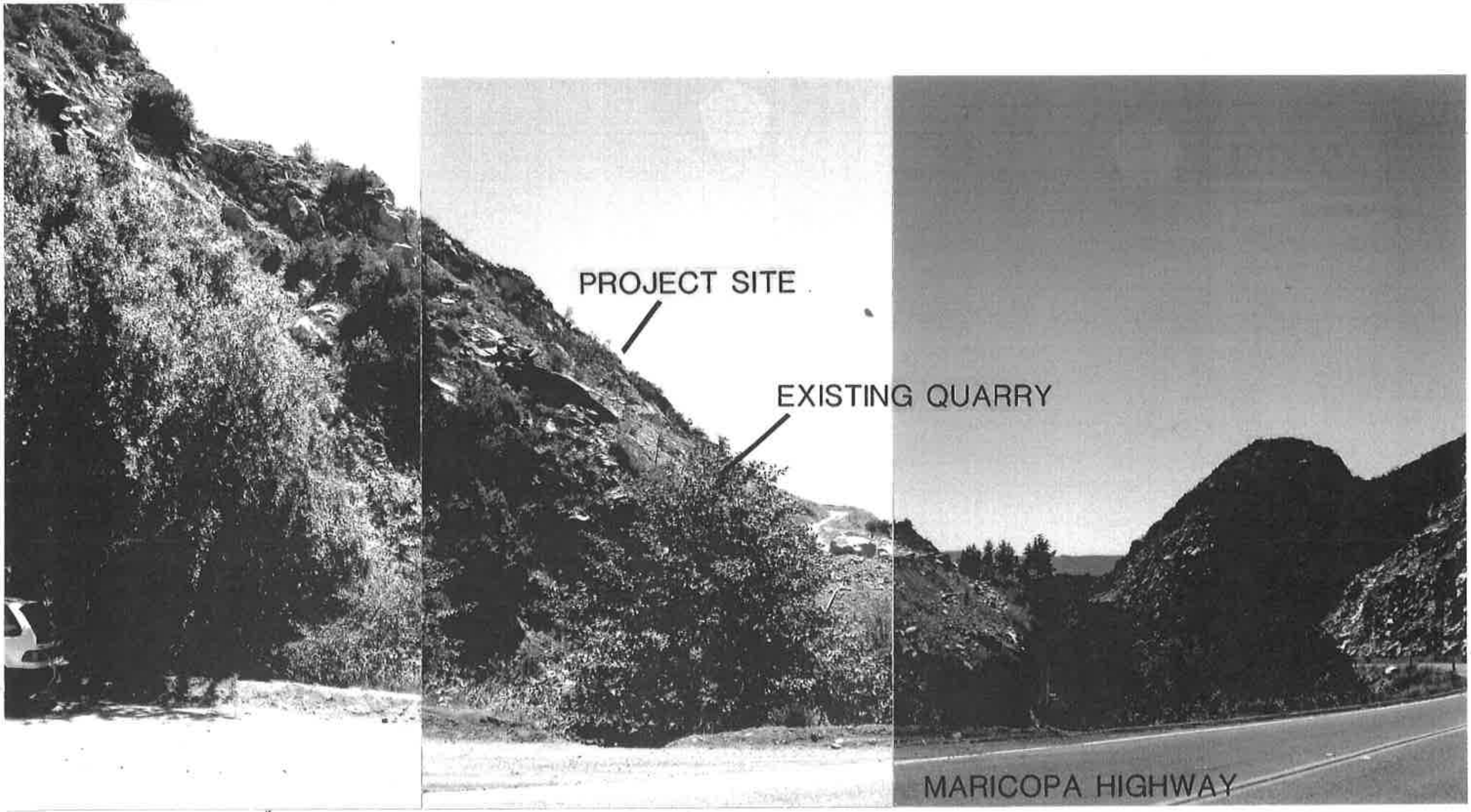
SITE PHOTOS

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 14



F VIEW OF EXISTING QUARRY AND THE PROJECT SITE LOOKING SOUTHEAST FROM SOUTHBOUND MARICOPA HIGHWAY.

Source: EDAW, Inc.

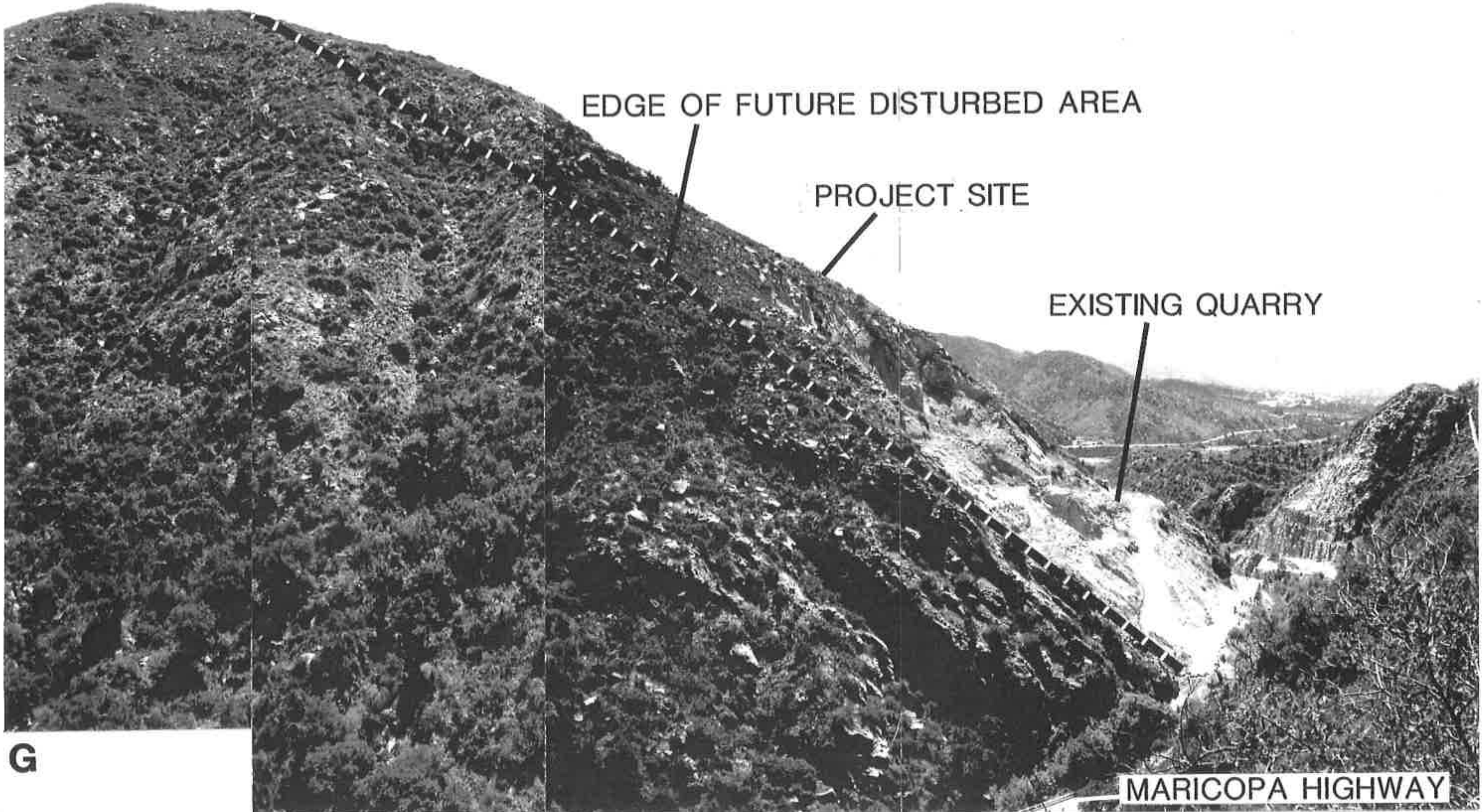
SITE PHOTOS

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 15



VIEW OF EXISTING QUARRY AND PROJECT SITE LOOKING SOUTHEAST FROM ADJACENT HILLSIDE, NEAR NORTH MATILIJA ROAD.

Source: EDAW, Inc.

SITE PHOTOS

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 16

General Plan

The County's General Plan is composed of a Countywide Goals, Policies and Programs document containing four chapters (Resources, Hazards, Land Use, and Public Facilities and Services). Additionally, the County's General Plan contains several Area Plans which contain specific goals, policies and programs for specific geographical areas of the County. These Area Plans do not necessarily border each other nor do they collectively cover the entire County. The proposed project site is not located within an Area Plan and has been designated as Open Space. The project site does not occur in a Mineral Resource Area as identified on the Resource Protection Map of the General Plan. The project lies outside the area inventoried for mineral resources by the State.

The Resources Appendix of the Ventura County General Plan describes the provisions of the State Scenic Highway Law for the regulation of land uses within the viewshed of a state scenic highway. The entire length of Highway 33 from milepost 17.5 to the Santa Barbara County line (includes the roadway segment adjacent to the project site) has been designated as a State Scenic Highway, and is identified as a Scenic Highway Protection Area on the Resource Protection Map.

Zoning Ordinance

The County of Ventura has zoned the proposed project site as Open Space (O-S). The County's Zoning Ordinance states that the Open Space (O-S) zone is to provide for the conservation of renewable and nonrenewable natural resources, to preserve and enhance environmental quality and to provide for the retention of the maximum number of future land use options while allowing reasonable and compatible uses on open lands in the County which have not been altered to any great extent by human activities. Regulations for mineral development are contained in Article 7, Section 8107-9 of the Zoning Ordinance. The purpose of this regulation is to establish a reasonable control on mining practices to ensure that these activities will be conducted in an environmentally sound manner and that mined sites will be appropriately reclaimed.

Surface Mining and Reclamation Act

In 1975, the Surface Mining and Reclamation Act (SMARA) was enacted . The Act governs surface mining operations and the reclamation of mined lands. It also provides for the submission of reclamation plans to, and issuance of permits by, lead agencies to persons engaging in surface mining operations. SMARA has two basic objectives. One is to ensure the proper reclamation of surface mining operations, and the other is to safeguard access to mineral resources of regional and statewide significance in the face of competing land uses and urban expansion. The Act also applies to rock quarries which exist in many Southern California cities.

To ensure proper reclamation of mining sites, the SMARA requires all jurisdictions in which mining occurs to adopt a reclamation ordinance and have it certified by the State Mining and Geology Board (Sec. 2774.3(a) SMARA). Ventura County has adopted such an ordinance (Sec. 8107-9 of the Zoning Code) which was found to be acceptable by the State Board. SMARA also provides for the inventory and classification of significant mineral resources throughout the state. Finally, SMARA requires that local jurisdictions develop mineral resource management policies to minimize land use conflicts and conserve mineral resources.

The State Division of Mines and Geology developed guidelines for local jurisdictions developing Mineral Resource Management Policies (MRMP). These guidelines included the following goals:

- Mineral lands designated MRZ-2 should be protected from incompatible uses.

- Surface mining in designated lands should be controlled to minimize environmental impacts, to reclaim to a usable condition for alternative land uses, to encourage mineral production while giving consideration to other land uses and environmental resources, and to remove any residual hazards to the public.

In 1985, the Ventura County Board of Supervisors adopted a Mineral Resource Management Program (MRMP) that addressed the goals and guidelines established by the state. The MRMP consisted of the following elements:

- Mineral resource policies in the Conservation and Open Space Elements of the Ventura County General Plan
- Mineral Resource Background Report to the Open Space and Conservation Elements
- Mineral resource zoning ordinances
- Mineral Resource Management Goals and Policies
- Mining time limit guidelines

Components of the 1985 MRMP were eventually incorporated into: 1). the revised 1988 Ventura County General Plan, the Mineral Resources Goals and Policies (Section 1.4); 2). the Mineral Resource Background Report in the Resources Appendix; and 3). Zoning Ordinance Article 7.

Recent amendments to SMARA include Chapter 1097, Statutes of 1990 and Assembly Bill 3551 (AB 3551). These changes increase the role of the State Division of Mines and Geology (DMG), as well as require greater regulation of mining and reclamation by the local jurisdictions. The major new requirements are as follows:

1. The State Mining and Geology Board (SMGB) is now required to adopt regulations by January 1, 1992 specifying minimum verifiable statewide standards for the reclamation of mined lands (SMARA Section 2773 (b). These standards shall address disposal of mining tailing and waste, backfilling, slope stability, re-vegetation, erosion control, agricultural land restoration, stream protection and wildlife habitat impacts.

2. A report must be filed to the State Geologist by July 1, 1991 identifying 16 items pertaining to the mining operation. Some of these include location; status of mining; size of mining operation; proof of annual inspection by lead agency; proof of financial assurances for reclamation; a copy of any approved reclamation plan and any amendments.

3. The operator must provide a financial assurance to cover the costs of reclamation to the DMG and local lead agency that can be adjusted annually to reflect the acreage of land to be reclaimed. ✱

4. The financial assurances can be forfeited if reclamation requirements are not met, and the DMG and lead agency will perform reclamation.

5. Under certain circumstances, the DMG can assume lead agency responsibilities.

6. The local lead agency must inspect each mine within 6 months of receiving the annual report. The inspection may be conducted by a registered geologist. A DMG form must be used and the results must be submitted to the state. The purpose of the inspection is to ensure compliance with applicable laws, regulations, and requirements.

V. ENVIRONMENTAL ANALYSIS

AESTHETICS/VISUAL

EXISTING CONDITIONS

The Schmidt Rock Quarry site is located on the east side of the Maricopa Highway (State Highway 33) approximately 900 feet northwest of Matilija Road and 3-1/4 miles northwest of the City of Ojai, California.

The current quarry operation begins excavation from approximately 1,200 feet above sea level. The visual quality of the resource has been altered by the existing quarry operation. The viewshed of the existing 4 acre quarry consists of exposed rock, rock pilings and an access road. The vegetation surrounding the existing quarry and the 9 acre project site consists of field grasses, bushes and shrub-like chaparral. Small trees have been planted along the existing quarry access road and on the quarry's lower slopes.

Exposed rock is currently visible on the existing quarry site. These rock outcroppings are a noticeable contrast to the surrounding area. The existing rock quarry operation is visible from Maricopa Highway from as far away as four miles. A view of the existing quarry from the south is provided in Exhibit 11, Photo A (Refer to the Environmental Setting section). It appears lighter on the hillside relative to the surrounding vegetation. Beyond the immediate surroundings is the U.S. Forest Service property which is more heavily vegetated.

Exhibit 12, Photo C (Refer to the Environmental Setting section) presents a view from the existing quarry's southern boundary line looking northeast. A small working area is visible at the existing quarry entrance. Exhibit 13, Photo D, provides a view from Maricopa Highway just beyond the entrance and adjacent to the site. The existing quarry operation is visible from this distance. The existing quarry and the project site are not visible from Maricopa Highway when approaching from the north until the viewer is almost immediately adjacent. See Exhibits 15 and 16, Photos F and G (Refer to the Environmental Setting section). The hillside and natural vegetation serve as a visual barrier on the north side.

Exhibit 14, Photo E presents a view of the existing quarry project face from the west looking east from Maricopa Highway. A large mass of exposed rock is visible. Small trees have been planted along the access road and the adjacent hillside. The trees offer little detraction from the quarry site as they are not fully grown. *

IMPACTS

CEQA defines a significant adverse visual impact as one which has a substantial and demonstrable negative aesthetic effect. For the purposes of this EIR, the criteria that are used to define such an impact have been established by the U.S. Forest Service. These criteria are substantial obstruction of: 1) unique environmental or man-made visual features; or, 2) views from important public gathering places.

<u>Methodology - Visual Resource Management System (VRM)</u>

Objectively measuring the level of potential impact to an amenity resource such as aesthetic visual quality is a subjective process. Impacts to visual resources are difficult to quantify in physical or economic terms. The U.S. Forest Service has had one such system developed for visual resource management (VRM). This system has been incorporated into the impact analysis. The first step of this methodology is to identify landscape classifications based on scenic quality, the second step is to identify viewer sensitivity related to levels of concern, the third step is to identify the viewing zone related to distances, and the fourth step is to identify the visual quality in terms of retention and modifications.

Step 1: Identify Landscape Classification

The classification of characteristic landscapes is based on its scenic quality. In the visual resource management (VRM) system, areas of unique or outstanding scenic quality are classified as a distinctive variety class (variety class A). Areas which are not outstanding in visual quality are referred to as a common variety class (variety class B), and areas which have become blighted or which have poor visual quality are classified as being a minimal variety class (variety class C).

The entire length of the Maricopa Highway 33 from milepost 17.5 to the Santa Barbara County line has been designated as a State Scenic Highway, and is identified as a Scenic Highway Protection Area. Therefore, the area containing the existing quarry and the proposed project can be classified as a distinctive variety class (variety class A).

The visual features within a landscape which rank the area as a distinctive variety class are the benchmark against which common and minimal areas can be judged. The dominant or visually distinct elements within an area are the features by which judgments of the characteristic landscape are made. Dominant elements are those which are the simplest visually recognizable parts of the characteristic landscape.

Step 2: Identify Viewer Sensitivity

Once the characteristic landscape or variety class is known (in this case variety class A), it is necessary to establish the level of concern of the viewer for the scenic quality. This level of concern is termed in the VRM system as the viewer sensitivity level and is determined in a two sub-step process.

The first sub-step in determining viewer sensitivity is to establish the primary and secondary importance of their visual relationship to the project site. Two groups of viewers are examined in this analysis, 1) residents of the surrounding community and 2) users of Highway 33 (this latter group is discussed later in this section under the heading Travel Routes).

The first group of viewers are the residents of the communities surrounding the 9 acre proposed project site. Those residents of primary importance are those which are currently living or working in the area and have a direct view of the proposed project site in most of their daily activities. Residents of secondary importance can be characterized as those that live in the area or may plan on relocating to the area in the near future that would not have a direct view of the site in most of their daily activities. These activities include living in a residence or working at a facility that can see the site from home, work, school, errands, and recreational activities. The distance from the proposed project site to those residents is a major factor in determining primary and secondary importance.

The second sub-step in determining viewer sensitivity levels involves the aesthetic concerns of the residents who are landscape viewers. A major concern for aesthetics is usually expressed by residents who can see the proposed project site directly from their residence. A minor concern for aesthetics is usually expressed by those not in direct view of the site.

The highest viewer sensitivity level (sensitivity level 1), as displayed in Table B, includes all areas viewed from primary residences where, as a minimum, at least one fourth of the residents have a major concern for the scenic quality. It also includes all areas viewed from secondary residences where at least three fourths of the residents may express major concern for the scenic quality.

An average sensitivity level (sensitivity level 2) includes all areas viewed from primary residents where fewer than one-fourth of residents have a major concern for visual quality or where at least one-fourth and not more than three-fourths of secondary residents have a major aesthetic concern.

The lowest sensitivity level (sensitivity level 3) includes all areas viewed from secondary residents where less than one-fourth of residents have a major concern for scenic qualities.

Studies conducted in Ventura County in the past have demonstrated that substantial concern with visual resources exists and preservation of visual resources is very important. By assuming that this attitude still prevails, the view area from the communities surrounding the proposed project site can be judged to have a high sensitivity level (sensitivity level 1). *

TABLE B
SUMMARY OF RESIDENTIAL AND USER VIEWING SENSITIVITY LEVELS

USE	SENSITIVITY LEVEL 1 (HIGH)	2 (AVERAGE)	3 (LOW)
Primary Residents and Users	At least 1/4 of residents have major concern for scenic qualities.	Less than 1/4 of uses have major concern for scenic qualities.	
Secondary Residents and Users	At least 3/4 of residents have major concern for scenic qualities.	At least 1/4 and not more than 3/4 of residents have major concern for scenic quality.	Less than 1/4 of residents have major concern for scenic qualities.

Source: National Forest Landscape Management, Volume 2

Step 3: Identify Viewing Zone

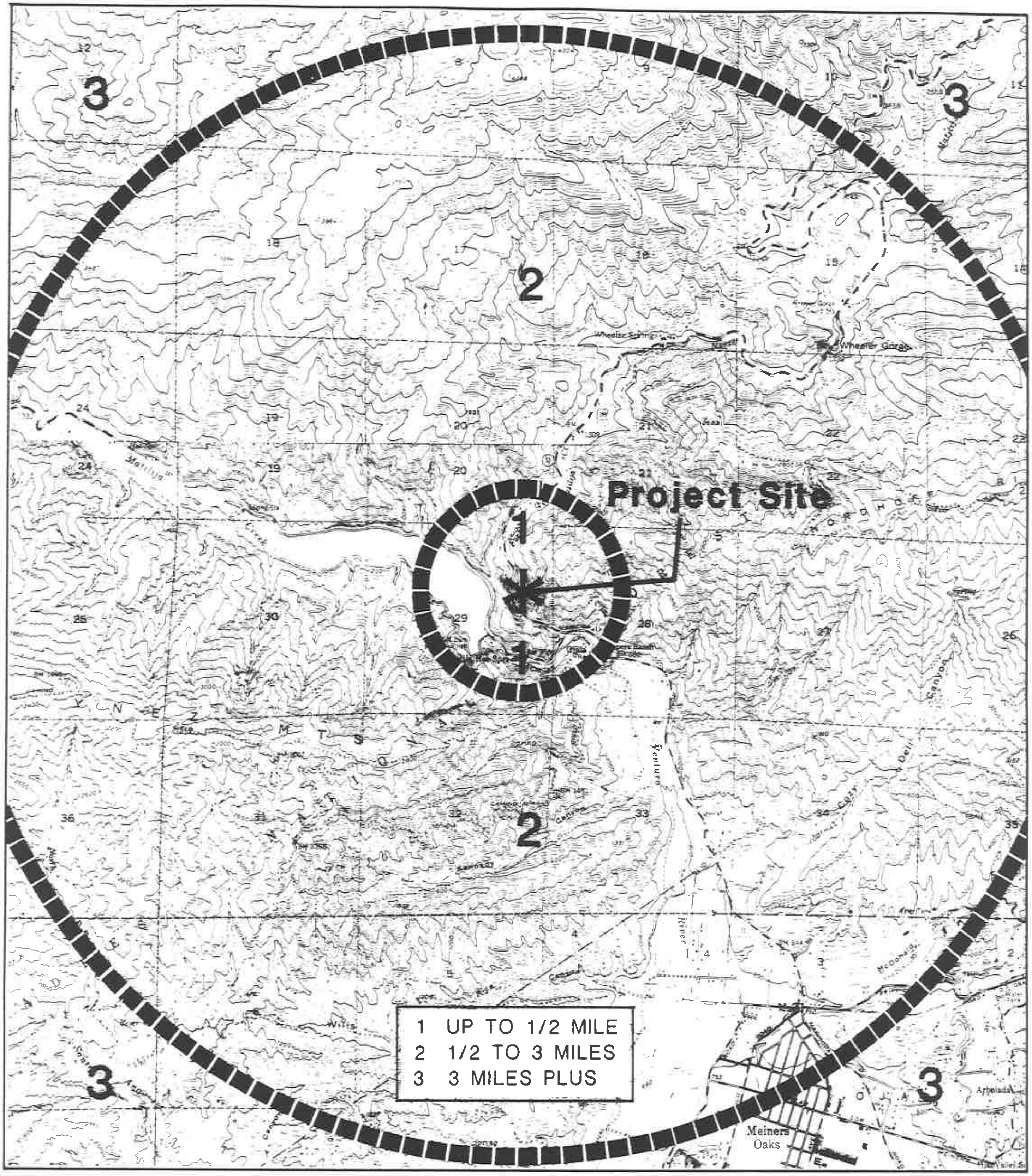
The next consideration in VRM is the viewing distance zone. There are three zones in this factor. A foreground view or distance zone is one in which details can be perceived. This is usually from one-fourth to one-half mile in distance from the site or object.

In the middleground view zone, details cannot be perceived although form and texture can be perceived. This distance zone usually extends from the end of the foreground zone to about three to five miles.

A background view zone extends from the end of the middleground zone (three to five miles) to an infinite distance. Perception of texture is very weak to non existent. Form and color are the main elements that are capable of being perceived. Exhibit 17 illustrates the spatial relationships of the proposed project site to the surrounding geographical features of the area. Foreground and middleground viewing zone distances are plotted.

Step 4: Identify the Visual Quality

The next step is to determine the visual quality objective (VQO). The VQO is the National Forest Service's visual resource management goal for a landscape area within a National Forest, but it can be applied to any landscape. Table C depicts the relationship between the variety class, view sensitivity level, and VQO.



Source: USGS Quad Map-Wheeler Springs & Matilija

SPATIAL RELATIONSHIPS

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 17

Typical VQO's include the following:

<u>Retention</u> - Changes in the characteristic landscape should not be visually evident.

<u>Partial Retention</u> - Changes can be visually evident but must remain visually subordinate to the characteristic landscape.

<u>Modification</u> - Changes may visually dominate the characteristic landscape but must borrow from and remain at a scale with previously established visual elements.

<u>Maximum Modification</u> - Changes may visually dominate the characteristic landscape. When viewed as foreground or middleground, changes to not need to appear to borrow from previously established visual elements, and can be out of scale or contain incongruent detail.

SURROUNDING COMMUNITY-RESIDENTS

Immediately surrounding the 9 acre project site are 7 residences to the north and 29 to the south within the foreground view zone which are on the opposite side of intervening ridgelines. These ridgelines visually seclude the proposed project site from surrounding areas to a great degree. Due to the topography of the area, neither the existing nor proposed quarry is completely visible beyond 2.5 miles from the site. *

As can be seen from Table C, the view areas from the residences in the foreground and middleground view zones have a Retention VQO based on the highest viewer sensitivity and a distinctive characteristic landscape. This VQO rating states that for those residents in the foreground and middleground view zones, any change to the existing landscape characteristics will be visually evident. It should be noted that a majority of the residences within these two view zones cannot currently view the proposed project site.

TRAVEL ROUTES

The second group of viewers examined in this report are those users of the major travel routes associated with the project. These routes include the Maricopa Highway, Matilija Road North and the Matilija Road South. The process of analyzing this group is essentially the same as the analysis used for residents.

The first step in determining user viewer sensitivity is to establish whether the travel routes are of primary or secondary importance. This is identified by the volume of use of average daily travel (ADT), the duration of use, and whether the route is a major access route or a local feeder street. The Maricopa Highway is a route of primary importance since it is a major access route, has long duration of use, and has an average daily travel (ADT) of 2,100 ADT. The ADT for peak hour travel is 420. Matilija Road North and Matilija Road South were determined to be of secondary importance based on an ADT which is only a fraction of that for the Maricopa Highway.

TABLE C
VISUAL QUALITY

VARIETY CLASS	FG1	MG1	BG1	FG2	MG2	BG2
Class A (Proposed 9 acre project site)	R	R	R	PR	PR	PR
Class B	R	PR	PR	PR	M	M
Class C	PR	PR	M	M	M	MM

Source: National Forest Landscape Management, Volume 2

FG = foreground
MG = middleground
BG = background
1 = Sensitivity Level 1
2 = Sensitivity Level 2
R = Retention
PR = Partial Retention
M = Modification
MM = Maximum Modification

The second step in determining viewer sensitivity levels according to VRM involves the aesthetic concerns of the users of the travel route who are the landscape viewers. The landscape area of the project site which is seen from the Maricopa Highway on the south side contains a number of bushes, and shrubs. The project site contains exposed rock which can be seen from as far as 2 miles away (See Exhibit 11, Photo A). The entire length of the Maricopa Highway 33 from milepost 17.5 to the Santa Barbara County line has been designated as a State Scenic Highway, and is identified as a Scenic Highway Protection Area.

The area therefore can be classified as a distinctive landscape area, similar to much of what is seen along other portions of the Maricopa Highway.

No travel count information (ADT) is available which distinguishes between types of travel on the Maricopa Highway. It is therefore difficult to determine the level of viewer sensitivity. The number of viewers along the Maricopa Highway with a major concern for aesthetics could possibly be less than one-fourth, but it is safer to assume that the number is between one-fourth to three-fourths. It is doubtful that the number is greater than three-fourths. Assuming one-fourth to three-fourths of users are concerned with aesthetics and as a primary travel route, the view area from the Maricopa Highway 33 can be judged to have a high sensitivity level (sensitivity level 1).

The view area from Matilija Road North is judged to have an average sensitivity level (sensitivity level 2) based on being a secondary route and having one-fourth to three-fourths of viewers with a major aesthetic concern.

As determined from Table B, the view areas from both the Maricopa Highway and Matilija Road North in the foreground and middleground view zones, have a Retention VQO based on the highest viewer sensitivity and a distinctive characteristic landscape. This VQO rating states that for those roadway users in the foreground and middleground view zones, any changes to the existing landscape characteristics will be visually evident.

Summary

As previously described in the discussion of Existing Conditions, there is an existing 4 acre rock quarry operation adjacent to the proposed project site. Currently, 4 acres of the total 34.61 acre parcel owned by the applicant are being used for rock quarry operations. The existing 4 acre quarry operation has established a predominant character of the visual landscape in that area. The proposed project expansion area will utilize an additional 9 acres for quarry operations with a similar reclamation plan and scale.

The proposed quarry plan will continue mining operations in stages. The phasing will begin from the top of a designated area and move downslope. Consecutive phases will begin at higher levels and excavate beneath the previous phase. The top of the ridgeline is over 2,000 feet and the excavation will reach an elevation of approximately 1,900 feet. A series of benches will be created to maintain the slope and ensure stability.

The proposed 9 acre expansion is substantially compatible with the existing 4 acres but it will continue to dominate the characteristic landscape. The proposed 9 acre project will be visually evident and therefore not meet the Retention VQO for the vast majority of residential viewers and travel route users in the foreground and middleground view zones.

The VRM system used in this analysis provides a guideline for decisions concerning visual quality. It is an adoption of a system developed for National Forests. The visual quality objectives prescribed by VRM provide an indication of the level of impact which would be generated by the proposed 9 acre project. It does not provide conclusive measurements of the impact level.

Since the proposed CUP request cannot meet the Retention objective for viewers in the foreground or middleground view zone, it can be concluded that a project-specific aesthetic/ visual impact will occur with implementation of the proposed project. The significance of a change or impact is not governed solely by the magnitude of the change. Significance is governed by the determination of whether people regard the effect as an adverse change. This directly relates to the concept of viewer sensitivity discussed previously.

Based on the VQO conclusions of the preceding impact analysis, it is determined that the project-specific impact will be unmitigable to a less than significant level for those viewers in the foreground and middleground view zone. The project-specific impacts can be mitigated to a less than significant level for viewers in the background view zone. *

Cumulative Impacts

The proposed project, in conjunction with other past, present and reasonably foreseeable future projects, will contribute incrementally to cumulative visual impacts along the Maricopa Highway 33. The cumulative visual impact will remain due to the conditions of the existing 4 acre quarry facility. The existing quarry operation has resulted in an exposed rock face which will always remain somewhat visible. The existing conditions in conjunction with the proposed CUP request render the cumulative impact unmitigable with or without this project's mitigation measures.

A series of mitigation measures have been developed which would lessen the project-specific and cumulative impacts of the proposed CUP request. Mitigation measures which would directly reduce visual and aesthetic impacts are listed below.

MITIGATION MEASURES

1. Upon completion of each phase as identified in the Operations Plan (Exhibit 5) and the Reclamation plans (Exhibits 6, 7, and 8), landscaping shall be provided along Maricopa Highway at the entrance to the project site, above the Matilija Creek adjacent to the project site and along the access road to quarry operations.

2. Upon completion of each phase as identified in the Operations Plan (Exhibit 5) and the Reclamation plans (Exhibits 6, 7, and 8), the applicant shall landscape the site in a manner consistent with the natural character of the area.

3. Upon completion of the final phase of quarry operations, the applicant shall provide landscaping to return the site to as natural a state as possible.

4. Prior to excavation, landscaping and irrigation plans shall be prepared in accordance with the Ventura County Landscape Design Criteria.

5. During excavation, the process of benching as identified in the Operations Plan (Exhibit 5) and the Reclamation plans (Exhibits 6, 7, and 8), will continue to reduce the amount of exposed rock visible.

LEVEL OF SIGNIFICANCE

Project-specific and cumulative impacts will be mitigated to a less than significant level for viewers in the background view zone. Implementation of mitigation measures which have been incorporated into this EIR will not mitigate project-specific and cumulative impacts to a less than significant level for those viewers in the foreground and middle ground view zone. This impact remains as significant and unavoidable. *

BIOLOGY/SEDIMENTATION

EXISTING CONDITIONS

The following information is based on a biological assessment prepared by S. Gregory Nelson and dated July 24, 1991. A copy of this report is provided as Appendix B of this EIR.

The existing 4 acre quarry site is located adjacent to the east of the Matilija Creek and consists of bare exposed rock and fill dirt. The existing quarry slope has been identified as unstable and subject to rockslide (discussed in the Geology/Soils section of this document). The proposed 9 acre expansion (project site) consists of generally undeveloped and unaltered land within the North Fork of Matilija Creek and Ventura River watersheds in Ventura County. Topography in the project area is extreme, consisting of steep walled canyons.

Vegetation/Plant Communities

Two distinct vegetation types, or plant communities, are found on the site. The two types are mixed chaparral and riparian woodland. A brief description of these is provided below.

Mixed chaparral on site is dominated by chamise (Adenostoma fasculatum), scrub oak (Quercus domosa), California sagebrush (Artemisia californica), laurel leaved sumac (Rhus laurina), California buckwheat (Erogonum fasciculatum), toyon Heteromeles arbutifolia) and ceanothus (Ceanothus sp.). Generally, these plant species possess relatively small, broad, hard leaves and are evergreen. This vegetation on the project site grows four to six feet tall, but does not form a closed canopy. A dense cover of primarily native needlegrass (stipa sp.) exists between shrubs where soil is found. Rock faces and outcrops also make up a large portion of the areas between shrubs. Mixed chaparral is widely distributed in Southern California on dry slopes at low to medium elevations, where it occupies thin, rocky or gravelly soils.

Riparian woodland exists in community form along the North Fork of Matilija Creek. This vegetation is dominated by white alder (Alnus rhombifolia), western sycamore (Platanus racemosa), arroyo willow (Salix lasiolepis) and coast live oak (Quercus agrifolia). Also found are large shrubs, including California bay (Umbellularia californica), toyon and laurel leaved sumac. Well developed riparian vegetation is found both upstream and downstream from the existing quarry site.

In general, the riparian woodland adjacent to the existing quarry site is not as well developed as the riparian vegetation up and downstream. This is believed to be the result of the very narrow, steep walled drainage course at this location and clearing in the past. An aerial photograph taken in 1978 showed no riparian vegetation where the creek crosses the existing quarry site. It is not known whether the clearing was by humans or was the result of natural scouring during flood conditions. Riparian woodland is very limited in its distribution within Southern California. This is due in part to the fact that it is generally restricted to deep, moist soils on north facing slopes and within drainage bottoms. Widespread loss to urbanization has occurred in the region. The riparian woodland adjacent to the existing quarry site appears to be in good condition, although not well developed.

Wildlife Habitat

Mixed chaparral and riparian woodland vegetation provide habitat for many wildlife species. A variety of species were observed or detected within the riparian woodland vegetation adjacent to the existing quarry and within the 9 acre expansion area. Bird species observed included Nuttall's woodpecker, brown towhee, California thrasher, scrub jay, wrentit, bewick's wren, bushtit, band tailed pigeon, lesser goldfinch, common raven, mourning dove, house finch, common flicker, starling, Anna's hummingbird and black phoebe. Mammals observed or detected included California ground squirrel, botta pocket gopher, dusky footed woodrat, Audubon cottontail and coyote. The only reptile observed was the side-blotched lizard. No amphibians were observed or detected.

A more complete listing of wildlife, including those species not observed, but expected with a relatively high degree of probability to occur in either habitat, are listed in the appendix of the biological assessment found in Appendix B of this EIR. The types of species expected are possibly due to the very strong affinities most wildlife have for particular types of habitats. The majority of wildlife observed or expected will use both mixed chaparral and riparian woodland. This is due in part to the high degree of overlap in plant species which exists between these two communities and in part to their close proximity to one another. Wildlife diversity generally follows habitat diversity.

The riparian woodland, with the added dimension of trees, has the potential to support a higher diversity of wildlife than chaparral. Of the various wildlife habitats in Southern California, riparian woodland is one of the more important and limited. Amphibian species, including the slender salamander and western toad, potentially occur in the woodlands' moist leaf litter, as do the southern alligator lizard and western skunk. Hummingbirds, flycatchers, vireos, warblers and sparrows favor southern oak woodland for foraging and nesting. Hawks, kites owls and doves specifically require trees to nest in. Furbearers (such as virginia opossum, raccoon, striped skunk and gray fox) often reach their highest concentrations in and around woodland habitats.

A detailed survey of the fauna inhabiting the North Fork of Matilija Creek was not performed. A previous biological survey contained in the previous EIR prepared for the existing rock quarry in 1975, reported that small fish and larger trout occur in this location.

Sensitive Resources

As mentioned above, the riparian woodland and associated stream are considered to be sensitive and significant resources due to their limited distribution and value to wildlife and fish.

In addition, general wildlife species which potentially use the riparian woodland are considered to be species of special concern. The Cooper's Hawk and Sharp-shinned hawk are discussed below.

Cooper's Hawk (*Accipiter cooperi*) is an uncommon resident and migrant in Riverside County. Nesting birds use riparian and oak woodlands and their foraging habitat includes woodlands and brushlands. The federal government provides no designation for the species. The state government lists the species as being of special concern. The species was not observed during survey, however, oak/riparian woodland adjacent to the existing quarry appears to be suitable for nesting and chaparral on the 9 acre expansion site appears to be suitable for foraging. The probability of occurrence in either habitat is high.

The Sharp-shinned hawk (*Accipiter straitus*) is a common winter migrant within Riverside County. It is very similar to Cooper's hawk in its habitat preference occupying woodlands and dense brush habitats alike. The federal government provides no designation for the species. The State government lists the species as being of special concern and as being on The State's Watch List, for which data is currently being compiled. The species was not observed during survey, however, oak/riparian woodland adjacent to the existing quarry appears to be suitable for foraging, as does chaparral on the 9 acre expansion site. The probability of occurrence in either habitat is high.

Sedimentation

The North Fork of Matilija Creek contained running surface water at the time of the survey and is indicated by a "blue line" on the Wheeler Springs/Matilija 7.5 minute USGS quad sheet. The California Department of Fish and Game considers streambeds and drainages, including, but not limited to such blue line streams to be potentially significant fish and wildlife habitat. Currently, the potential exists for rockfall from the existing quarry operation to enter the Matilija Creek. This is considered an existing adverse condition. It is discussed in more detail in the Geology/Soils section of this EIR.

IMPACTS

According to CEQA, and for purposes of this EIR, significant effects on rare or endangered plants or animals (or the habitat of such species), as well as substantial interference with resident or migratory fish or wildlife species, are considered to be significant adverse impacts.

Implementation of the proposed 9 acre quarry expansion will have an impact on biological resources as a result of several factors associated with the proposed quarry operation. The vegetation and wildlife resources described in the existing setting section comprise biotic communities which are assemblages of diverse groups of plant and animal species occurring in the same physical habitat. These species are tied together in an orderly predictable manner by a very close and complex set of interrelationships. Impacts directly resulting from causal factors are termed first order impacts. Impacts associated with quarry operations will result in first order impacts which will, in turn, result in second and third order impacts. Typically, the degree to which this chain-like reaction proceeds toward the complete breakdown and loss of community stability and integrity depends upon the intensity and extent of the causal factor. Causal factors, their associated impacts, and the determinants of their severity are discussed below.

Vegetation/Plant Communities

The most direct impact from implementation of the project will be the direct removal of existing vegetation from 9 acres proposed for quarry operations. Within this 9 acre area, all existing vegetation will be removed and lost. Vegetation lost will be mixed chaparral. This loss will be locally significant but will not be a significant impact on a regional basis due to the abundance of chaparral in the regional area. The use of native vegetation as landscaping will reduce impacts. With implementation of Mitigation Measure 1, impacts will be reduced to a less than significant level.

Wildlife Habitat

The removal of existing vegetation will result in the loss of wildlife habitat. Most wildlife species are highly dependent upon specific habitats and do not successfully adapt to habitats of a different kind.

Less mobile forms of wildlife, such as burrowers, will be destroyed, along with their habitats. Most mobile forms, such as birds and large mammals, will be displaced to suitable habitats nearby. This displacement may potentially crowd and disrupt resident wildlife populations. Successful adaptation and adjustments of displaced wildlife into nearby habitats will be low, and these too will be lost. The chaparral habitat to be lost is relatively common in the region, as are the wildlife it supports. This loss will be locally adverse, but will not be significant on a regional basis due to the abundance of chaparral habitat in the regional area. The use of native vegetation as landscaping will reduce impacts. With implementation of Mitigation Measure 1, impacts will be reduced to a less than significant level.

Wildlife populations adjacent to proposed mining and processing areas will be impacted through "harassment". This indirect, second order impact is defined as a result of those human activities which increase the physiological costs of survival or decrease the probability of successful reproduction in wildlife populations. The most common forms of harassment that will accompany the project are excessive noise and the presence of humans and equipment. Wildlife not tolerant of such disturbances will move away from habitat adjacent to quarry areas and not use otherwise suitable habitat located there. This is particularly critical for larger wide ranging wildlife, such as birds of prey. Studies have shown that some birds of prey are not tolerant of disturbances within as much as one-half mile of their nesting sites and will abandon their nests if this area is encroached upon.

The potential effects of harassment on the riparian woodland habitat adjacent to the existing quarry is potentially the most significant. The proposed quarry expansion will operate at a greater distance from the riparian woodland habitat than the existing quarry site. No increase in harassment is anticipated due to the project. No significant impacts are anticipated.

Sensitive Resources

The removal of existing vegetation will result in the loss of wildlife habitat. Specifically, chaparral will be lost. This plant community serves as foraging area and habitat for both the Cooper's Hawk and the Sharp-shinned Hawk. Although not observed during the biological assessment, the probability of occurrence is high. Both species are migrants which may explain their absence at the time of the survey. The loss of habitat to these sensitive species is considered adverse, but will not be significant on a regional basis due to abundance of chaparral habitat in the regional area. The use of native vegetation as landscaping will reduce impacts. With implementation of Mitigation Measure 1, impacts will be reduced to a less than significant level.

Sedimentation

The proposed quarry will result in alterations to surface soils and underlying geology which is part of the watershed for Matilija Creek. The California Department of Fish and Game (CDFG) has jurisdiction over the North Fork of the Matilija Creek as it is a blue line stream. The CDFG must be notified prior to any alteration of a blue line stream. As result of potential alteration, there is the potential for greater erosion through the exposure of sediments and soils. Downstream, there will be the potential for changes to surface and groundwater hydrology which, if unmitigated, may have adverse impacts on downstream riparian and aquatic habitats. Given the significance of stream riparian and aquatic habitats, the potential for erosion/siltation due to implementation of the project is considered a significant adverse impact. Even small amounts of silt in streams can result in the smothering of aquatic insects, which are key sources of food for fish. Siltation can also result in the reduced suitability of affected stream sections for fish spawning purposes.

The quarry slope as it currently exists within the project area has the potential for a major failure into the North Fork of Matilija Creek resulting in several significant adverse impacts.

These include loss of riparian habitat through burial, loss of aquatic habitats through burial and/or siltation onsite and downstream and interruption of movement by fish and wildlife along the creek. Although implementation of the project as proposed would greatly reduce the likelihood of a major slope failure from the existing 4 acre quarry, the continued quarry operations has a potential to result in a minor slope failure. Implementation of the project as proposed will reduce the existing adverse condition of potential major slope failure to a less than significant level. This potential impact is discussed in more detail in the Geology/Soils section of this EIR. With the implementation of mitigation measures in the Geology section as well as Mitigation Measures 2 through 5 below, impacts to Matilija Creek are reduced to a less than significant level. With implementation of the above stated mitigation measures proposed, impacts to erosion and downstream sedimentation will be reduced to a less than significant level.

CUMULATIVE IMPACTS

The potential adverse impacts that may occur as a result of project implementation will contribute on an incremental basis to cumulative impacts now occurring in the region as a result of land development activities. These impacts are an incremental loss in native vegetation and habitat and an incremental contribution to the fragmentation of large blocks of contiguous native vegetation and habitat. With implementation of Mitigation Measure 1, cumulative impacts associated with the loss of native vegetation will be reduced to a less than significant level.

MITIGATION MEASURES

Vegetation/Plant Communities, Wildlife Habitat, and Sensitive Resources

1. Upon completion of each phase of quarry operation as identified in the Operations Plan (Exhibit 5) and the Reclamation Plans (Exhibits 6, 7, and 8) all revegetation and landscaping shall utilize native species of trees, shrubs and groundcover only.

Sedimentation

2. Pursuant to Section 1601-1603 of the California State Fishing and Game Code, the California Department of Fish and Game shall be notified prior to any alteration of the blue line drainage traversing the property. The purpose of this notification is to allow the state to regulate alterations to streamed habitats, including, but not necessarily limited to, those drainages which are shown by a "blue line" in U.S.G.S. 7.5 minute quad sheets.

3. Prior to issuance of grading permits, the project engineer shall develop and implement erosion and siltation control plans, during all phases of quarry operations, to prevent erosion and siltation resulting in the transport of sediment into the drainages onsite and downstream to Matilija Creek where it may adversely impact riparian and aquatic habitat areas.

4. Prior to the issuance of grading permits, the existing interface between the quarry operations and Matilija Creek shall be recontoured so as to provide a protective berm along, but outside, of the riparian habitat. The purpose of this berm would be to stop any minor failures or slumping from reaching the creek and creating a sedimentation problem.

5. Prior to the issuance of grading permits, a silt fence shall be placed at the bottom of the berm recommended in Mitigation Measure 3 on the creek side, to prevent the run-off of water borne sediments from the berm into the creek.

LEVEL OF SIGNIFICANCE

Implementation of Mitigation Measure 1 will reduce project-specific and cumulative impacts to vegetation/plant communities, wildlife habitat, and sensitive resources concerns to a less than significant level. Potential project-specific impacts to sedimentation are reduced to a less than significant level with implementation of Mitigation Measures 2 through 5.

GEOLOGY/SOILS

EXISTING CONDITIONS

The following information is based on a geotechnical report including slope stability analyses prepared by Pacific Materials Laboratory, Inc. and dated July 25, 1988. An Addendum Stability Analysis and Final Quarry Plan Review was prepared on March 25, 1991, and supplemental information was provided by Pacific Materials Laboratory, Inc. on February 10, 1993. The Findings of the addendum are incorporated in this section. Copies of the reports can be found in Appendix C of this EIR.

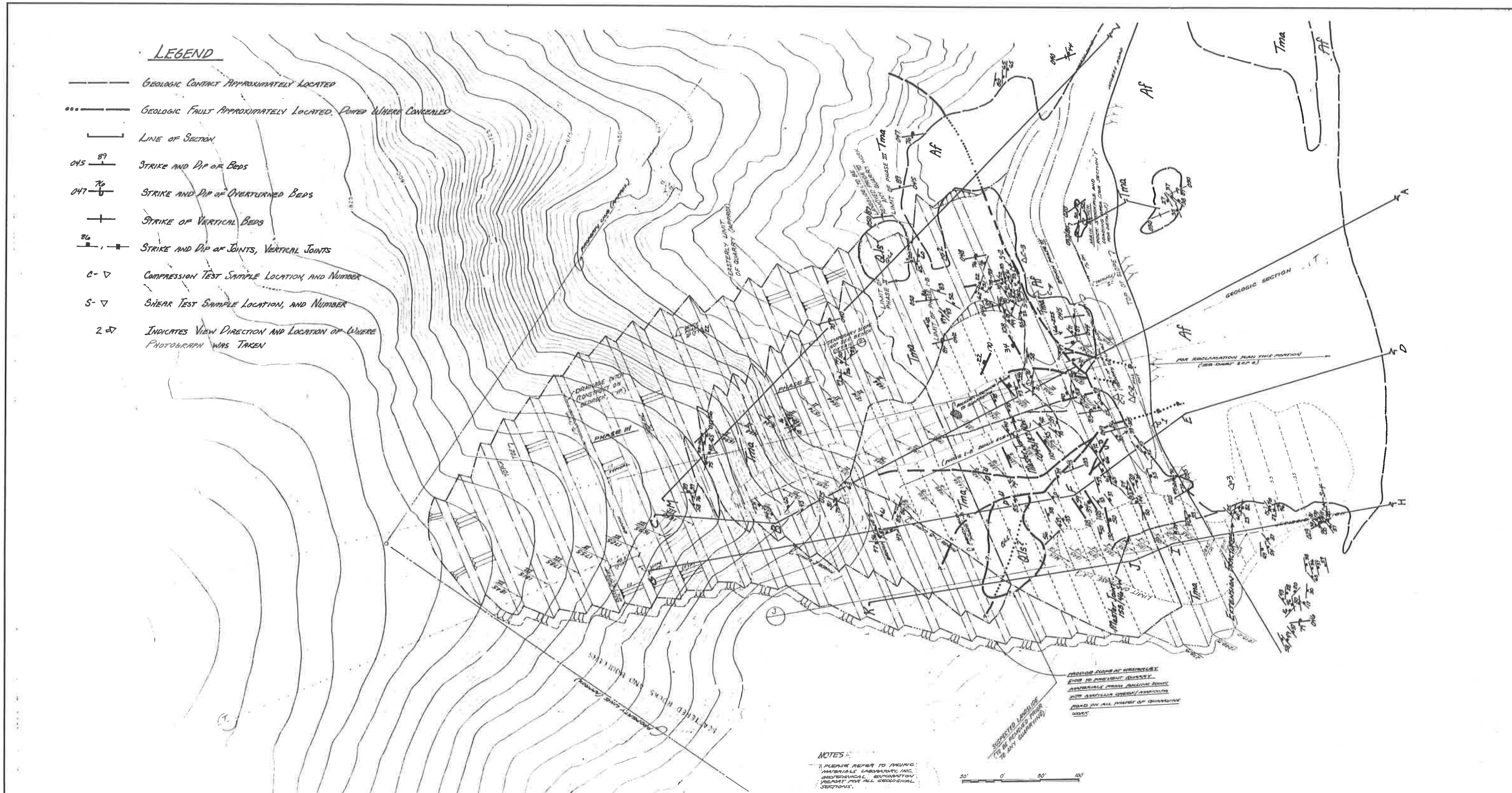
Local Geology

The existing and proposed quarry areas are located in the west central portion of the Transverse Ranges, in the structural block bounded by the Santa Ynez fault on the north and the Arroyo Parida-Santa Ana fault system on the south. The rocks of the area were deposited in the western Ventura Basin during Eocene time. They were subsequently strongly folded and faulted on the south limb of a major overturned anticline known as the Matilija Overturn. An anticline is a fold of earth material shaped like an arch. Uplift of this area formed the rugged Santa Ynez Mountains which are presently being vigorously dissected by streams. Prominent rock exposures occur in the area. Exhibit 18 depicts the existing geologic conditions. Geologic units existing on the proposed project site consist of the following types. *

Artificial Fill (AF): This soil type covers the majority of the site downslope of the present quarry area. It consists of quarry non-cohesive waste by-products containing boulder, gravel, sand, and silt mixtures which are grayish brown in overall color. Gravel and boulder talus commonly covers steep slopes underlain by these deposits. This unit generally appears cohensionless, loose and poorly-consolidated. The fine-grained constituents of the artificial fill appear easily erodible.

Landslide Deposits (Qls): Apparent landslide soil deposits exist near the top of the present quarry slope. These deposits appear, from a distance, as jumbled masses of angular boulders in a matrix of tan gravelly silty sand. It was not possible to observe landslide deposits on the outcrop because of the steep slope.

Matilija Formation (Tma): These Eocene rock deposits consist of brown-weathering, light gray to tan medium-grained arkosic sandstone interbedded with brown to gray-green silty very fine-grained sandstone and silty shale. Sandstone dominates over shale by an approximate 50:1 ratio in the project site area.



Source: Pacific Materials Laboratory, Inc.

GEOLOGIC MAP

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 18

Slope Stability

A slope stability analysis was conducted along visible joints or fractures in the project area. The degree of straightness of daylighted fractures varies from 35 to 44 degrees on the subject site.

The slope stability analysis indicates that substantially all materials at 44 degrees or flatter are stable with a factor of safety against movement greater than 1.15. This factor of safety is below normal permanent design limits of 1.5. It is based upon the private commercial site use. Specific cross section details and stability analysis are provided in the Geotechnical Report contained in Appendix C.

There are several locations on the existing quarry site where joints dip in excess of 44 degrees out of slope. These areas have significant extension cracks which are highly suggestive of downhill movement of the rock units. They are prone to rock toppling and/or bedrock block slide.

Joints

Joints in rocks also effect slope stability. They are generally defined by relatively smooth planar cracks or fractures along which, or across which only minute often undetectable displacements have occurred. There are two categories of joints on the existing quarry and proposed project site area.

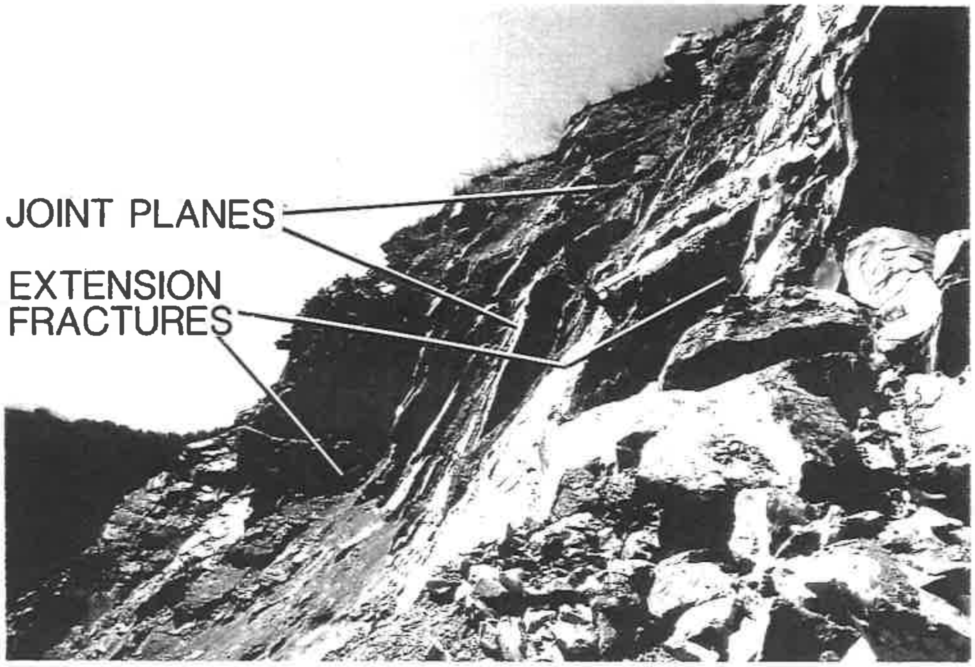
- Systematic joints which are relatively planar tight cracks.
- Extension fractures which appear as steeply-dipping, planar to jagged, open cracks.

SYSTEMATIC JOINTS

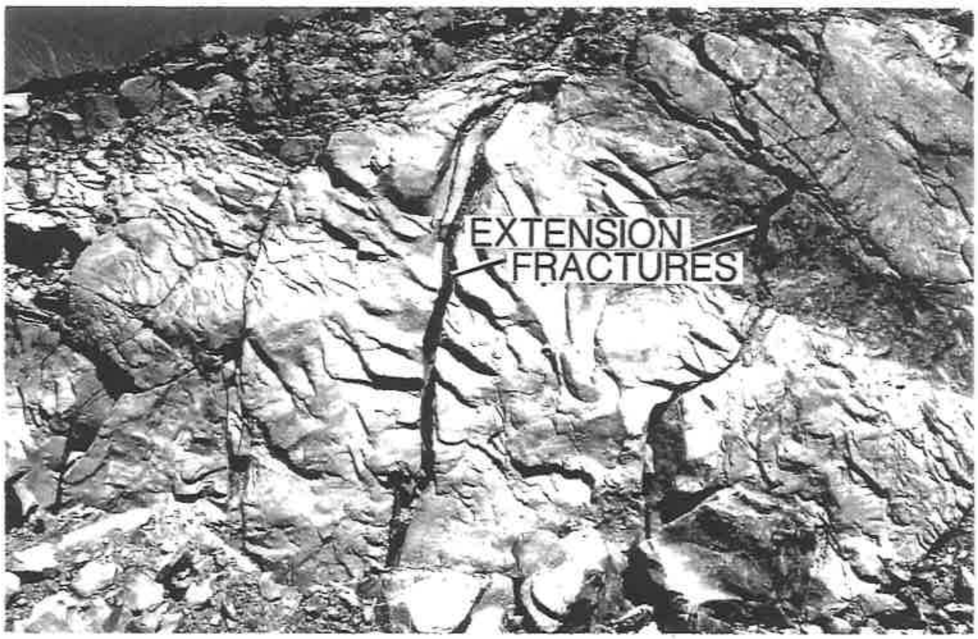
Southwest-dipping systematic joints were typically spaced from 1 to 5 feet apart and were continuously traceable for approximately 5 to 75 feet. Exhibit 19, Photo A is a photograph of southwest-dipping joints which are visible in the existing quarry slope. Northeast-dipping systematic joints were typically spaced from 1 inch to 10 feet apart and were continuously traceable for approximately 5 to 15 feet.

EXTENSION FRACTURES

Extension fractures were oriented approximately perpendicular to bedding and near-vertical. These consisted of open fractures ranging from 0.5 to 3.5 inches wide. Exhibit 19, Photo B is a photograph taken July 2, 1988 of extension fractures located along the northern margin of the existing quarry slope. These extension fractures may occur precedent to rock fall and/or landsliding. The potential for rockfall onto Matilija Creek from the northwest margin of the existing quarry presently appears moderate to high. This existing quarry slope is shown on geologic section H-K contained in the Geotechnical Report in Appendix C.



A



B

Source: Pacific Materials Laboratory , Inc.

EXTENSION FRACTURES AND JOINT PLANES

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 19

Faulting/Seismicity

Faults

Several faults with northeast to northwest trends and near vertical dips were exposed at the existing quarry. These faults appear to be the result of displacements associated with intense folding of the Matilija Overturn. The Matilija Formation in the project site area crops out on the steep to overturned south limb of a major east-west trending anticline known as the Matilija Overturn. The fold axis of this anticline forms an S-shaped bend through the site area.

North to northeast trending faults located in the proposed 350± feet quarry slope truncate or interrupt sandstone and shale units. Exhibit 20 is a photograph of faulted shale beds in the existing quarry rock face.

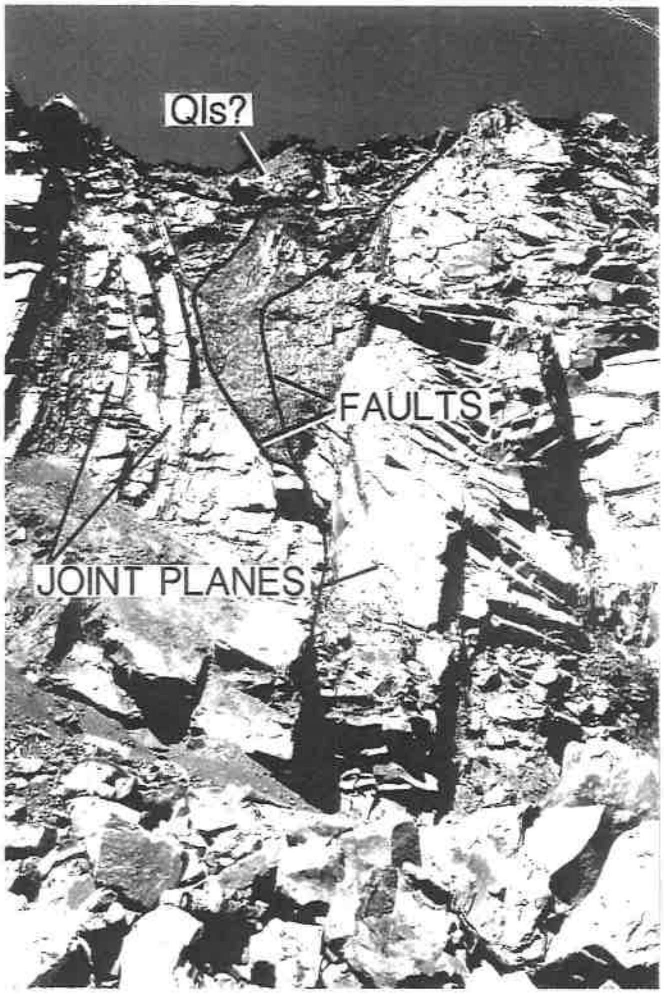
A northwest-trending near-vertical fault occurs along the base of the proposed 350± feet slope. This fault cuts across bedding at its intersection with geologic section A-C, but may pass into bedding approximately 140 feet to the southeast. A similar fault was exposed 380 feet southeast of geologic section A-B. Refer to the Geotechnical Report contained in Appendix C for geological cross-sections.

Seismicity

The project site is situated in an area of high seismicity. Many active, or potentially active faults occur within 50 miles of the site. Some of these include: Santa Ynez Fault (1.0 mile), Santa Ana-Arroyo Parida Fault (6.0 miles), Pine Mountain Fault (8.7 miles), San Cayetano Thrust (6.0 miles), Oak Ridge Fault (16.0 miles) , Big Pine Fault (16.0 miles), Red Mountain Thrust (13.9 miles) and the San Andreas Fault (30.0 miles). Table D lists distances and maximum credible earthquake magnitudes for some of the active and potentially active faults in Southern California.

Mass Wasting

No evidence of large landslides was observed in the proposed project area. Two relatively small (0.1 acres) shallow-seated landslides were mapped bordering the top of the existing quarry slopes. These landslides are shown on Exhibit 18 and within the geologic map contained in the Geotechnical Report in Appendix C.



C

Source: Pacific Materials Laboratory , Inc.

FAULTED SHALE BEDS

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 20

TABLE D

DISTANCES AND MAXIMUM CREDIBLE EARTHQUAKE MAGNITUDES FOR ACTIVE AND POTENTIALLY ACTIVE FAULTS

	ACTIVITY	DISTANCE (Miles)	MAXIMUM CREDIBLE EARTHQUAKE (Richter)
1. Malibu Coast Fault	(PA)	35.0	6.8
2. Simi-Santa Rosa Fault	(PA)	20.2	6.5
3. Oak Ridge Fault	(PA)	16.0	7.5
4. San Cayetano Thrust	(A, PA)	6.0	7.5
5. San Fernando Zone	(A)	52.0	6.5
6. Santa Gabriel Fault	(A, PA)	32.0	7.5
7. Santa Susana Thrust	(PA)	32.0	6.5
8. Chatsworth Fault	(PA)	39.0	6.5
9. San Andreas Fault	(A)	30.0	8.5
10. Garlock Fault	(A, PA)	32.0	7.75
11. Big Pine Fault	(A)	12.0	7.5
12. White Wolf Fault	(A)	39.0	7.75
13. Inglewood-Newport	(PA)	60.0	7.0
14. Palos Verdes Fault	(PA)	62.0	7.0
15. Sierra Madre Fault	(PA)	66.0	7.5
16. Ventura/Pitas Point	(PA)	15.0	7.0
17. Whittier/Elsinore Zone	(A)	75.0	7.1
18. San Jacinto Fault	(A)	96.0	7.75
19. Cucamonga Fault	(A)	60.0	6.5
20. Santa Cruz Island	(A, PA)	47.0	7.3
21. Northridge Hills Fault	(PA)	40.0	6.5
22. Santa Ynez	(PA)	1.0	7.5

Source: Pacific Materials Laboratory, Inc.

A = Active Fault
PA = Potentially Active Fault

IMPACTS

According to CEQA, exposure of people or structures to major geologic hazards is considered a significant adverse impact. For the purposes of this EIR, major (i.e. significant) geologic hazards be overcome by design using reasonable construction and/or maintenance practices.

The site has several potential geotechnical constraints. The existing quarry operation has created a currently unstable slope which has the potential for a rockfall that would impact quarry workers, Matilija Creek, and Highway 33. During quarry activities, the proposed project will expose quarry operators and Highway 33 roadway users to major geological hazards. This is considered a significant impact. The proposed project will alter the existing landform by the removal of materials. This may expose people or structures to major geologic hazards in the proposed project area upon project completion. No structures are proposed by the project and no habitation of the site is proposed. Potential impacts to the Matilija Creek are discussed in the Biology/Sedimentation section of this document. The significance of the potential geologic impacts is discussed below.

Local Geology

Implementation of the proposed project will remove rock materials from the area. Alteration of the existing landform may result in unsafe geologic conditions. Exhibit 18 depicts existing geological constraints within the project area. Compliance with the Ventura County Reclamation Ordinance (Sec. 8107-9 of the Zoning Code) will ensure that no significant impacts to local geology will occur.

Slope Stability

The proposed project will expose quarry operators, motorists on Highway 33, and Matilija Creek to potentially unstable slopes. The proposed project site is located in an area of high seismic activity. Factors of safety for all slopes within the quarry area will drop below acceptable limits during significant earthquakes. Rockfall, rockslides, and/or landslide occurrences may occur during earthquake events. Such events are considered significant impacts as they could fill Matilija Creek and/or overtop Highway 33.

The potential of rock toppling was also noted on the proposed 9 acre site as indicated by several upslope boulders which are currently being undermined by ongoing quarry activity. In addition, as quarry activity extends upslope, significant new areas may develop, due to the joint orientations of the proposed 9 acre site, which could result in singular or multiple rock toppling. These areas appear to represent a local danger to quarry activity and are more prone to toppling and/or bedrock block slide. *

Current on-going quarry mining activity for retrieving quarry products includes horizontal benches and near-vertical cuts up to 50 feet into the rock formation. This condition has worked thus far during the life of the quarry activity. The existing quarry mining has reached the state in which it is attempting to obtain materials from much steeper naturally sloped areas in which the identified geologic joint condition is of increasing concern. Implementation of the project will eliminate the existing unsafe geologic conditions and result in compliance with the County of Ventura static safety factor of 1.5. With the implementation of Mitigation Measures 1 through 12 designed to modify quarry activity and site configuration, and compliance with the Ventura County Reclamation Ordinance (Sec. 8107-9 of the Zoning Code), the potential for slope failure will be reduced to a level less than significant.

The rock-blasting activities currently occurring at the site and projected to continue with implementation of the project could also pose impacts on gross slope stability. As referenced in the February 10, 1993 study conducted by Pacific Materials Laboratory, Inc. (included in Appendix C), the previous, current, and future site blasting program associated with the proposed project (as identified in the letter submitted by the quarry operator - contained in Appendix C), constitute small scale blasting episodes. Based upon the mining procedures described in the owner's letter, it is the opinion of Pacific Materials Laboratory that the small scale blasting episodes conducted at the quarry have a neglible effect upon gross slope stability. Furthermore, to ensure that current and future site blasting activities continue to have a negligible effect upon gross slope stability, Mitigation Measure 11 has been provided, and any increase or intensification of rock blasting would constitute a change in the project and would require further environmental review. Thus, no significant impacts associated with rock-blasting activities are anticipated.

Joints

The systematic joints and extension fractures which occur in the existing quarry area have resulted in unstable geologic conditions. As identified in the Existing Conditions discussion, the undercutting of rock that has taken place at the quarry has resulted in an existing adverse conditions due to weak areas in the rock which present an existing potential danger to quarry workers and users of Highway 33.

The unstable geologic conditions which occur in the existing quarry area and 9 acre continuation area have resulted from a combination of factors including past excavation procedures and existing joint orientations. Implementation of the project will eliminate the existing unsafe geologic conditions and result in compliance with the County of Ventura static safety factor of 1.5. With implementation of the proposed project, no significant impacts are anticipated related to unsafe systematic joints and extension fractures. During construction operations, quarry operators and Highway 33 Roadway users will be exposed to geologic hazards from systematic joints and extension fractures.

Faulting/Seismicity

The proposed project site is located in a seismically active area. Implementation of the proposed project will not create increased exposure to seismic activity. Seismic hazards constitute an existing safety condition experience by all developments in the California region. It may be anticipated that ground shaking, a secondary earthquake effect, will occur due to the historic seismic record and reasonable projections of possible future earthquake occurrence. During the lifetime of the proposed quarry, several earthquakes may occur with Richter Magnitude between 5.0 and 8.5 with various epicentral distances within an 80-miles radius. As with the existing quarry site, earthquakes have the potential to induce rockfall and slope failure on the proposed quarry site. This is considered a significant impact as persons and structures may be injured and damaged. With implementation of Mitigation Measures 1 through 12 impacts associated with seismic activity will be reduced to a level less than significant.

Mass Wasting

The proposed project could expose quarry operators, motorists on Highway 33, and Matilija Creek to mass wasting. The only danger the existing landslides present is encroachment from downslope which could reactivate the slides. Due to the lack of evidence of large landslides and the dominance of very hard, resistant sandstone on the project site, no significant impacts due to mass wasting are anticipated.

CUMULATIVE IMPACTS

No cumulative impacts have been identified to local geology, joints, slope stability, mass wasting or faulting/seismicity.

MITIGATION MEASURES

1. During quarry operations, bench backcut slopes shall be limited to a maximum of 30 feet in vertical height and laid back at a temporary repose not to exceed 60 degrees. Quarry tailings shall be placed in a systematic method downslope of the previous slope backcut to insure that buttressing of the previous bench backcut slopes exists prior to significant further upslope quarry activity.

2. During quarry operations, buttress fills shall be created in a near structural manner. This includes preparation of the area to receive fill by creating a level bench, placement of the material in such a manner as to obtain a degree of compaction in excess of 85 percent relative compaction with a final fill slope repose not to exceed 1.5:1.

3. As the previously-used quarry benches will be modified into switchback access roads, during quarry operations, care shall be taken to define the access roadway and to provide positive drainage and drainage devices as necessary to avoid downslope artificial fill erosion. This may include but is not limited to consideration of tightline conduits for direct drainage into Matilija Creek, limiting switchback road gradients, sloping switch-back roads back into the hillside and collection of free water drainage on previously cut

bedrock formations in lieu of artificial fill and providing planting and irrigation systems on artificial fill slopes to protect their surfaces.

4. Two significant shallow-depth landslides are identified upslope of the present quarry area but within the proposed future quarry development. The removed materials may be stockpiled or used for artificial fill and/or buttressing. The limits of landslide removal shall be established by geologic inspection during grading removal.

5. During quarry operations, the integrity of the existing natural drainage surface located along the west side of the quarry shall be maintained by either closed conduit or open channel flow.

6. During quarry operations along the northwest boundary line where significant extension joint-crack openings exist, material shall either be removed or an engineered buttress shall be provided to prevent potential translation. The materials observed may be of significant use in quarry activity and may be better served by full removal down to a more competent, less steeply jointed bedrock zone as indicated on the geologic map. Limits of removal shall be established by geologic inspection during grading removal.

7. Final quarry slope repose shall be designed to match existing natural fracture orientations. Since orientations vary per given area, design shall include joint orientations indicated within the geotechnical report prepared by Pacific Materials Laboratory. Actual conditions encountered during quarry activities may require modifications to final slope repose. As a rule of thumb, the final quarry slopes shall be laid back to match existing joint attitudes so as to remove all unsupported fractured sandstone blocks. This condition appears to vary from 35 to 44 degrees and will result in quarry limits well beyond those indicated for the first phase of quarry development.

8. Prior to continuation of quarry operations, all areas where the natural quarry fracture planes are in excess of 44 degrees, shall be fully identified and these rock slabs be rock-bolted to stabilize units below with sufficient bolts to prevent downslope translation or stabilized in another acceptable manner to prevent translation.

9. Prior to removal of rock bolted slabs during quarry operations, new rock bolts will be required upslope to insure stability of increasingly steep slope conditions. Additionally, as a safeguard for quarry workers, well-anchored structural tension netting shall be installed upslope of all quarry areas prior to commencement of quarrying activities.

10. Prior to continuation of quarry operations, on-site perched boulders identified upslope of the current quarry activity shall be identified and removed.

11. Ongoing quarry activity shall be placed under the supervision of a certified engineering geologist and licensed land surveyor providing periodic inspection of measures to ensure quarry safety and to aid in identification of changes of lithology and/or geologic context

which may occur during quarry excavation. Of particular significance is quarry work outside the currently proposed limits of Phase I quarry activity, as many upslope areas of concern are extremely steep and not presently readily accessible for confirmation of geologic conditions. An engineering geologist, on at least an annual basis shall be retained to provide progress geologic logging, reports, and recommendations pertaining to the structural geology of the subject site.

12. Prior to continuation of quarry operations, the precariously steep backcut slopes within the current mining benches of the site shall be modified and backfilled to provide buttressing to maintain a near vertical bench backcut slope height of not to exceed 30 feet.

LEVEL OF SIGNIFICANCE

Implementation of the project as proposed will reduce existing adverse conditions to joints and slope stability to less than significant levels. No project-specific impacts have been identified to local geology, mass wasting, or joints. The implementation of mitigation measures will reduce project-specific impacts to faulting/seismicity, and slope stability to a level less than significant. No cumulative impacts to these resources have been identified.

TRAFFIC

EXISTING CONDITIONS

The existing quarry and proposed project site is located adjacent and east of Maricopa Highway 33 between Matilija Road North and Matilija Road South. According to the State Department of Transportation's (Caltrans), 1990 Traffic Volumes Report, the annual average daily trips (ADT) along Maricopa Highway in the vicinity of the project site is 2,100. Peak hour volume is 420.

The current permit, under which the existing quarry operates, allows no more than twenty loaded trucks to travel through the City of Ojai on each day of permitted quarry operation. Additionally, no trucking is permitted to occur during peak school hours. In the previous EIR prepared for the project in 1975, the County Public Works Agency stated that the Schmidt Rock Quarry operation generates approximately 40 ADT.

IMPACTS

According to CEQA, increases in traffic which are substantial in relation to the load and capacity of the street system or in violation of County General Plan policy are significant impacts.

Traffic impacts were analyzed in the previous EIR prepared for the site in 1975. The project is permitted for 20 truck trips per day for a total 40 ADT. The County Public Works Agency determined that the 40 ADT resulting from the proposed project would not create a significant impact on Maricopa Highway.

The project as proposed is a continuation of an existing quarry operation. According to the CUP application request dated May 3,1991, no increase in truck traffic has been requested by the applicant. No modification to the existing level of truck transport is anticipated with implementation of the proposed CUP. Based on the previous environmental documentation and the fact that the proposed project is a continuation of an existing operation with no increase in ADT, no significant impacts are anticipated.

MITIGATION MEASURES

None necessary.

LEVEL OF SIGNIFICANCE

The continuation of quarry operations will not increase existing ADT's. No project-specific or cumulative impacts have been identified.

VI. GROWTH INDUCING IMPACTS

According to CEQA Guidelines, this section should, "discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Further it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

The proposed continuation of the rock quarry will not introduce features that will immediately draw new development to the area. The continuation will not open new roads, require new sewers or extensions of infrastructures which would normally be associated with residential or commercial developments entering into undeveloped areas. Because of the nature of rock quarries, they tend to be located, at least while they are active, in isolated areas as is the case with the proposed 9 acre continuation project.

The continuation of the rock quarry provides rock materials utilized in the construction of dam facings, flood control devices and sea walls. The continuation of the existing quarry operation will not increase the amount of materials extracted nor will it create an increased demand for the materials. If the proposed project is not implemented, increased demands would be placed on other nearby rock quarries.

VII. ALTERNATIVES TO THE PROPOSED PROJECT

INTRODUCTION

The following discussion evaluates alternatives to the proposed 9 acre expansion of an existing 4 acre rock quarry operation. The Alternatives Summary of Impacts, Table E located at the end of this section, provides a comparison of alternatives under consideration. The table is in tabular format permitting a review of the range of alternatives with their estimated impacts and providing a comparative analysis of each alternative.

CEQA Guidelines indicate that "The discussion of alternatives shall focus on alternatives capable of eliminating any significant adverse environmental effect or reducing them to a level of insignificance, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."

A brief description of each alternative is provided below. This section evaluates alternatives which may be capable of eliminating, or reducing to a level of significance, adverse impacts associated with the project. Additionally, the alternatives considered environmentally similar, superior, or inferior to the proposed project are identified.

The objective of the proposed rock quarry expansion is to continue operations at the existing quarry location and implement a reclamation plan which will stabilize existing geotechnical hazards at the 4 acre rock quarry operation. The continuation of quarry operations will continue to provide materials for the construction of dam facings, flood control devices, sea walls and various types of development throughout the region. Alternatives to the proposed project include the "no project" alternative as required by CEQA and an evaluation of an alternative project location.

NO PROJECT ALTERNATIVE

The discussion of the No Project alternative is required by section 15126(d)(2) of CEQA Guidelines. Its intent and objectives are to compare the differences in environmental impacts, while considering overall project goals.

Adoption of the No Project alternative would limit the quarry operation to the existing 4 acres and not allow for implementation of the proposed reclamation plan. This reclamation plan would serve to fulfill an important project objective of stabilizing unsafe slopes at the existing quarry.

Currently, parts of the existing quarry site are geologically unstable. The undercutting that has taken place at the existing quarry operation has resulted in geologically unstable conditions. Several boulders have been unstabilized during quarry activity which have the potential for toppling. The existing quarry operation has reached a more steep slope area where an unstable geologic joint condition has been identified. Refer to the Geotechnical

Report in Appendix C. If this condition is allowed to remain as is, the dangers of slope instability will continue to exist. Continued quarry operations (proposed project) would serve to stabilize existing slopes and prevent potential landslides and rock toppling. The No Project Alternative would not allow excavation necessary to rectify existing unstable and unsafe slopes. The geological impacts associated with the No Project Alternative will be greater than with implementation of the proposed expansion. Geological impacts associated with this alternative could result from rock toppling and the unstable slope conditions create a greater potential for seismic related hazards.

The No Project Alternative does not allow the project objective of stabilizing unsafe slopes to be met. The remaining objectives as stated in the Project Description of this EIR would not be met if the No Project Alternative were approved. The project objectives include providing rock materials which meet both State and County standards for rock materials; continuing quarry operations in order to stabilize existing unsafe slopes; and eliminating potential erosion hazards which may create runoff into the North Fork of the Matilija Creek.

This No Project Alternative would not result in further excavation beyond the current permitted area. Loss of vegetation or wildlife habitat will therefore not occur. However, the potential for sedimentation impacts to the North Fork of the Matilija Creek would be greater than with the proposed project. Traffic impacts associated with the No Project Alternative and the proposed project are not considered significant. As stated in the Traffic section of this EIR, the amount of traffic will not change with the proposed quarry continuation. Approval of this alternative will eliminate significant unavoidable visual impacts as discussed in the Aesthetics/Visual section of this EIR. No vegetation would be removed and no unweathered rock would be exposed beyond the current permit area.

The No Project alternative would not incur the site-specific visual environmental effects associated with implementation of the project. It would, however, have the potential to result in significant geological and slope failure/sedimentation impacts because it would not allow for stabilization of the existing unstable and unsafe slope adjacent to the existing quarry site. The avoidance of the site-specific visual impacts must, therefore, be balanced against the other significant effects which would not occur with implementation of the proposed project. The No Project alternative would also not meet the project objectives as stated in the Project Description Section of this EIR. Thus, while the No Project alternative can be considered to be environmentally superior to the project in some ways, it has the potential to have an impact of greater significance in another environmental issue area.

ALTERNATIVE PROJECT LOCATION

The California Environmental Quality Act indicates that the EIR must address alternative locations for the proposed project. The proposed project is a continuation of an existing quarry operation, therefore in selecting an alternative location, an existing quarry was sought which could supply the same quality rip-rap and crushed rock aggregate. As stated in the related projects section of this EIR, the only other location in the County of Ventura which fulfills this objective is the Mary Smith Quarry. This quarry meets County standards for rock materials but does not meet State standards. Based on the above stated factors and discussions with County staff the Mary Smith Quarry was chosen as the alternative project location to be analyzed.

In relation to the proposed site, the alternative location lies approximately 40 miles to the Southeast near the City of Camarillo. The entrance to the quarry is located along Howard Road. The nearest cross streets are Pleasant Valley Road and Pancho Road.

Surrounding land uses include agriculture and the Conejo Mountain Memorial Park Cemetery. The topography of the site consists of vertical hillsides and plateaus. Native vegetation consists of trees, chaparral and cactus. Surface runoff is directed toward a settling/water supply pond adjacent to the site. The hours of operation are from 7:30 a.m. to 3:30 p.m. with a total of 3-4 employees.

This alternative site is the only quarry which is capable of producing similar type and quality of rock material as the Schmidt Rock Quarry. The site consists of 102 acres with 62 acres currently being mined. The quarry owner has applied for an expansion of 86,000 tons/year under CUP 3817.

The Mary Smith Quarry is not readily visible from nearby U.S. Highway 101. Visitors to the adjacent cemetery are currently and would continue be visually impacted by the quarry. Existing trees and shrubs will provide some screening. As stated previously in the Mary Smith Quarry is located adjacent to an existing Cemetery. As with the Schmidt Rock Quarry, few scattered residences occur within the quarry's vicinity. Impacts associated with aesthetics/visual are anticipated to be similar to the proposed project.

According to the project description questionnaire submitted by the applicant on August 9, 1991, the Mary Smith Quarry is located in an area of similar vegetation, i.e. chaparral and wildlife. With this alternative, removal of vegetation would take place creating similar biological impacts as the proposed project. The Mary Smith Quarry is not located near a blue line stream as identified by the California Department of Fish and Game. No waterways would be impacted with approval of this alternative, therefore, sedimentation related impacts will be less than the proposed project.

The Mary Smith Quarry is a hillside excavation which inherently presents a risk to quarry workers. Impacts associated with geology will be similar to the proposed project because the excavation takes place on vertical hillsides which poses potential danger to quarry workers. Similar seismic hazards also exist in the event of an earthquake.

Both the Mary Smith Quarry and the Schmidt Rock Quarry are located in remote areas which results in hauling materials over long distances. Traffic impacts are not anticipated to be significant with the proposed project or with this alternative. Traffic impacts will be similar with approval of this alternative.

The Mary Smith Quarry produces similar rip-rap and crushed rock aggregate as the Schmidt Rock Quarry. It is not able to meet State specifications for rip-rap and concrete standards but it does meet County specifications. Approval of this alternative will not meet the project objectives as stated in the Project Description of this EIR. One of the key objectives is to continue the existing quarry operations in order to stabilize existing unsafe slopes. An additional objective is to provide rock materials which meet both State and County specifications. As stated previously, the material mined at this site does not meet State standards. This alternative will not allow the objective of eliminating potential erosion hazards which may create runoff into the North Fork of the Matilija Creek. This alternative is not considered environmentally superior to the proposed project and does not meet the project objectives, therefore, it should be rejected from further consideration.

VIII. PERSONS AND ORGANIZATIONS CONSULTED

ORGANIZATIONS CONSULTED

County of Ventura

Planning Department	Judith Ward Beth Painter

PREPARERS AND CONTRIBUTORS TO THE REPORT

Preparers

EDAW, Inc.	Jayna Morgan Tim Gnibus Sally Salavea Dianne Stevens

Contributors

Graphic Design	Gwen Koger
Pacific Materials Laboratory, Inc.	Douglas C. Papay Mason Redding
LBH Engineering Company	Debbie Naves
Consulting Biologist	Steve Nelson

REFERENCES

Los Padres National Forest, 1987. Guidelines for Preparing Visual Resource Sections of Environmental Documents for Projects Affecting the Los Padres National Forest. Prepared for Los Angeles National Forest, Goleta, California.

Ventura, County of, 1985. Ventura County General Plan. County of Ventura, California.

Ibid, 19___. Ventura County Zoning Ordinance.

Ibid, 19___. County Guidelines for Orderly Development Policies within Spheres of Influence.

APPENDICES

APPENDIX A

PUBLIC PARTICIPATION AND REVIEW

1. NOP/INITIAL STUDY
2. RESPONSES TO NOP

RESOURCE MANAGEMENT AGENCY

county of ventura

Planning Division

Keith A. Turner
Manager

January 5, 1989

Schmidt Construction, Inc.
26951 Ruether Avenue
Canyon Country, CA 91351

Certified Mail No. P-573 382 879

Dear Mr. Schmidt:

Subject: Determination that an Environmental Impact Report will be Required for CUP-3489 (Modification No. 2)

In accordance with Section 15063 of the California Environmental Quality Act (CEQA), the Resource Management Agency has conducted an Initial Study (environmental analysis) and has determined that the above project could have significant environmental impacts with respect to the following issues:

1. Traffic

   The continuation and expansion of this quarry could generate additional truck trips, have an impact upon existing roads, and result in traffic hazards to motor vehicles, bicyclists or pedestrians. It is also possible that additional traffic trips may be created by this project along Highway 33 during peak traffic hours. These issues and any mitigation measures to possible adverse impacts need to be addressed.

2. Flood Control/Biology

   It is possible that a potential failure of the existing quarry site into the adjacent stream may dam the stream's flow creating a possible problem with existing flora/fauna. Potential damage to the North Fork of Matilija Creek with possible mitigation should be explored.

3. Visual

   The quarry site is highly visible and can be seen by motorists traveling north and south on Highway 33. This issue with any mitigation measures needs to be discussed.

4. Archaeological

   No previous archaeological work has been done in the area. A reconnaissance of the entire proposed evacuation area shall be done as part of the EIR.

800 South Victoria Avenue, Ventura, CA 93009

Pursuant to State law, this Agency has determined that an Environmental Impact Report (EIR) should be prepared for this project. We must inform you that an EIR may take nine months or more to prepare (depending on the project complexity). The full cost for consultant fees and staff coordination must be borne by the applicant.

In order to proceed with your project, it will be necessary for you to sign and submit the attached Reimbursement Agreement and an initial $2,530.00 deposit fee no later than January 31, 1989, to pay for staff coordination and review of the EIR. Once the deposit is received, staff will prepare the Scope-of-Work and a consultant contract. After the consultant contract has been approved by the County, you must deposit the total consultant EIR cost in a Trust Account with the Resource Management Agency before work on the EIR can commence. If staff review costs exceed the $2,530.00 deposit, you will be billed periodically. Failure to submit the required fee in a timely manner will stop work on the EIR and result in automatic (fast track) denial without prejudice of your application request.

If you disagree that an EIR is necessary for your project, this administrative decision can be appealed to the Environmental Report Review Committee by submitting an appeal form and $660.00 appeal deposit fee to the Planning Division within ten (10) calendar days following the date of this letter.

If you have any questions on this process, please call Paul Porter at (805) 654-2491.

Sincerely,

Robert K. Laughlin, Supervisor
Commercial/Industrial Land Use Section

RKL:lb/L322

Attachment:
Reimbursement Agreement

cc: LBH Engineering

INITIAL STUDY

A. PROJECT INFORMATION

1. Project No.: [illegible] (Mod 2)
2. Name of Applicant: [illegible]
3. Project Location: Adjacent and east of Highway 33 approximately 900 feet north of Matilija Road and about 3.25 miles [illegible]
4. Project Description: The [illegible] quarry.

B. ENVIRONMENTAL IMPACT CHECKLIST

PLANNING DIVISION

	Impact? Yes	Impact? Maybe	Impact? No	Significant? Yes	Significant? Maybe	Significant? No
1. **Land Use** Will the project, individually or cumulatively, alter the planned land use of an area?			X			
2. **Growth Inducement** Will the project, individually or cumulatively, induce growth in an area?			X			
3. **Housing** Will the project, individually or cumulatively, affect existing housing, or create a demand for additional housing?			X			
4. **General Plan Consistency** Will the project, individually or cumulatively, conflict with any environmental goal, objective, policy or program of the General Plan?			X			
5. **Mineral and Oil Resources** Will the project, individually or cumulatively, result in:						
a. The depletion of mineral or oil resources?	X					X
b. Hampering or precluding access to or the extraction of, mineral or oil resources?			X			

	Impact? Yes	Maybe	No	Significant? Yes	Maybe	No
6. **Solid Waste Facilities**						
Will the project, individually or cumulatively, have an effect upon solid waste disposal facilities?			X			
AIR POLLUTION CONTROL DISTRICT						
7. **Air**						
a. Will the project, individually or cumulatively, result in:						
(1) Deterioration of regional ambient air quality?	X					X
(2) Localized air quality impacts?		X				X
(3) Objectionable odors?			X			
b. Will the project be impacted by:						
(1) Air pollutants from a nearby emission source?			X			
(2) Objectionable odors?			X			
PUBLIC WORKS AGENCY						
8. **Earth**						
Will the project, individually or cumulatively, result in or be impacted by:						
a. Unstable earth conditions or changes in geologic substructures?	X			X		
b. Disruptions, displacements, compaction or overcovering of the soil?	X			X		
c. Change in topography or ground surface relief features?	X			X		
d. The destruction, covering or modification of any unique geological or physical features?	X			X		
e. An increase in wind or water erosion of soils, either on or off the site?	X			X		
f. Changes to the deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?	X			X		
g. Geologic hazards such as earthquakes, landslides, mudslides, ground failure, liquefaction, or similar hazards?	X			X		
9. **Transportation/Circulation**						
Will the project, individually or cumulatively, result in:						
a. The generation of additional vehicular movement?	X			X		

	Impact? Yes	Impact? Maybe	Impact? No	Significant? Yes	Significant? Maybe	Significant? No
b. An effect on existing parking facilities, or demand for new parking?			X			
c. An impact upon existing transportation systems?	X			X		
d. Alterations to present patterns of circulation or movement of people and/or goods?			X			
e. Alterations to rail traffic?			X			
f. An increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	X				X	
10. Flood Control						
Will the project, individually or cumulatively, result in or be impacted by:						
a. Changes to absorption rates, drainage patterns, or the route and/or amount of surface water runoff?	X			X		
b. The alteration to the course or flow of flood waters?	X			X		
c. The exposure of people, property or unique natural resources to hazards such as flooding or tsunami?	X			X		
d. An effect on a channel or stream regulated by the Flood Control District?			X			
e. Changes in currents, or the course of direction of water movements, in any body of water?			X			
f. A flood plain indicated on the Ventura County Flood Insurance Rate Maps?			X			
11. Water Resources						
Will the project, individually or cumulatively, result in or be impacted by:						
a. A decrease of surface water quantity?			X			
b. The degradation of surface water quality?	X				X	
c. A decrease of groundwater quantity?			X			
d. The degradation of groundwater quality?			X			
e. A high groundwater table?			X			

	Impact? Yes	Maybe	No	Significant? Yes	Maybe	No
ENVIRONMENTAL HEALTH DIVISION						
12. Sanitation If the project will utilize an individual sewage disposal system, can the sewage generated by the project create an adverse health impact?			X			
13. Water Supply Will the project not be provided with a long-term water supply of adequate quantity and quality?			X			
14. Risk of Upset Does the project, individually or cumulatively, involve a risk of releasing hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset condition?	X				X	
15. Human Health Will the project, individually or cumulatively, result in:						
a. Creation of any health hazard or potential health hazard (excluding mental health)?			X			
b. Exposure of people to potential health hazards?			X			
FIRE PROTECTION DISTRICT						
16. Will the project, individually or cumulatively, result in impacts on fire protection due to:						
a. The distance/response time from nearest fire station?			X			
b. The availability of personnel or equipment?			X			
c. The location in a high fire hazard area?			X			
d. The design of roads and circulation?			X			
e. The water supply and distribution system?			X			
f. The hazardous nature of the project?			X			
SHERIFF'S DEPARTMENT						
17. Will the project, individually or cumulatively, result in impacts on law enforcement due to:						
a. The design of the project?			X			
b. The design of roads and circulation?			X			
c. The location of the project?			X			

	Impact? Yes	Impact? Maybe	Impact? No	Significant? Yes	Significant? Maybe	Significant? No
GENERAL SERVICES AGENCY						
18. Recreation Will the project, individually or cumulatively, result in impacts on recreational opportunities or facilities?			✓			
19. Harbors Will the project, individually or cumulatively, result in an impact on harbors?			✓			
AIRPORTS DEPARTMENT						
20. Will the project, individually or cumulatively, result in impacts on:						
a. Air traffic safety?			X			
b. Existing airport facilities?			X			
AGRICULTURAL DEPARTMENT						
21. Agricultural Resources Will the project, individually or cumulatively, result in:						
a. The conversion of prime agricultural land to other uses?			✓			
b. The loss of productive crop land or soils?			✓			
c. An adverse effect on adjacent agricultural land?			X			
AREAS TO BE COMPLETED BY THE AGENCY RESPONSIBLE FOR ADMINISTERING THE PROJECT						
22. Visual Effects Will the project, individually or cumulatively, result in the obstruction of a scenic resource or view open to the public, or will the project result in the creation of an aesthetically offensive site open to public view?	X				X	
23. Light and Glare Will the project, individually or cumulatively, produce light or glare?			X			
24. Noise and Vibrations Will the project, individually or or cumulatively, result in the exposure of people to increased noise or vibrations?			X			
25. Public Facilities and Utilities Will the project, individually or cumulatively, have an effect upon, or result in a need for new or altered services in any of the following areas:						
a. Sewers or sewage treatment plants?			X			

	Impact? Yes	Maybe	No	Significant? Yes	Maybe	No
b. Water mains or storage facilities?			X			
c. Electrical transmission facilities?			X			
d. Natural gas facilities?			X			
e. Communication facilities?			✓			
f. Educational facilities?			X			
26. Energy						
Will the project:						
a. Result in an increase in demand upon existing sources of fuel or energy?			X			
b. Use fuel or energy in a wasteful manner?			X			
27. Cultural/Ethnic Resources						
Will the project, individually or cumulatively, result in:						
a. Disruption, alteration, destruction, or adverse effect on a prehistoric or historic archaeological site or paleontological site?		✓			✓	
b. Disruption or removal of burials or cemetery?		X			✓	
c. Inducement to trespass, vandalism, or desecration of cultural resources?			X			
d. The potential to cause a physical change which would affect unique values of an ethnic or social group?		✓			✓	
e. The potential to conflict with or restrict existing religious, scientific, or educational uses of the area?		✓			✓	
f. Adverse physical or aesthetic effects to any historic structure or feature, or to any structure or feature eligible for designation as a county landmark?		X			✓	
28. Biological Resources						
Will the project, individually or cumulatively, result in:						
a. Change in the diversity of species, or numbers of any locally sensitive or unique plant species.			X			
b. Disturbance or reduction in the numbers of any State or Federally listed rare, threatened or endangered plant species or their habitats?			X			

	Impact? Yes	Impact? Maybe	Impact? No	Significant? Yes	Significant? Maybe	Significant? No
c. Introduction of new plant species into an area, or the introduction of a barrier to the normal replenishment of existing species?			✓			
d. Change in the diversity of species, numbers or habitat of any animal species which are locally sensitive or unique?			✓			
e. Disturbance or reduction in the numbers of any State or Federally listed rare, threatened or endangered animal species or their habitats?			✓			
f. Introduction of new animal species into an area?			✓			
g. Introduction of barriers to movement of any resident or migratory fish or wildlife species?		X			X	
h. Introduction of factors adverse to the existing ecological balance?		✓			X	
i. Introduction of substances, human activity, structures or other factors that would damage, change or hamper an existing locally sensitive or unique ecosystem?			✓			

C. **DISCUSSION OF RESPONSES TO CHECKLIST**

(Agency responses are attached here.)

	Yes	Maybe	No

D. MANDATORY FINDINGS OF SIGNIFICANCE

	Yes	Maybe	No
1. Does the project have the potential to significantly degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	___	X	___
2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future).	___	___	X
3. Does the project have impacts which are individually limited, but cumulatively considerable? (Several projects may have relatively small individual impacts on two or more resources, but the total of those impacts on the environment is significant.)	___	X	___
4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	___	___	X

E. DETERMINATION OF ENVIRONMENTAL DOCUMENT

On the basis of this initial evaluation:

[ ] I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION should be prepared.

[ ] I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measure(s) described in Section C of the Initial Study will be applied to the project. A MITIGATED NEGATIVE DECLARATION should be prepared.

[X] I find the proposed project, individually and/or cumulatively, MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required.*

Signature of Person Responsible for Administering the Project — Date 12/19/89

*EIR Issues of Focus: ______________________________

EXPLANATION OF INITIAL STUDY CHECKLIST
CUP-3489 MOD 2
SCHMIDT CONSTRUCTION, INC.

Items 1 through 4

The permit for the ongoing rock quarry operation is consistent with the General Plan designation of "Open Space," and the existing zoning of R-A (Rural Agricultural) which allows mining with approval of a Conditional Use Permit. The project is intermittent in nature and has a maximum of 30 loads per day and has not expanded its number of truck trips in a number of years. Therefore, the project will not be growth inducing, nor will it create a demand for additional housing.

5. Mineral and Oil Resources

The proposed project mines only rock for rip rap and similar uses and as such does not use sand and gravel mineral or oil resources, nor is it located in an area containing these resources.

6. Solid Waste Facilities

The rock mining operations will have no impact on solid waste facilities, as it is not a generator of significant sources of this type of waste.

7. Air

a) (1) Since this is a facility that has been in existence for many years, there will be an impact, but the impact will be insignificant.

(2) Due to the project's remote location and its intermittent operating schedule, there may be some dust impacts, but the impacts will not be significant.

(3) The project does not produce objectionable odors

b) (1 and 2)

Due to the project's remote location, the project will not be impacted by other emission sources or objectionable odors.

Items 8 through 11

See attached information from Public Works Agency and EIR previously prepared for project dated November 25, 1975.

12. Sanitation

The project does not lend itself to the installation of an individual sewage disposal system, because of adverse geological constraints. Chemical toilets with washing facilities are utilized with the handwashing facilities draining into the chemical toilet's holding tank.

13. Water Supply

Domestic water will not be supplied. Water for dust control will be supplied from stream wells.

Items 14 (Risk of Upset) and 15 (Human Health)

An accident or upset condition may cause the release of diesel fuel. Existing fire codes regulate aboveground fuel storage tanks.

The operation of the quarry would involve the use of explosives. Improper blasting can result in excessive scattering of rock fragments and soil. If such debris fly beyond the site boundaries, it would represent a serious safety problem.

The transportation and storage of explosives can also create a public safety hazard if not done properly. Carefully considered security for blasting material must be undertaken to prevent serious public safety problems.

In addition, blasting produces a shock wave in the rock and earth which is not unlike the shock of a small earthquake. Since the energy involved in most blasting is much less than that from a seismic event, the area affected is quite small. Even so, the shock can dislodge loose material on hillsides and road cuts, thus increasing this potential hazard. This problem is particularly noteworthy in this case because of the substantial road cut on State Highway 33 adjoining the quarry site.

The operation of heavily loaded trucks in residential neighborhoods represents a potentially hazardous situation.

The project site is located in a seismically active area. Groundshaking could possibly result in an obstruction to stream flow from falling rocks.

Impact: The use of explosive at the site could result in shock waves, flying materials, and transportation and storage hazards.

Treatment Alternatives: Some of the problems associated with blasting can be mitigated or eliminated by the use of blasting mats. These mats are used for blasting operations in areas where flying debris and noise of detonation are intolerable, such as the downtown areas of large cities. Improved blasting techniques could also be employed to reduce quasi seismic effects and noise.

16. Fire Protection

According to the Ventura County Fire Department, the project has no significant fire hazards involved with its operation. The Department further indicates that the use of explosives at the project site are adequately regulated through the Sheriff's Department permit process.

Impact: The project would not affect the Fire Department's ability to service the area.

17. Law Enforcement

The Sheriff's Department indicates that the project has no significant impact on its ability to render service to the area. The Department is also unaware of any past problems with the operation and can predict none in the future.

Impact: The project would not affect the Sheriff's Department's ability to service the area.

18. Recreation

The proposed project will not have any effects on recreational opportunities or facilities.

Items 19 (Harbors) and 20 (Airports)

The proposed project is not near a harbor nor near an airport, nor will it affect their operation.

21. Agriculture

The land is not suitable for agricultural purposes.

22. Visual Effects

The project site is located approximately two miles south of a point where Highway 33 becomes designated as a part of the California Scenic Highway System. Although the section of Highway 33 adjacent to the project site has not been so designated, it is on both the County's and State's Scenic Highway eligibility lists. In preparation for future entry into the Scenic Highway System, The Board of Supervisors have requested the

Division of Highways give Highway 33 the highest priority in the preparation of this route's scenic corridor study. Currently, the corridor study has been completed and all that remains to do before the official scenic designation can be given, is the preparation and adoptions of local plans and programs for the preservation and enhancement of the scenic corridor.

The State Division of Highways has recommended that these plans and programs contain policies for the restoration of quarries to an attractive appearance.

Impacts: The quarry operation has created and could continue to expose unweathered rock on the mountainside. The unweathered rock is highly visible to those people traveling on Highway 33.

23. Light and Glare

Excavation does not take place at night, therefore, light and glare will not be a problem.

24. Noise and Vibration

Please refer to items 14 and 15 as well as the EIR proposed for the initial project dated November 25, 1975.

25. Public Utilities

Public utilities will not be affected by this project.

26. Energy

The project, as proposed, will not result in an increased demand for energy, nor will it waste energy.

27. Cultural/Ethnic Resources

According to the Ventura County Archaeological Society, there are no recorded archaeological sites in the vicinity of the project site. Although it would be normal to require a survey in cases of new development in an unsurveyed area, the society is of the opinion in this case such a survey would not be beneficial, providing that operations are confined to the present quarry sites. Therefore, if the operator intends to open new areas in the future, a survey should be performed. Since the operator intends to expand the operation, an archaeological report shall be prepared as a part of the Environmental Impact Report.

28. Biological Resources

The immediate quarry site contains almost no native plant species. The adjacent stream contains a few small immature riparian species including White Alder (Anlus Rhombipolia) and Sycamore (Platanus raresmosa). The stream area also contains small amounts of Mule Fat (Baccharis gilutinosa), Willow (Salix sp.), California Buckwheat (Eriogonum fasciculatum) and Laurel Leaved Sumac (Rhus laurina).

The vegetation on the mountainous areas surrounding the quarry is predominantly chaparral. The rocky nature of the soil would appear to make this vegetation thinner than usual because fire has given it a sparse appearance. Nevertheless, this surrounding community should recover and grow into a varied chaparral plant community. Plant species observed on the surrounding hills include: California Live Oak (Quercus agrifolia), Scrub Oak (Quercus Dumosa), Laurel Leaved Sumac (Rhus laurina), Chamise (Adenstomia fasciculatum), California Buckwheat (Eriogonum fasciculatum), Ceanothus (Ceanothus sp.), Toyon (Heteromeles arbutifolia), Yucca (Yucca whipplei) and native grasses.

Plants in the upstream and downstream portions of the north fork of the Ventura River are predominently Sycamore (Platanus raresmosa) and White Alder (Alnus Rhombifolia). Other species include California Bay (Umbellularia californica), Willows (Salix sp.), Mule Fat (Baccharis gluitinosa), Black Cottonwood (Populus trichocarpa), Cat Tail (Typhe letifolia), Sweet Clover (Melilotus sp.), Night Shade (Solanum douglasi), Poison Oak (Rhus diversiloba) and Stream Algae.

There are only a few wildlife species in the immediate quarry site. Wildlife here is limited to small mammals, snakes, lizards, and insects. The only observed bird species that might reside in the quarry area are the Rock Wren and Canyon Wren.

The sparse vegetation in the stream adjacent to the quarry contributes to a relatively small number of wildlife species. A fish survey conducted on August 5, 1975, showed an absence of fish in the stream adjacent to the quarry. However, small fish were observed both upstream and downstream of the quarry site. One large trout was observed below the quarry. A fish survey conducted in July, 1974, showed the presence of fish at the quarry site.

The absence of wildlife species at the quarry site and in the adjacent stream is a stark contrast to the abundance of wildlife species surrounding it. The surrounding area contains a wide variety of wildlife species too numerous to list here. For the purposes of this report it appears sufficient to indicate that the wildlife species range from large mammals (bear, mountain lion, mule deer, etc.) to an abundance of insects. A listing of wildlife appropriate to the surrounding habitats is available in the Flood Control District Office.

Impact: According to the Public Works Agency, the existing quarry operations have apparently denuded most of the native riparian and chaparral plant community habitats. An investigation of upstream and downstream areas indicate that the native habitats must have been substantial. An apparent fire has burned the area immediately above the existing quarry giving it a sparse appearance.

The quarry operations may have caused large rocks to fall in the north fork of Ventura River. While upstream and downstream portions of the stream are also very rocky in nature, they contain greater amounts of sands and small rock. The stream in the quarry area contains very little of these finer sands and rock.

The quarry may have reduced the width of the natural stream. This however, is difficult to determine given the presence of Highway 33 and the naturally narrow stream configuration upstream of the quarry. There is at least one location where rock in the stream has created a 3 to 4 foot fall in the stream. Under summer low flow conditions this may be a barrier to fish migration. Additionally, the California State Department of Fish and Game reports that stream blockages could adversely effect the migrations of native and planted trout.

The State Department of Fish and Game has also reported that this quarry is a likely source of siltation from the effects of erosion. Current research on quarries indicates that even small amounts of silt can have substantial impacts on aquatic resources. The presence of silt in streams can result in the smothering of aquatic insects and the reduced suitability of the affected stream sections for spawning purposes.

Treatment Alternatives: The quarry operator and the State Department of Fish and Game could meet to discuss developing jointly plans and programs for the maintenance and rehabilitation of the stream channel to insure that future fish migrations and spawning are not adversely effected by quarrying activities.

PP:bb/A12

RESOURCE MANAGEMENT AGENCY
county of ventura

Planning Division
Keith A. Turner
Manager

March 15, 1989

Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

Certified Mail No. P85230578

TO ALL CONCERNED PARTIES:

Subject: Notice of Preparation of an Environmental Impact Report for Conditional Use Permit No. 3489 - Mod. 2 (Schmidt Quarry)

The Planning Division of Ventura County has determined that the above referenced project may have a significant effect on the environment and that an Environmental Impact Report (EIR) should be prepared. A preliminary Scope of Work, description and location map are attached along with a copy of the Initial Study.

The purpose of this notice is to call your attention to this project and to request that your organization assist the Planning Division in identifying issues that should be addressed in the EIR.

Pursuant to Government Code Section 21080.4(a), this information must be submitted to this Agency by certified mail no later than 30 days after receipt of this letter.

If you have any questions or concerns, or would like to meet with County Planning staff to discuss the contents of this notice, please contact Paul Porter at (80 654-2491 as soon as possible.

Sincerely,

Robert K. Laughlin

Robert K. Laughlin, Supervisor
Commercial/Industrial Land Use Section

RKL:jl/C168

Attachments:
- Project Description
- Location Map
- Initial Study
- Preliminary Scope of Work

ICE OF PLANNING AND RESEARCH
Mail to: 1400 Tenth Street, Room 121
Sacramento, CA 95814
(916) 445-0613

NOTICE OF COMPLETION AND ENVIRONMENTAL DOCUMENT TRANSMITTAL FORM

Appendix 12
See NOTE below
SCH# ____________

1. Project Title: [illegible]
2. Lead Agency: County of Ventura
   Contact Person: [illegible] Porter
3a. Street Address: 800 S. Victoria Avenue
3b. City: Ventura
3c. County: Ventura
3d. Zip: 93009
Phone: 654-[illegible]

PROJECT LOCATION

4. County: Ventura
4a. City/Community: [illegible]
4b. Assessor's Parcel No.: [illegible]
4c. Section: [illegible]
5. Cross Streets: [illegible]
6. Within 2 Miles: a. State Hwy. #: [illegible]
b. Airports: none
c. Railways: none
d. Waterways: [illegible] Ventura River

7. DOCUMENT TYPE

CEQA
01. ✓ NOP
02. ___Early Cons.
03. ___Neg. Dec.
04. ___Draft EIR
Supplement/
05. ___Subsequent EIR
06. ___NOE
07. ___NOC
08. ___NOD
(Prior SCH No.: ____________)

NEPA
09. ___NOI
10. ___FONSI
11. ___Draft EIS
12. ___EA

OTHER
13. ___Joint Document
14. ___Final Document
15. ___Other ____________

8. LOCAL ACTION TYPE

01. ___General Plan Update
02. ___New Element
03. ___General Plan Amendment
04. ___Master Plan
05. ___Annexation
06. ___Specific Plan
07. ___Community Plan
08. ___Redevelopment
09 ___Rezone
10. ___Land Division (Subdivision, Parcel Map, Tract Map, etc.)
11. ___Use Permit
12. ___Waste Mgmt Plan
13. ___Cancel Ag Preserve
14. ___Other ____________

9. DEVELOPMENT TYPE

01. ___Residential Units ______ Acres ______
02. ___Office: Sq. Ft. ______ Acres ______ Employees ______
03. Shopping/Commercial: Sq. Ft. ______ Acres ______ Employees ______
04. ___Industrial: Sq. Ft. ______ Acres ______ Employees ______
05. ___Water Facilities: MGD ______
06. ___Transportation: Type ______
07 X Mining: Mineral ______
08. ___Power: Type ______
09. ___Waste Treatment: Type: ______
10. OCS Related
11. Other: ______

10. TOTAL ACRES: ____________
11. TOTAL JOBS CREATED: ____________

12. PROJECT ISSUES DISCUSSED IN DOCUMENT:

01. X Aesthetic/Visual
02. ___Agricultural Land
03. ___Air Quality
04. ___Archaeological/Historical
05 ___Coastal Zone
06. ___Economic
07. ___Fire Hazard
08. X Flooding/Drainage
09. X Geologic/Seismic
10. ___Jobs/Housing Balance
11. ___Minerals
12. ___Noise
13. ___Public Services
14. ___Schools
15 ___Septic Systems
16. ___Sewer Capacity
17. ___Social
18. ___Soil Erosion
19. ___Solid Waste
20. ___Toxic/Hazardous
21. X Traffic/Circulation
22. X Vegetation
23. ___Water Quality
24. ___Water Supply
25. ___Wetland/Riparian
26. ___Wildlife
27. X Growth Inducing
28. ___Incompatible Land Use
29. ___Cumulative Effects
30. ___Other ____________

13. FUNDING (approx.) Federal $ ________ State $ ________ Total $ ________

14. PRESENT LAND USE AND ZONING:
Existing Rock Quarry, Open Space [illegible] 2

15. PROJECT DESCRIPTION:
The applicant is applying for an expansion and extension of an existing rock quarry.

16. SIGNATURE OF LEAD AGENCY REPRESENTATIVE: Paul Porter DATE: [illegible]

NOTE: Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. from a Notice of Preparation or previous draft document) please fill it in.

STATE OF CALIFORNIA—OFFICE OF THE GOVERNOR GEORGE DEUKMEJIAN, Governor

OFFICE OF PLANNING AND RESEARCH

1400 TENTH STREET
SACRAMENTO, CA 95814

DATE: March 27, 1989

TO: Reviewing Agencies

RE: The County of Ventura's NOP for
Conditional Use Permit No. 3489 (Modification No. 2) Project
SCH# 89032904

Attached for your comment is the County of Ventura's Notice of Preparation of a draft Environmental Impact Report (EIR) for the Conditional Use Permit No. 3489 (Modification No. 2) project.

Responsible agencies must transmit their concerns and comments on the scope and content of the EIR, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of this notice. We encourage commenting agencies to respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Paul Porter
County of Ventura
800 S. Victoria Avenue
Ventura, CA 93009

with a copy to the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the review process, call Garrett Ashley at 916/445-0613.

Sincerely,

David C. Nunenkamp
Chief
Office of Permit Assistance

Attachments

cc: Paul Porter

I#: 8902 29 C

'S': Sent by Lead 'X': Sent by SCH

[X] Bob Fletcher
Air Resources Board
1102 Q Street
Sacramento, CA 95814
916/322-8267

[ ] Karen Cagle
Dept. of Boating & Waterways
1629 S Street
Sacramento, CA 95814
916/445-6281

[ ] Gary L. Holloway
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, CA 94105
415/543-8555

[ ] Eileen Allen
California Energy Commission
1516 Ninth Street, Rm. 200
Sacramento, CA 95814
916/324-3231

[ ] Sandy Hesnard
Caltrans - Division of Aeronautics
P.O. Box 942874
Sacramento, CA 94274-0001
916/324-1833

[ ] George Smith
Caltrans - Planning
P.O. Box 942874
Sacramento, CA 94274-0001
916/445-5570

[X] Dennis O'Bryant
Dept. of Conservation
1416 Ninth Street, Room 1326-2
Sacramento, CA 95814
916/322-5873

( ) Div. of Mines and Geology
( ) Div. of Oil and Gas
( ) Land Resources Protect. Unit

[ ] Vashek Cervinka
Dept. of Food and Agriculture
1220 N Street, Room 104
Sacramento, CA 95814
916/322-5227

[ ] Douglas Wickizer
Dept. of Forestry
1416 Ninth Street, Room 1516-2
Sacramento, CA 95814
916/322-0128

[ ] Robert Sleppy
Dept. of General Services
400 P Street, Suite 3460
Sacramento, CA 95814
916/324-0214

[ ] Arlene Chance
Dept. of Health
714 P Street, Room 1253
Sacramento, CA 95814
916/323-6111

[ ] Sgt. J... dell
California Highway Patrol
Long Range Planning Section
Planning and Analysis Division
2555 First Avenue
Sacramento, CA 95818
916/445-1981

[X] William A. Johnson
Native American Heritage Comm.
915 Capitol Mall, Room 288
Sacramento, CA 95814
916/322-7791

[ ] Hans Kreutzberg
Office of Historic Preservation
P.O. Box 942896
Sacramento, CA 94296-0001
916/322-9621

[X] Mike Doyle
Dept. of Parks and Recreation
P.O. Box 942896
Sacramento, CA 94296-0001
916/324-6421

[ ] George Hersh
Public Utilities Commission
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JW

April 19, 1989

IGR/CEQA
The County of Ventura's NOP for
Conditional Use Permit No. 3489
(Modification No. 2) Project
SCH No. 89032904

Mr. Paul Porter
County of Ventura
800 S. Victoria Avenue
Ventura, CA 93009

Dear Mr. Porter:

Caltrans has reviewed the above referenced Notice of Preparation and has the following comments.

We are primarily concerned with the effects that this project may have on our facility, Route 33. Caltrans suggests that any impacts to this route be included in the draft environmental document. The draft document should also address the visual impacts of this project on the proposed scenic highway Route 33.

We also suggest that if a traffic study is prepared for this project, that the study include:

1. Existing and 20 year future average daily traffic (ADT) volumes
2. Traffic generation (including peak hour)
3. Traffic distribution and assignment
4. Current and projected capacities of affected highway and freeway routes
5. Cumulative traffic impacts

The DEIR should also include traffic mitigation measures where ever necessary.

We look forward to reviewing the Draft Environmental Impact Report. Thank you for this opportunity to comment.

Sincerely,

Gary McSweeney

GARY McSWEENEY
Senior Transportation Planner
IGR/CEQA Coordinator
Transportation Planning and
Analysis Branch

APPENDIX B

BIOLOGY REPORT

Schmidt Rock Quarry
Biological Assessment

Prepared For:

STA, Inc.
550-C Newport Center Drive
Newport Beach, California 92660

Prepared By:

S. Gregory Nelson
24230 Delta Drive
Diamond Bar, California 91765

I certify that this report is a complete and accurate account of the findings and conclusions of the biological assessment for the Schmidt Rock Quarry.

S. Gregory Nelson
S. Gregory Nelson
Consulting Biologist

July 24, 1991

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SCHMIDT ROCK QUARRY
BIOLOGICAL ASSESSMENT

S. Gregory Nelson
July 24 1991

INTRODUCTION

This report presents the findings of a biological assessment prepared in conjunction with the review and consideration of the proposed expansion of the Schmidt Rock Quarry by the County of Ventura and other concerned regulating agencies. The property assessed and described in this report is a nine acre parcel generally located in the County of Ventura, California, approximately three and one-quarters miles northwest of the City of Ojai, along Maricopa Highway (see Maps 1, 2 and 3).

The proposed project consists of a nine-acre expansion of the existing four acre quarry operation. Biological resources of the subject property are described and evaluated with regard to their significance; potential impacts to those resources as a result of the proposed project are analyzed and discussed; and, recommendations for mitigation measures are made. The reader should note that the author is neither a proponent nor an opponent of the proposed project, and the findings contained herein are entirely objective.

METHODS

The study began with a review of literature relating to sensitive and/or significant biological resources known to occur in the vicinity of the property. Primary sources reviewed included the California Natural Diversity Data Base, the California Department of Fish and Game's 1988 Annual Report On The Status Of California's State, Listed Threatened And Endangered Plants And Animals, the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California and the current U.S. Department of Interior, Fish and Wildlife Service reviews of endangered and threatened wildlife and plants. Other sources reviewed are listed in the References section at the end of this report.

The purpose of the literature review was to identify any significant and/or sensitive biological resources which potentially occur on site, and therefore, should be specifically evaluated and searched during field investigations.

Following the literature review, field investigations were conducted by the author on July 24, 1991. Weather at the time of the survey was mild, with a temperature range of 70°F to 75°F, light winds and overcast. Techniques employed to survey and inventory wildlife and vegetation included walking transects of representative examples of the various habitats found on site, as well as observation when traveling from transect to transect. Due to the size and accessibility of the site, all areas of the property were visually observed. Plant and wildlife species encountered were identified through direct observation, songs, scats, tracks and burrows. In addition, the condition, degree of development and viability of habitats found on site were noted.

RESULTS

Physiographical Setting

The subject property consists of generally undeveloped and unaltered land within the North Fork of Matilija Creek and Ventura River watersheds in Ventura County. Topography is extreme, consisting of steep walled canyons. Elevations on site range from approximately 1,800 feet above sea level to approximately 1,000 above sea level.

Vegetation/Plant Communities

Two distinct vegetation types, or plant communities, are found on the property: mixed chaparral and riparian woodland (see Map 2). A brief description of these is provided below.

Mixed chaparral on site is dominated by chamise (*Adenostoma fascuculatum*), scrub oak (*Quercus dumosa*), California sagebrush (*Artemisia californica*), laurel leaved sumac (*Rhus laurina*), California buckwheat (*Eriogonum fasciculatum*), toyon (*Heteromeles arbutifolia*) and ceanothus (*Ceanothus* sp.). Generally, these plant species possess relatively small, broad, hard leaves and are evergreen. This vegetation on site grows four to six feet tall, but does not form a closed canopy. A dense cover of primarily native needlegrass (*Stipa* sp.) exists between shrubs where soil is found. Rock faces and outcrops also make up a large portion of the areas between shrubs. In its distribution, mixed chaparral is widely distributed in Southern California on dry slopes at low to medium elevations, where it occupies thin, rocky or gravelly soils.

Riparian woodland exists in community form along the North Fork of Matilija Creek. This vegetation is dominated by white alder (*Alnus rhombifolia*), western sycamore (*Platanus racemosa*), arroyo willow (*Salix lasiolepis*) and coast live oak (*Quercus agrifolia*) Also found are large shrubs, including California bay (*Umbellularia californica*), toyon and laurel leaved sumac. Well developed riparian vegetation is found both upstream and downstream from the site.

In general, the riparian woodland on site is not as well developed as the riparian vegetation up and downstream. This is believed to be the result of the very narrow, steep walled drainage course at this location and clearing in the past. An aerial photograph taken in 1978 showed no riparian vegetation where the creek crosses the site. It is not known whether the clearing was by man or was the result of natural scouring during flood conditions. Riparian woodland is very limited in its distribution within Southern California. This is due in part to its generally being restricted to deep, moist soils on north facing slopes and within drainage bottoms. More significantly, however, widespread loss to urbanization has occurred in the region. The riparian woodland on site appears to be in good condition, although not well developed.

The North Fork of Matilija Creek contained running surface water at the time of the survey and is indicated by a "blue line" on the Wheeler Springs/Matilija 7.5 minute USGS quad sheet. The implications of this are discussed below under Mitigation Measures.

Wildlife

Mixed chaparral and riparian woodland vegetation provide habitat for many wildlife species. During the field investigation, a number of these were observed or detected using the survey methods described in the Methods section of this report. Bird species observed included Nuttall's woodpecker, brown towhee, California thrasher, scrub jay, wrentit, bewick's wren, bushtit, band tailed pigeon, lesser goldfinch, common raven, mourning dove, house finch, common flicker, starling, Anna's hummingbird and black phoebe. Mammals observed or detected included California ground squirrel, botta pocket gopher, dusky footed woodrat, Audubon cottontail and coyote. The only reptile observed was the side-blotched lizard. No amphibians were observed or detected.

A more complete listing of wildlife, including those species not observed, but expected with a relatively high degree of probability to occur on site, may be found in the Appendix. The listing of expected species is possible due to the very strong affinities most wildlife have for particular types of habitats. In this regard, the majority of wildlife observed or expected on site will use both mixed chaparral and riparian woodland. This is due in part to the high degree of overlap in plant species which exists between these two communities and in part to their close proximity to one another. Since wildlife diversity generally follows habitat diversity, however, the riparian woodland, with the added dimension of trees, has the potential to support a higher diversity of wildlife than chaparral. Of the various wildlife habitats in Southern California, riparian woodland is one of the more important and limited. Amphibian species, including the slender salamander and western toad, potentially occur in the woodlands' moist leaf litter, as do the southern alligator lizard and western skink. Hummingbirds, flycatchers, vireos, warblers and sparrows favor southern oak woodland for foraging and nesting. Hawks, kites owls and doves specifically require trees to nest in. Furbearers (such as virginia opossum, raccoon, striped skunk and gray fox) often reach their highest concentrations in and around woodland habitats.

A detailed survey of the fish inhabiting the North Fork of Matilija Creek was not performed. However, a previous biological survey of the site reported that small fish and larger trout occur here.

Sensitive Resources

As mentioned above, the riparian woodland and associated stream are considered to be sensitive and significant resources due to their limited distribution and value to wildlife and fish.

In addition, several wildlife species which potentially use the riparian woodland are considered to be species of special concern. These are discussed below.

Cooper's hawk (*Accipiter cooperi*): Uncommon resident and migrant in Riverside County; nesting birds use riparian and oak woodlands; foraging habitat includes woodlands and brushlands; Federal government provides no designation for the species; State government lists the species as being of special concern; not observed during survey, however, oak/riparian woodland on site appears to be suitable for nesting; on site chaparral appears to be suitable for foraging; **probability of occurrence on site high.**

Sharp-shinned hawk (*Accipiter striatus*): Common winter migrant within Riverside County; very similar to Cooper's hawk in its habitat preference occupying woodlands and dense brush habitats alike; Federal government provides no designation for the species; State government lists the species as being of special concern and as being on The State's Watch List, for which data is currently being compiled; not observed during survey; however, oak/riparian woodland on site appears to be suitable for foraging, as does on site chaparral; **probability of occurrence on site high.**

DISCUSSION

Project Impacts

Adverse impacts to biological resources can be expected to occur as a result of several "causal" factors associated with the proposed expanded quarry operation. The vegetation and wildlife resources described in the existing setting section comprise biotic communities which are assemblages of diverse groups of plant and animal species occurring in the same physical habitat. These species are tied together in an orderly, predictable manner by a very close and complex set of interrelationships. As a consequence, first order impacts directly resulting from causal factors will, in turn, result in second order impacts which will, in turn, result in third order impacts, and so on. Typically, the degree to which this chain-like reaction proceeds toward the complete breakdown and loss of community stability and integrity depends upon the intensity and extent of the causal factor. Causal factors, their associated impacts, and the determinants of their severity are discussed below.

Removal of Vegetation. The most direct "first order" impact from the project will be the direct removal of existing vegetation from nine acres proposed for quarry operations. Within these areas, all existing vegetation will be removed and lost. Vegetation lost will be mixed chaparral. This will not be a significant adverse impact.

Loss of Wildlife Habitat. The second order impact resulting from the removal of existing vegetation will be the loss of wildlife habitat. Most wildlife species are highly dependent upon specific habitats and do not successfully adapt to habitats of a different kind.

Less mobile forms of wildlife, such as burrowers, will be destroyed, along with their habitats. Most mobile forms, such as birds and large mammals, will be displaced to suitable habitats nearby where they potentially will crowd and disrupt resident wildlife populations. Successful adaptation and adjustments of displaced wildlife into nearby habitats will be low, and these too will be lost. The chaparral habitat to be lost is relatively common in the region, as are the wildlife it supports. Although adverse, this impact will not be significant.

Harassment of Wildlife in Adjacent Habitats. Wildlife populations adjacent to proposed mining and processing areas will be impacted through "harassment". This indirect, second order impact is defined as the result of those activities of man which increase the physiological costs of survival or decrease the probability of successful reproduction in wildlife populations. The most common forms of harassment that will accompany the project are excessive noise and the presence of man and his equipment. Wildlife not tolerant of such disturbances will move away from habitat adjacent to quarry areas and will not use otherwise suitable habitat located there. This is particularly critical for larger wide ranging wildlife, such as birds of prey. Studies have shown that some birds of prey are not tolerant of disturbances within as much as one-half mile of their nesting sites and will abandon their nests if this area is encroached upon.

The effects of harassment on the riparian woodland habitat on site is potentially the most significant. However, given the existing operations, the proposed expansion is not believed to create significantly greater harassment than now exists.

Downstream Siltation. The proposed quarry operation will result in alterations to surface soils and underlying geology on site, which is part of the watershed for Matilija Creek. As a consequence, there is the potential for greater erosion on site through the exposure of sediments and soils. On site, this potential impact will not result in greater impacts to habitat than would result from the initial clearing of vegetation. Downstream, however, there will be the potential for changes to surface and groundwater hydrology which, if unmitigated, may have adverse impacts on downstream riparian and aquatic habitats. Given the significance of on site and downstream riparian and aquatic habitats, the potential for erosion/siltation is a significant adverse impact. Even small amounts of silt in streams can result in the smothering of aquatic insects, which are key sources of food for fish. Siltation can also result in the reduced suitability of affected stream sections for fish spawning purposes.

At a catastrophic scale, there exists the potential for the quarry site to fail and fall or slide into the North Fork of Matilija Creek. The reader should note that the author is not an engineer or geologist, and has no reason to believe such failure has even a remote probability to occur. It is only pointed out here so that a complete assessment is made. However, if failure into the creek occurred, several significant adverse impacts would result. These are: loss of riparian habitat through burial; loss of aquatic habitats through burial and/or siltation on site and downstream; and, interruption of movement by fish and wildlife along the creek.

__Cumulative Impacts__

The potential adverse impacts discussed above for the subject project will contribute on an incremental basis to cumulative impacts now occurring in the region as a result of land development activities. These impacts are an incremental loss in native vegetation and habitat; and an incremental contribution to the fragmentation of large blocks of contiguous native vegetation and habitat.

__Mitigation Measures__

Based on the preceding discussion, there is one __potentially__ significant adverse impact associated with the proposed project, which is siltation of downstream riparian and aquatic habitats. In other cases, there are impacts which are not significant, but are potentially inconsistent with sound resource planning management. The following measures are recommended to alleviate such inconsistencies and mitigate significant adverse impacts as much as possible.

1. The engineering of the proposed quarry expansion plan should be carefully reviewed by qualified geologists and engineers to assure that there is no possibility for large scale failure of slopes and rock faces.

2. The existing interface between the quarry operations and Matilija Creek should be recontoured so as to provide a protective berm along, but outside, of the riparian habitat. The purpose of this berm would be to stop any minor failures or slumping from reaching the creek and creating a sedimentation problem. (As understood, this is a component of the proposed Reclamation Plan.)

3. A silt fence should be placed at the bottom of the berm recommended above, on the creek side, to prevent the run-off of water borne sediments from the berm into the creek.

4. All relandscaping to be a part of the Reclamation Plan should be made using native species of trees, shrubs and groundcover only. (As understood, this is a component of the proposed Reclamation Plan.)

5. It should be noted that no adverse impacts to the Matilija Creek are expected; however, pursuant to Section 1601-1603 of the California State Fish and Game Code, the California Department of Fish and Game should be notified prior to any future alteration of the drainage. The purpose of this notification is to allow the state to regulate alterations to streambed habitats, including, but not necessarily limited to, those drainages which are shown by a "blue line" on U.S.G.S. 7.5 minute quad sheets. Mitigation measures beyond those recommended in this report may be required at that time.

6. In addition to those measures recommended above, a comprehensive erosion and siltation control plan should be designed and implemented during all phases of the quarry operations. (As understood, this is a component of the proposed plan.)

CONCLUSIONS

It is the conclusion of this assessment that if the proposed Operations and Reclamation Plans are followed with the incorporation of all recommended mitigation measures, significant adverse impacts can be avoided.

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07/26/91

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Appendix

WILDLIFE SPECIES INVENTORY

Following is a listing of wildlife species observed on site during the field survey and expected according to the literature and previous experience of the author. The list is not intended to be exhaustive and species listed as expected are those which have a moderate to high degree of probability to occur on site and/or would use the site as a significant part of their habitat.

Amphibians

Bufo boreas - western toad
Batrachoseps pacificus - pacific slender salamander

Reptiles

Gerrhonotus multicarinatus - southern alligator lizard
Coluber constrictor - racer
Lampropeltis getulus - common kingsnake
Masticophis flagellum - common whipsnake
Pituophis melanoleucus - gopher snake
Sceloporus occidentalis - western fence lizard
Uta stansburiana - side-blotched lizard
Eumeces skiltonianus - western skink
Lichanura trivirgata - rosy boa
Crotalus ruber - red diamond rattlesnake

Mammals

Canis latrans - coyote
Neotoma fuscipes - dusky-footed woodrat
Peromyscus californicus - California mouse
Peromyscus maniculatus - deer mouse
Didelphis virginiana - Virginia opossum
Thomomys bottae - Botta pocket gopher
Dipodomys agilis - pacific kangeroo rat
Perognathus californicus - California pocket mouse
Sylvilagus audubonii - Audubon cottontail
Mephitis mephitis - striped skunk
Spilogale gracilis - spotted skunk
Procyon lotor - raccoon
Spermophilus beecheyi - California ground squirrel
Scapanus latimanus - broad-handed mole
Mus musculus - house mouse

Birds

Accipiter cooperii - Cooper's hawk
Accipiter striatus - sharp-shinned hawk
Buteo jamaicensis - red-tailed hawk
Buteo lineatus - red-shouldered hawk
Aeronautes saxatalis - white-throated swift
Bombycilla cedrorum - cedar waxwing
Cathartes aura - turkey vulture
Chamaea fasciata - wrentit
Columba fasciata - band-tailed pidgeon
Streptopelia chinensis - spotted dove
Zenaida macroura - mourning dove
Aphelocoma coerulescens - scrub jay
Corvus brachyrhynchos - common crow
Corvus corax - common raven
Geococcyx californianus - roadrunner
Falco sparverius - American kestrel
Aimophila ruficeps - rufous-crowned sparrow
Carpodacus mexicanus - house finch
Chondestes grammacus - lark sparrow
Junco haemalis - dark-eyed junco
Melospiza melodia - song sparrow
Passerella iliaca - fox sparrow
Pipilo erythrophthalmus - rufous-sided towhee
Pipilo fuscus - brown towhee
Spinus lawrencei - Lawrence's goldfinch
Spinus psaltria - lesser goldfinch
Spizella passerina - chipping sparrow
Zonotrichia atricapilla - golden-crowned sparrow
Zonotrichia leucophrys - white-crowned sparrow
Icterus galbula - northern oriole
Molothrus ater - brown-headed cowbird
Lanius ludovicianus - loggerhead shrike
Mimus polyglottos - mockingbird
Toxostoma redivivum - California thrasher
Parus inornatus - plain titmouse
Psaltriparus minimus - bushtit
Dendroica cornata - yellow-rumped warbler
Vermivora celata - oranged-crowned warbler
Lophortyx californicus - California quail
Colaptes auratus - common flicker
Dendrocopos nuttallii - Nuttall's woodpecker
Dendrocopos villosus - hairy woodpecker

Birds (continued)

Phainopepla nitens - phainopepla
Sitta carolinensis - white-breasted nuthatch
Asio otus - long-eared owl
Bubo virginianus - great-horned owl
Otus asio - screech owl
Sturnus vulgaris - starling
Regulus calendula - ruby-crowned kinglet
Piranga ludoviciana - western tanager
Calypte anna - Anna's hummingbird
Thryomanes bewickii - Bewick's wren
Troglodytes aedon - house wren
Catharus guttat - hermit thrush
Sialia mexicana - western bluebird
Turdus migratorius - American robin
Contopus sordidulus - western wood pewee
Myiarchus cinerascens - ash-throated flycatcher
Sayornis nigricans - black phoebe
Tyto alba - barn owl
Vireo flavifrons - Hutton's vireo

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PLANT SPECIES INVENTORY

Following is a listing of plant species recorded as being observed on site. Species other than those listed below may have been overlooked or were undetectable at the time of the survey due to the seasonal nature of their occurrence.

Ferns

Dryopteris arguta - Coastal woodfern

Dicot Flowering Plants

Rhus laurina - Laurel sumac
Rhus ovata - Sugarbush
Baccharis glutinosa - Mulefat
Centaurea melitensis - Star-thistle*
Gnaphalium californicum - California cudweed
Heterotheca grandiflora - Telegraph weed
Brassica geniculata - Short-pod mustard*
Chenopodium album - Lamb's quarters*
Salsola iberica - Russian thistle*
Marah macrocarpus - Wild cucumber
Lotus scoparius - Deerweed
Quercus agrifolia - Coast live oak
Quercus dumosa - Scrub oak
Erodium cicutarium - Red-stemmed filaree*
Salvia mellifera - Black sage
Eriogonum fasciculatum - California buckwheat
Ceanothus crassifolius - Thick-leaf California lilac

* Non-native species.

Ferns

Artemisia californica - California sagebrush
Umbelluria californica - California bay
Adenostoma fasciculatum - Chamise
Heteromeles arbutifolia - Toyon
Galium angustifolium - Narrowleaf bedstraw
Salix lasiolepis - Arroyo willo
Keckiella cordifolia - Climbing bush penstemon
Platanus racemosa - Western sycamore
Alnus rhombifolia - White alder

Monocot Flowering Plants

Yucca whipplei - Our Lord's candle
Avena barbata - Slender wild oats*
Bromus rubens - Red brome*
Stipa sp. - Needlegrass

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07/27/91

* Non-native species.

APPENDIX C

GEOTECHNICAL REPORT

1. GEOTECHNICAL REPORT, JULY 25, 1988
2. ADDENDUM REPORT, MARCH 25, 1991
3. SUPPLEMENTAL INFORMATION, FEBRUARY 10, 1993
4. CUT COMPUTER CALCULATIONS, MARCH 17, 1993

Pacific Materials Laboratory, Inc.

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GEOTECHNICAL EXPLORATION

Schmidt Ojai Quarry

CUP 3489, Ventura County

CLIENT:

Schmidt Construction Co.

c/o Mr. William C. Schmidt

7002 Owensmouth Avenue

Canoga Park, CA 91305

July 25, 1988

Lab No. 20475-3

File No. 88-6253-3

July 25, 1988
File No. 88-6253-3
Lab No. 20475-3

TABLE OF CONTENTS

INTRODUCTION

Submitted herewith at your request and authorization is a geotechnical report which includes slope stability analyses for CUP 3489 which is assigned to Assessor's Parcel No. 10-180-27, Wheeler Springs Area of Ventura County, CA. This property contains 34.61 acres, the bulk of which consists of a natural mountainous slope which is presently utilized as an active rock quarry. Approximately 3 acres of the northerly portions of the property are currently being quarried. The remaining portions consist mostly of a system of dirt switchback roads leading to the quarry areas. Access roads appear to be constructed of quarry tailing artificial fills. Schmidt Construction, Inc. has been producing rip-rap materials from the site since the quarry was initiated in 1949.

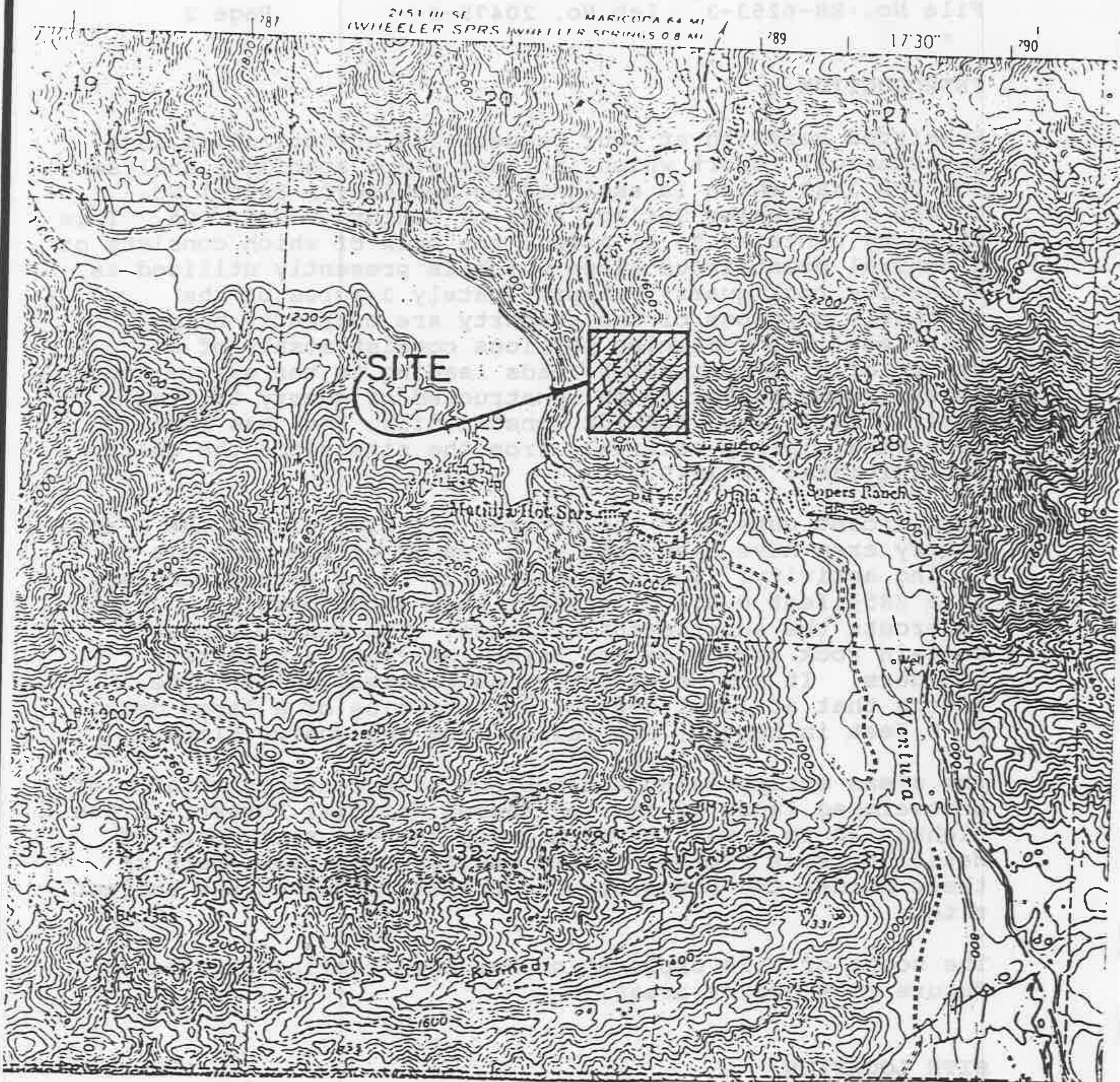
Significant cuts into the natural hillside within the 3-acre quarry area have been made as a result of the open-pit mining activity. The area currently being worked consists of a 285± feet 0.8:1 or steeper rock slope precipice which undercuts the superjacent hillside. The quarry slopes contain rock overhangs and large (>6 feet in diameter) boulders. It was noted during successive (daily) site visits that at least one boulder the size of a large desk (5-8 feet in length) had fallen from the quarry slope.

The areas encompassing the subject site consists chiefly of undeveloped lands of the Los Padres National Forest. State Highway 33 is a main paved highway and the north fork of Matilija Creek receive public recreational use. Both of these border the downslope (southwest) sides of the subject site.

The scope of this exploration has been confined to the future rock quarry areas.

SITE LOCATION

The site borders the east side of State Highway 33 (Maricopa Highway) approximately 900 feet northwest of Matilija Road, and about 3.25 miles northwest of the City of Ojai, CA. The site location is shown on the Locality Map on the following page.



Ventura County
Environmental
Resource
Agency
Planning Division

CUP-3489

Scale:

Lab # 20475-3
File # 88-6253-3

PROPOSED DEVELOPMENT

Schmidt Construction, Inc. plans to extract approximately 80,000 tons of rock yearly from an estimated 2,400,000 tons of onsite reserves. The projected additional quarry lifetime is currently estimated to be 30 years. Plans are to reclaim portions of the quarry site at the end of 1992 and 1997. The reclamation plan calls for planting trees and placing large boulders along existing switchback berms and will undoubtedly include erosion control protection devices.

Proposed slopes are shown on the project grading plan prepared by LBH Engineering of Simi Valley, CA and on geologic sections A-C and D-G. These slopes reach heights of up to 350 feet, and are very steeply inclined from 0.5:1 to 1:1 slope ratios. Maximum cuts of about 50 feet below the existing ground surface are planned.

SCOPE OF PRESENT WORK

Portions of 28 days spanning June 9, 1988 through July 28, 1988 were spent preparing this geotechnical report. Tasks conducted during this time included:

1. Research and review of available geologic literature.
2. Geologic mapping of the site at a scale of 1 inch = 50 feet.
3. Photography of prominent geologic features.
4. Statistical analysis of joint orientations.
5. Compressive strength testing of prepared bedrock samples.
6. Direct shear testing along joints of prepared bedrock samples.
7. Gross translational slope stability analysis of existing and proposed rock slopes.
8. Preparation of this geotechnical report.

The geology of the subject site was plotted on the accompanying grading plan prepared by LBH Engineering of Simi Valley, CA. This geologic map utilizes a scale of 1 inch = 50 feet, a contour interval of 5 feet, and is enclosed herein as Enclosure A-1. The map legend is enclosed herein as Enclosure A-2.

Detailed geologic sections were prepared and utilize the same scale as the geologic map (scale: 1 inch = 50 feet), and are enclosed herein as Enclosures B-1 through B-4.

Photographs of geologic features are contained herein. The location where each photo was taken along with the corresponding figure number is shown on the geologic map.

Direct shear and unconfined compression test results are included on Enclosure C.

Gross translational slope stability calculations are included herein on Enclosures D-1 thru D-6.

PHYSIOGRAPHY

The subject site is located in the eastern Santa Ynez Mountains northwest of Ojai Valley. It is situated on the lower east face of the steep-sided canyon eroded by the north fork of Matilija Creek which intersects the Ventura River approximately 1500 feet southeast of the subject site. Topographic relief measured from the crest of the ridge located upslope (northeast) of the site to Matilija Creek is roughly 1030 feet. Onsite, total relief is approximately 570 feet.

The north fork of Matilija Creek forms the major through-flowing stream for drainage of a large watershed extending for several miles northeastward of the site into the Wheeler Gorge Area. Matilija Creek flows year-round and may be subject to overflow during periods of flooding and heavy rainfall. All site drainage presently flows in a relatively uncontrolled manner to Matilija Creek. Accidental damming of the creek by debris flows and/or landslides emanating from the subject site presently appears possible. The potential for such an event may be lessened by means of controlled drainage and slope stabilization, as according to the recommendations of this report.

Slow vegetative growth occurs on the hard sandstone slopes which cover the quarry area. Artificial (tailing) fills support few shrubs, and are also largely barren. Natural slopes are covered by spotty patches of moderately dense shrub-like chaparral, and field grasses.

GEOLOGY

The project site is located in the west central portion of the Transverse Ranges, in the structural block bounded by the Santa Ynez fault on the north and the Arroyo Parida-Santa Ana fault system on the south. The rocks of the site area were deposited in the western Ventura Basin during Eocene time, and were subsequently strongly folded and faulted on the south limb of a major overturned anticline known as the Matilija Overturn. Uplift of this area formed the rugged Santa Ynez Mountains which are presently being vigorously dissected by streams. Excellent rock exposures occur in the site area.

Lithologic Units:

Artificial Fill (AF): This unit covers the majority of the site downslope of the present quarry area. It consists of quarry non-cohesive waste by-products containing boulder, gravel, sand, and silt mixtures which are grayish brown in overall color. Gravel and boulder talus commonly covers steep slopes underlain by these deposits. This unit generally appears cohesionless, loose and poorly-consolidated. The fine-grained constituents of the artificial fill appear easily erodible.

Landslide Deposits (Qls): Apparent landslide deposits exist near the top of the present quarry slope. These deposits appear, from a distance, as jumbled masses of angular boulders in a matrix of tan gravelly silty sand. It was not possible to observe landslide deposits on the outcrop because of the steep slope.

Matilija Formation (Tma): These Eocene deposits consist of brown- weathering, light gray to tan medium-grained arkosic sandstone interbedded with brown to gray-green silty very fine-grained sandstone and silty shale. Sandstone dominates over shale by an approximate 50:1 ratio in the site area. The sandstone is dense (approximately 158 pounds per cubic foot), very hard, and forms steep resistant near-vertical beds.

Sandstone beds were tabular-shaped and generally massive, ranging from 1 to 15 feet thick. Silty sandstone and shale beds were from 1 inch to 4 inches thick, in sequences typically from 0.5 to 5 feet thick. The Matilija Formation exposed at the site was generally well-jointed (see Geologic Structure).

GEOLOGIC STRUCTURE

The geologic structure of the site area is complex and includes both Tertiary and Quaternary folding and faulting. The relationships of the geologic structure to the proposed slopes are shown on the geologic map and geologic cross-sections. The scale utilized for both the geologic map and geologic sections is 1 inch = 50 feet.

Folds

The Matilija Formation in the site area crops out on the steep to overturned south limb of a major east-west trending anticline known as the Matilija Overturn (Kerr and Schenck, 1928). The fold axis of this anticline forms an S-shaped bend through the site area, resulting in a change in the strike and overturning of the beds (see Dibblee, 1987). Bedding attitudes measured at the site typically strike 011 to 047 degrees, and dip from 56 degrees upright to the southeast, to 76 degrees overturned to the northwest.

Faults

Several faults with northeast to northwest trends and steep or near vertical dips were exposed at the quarry site. These faults appear to be the result of displacements associated with intense folding of the Matilija Overturn. The magnitudes of these displacements, however, could not be determined and the traces of these faults were not explored beyond the site area. These faults do not appear to cause significant adverse affect on slope stability because they were steeply dipping and oblique to the face of the proposed slope.

North to northeast trending faults located in the proposed 350± feet quarry slope truncate sandstone and shale units. These faults appear to displace sedimentary units chiefly along bedding, in a manner similiar to the shuffling of a deck of playing cards. Shale sequences were highly sheared in the quarry area and appear to be the main units along which displacement has occurred. Figure 1 is a photograph of faulted shale beds that are well-exposed in the quarry rock face.

A northwest-trending near-vertical fault was mapped along the base of the proposed 350± feet slope. This fault cuts across bedding at its intersection with geologic section A-C, but may pass into bedding approximately 140 feet to the southeast. A similiar fault was exposed 380 feet southeast of geologic section A-B. These faults consist of a seam of brown shale gouge about 0.5 feet thick.

Figure 1. Sandstone and shale units truncated by north to northeast-trending faults (view looking 030 degrees). Note joint planes and landslide deposits exposed in quarry slope. Clipboard shown for scale in lower left of photo.

Joints

Joints in rocks are generally defined by relatively smooth planar cracks or fractures along which, or across which only minute often indetectable displacements have occurred. The joints observed during exploration of the subject site were divided into two catagories:

1. Systematic joints which are relatively planar tight cracks that appear in subparallel sets.

2. Extension fractures which appear as steeply-dipping, planar to jagged, open cracks.

The orientations of systematic joints in the site area were measured by a total of 157 attitudes. Prominent joint orientations were then determined through statistical work involving preparation of a PI Diagram. The results of the statistical work indicate prominent joint sets have the following orientations:

1. 110/35° SW
2. 104/44° SW
3. 118/37° SW
4. 130/50° SW
5. 118/59° SW
6. 170/22° NE
7. 108/34° NE

These orientations are listed in the order of decreasing prominence (or density distribution). The following critical orientations were used for slope stability analyses:

1. 110/35° SW
2. 104/44° SW

Southwest-dipping systematic joints were typically spaced from 1 to 5 feet apart and were continuously traceable for approximately 5 to 75 feet. Figure 2 is a photograph of southwest-dipping joints which are daylighted in the quarry slope. Northeast-dipping systematic joints were typically spaced from 1 inch to 10 feet apart and were continuously traceable for approximately 5 to 15 feet.

Extension fractures were oriented approximately perpendicular to bedding and near-vertical. These consisted of open fractures ranging from 0.5 to 3.5 inches wide which were formed owing to downslope creep of individual sandstone blocks along daylighted southwest-dipping joints. Figure 3 is a photograph taken July 2, 1988 of extension fractures located along the northern margin of the quarry slope. These extension fractures are significant because they may occur precedent to rock fall and/or landsliding. The potential for rockfall onto Matilija Creek from the northwest margin of the quarry site presently appears moderate to high. This slope is shown on geologic section H-K. The gross stability of the site's slopes is evaluated in the slope stability section of this report.

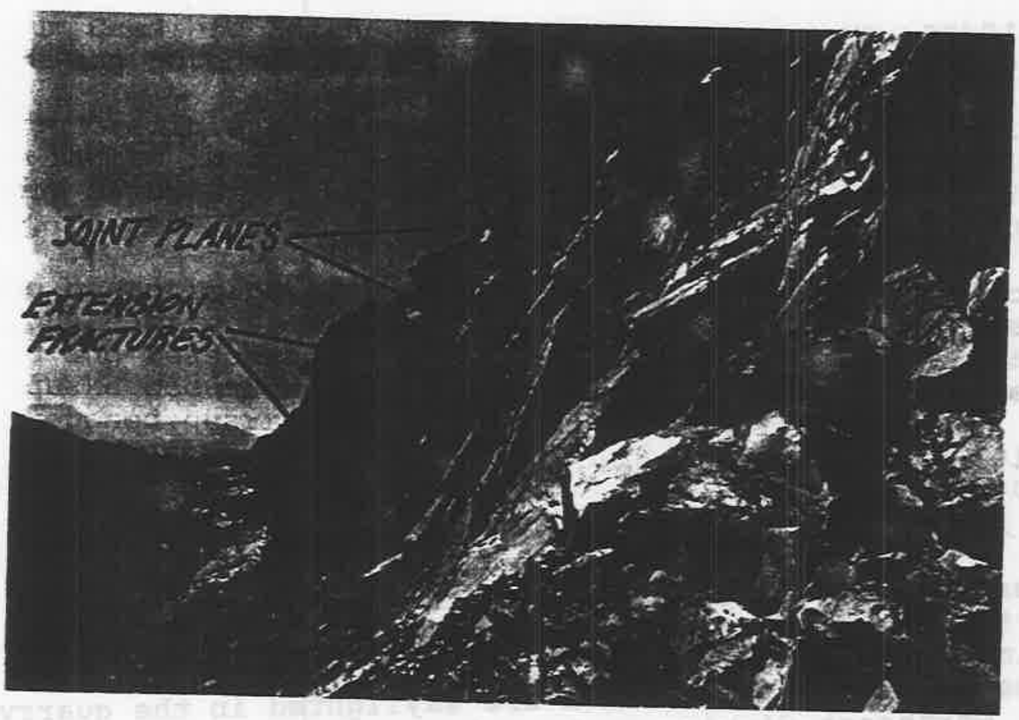


Figure 2. Southwest-dipping daylighted joints in southwest-facing quarry slope (view looking 300 degrees). Note steeply dipping extension fractures.

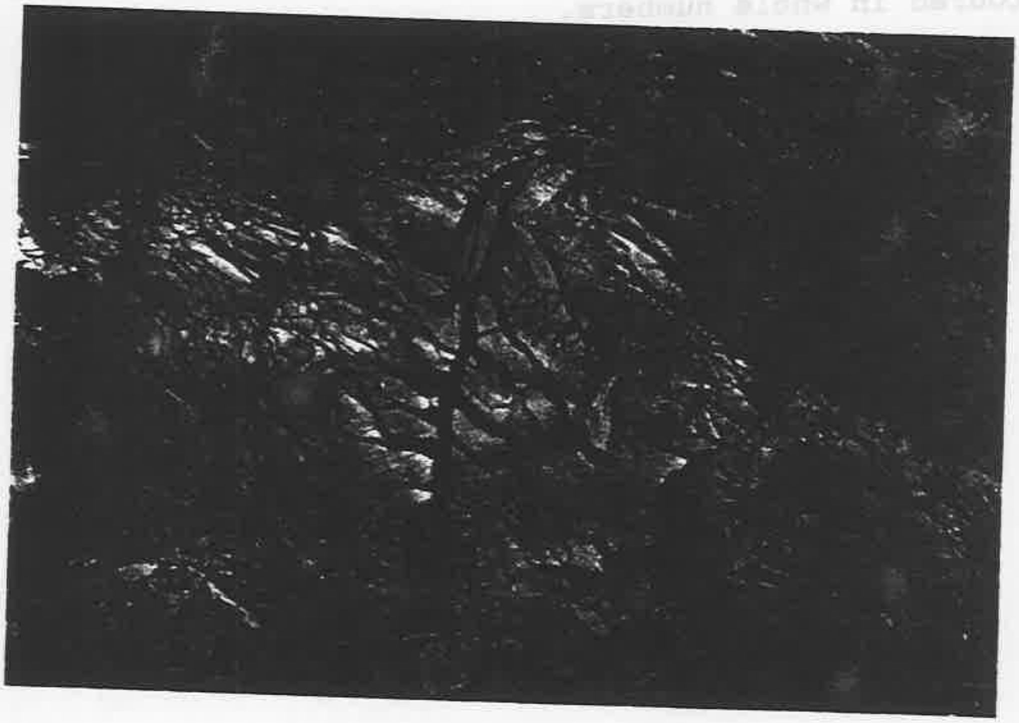


Figure 3. Extension fractures mapped along the northwestern margin of the quarry area (view looking 310 degrees). Rock hammer shown for scale in lower center of photo.

STATISTICAL DETERMINATION OF PROMINENT JOINT ORIENTATIONS

A statistical approach involving the preparation of a PI Diagram was used to determine prominent joint orientations. Figure 4 is a copy of the PI Diagram which was prepared using 157 joint attitudes that were measured during field exploration of the subject site. The PI Diagram shows the distribution of joint orientations expressed as the ratio of percent of total attitudes per one percent area of the equal-area projection that was used. These ratios were then contoured in whole numbers.

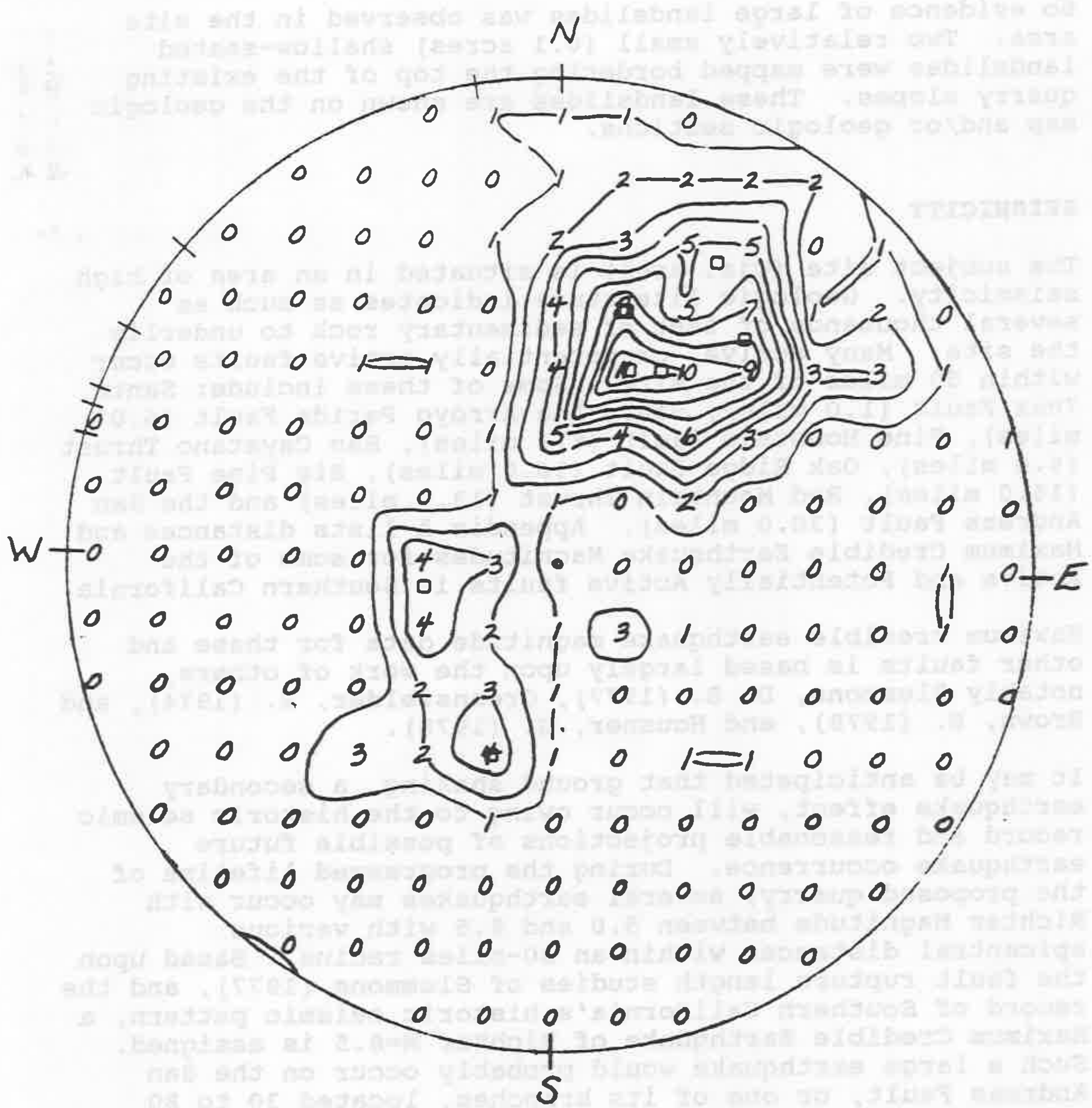


Figure 4. PI Diagram showing distribution of joint orientations. Contours represent the percentage of poles to joints per one percent area. Squares indicate selected prominent orientations.

MASS WASTING

No evidence of large landslides was observed in the site area. Two relatively small (0.1 acres) shallow-seated landslides were mapped bordering the top of the existing quarry slopes. These landslides are shown on the geologic map and/or geologic sections.

SEISMICITY

The subject site (Ojai area) is situated in an area of high seismicity. Geologic literature indicates as much as several thousands of feet of sedimentary rock to underlie the site. Many active, or potentially active faults occur within 50 miles of the site. Some of these include: Santa Ynez Fault (1.0 mile), Santa Ana-Arroyo Parida Fault (6.0 miles), Pine Mountain Fault (8.7 miles), San Cayetano Thrust (6.0 miles), Oak Ridge Fault (16.0 miles), Big Pine Fault (16.0 miles), Red Mountain Thrust (13.9 miles) and the San Andreas Fault (30.0 miles). Appendix A lists distances and Maximum Credible Earthquake Magnitudes for some of the Active and Potentially Active faults in Southern California.

Maximum credible earthquake magnitude data for these and other faults is based largely upon the work of others, notably Slemmons, D. B. (1977), Greensfelder, R. (1974), and Brown, B. (1978), and Housner, G. (1970).

It may be anticipated that ground shaking, a secondary earthquake effect, will occur owing to the historic seismic record and reasonable projections of possible future earthquake occurrence. During the programmed lifetime of the proposed quarry, several earthquakes may occur with Richter Magnitude between 5.0 and 8.5 with various epicentral distances within an 80-miles radius. Based upon the fault rupture length studies of Slemmons (1977), and the record of Southern California's historic seismic pattern, a Maximum Credible Earthquake of Richter M=8.5 is assigned. Such a large earthquake would probably occur on the San Andreas Fault, or one of its branches, located 30 to 80 miles east of the subject site. Because of the distance of the epicenter from the site, the local effects would be much attenuated.

The Santa Ynez Fault is herein considered to be the most significant local fault, and hence is used as a primary basis for seismic planning in this report. Greensfelder (1974) assigned the fault a maximum credible earthquake (MCE) risk of Richter M=7.5. However, the Maximum Probable Earthquake (MPE) defined as the maximum Richter Scale Magnitude probable to occur in a designated time period, such as a 100-year period, is a smaller magnitude than the "maximum credible", and thus is a magnitude which would be normally expected. The Maximum Probable Earthquake (MPE) assigned herein, based upon the historical seismic record, and recurrence statistics (according to Hileman, et al, (1973), and Housner (1970), is Richter M=6.0.

Because the San Andreas Fault is 30.0 miles from the site, the local shaking effects for an earthquake on that fault would be much attenuated. Maximum Peak Horizontal Ground Acceleration of 0,20 g would be received at the site (according to Joyner and Boore, 1981) from a Richter 8.5 earthquake with a focal depth of 20 kilometers.

Of much greater significance is the nearby Santa Ynez Fault where Maximum Credible Horizontal Bedrock Acceleration values exceeding 0.85 g appear to be possible.

Maximum Probable Horizontal Bedrock Acceleration assigned herein, based upon a Richter M=6.0 MPE earthquake occurring on the Santa Ynez Fault, is 0.40 g.

Vertical accelerations exceeding 1.0 g have been recorded for several California earthquakes (1979 Imperial Valley, 1983, Coalinga, 1984 Morgan Hill, and 1971 San Fernando). Peak Probable vertical acceleration, based upon a 50 percent increase over horizontal acceleration values of 0.40 g would be 0.60 g. A maximum credible peak vertical acceleration would be 1.28 g, based upon a 50 percent increase over a horizontal acceleration value of 0.85 g.

SLOPE STABILITY ANALYSIS

A translational rock mass slope stability analysis was conducted along daylighted joints or fractures in lieu of conventional bedding orientation given the geologic conditions of the subject property. Daylighted joints are considered the most significant and most adverse condition affecting the stability of the site's slopes. Systematic joints tend to generally be moderately to extremely dense. Extension fractures were locally exposed as noted on Figure 2.

Critical cross sections of the active quarry were prepared for study. The repose of daylighted fractures varies from 35 to 44 degrees on the subject site. Locally, zones of from 50 to 59 degrees exist.

Insitu shear strengths of fractured but competent dense joints indicates that a significant angle of internal friction exists with the minimum tested being 48 degress and the maximum 67 degrees. No significant cohesion was noted based upon the direct shear test data. Unfractured and massive Matilija sandstone develops impressive compressive strengths as indicated by our test results.

The fracture surface of the most concern is developed somewhat by quarry blasting to dislodge rock. The extremely fractured condition was considered in slope stability analysis as shown on cross-sections contained herein. Upon completion of quarry activity a less openly fractured surface would be anticipated.

Translational slope stability analysis prepared on the basis of the enclosed cross-sections indicates that substantially all materials at a repose of 44 degrees or flatter are stable with a factor of safety against movement greater than 1.15. While this factor of safety is below normal permanent design limits of 1.5, based upon the private commercial site use, this appears to be in keeping with California Division of Mines and Geology criteria. For specific cross section details and stability analysis see Enclosure Ds herein.

Please be advised that the subject site is located in an area of high seismic activity. Accordingly, factors of safety for all slopes within the quarry area will drop well below acceptable limits during significant earthquakes. Rockfall, rockslides, and/or landslide occurrences may occur during earthquake events. Such events pose a clear and present danger in that they could fill Matilija Creek and/or overtop Highway 33. Additionally, it is recommended that artificial fill benches, berms, and any other necessary devices be constructed, or installed to prevent rockfall, rockslides, and/or landslide materials reaching Highway 33.

Locally there are several locations on the subject site where joints dip in excess of 44 degrees out of slope. These areas were observed to have significant extension cracks which are highly suggestive of downhill translation of the block units.

The potential of rock toppling was also noted on the subject site as indicated by several upslope boulders which are currently being undermined by ongoing quarry activity. In addition, as quarry activity extends upslope, significant new areas may develop, owing to the joint orientations of the subject site, which could result in singular or multiple rock toppling.

Current on-going quarry mining activity for retrieving quarry products includes horizontal benches and near-vertical cuts up to 50 feet into the rock formation. This condition has worked thus far during the life of the quarry activity. However, the quarry mining has reached the state in which it is attempting to obtain materials from much steeper naturally sloped areas in which the identified geologic joint condition is of increasing concern. Continued quarry activity in the current manner will create additional dangers of slope instability and rock toppling in the future. Accordingly, recommendations have been provided herein to modifiy quarry activity and site configuration to mitigate the potential of slope failure.

RECOMMENDATIONS

1. As previously noted, the natural slopes upslope of the quarry area are steeper than previous excavation attempts have encountered. Accordingly, shallower horizontal benches and less slope backcut height will be necessary to mitigate hillside safety. Accordingly, it is recommended that bench backcut slopes be limited to a maximum of 20 feet in vertical height and laid back at a temporary repose not to exceed 60 degrees. Quarry tailings shall be placed in a systematic method downslope of the previous slope backcut to insure that buttressing of the previous bench backcut slope exists prior to significant further upslope quarry activity.

2. Buttress fills shall be created in a near structural manner including preparation of the area to receive fill by creating a level bench, placement of the material in such a manner as to obtain a degree of compaction in excess of 85 percent relative compaction with a final fill slope repose not to exceed 1.5:1.

3. As the previously-used quarry benches will be modified into switchback access roads, care shall be taken to define the roadway unit and to provide positive drainage and drainage devices as necessary to avoid downslope artificial fill erosion. This may include but is not limited to consideration of tightline conduits for direct drainage into Matilija Creek, limiting switchback road gradients, sloping switchback roads back into the hillside and collection of free water drainage on previously cut bedrock formations in lieu of artificial fill and providing planting and irrigation systems on artificial fill slopes to protect their surfaces.

4. Two significant shallow-depth landslides are identified upslope of the present quarry area but within the proposed future quarry development. These landslides shall be removed prior to continuation of quarry activity below. The removed materials may be stockpiled or used for artificial fill and/or buttressing. The only danger the existing landslides appear to present is encroachment from downslope which could reactivate the slides and pose a potential danger to quarry workers. The limits of landslide removal shall be established by geologic inspection during grading removal.

5. The integrity of the existing natural drainage surface located along the west side of the quarry shall be maintained by either closed conduit or open channel flow. It is our understanding that future quarry activity is designed for the subject area and may require some detailing to provide adequate drainage in this zone.

6. A local mantle of overly steep fractured sandstone exists along the northwest quarry boundary line. The limits are approximately indicated on our geologic map. This material reveals significant extension joint-crack openings. This material exhibits a high potential for translational downslope movement. A slope stability analysis was conducted on this unit (Enclosure D-6) with an obtained SF=1.07. This factor of safety will drop well below acceptable limits during significant seismic events. Accordingly, it is recommended that this material either be removed or an engineered buttress be provided to prevent potential translation. The materials observed may be of significant use in quarry activity and may be better served by full removal down to a more competent, less steeply jointed bedrock zone as indicated on the geologic map. Limits of removal shall be established by geologic inspection during grading removal.

7. In the quarry activity preceeding up the slope, it is recognized that the present quarry limits appear highly restrictive and are not conductive with onsite geology. It is therefore recommended, as shown on cross-sections included herein, that final quarry slope repose be designed to match existing natural fracture orientations while employing procurement recommendations included herein. Since orientations vary per given area, design shall include joint orientations indicated within this report. Actual conditions encountered during quarry activities may require modifications to final slope repose. As a rule of thumb, the final quarry slopes shall be laid back to match existing joint attitudes so as to remove all unsupported fractured sandstone blocks. This condition appears to vary from 35 to 44 degrees and will result in quarry limits well beyond those indicated for the first phase of quarry development.

8. Local areas upslope of current quarry work presently possess joints with out-of-slope dips in excess of 44 degrees. These areas appear to represent a local danger to quarry activity and are more prone to toppling and/or bedrock block slide. Accordingly, for the safety of quarry workers and prior to continuation of quarry work, it is recommended that all areas where the natural quarry fracture planes are in excess of 44 degrees, be fully identified and these rock slabs be rock-bolted to stabilize units below with sufficient bolts to prevent downslope translation or stabilized in another acceptable manner to prevent translation. Prior to removal of rock bolted slabs during quarry activity, new rock bolts will be required upslope to insure stability of increasingly steep slope conditions. Additionally, as a safeguard for quarry workers, it is recommended that well-anchored structural tension netting be installed upslope of all quarry areas prior to commencement of quarrying activity.

9. Several onsite perched boulders were identified upslope of the current quarry activity. These boulders shall be identified and removed prior to additional quarry work.

10. It is recommended that ongoing quarry activity be placed under the supervision of an engineering geologist providing periodic inspection of measures to mitigate quarry safety and to aid in identification of changes of lithology and/or geologic context which may occur during quarry excavation. Of particular significance is quarry work outside the currently proposed limits of Phase I quarry activity, as many upslope areas of concern are extremely steep and not presently readily accessible for confirmation of geologic conditions. Accordingly, it is recommended that an engineering geologist, on at least an annual basis be retained to provide progress geologic logging, reports, and recommendations pertaining to the structural geology of the subject site.

11. Existing quarry activities have resulted in precariously steep backcut slopes within the current mining benches of the site. These slopes range to 50 feet with near vertical backcuts. These areas shall be modified and backfilled as soon as possible to provide buttressing to maintain a near vertical bench backcut slope height of not to exceed 20 feet.

12. To provide additional criteria for determining slope stability, it is recommended that a study be conducted to determine the seismic acceleration factor developed by site rock-blasting activities.

The geotechnical recommendations presented herein shall be included on final development plans which shall be employed in a manner acceptable to the governing authorities and consistent with the California Division of Mines and Geology.

Respectfully submitted,

PACIFIC MATERIALS LABORATORY, INC.

Barry S. Haskell

K. Mason Redding, Staff Geologist

Barry S. Haskell, CEG 722
Expiration Date 6-30-90

Douglas C. Papay

KMR:BSH:DCP:cmp
cc: Addressee (6)

Douglas C. Papay, GE 664
Expiration Date 3-31-91

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APPENDIX

DISTANCES AND MAXIMUM CREDIBLE EARTHQUAKE MAGNITUDES FOR ACTIVE AND POTENTIALLY ACTIVE FAULTS

The following list indicates the specific faults considered either Active (A) or Potentially Active (PA), their closest distance to the site, and their maximum credible earthquake value, as measured on the Richter Scale of Earthquake Magnitude.

			DISTANCE (miles)	MAXIMUM CREDIBLE EARTHQUAKE (RICHTER =)
1.	Malibu Coast Fault	(PA)	35.0	6.8
2.	Simi-Santa Rosa Fault	(PA)	20.2	6.5
3.	Oak Ridge Fault	(PA)	16.0	7.5
4.	San Cayetano Thrust	(A,PA)	6.0	7.5
5.	San Fernando Zone	(A)	52.0	6.5
6.	Santa Gabriel Fault	(A,PA)	32.0	7.5
7.	Santa Susana Thrust	(PA)	32.0	6.5
8.	Chatsworth Fault	(PA)	39.0	6.5
9.	San Andreas Fault	(A)	30.0	8.5
10.	Garlock Fault	(A,PA)	32.0	7.75
11.	Big Pine Fault	(A)	12.0	7.5
12.	White Wolf Fault	(A)	39.0	7.75
13.	Inglewood-Newport	(PA)	60.0	7.0
14.	Palos Verdes Fault	(PA)	62.0	7.0
15.	Sierra Madre Fault	(PA)	66.0	7.5
16.	Ventura/Pitas Point	(PA)	15.0	7.0
17.	Whittier/Elsinore Zone	(A)	75.0	7.1
18.	San Jacinto Fault	(A)	96.0	7.75
19.	Cucamonga Fault	(A)	60.0	6.5
20.	Santa Cruz Island	(A,PA)	47.0	7.3
21.	Northridge Hills Fault	(PA)	40.0	6.5
22.	Santa Ynez	(PA)	1.0	7.5

File No. 88-6253-3 Lab No. 20475-3 Enclosure: C-1

COMPRESSION TESTING

Competent massive Matilija sandstone was sampled at three locations in the present quarry area as shown on the geologic map. These samples were cut into rectangular specimens with longest length to least width ratios of approximately 2:1 using a wet/diamond blade saw.

The cross-sectional area, weight, and volume of each specimen was measured. The specimens were capped with sulfur capping compound, and tested for unconfined compressive strength. The specimens were then tested for compresive strength using an hydraulic compression machine advancing at a rate of 0.05 cm/min. The results follow:

SAMPLE NO.	UNCONFINED COMPRESSIVE STRENGTH (psi)	UNIT WEIGHT (lbs./cft)
1	16,164	157.7
2	15,917	159.7
3	14,649	157.2

PACIFIC MATERIALS LABORATORY, INC.

DIRECT SHEAR DATA

Block sandstone samples containing an existing joint surface were gathered at four site locations which are shown on the geologic map, Enclosure A. Direct shear testing was performed across existing joints of relatively insitu specimens prepared as follows:

The samples were cut on a tray saw into rectangular specimens which could be inserted into the 2.375 inch diameter chamber of our direct shear machine. Each specimen was loaded into the chamber such that the existing joint surface and the plane of shear were in the same plane. The specimen was held secure by sulfur capping compound which was placed into the void space between the specimen and the chamber housing. The top shear block was free to move vertically during shearing. A 1/8-to-1/4-inch air gap was centered with the existing joint surface so that the sulfur compound did not influence shearing. Each specimen was sheared under saturated conditions at confining loads of 1000, 2000, and 4000 psf. The results follow:

SAMPLE NO.	COHESION	ANGLE
1	0	62
2	0	54
3	0	48
4	500	66.9

Enclosure D-1

GROSS SLOPE STABILITY ANAYLSIS

GEOLOGIC SECTION A - B - C
FAILURE PLANE A

	soil unit weight	0.158	(ksf)
a =	int. angle (deg)	48.0	lowest ultimate shear strength - Tma
C =	cohesion (psf)	0	
	No. of slices	5	

SEG #	WEIGHT - W (kips)	REPOSE (r-deg)	LENGTH (ft)	Ft W sin(r)	Wn W cos(r)	Fr Wntan(a)+CL	FS Fr/Ft
1	9.00	44.00	11.00	6.25	6.47	7.19	1.15
2	87.00	44.00	22.00	60.44	62.58	69.50	1.15
3	82.00	44.00	20.00	56.96	58.99	65.51	1.15
4	158.00	44.00	35.00	109.76	113.66	126.23	1.15
5	443.00	44.00	170.00	307.73	318.67	353.92	1.15

FS static = Pr/Pt = 1.15

Lab No. 20475-3
File No. 88-6253-3

GEOLOGIC SECTION A-B-C FAILURE PLANE A

SEGMENT #	L	WEIGHT (KIPS)
1.	11	$\gamma\left[\frac{19}{2}\right]6 = 9.0$
2.	22	$\gamma\left[\frac{A+35}{2}\right]16 = 87$
3.	20	$\gamma\left[\frac{34+35}{2}\right]15 = 82$
4.	35	$\gamma\left[\frac{46+34}{2}\right]25 = 158$
5.	170	$\gamma\left[\frac{46}{2}\right]122 = 443$

γ = DENSITY OF MATILIJA SANDSTONE = 0.158 $Kips/ft^3$

Scale: ______	Enclosure D-1 Lab # 20475-3 File # 88-6253-3

Pacific Materials Laboratory, Inc.

Enclosure D-2

GROSS SLOPE STABILITY ANAYLSIS

GEOLOGIC SECTION A - B - C
FAILURE PLANE B

	soil unit weight	0.158	(ksf)
a =	int. angle (deg)	48.0	lowest ultimate shear strength - Tma
C =	cohesion (psf)	0	
	No. of slices	16	

SEG #	WEIGHT - W (kips)	REPOSE (r-deg)	LENGTH (ft)	Ft W sin(r)	Wn W cos(r)	Fr Wntan(a)+CL	FS Fr/Ft
6	7.90	44.00	6.00	5.49	5.68	6.31	1.15
7	223.00	44.00	48.00	154.91	160.41	178.16	1.15
8	120.00	44.00	15.00	83.36	86.32	95.87	1.15
9	224.00	44.00	21.00	155.60	161.13	178.96	1.15
10	245.00	44.00	20.00	170.19	176.24	195.73	1.15
11	405.00	44.00	35.00	281.34	291.33	323.56	1.15
12	1658.00	44.00	170.00	1151.74	1192.67	1324.59	1.15
13	342.00	44.00	45.00	237.57	246.01	273.23	1.15
14	713.00	44.00	113.00	495.29	512.89	569.62	1.15
15	175.00	44.00	47.00	121.57	125.88	139.81	1.15
16	96.00	44.00	76.00	66.69	69.06	76.70	1.15

FS static = Fr/Ft = 1.15

Lab No. 20475-3
File No. 88-6253-3

GEOLOGIC SECTION A-B-C - FAILURE PLANE B

SEGMENT #	L	WEIGHT (KIPS)
6.	6	$\gamma[25/2]4 = 7.9$
7.	48	$\gamma\left[\frac{25+58}{2}\right]34 = 223$
8.	15	$\gamma\left[\frac{58+80}{2}\right]11 = 120$
9.	21	$\gamma\left[\frac{80+97}{2}\right]16 = 224$
10.	20	$\gamma\left[\frac{97+97}{2}\right]15 = 245$
11.	35	$\gamma\left[\frac{97+108}{2}\right]25 = 405$
12.	170	$\gamma\left[\frac{108+64}{2}\right]122 = 1658$
13.	45	$\gamma\left[\frac{64+67}{2}\right]33 = 342$
14.	113	$\gamma\left[\frac{67+43}{2}\right]82 = 713$
15.	47	$\gamma\left[\frac{43+22}{2}\right]34 = 175$
16.	76	$\gamma\left[\frac{22}{2}\right]55 = 96$

Scale: ____________

Enclosure D-2
Lab # 20475-3
File # 88-6253-3

Pacific Materials Laboratory, Inc.

GROSS SLOPE STABILITY ANAYLSIS

GEOLOGIC SECTION A - B - C
FAILURE PLANE C

	soil unit weight	0.158	(ksf)
a =	int. angle (deg)	48.0	lowest ultimate shear strength - Tma
C =	cohesion (psf)	0	
	No. of slices	17	

SEG #	WEIGHT - W (kips)	REPOSE (r-deg)	LENGTH (ft)	Ft W sin(r)	Wn W cos(r)	Fr Wntan(a)+CL	FS Fr/Ft
17	7.20	44.00	18.00	5.00	5.18	5.75	1.15
18	17.70	44.00	4.00	12.30	12.73	14.14	1.15
19	115.00	44.00	25.00	79.89	82.72	91.87	1.15
20	220.00	44.00	56.00	152.82	158.25	175.76	1.15
21	22.00	44.00	10.00	15.28	15.83	17.58	1.15
22	19.00	44.00	6.00	13.20	13.67	15.18	1.15
23	312.00	44.00	48.00	216.73	224.43	249.26	1.15
24	149.00	44.00	15.00	103.50	107.18	119.04	1.15
25	267.00	44.00	21.00	185.47	192.06	213.31	1.15
26	270.00	44.00	20.00	187.56	194.22	215.71	1.15
27	472.00	44.00	35.00	327.88	339.53	377.08	1.15
28	1976.00	44.00	170.00	1372.64	1421.42	1578.64	1.15
29	425.00	44.00	45.00	295.23	305.72	339.54	1.15
30	913.00	44.00	113.00	634.22	656.76	729.40	1.15
31	258.00	44.00	47.00	179.22	185.59	206.12	1.15
32	235.00	44.00	76.00	163.24	169.04	187.74	1.15
33	57.00	44.00	65.00	39.60	41.00	45.54	1.15

FS static = Fr/Ft = 1.15

GEOLOGIC SECTION A-B-C - FAILURE PLANE C

SEGMENT #	L	WEIGHT (KIPS)
17.	16	$\gamma\left[\frac{7}{2}\right]13 = -7.2$
18.	4	$\gamma\left[\frac{7+49}{2}\right]4 = 17.7$
19.	25	$\gamma\left[\frac{49+48}{2}\right]15 = 115$
20.	56	$\gamma\left[\frac{48+20}{2}\right]41 = 220$
21.	10	$\gamma\left[\frac{20+20}{2}\right]7 = 22$
22.	6	$\gamma\left[\frac{20+41}{2}\right]4 = 19$
23	48	$\gamma\left[\frac{41+75}{2}\right]34 = 312$
24	15	$\gamma\left[\frac{75+97}{2}\right]11 = 149$
25.	21	$\gamma\left[\frac{97+114}{2}\right]16 = 267$
26	20	$\gamma\left[\frac{114+114}{2}\right]15 = 270$
27.	35	$\gamma\left[\frac{114+125}{2}\right]25 = 472$
28.	170	$\gamma\left[\frac{125+80}{2}\right]122 = 1976$
29.	45	$\gamma\left[\frac{80+83}{2}\right]33 = 425$
30.	113	$\gamma\left[\frac{83+58}{2}\right]82 = 913$
31	47	$\gamma\left[\frac{58+38}{2}\right]34 = 258$
32.	76	$\gamma\left[\frac{38+16}{2}\right]55 = 235$
33.	65	$\gamma\left[16/2\right]45 = 57$

Scale: ____________

Enclosure D-3
Lab # 20475-3
File # 88-6253-3

Pacific Materials Laboratory, Inc.

Enclosure D-4

GROSS SLOPE STABILITY ANAYLSIS

GEOLOGIC SECTION D - E - F - G
FAILURE PLANE D

	soil unit weight	0.158	(ksf)
a =	int. angle (deg)	48.0	lowest ultimate shear strength - Tma
C =	cohesion (psf)	0	
	No. of slices	9	

SEG #	WEIGHT - W (kips)	REPOSE (r-deg)	LENGTH (ft)	Ft W sin(r)	Wa W cos(r)	Fr Wntan(a)+CL	FS Fr/Ft
1	6.30	35.00	10.00	3.61	5.16	5.73	1.59
2	53.00	35.00	29.00	30.40	43.42	48.22	1.59
3	180.00	35.00	44.00	103.24	147.45	163.76	1.59
4	1141.00	35.00	208.00	654.45	934.65	1038.04	1.59
5	364.00	35.00	65.00	208.78	298.17	331.15	1.59
6	345.00	35.00	63.00	197.88	282.61	313.87	1.59
7	230.00	35.00	67.00	131.92	188.40	209.24	1.59
8	61.00	35.00	26.00	34.99	49.97	55.50	1.59
9	25.00	35.00	29.00	14.34	20.48	22.74	1.59

FS static = Pr/Ft = 1.59

Lab No. 20475-3
File No. 88-6253-3

GEOLOGIC SECTION D-E-F-G FAILURE PLANE D

SEGMENT #	L	WEIGHT (KIPS)
1.	10	$\gamma\left[\frac{10}{2}\right]8 = 6.3$
2.	29	$\gamma\left[\frac{10+18}{2}\right]24 = 53$
3.	44	$\gamma\left[\frac{18+47}{2}\right]35 = 180$
4.	208	$\gamma\left[\frac{47+37}{2}\right]172 = 1141$
5	65	$\gamma\left[\frac{37+50}{2}\right]53 = 364$
6.	63	$\gamma\left[\frac{50+34}{2}\right]52 = 345$
7.	67	$\gamma\left[\frac{34+20}{2}\right]54 = 230$
8.	26	$\gamma\left[\frac{20+15}{2}\right]22 = 61$
9.	29	$\gamma\left[\frac{15}{2}\right]21 = 25$

Scale: ____________

Enclosure D-4
Lab # 20475-3
File # 88-6253-3

Pacific Materials Laboratory, Inc.

GROSS SLOPE STABILITY ANAYLSIS

GEOLOGIC SECTION D - E - F - G
FAILURE PLANE E

	soil unit weight	0.158	(ksf)
a =	int. angle (deg)	48.0	lowest ultimate shear strength - Tma
C =	cohesion (psf)	0	
	No. of slices	15	

SEG #	WEIGHT - W (kips)	REPOSE (r-deg)	LENGTH (ft)	Ft W sin(r)	Wn W cos(r)	Fr Wntan(a)+CL	FS Fr/Ft
10	146.00	35.00	55.00	83.74	119.60	132.83	1.59
11	649.00	35.00	90.00	372.25	531.63	590.43	1.59
12	284.00	35.00	15.00	162.90	232.64	258.37	1.59
13	163.00	35.00	29.00	93.49	133.52	148.29	1.59
14	594.00	35.00	44.00	340.70	486.58	540.40	1.59
15	3080.00	35.00	208.00	1766.62	2522.99	2802.06	1.59
16	955.00	35.00	65.00	547.77	782.29	868.82	1.59
17	924.00	35.00	63.00	529.98	756.90	840.62	1.59
18	836.00	35.00	67.00	479.51	684.81	760.56	1.59
19	308.00	35.00	26.00	176.66	252.30	280.21	1.59
20	285.00	35.00	29.00	163.47	233.46	259.28	1.59
21	693.00	35.00	83.00	397.49	567.67	630.46	1.59
22	464.00	35.00	57.00	266.14	380.09	422.13	1.59
23	357.00	35.00	43.00	204.77	292.44	324.78	1.59
24	1048.00	35.00	261.00	601.11	858.47	953.43	1.59

FS static = Pr/Ft = 1.59

GEOLOGIC SECTION D-E-F-G - FAILURE PLANE E

SEGMENT #	L	WEIGHT
10.	55	$\gamma\left[\frac{44}{2}\right]42 = 146$
11.	90	$\gamma\left[\frac{44+67}{2}\right]74 = 649$
12.	15	$\gamma\left[\frac{67+83}{2}\right]24 = 284$
13.	29	$\gamma\left[\frac{90+82}{2}\right]12 = 163$
14.	44	$\gamma\left[\frac{90+119}{2}\right]36 = 594$
15.	208	$\gamma\left[\frac{119+108}{2}\right]172 = 3080$
16.	65	$\gamma\left[\frac{108+120}{2}\right]53 = 955$
17.	63	$\gamma\left[\frac{120+105}{2}\right]52 = 924$
18.	67	$\gamma\left[\frac{105+91}{2}\right]54 = 836$
19.	26	$\gamma\left[\frac{91+86}{2}\right]22 = 308$
20.	29	$\gamma\left[\frac{86+71}{2}\right]23 = 285$
21.	83	$\gamma\left[\frac{71+58}{2}\right]68 = 693$
22.	57	$\gamma\left[\frac{58+67}{2}\right]47 = 464$
23.	43	$\gamma\left[\frac{67+62}{2}\right]35 = 357$
24.	261	$\gamma\left[\frac{62}{2}\right]214 = 1048$

Scale: ______

Enclosure D-5
Lab # 20475-3
File # 88-6253-3

Pacific Materials Laboratory, Inc.

Enclosure D-6

GROSS SLOPE STABILITY ANAYLSIS

GEOLOGIC SECTION H - I - J - K
FAILURE PLANE F

	soil unit weight	0.158	(ksf)
a =	int. angle (deg)	48.0	lowest ultimate shear strength - Tma
C =	cohesion (psf)	0	
	No. of slices	15	

SEG #	WEIGHT - W (kips)	REPOSE (r-deg)	LENGTH (ft)	Ft W sin(r)	Wn W cos(r)	Pr Wntan(a)+CL	FS Pr/Pt
1	22.00	46.00	12.00	15.83	15.28	16.97	1.07
2	113.00	46.00	43.00	81.29	78.50	87.18	1.07
3	80.00	46.00	30.00	57.55	55.57	61.72	1.07
4	36.00	46.00	15.00	25.90	25.01	27.77	1.07
5	51.00	46.00	21.00	36.69	35.43	39.35	1.07
6	83.00	46.00	39.00	59.71	57.66	64.03	1.07
7	13.00	46.00	18.00	9.35	9.03	10.03	1.07
8	12.00	46.00	12.00	8.63	8.34	9.26	1.07
9	54.00	46.00	47.00	38.84	37.51	41.66	1.07
10	28.00	46.00	29.00	20.14	19.45	21.60	1.07
11	29.00	46.00	22.00	20.86	20.15	22.37	1.07
12	19.00	46.00	16.00	13.67	13.20	14.66	1.07
13	21.00	46.00	18.00	15.11	14.59	16.20	1.07
14	73.00	46.00	76.00	52.51	50.71	56.32	1.07
15	5.00	46.00	18.00	3.60	3.47	3.86	1.07

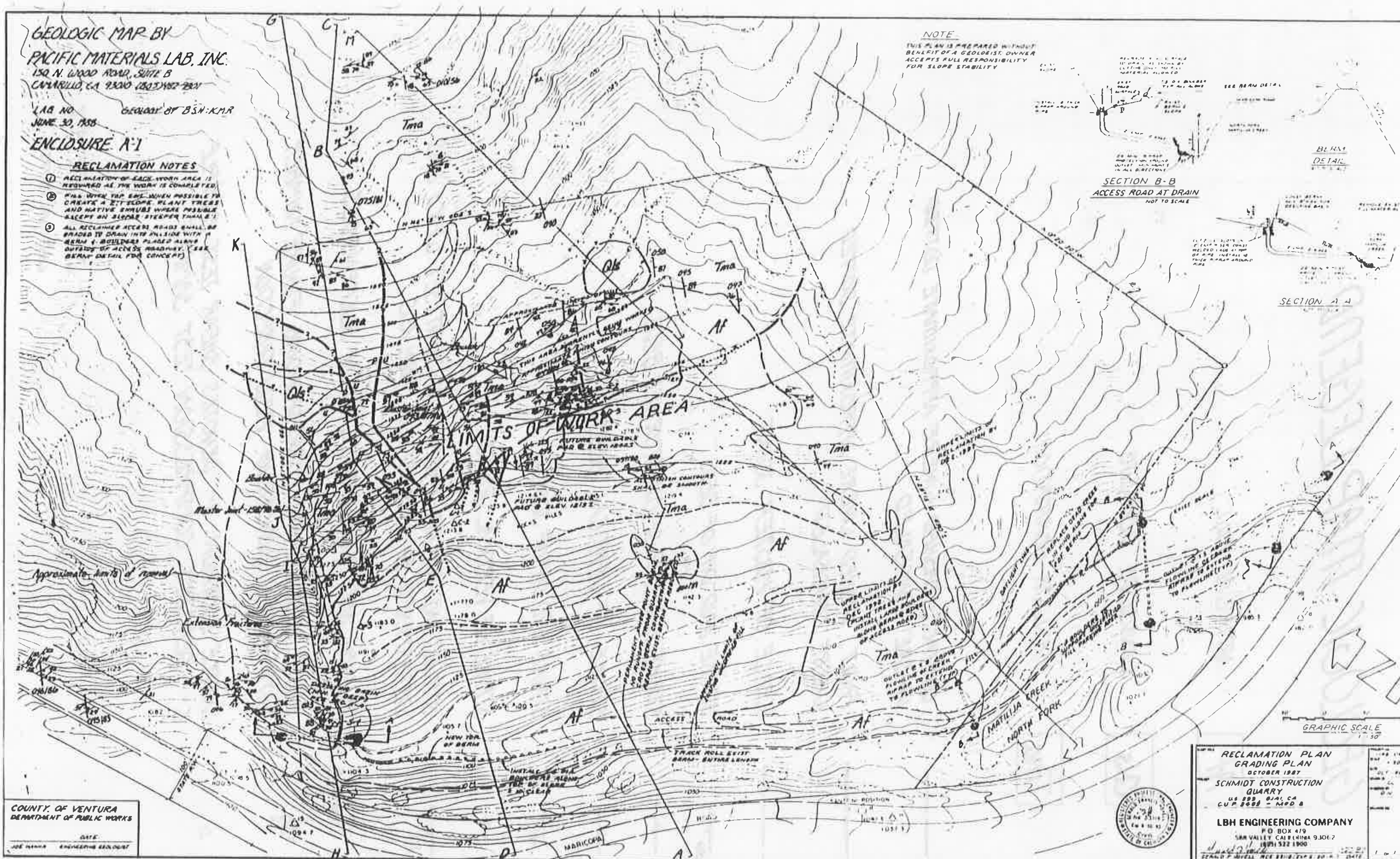
FS static = Pr/Pt = 1.07

GEOLOGIC SECTION H-I-J-K - FAILURE PLANE F

SEGMENT #	L	WEIGHT (KIPS)
1.	12	$\gamma\left[\frac{23}{2}\right]12 = 22$
2	43	$\gamma\left[\frac{23+23}{2}\right]31 = 113$
3.	30	$\gamma\left[\frac{23+23}{2}\right]22 = 80$
4	15	$\gamma\left[\frac{23+18}{2}\right]11 = 36$
5.	21	$\gamma\left[\frac{18+25}{2}\right]15 = 51$
6	39	$\gamma\left[\frac{25+14}{2}\right]27 = 83$
7	18	$\gamma\left[\frac{14}{2}\right]12 = 13$
8	12	$\gamma\left[\frac{13}{2}\right]12 = 12$
9.	47	$\gamma\left[\frac{13+7}{2}\right]34 = 54$
10	29	$\gamma\left[\frac{7+9}{2}\right]22 = 28$
11.	22	$\gamma\left[\frac{9+14}{2}\right]16 = 29$
12.	16	$\gamma\left[\frac{14+8}{2}\right]11 = 19$
13.	18	$\gamma\left[\frac{8+12}{2}\right]13 = 21$
14.	76	$\gamma\left[\frac{12+5}{2}\right]54 = 73$
15.	18	$\gamma\left[5/2\right]12 = 5$

Scale: ___________

Enclosure D-6
Lab # 20475-3
File # 88-6253-3


GEOLOGIC MAP BY
PACIFIC MATERIALS LAB, INC.
150 N. WOOD ROAD, SUITE B
LAB NO
GEOLOGY BY BSH:KMR
ENCLOSURE A-1
RECLAMATION NOTES
NOTE
THIS PLAN IS PREPARED WITHOUT BENEFIT OF A GEOLOGIST. OWNER ACCEPTS FULL RESPONSIBILITY FOR SLOPE STABILITY
SECTION B-B
ACCESS ROAD AT DRAIN
NOT TO SCALE
BERM DETAIL
SECTION A-A
LIMITS OF WORK AREA
Tma
Af
Qls
Master Joint
Approximate limits of removal
Extension Fractures
ACCESS
ROAD
MATILIJA CREEK
NORTH FORK
MARICOPA
GRAPHIC SCALE
RECLAMATION PLAN
GRADING PLAN
OCTOBER 1987
SCHMIDT CONSTRUCTION
QUARRY
LBH ENGINEERING COMPANY
P.O. BOX 479
COUNTY OF VENTURA
DEPARTMENT OF PUBLIC WORKS
DATE

GEOLOGIC MAP LEGEND

EOCENE -- QUATERNARY TO RECENT

Af	ARTIFICIAL FILL
Qls	LANDSLIDE DEPOSITS
Tma	MATILIJA FORMATION

CONTACT, DASHED WHERE APPROXIMATE, DOTTED WHERE CONCEALED

FAULT, DASHED WHERE APPROXIMATE, DOTTED WHERE CONCEALED

TRACE OF MASTER JOINT

011 36 STRIKE AND DIP OF BEDS

037/80 STRIKE AND DIP OF OVERTURNED BEDS

040 STRIKE OF VERTICAL BEDS

44 STRIKE AND DIP OF JOINTS

STRIKE OF VERTICAL JOINTS

110 35 STRIKE AND DIP OF PROMINENT JOINT SET WHICH WAS DETERMINED BY STATISTICAL ANALYSIS

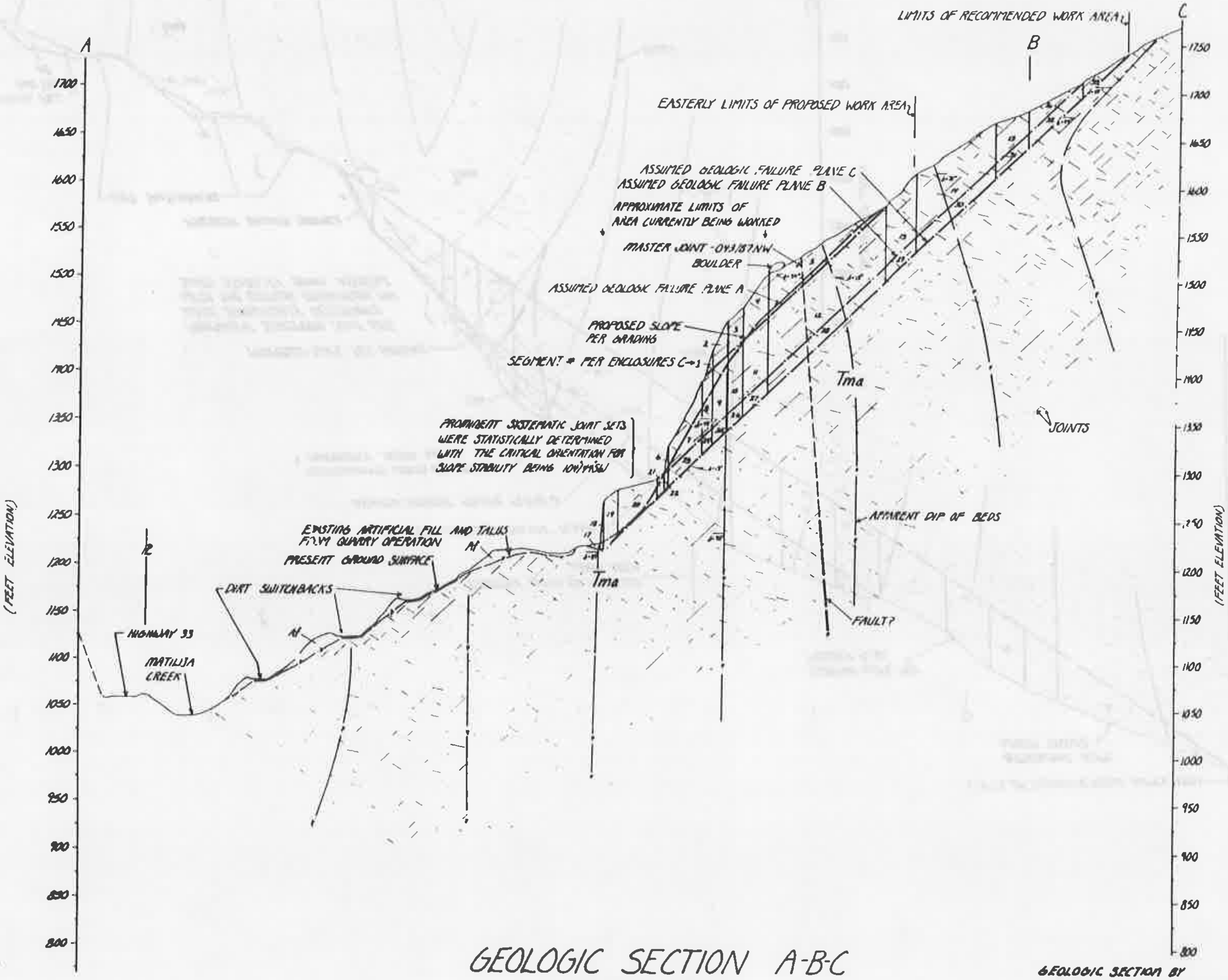
66-225 PLUNGE AND PLUNGE DIRECTION OF SLICKENSIDES

1 PHOTO LOCATION AND CORRESPONDING FIGURE NUMBER WITH ARROW INDICATING VIEW DIRECTION

S- C- SAMPLE LOCATION; S- DENOTES SHEAR TEST SAMPLE C- DENOTES COMPRESSION TEST SAMPLE

ENCLOSURE A-2

LAB NO. 20475-3

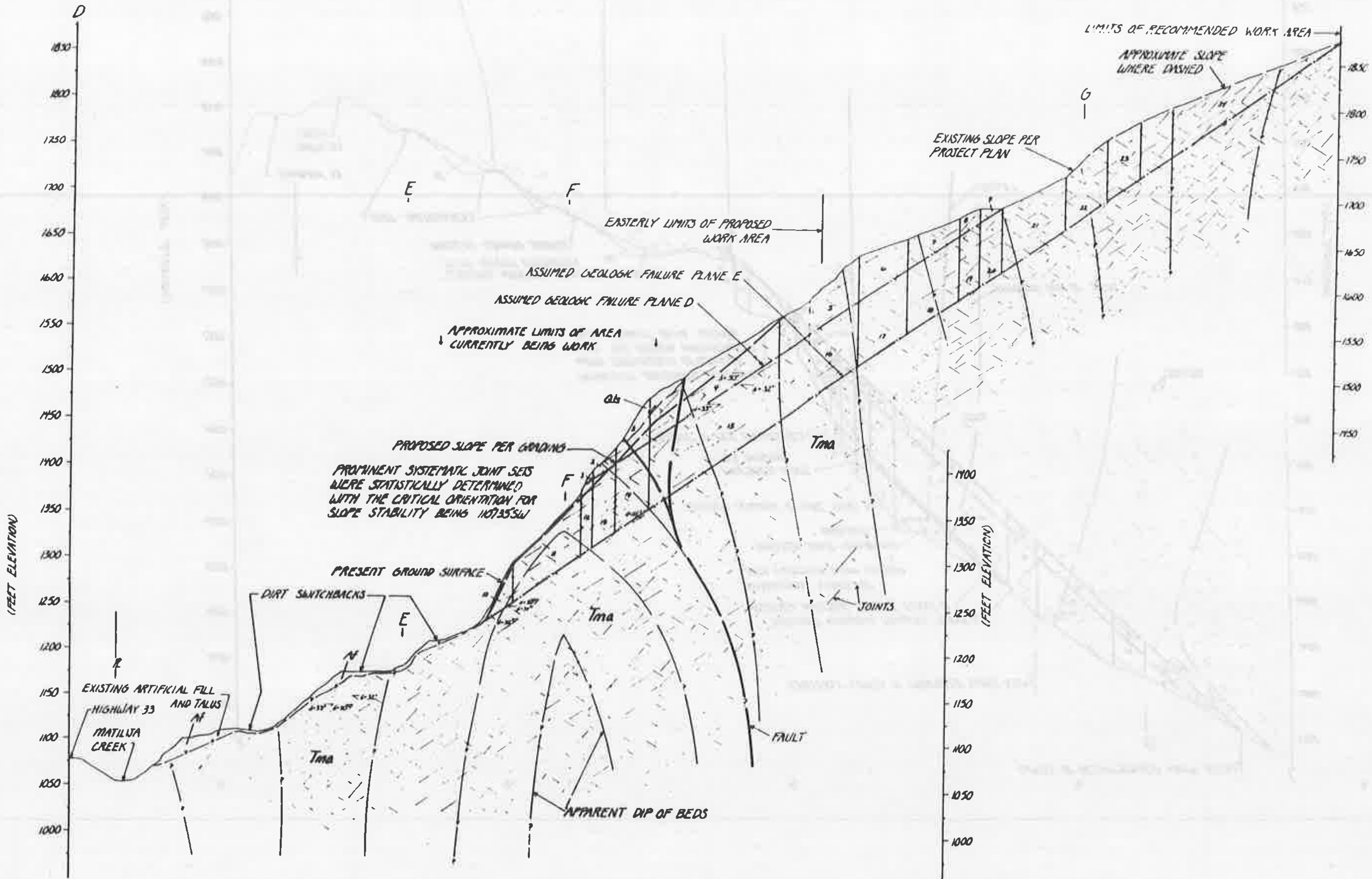


GEOLOGIC SECTION A-B-C

horiz. scale = vert. scale = 1" = 50'

GEOLOGIC SECTION BY
PACIFIC MATERIALS LABORATORY, INC.
7-7-88, LAB No. 20475-3

ENCLOSURE B-1

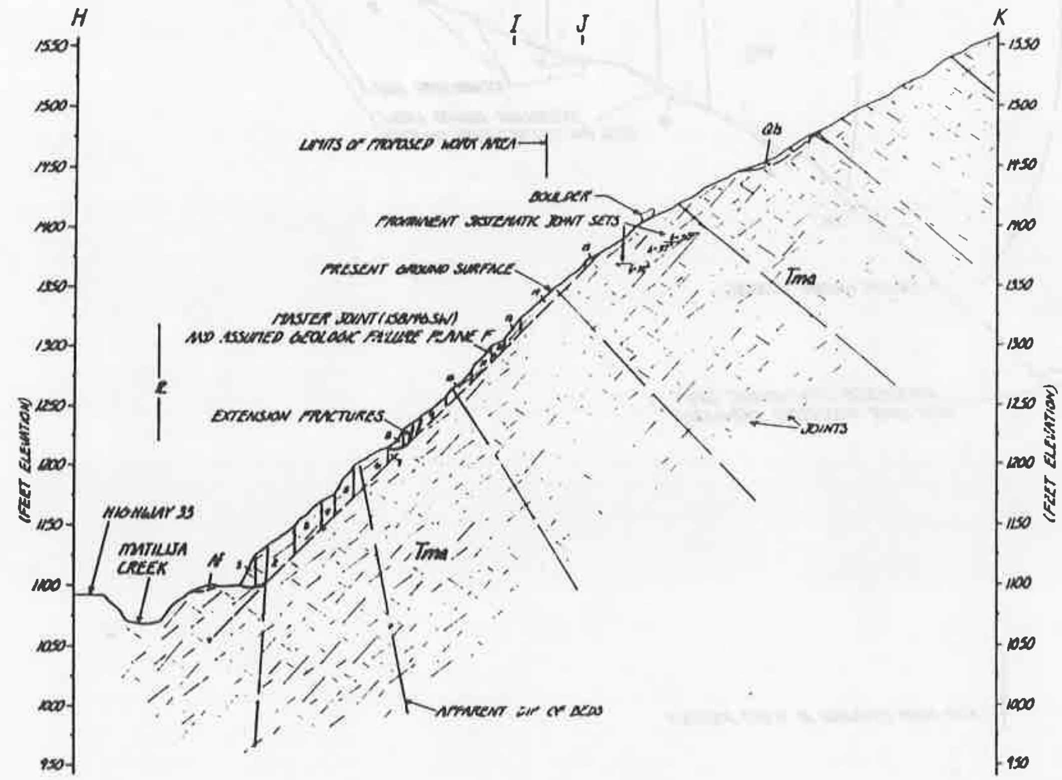


GEOLOGIC SECTION D-E-F-G

horiz. scale = vert. scale 1" = 50'

GEOLOGIC SECTION BY
PACIFIC MATERIALS LABORATORY, INC.
7-7-88, LAB No. 20475-3

ENCLOSURE B-2

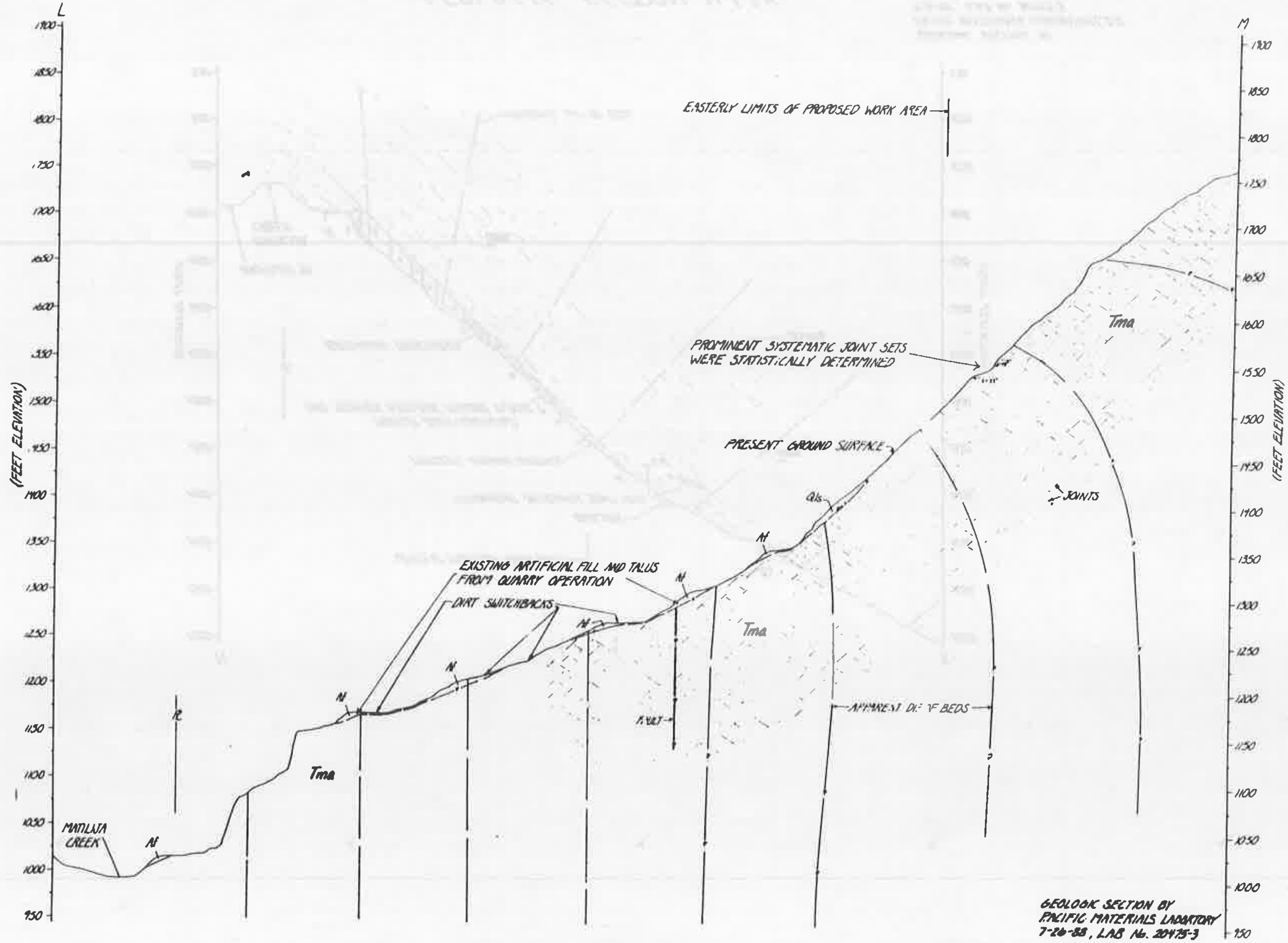


GEOLOGIC SECTION H-I-J-K

horz. scale = vert. scale · 1" = 50'

GEOLOGIC SECTION BY
PACIFIC MATERIALS LABORATORY, INC.
7-8-88, LAB No. 20475-3

ENCLOSURE B-3



GEOLOGIC SECTION L-M

horiz. scale = vert scale: 1" = 30'

GEOLOGIC SECTION BY PACIFIC MATERIALS LABORATORY 7-26-88, LAB No. 20475-3

ENCLOSURE B-4

Pacific
Materials
Laboratory, Inc.

150-B Wood Road
P.O. Box 91
Camarillo, CA 93011
Phone: 482-9801

March 25, 1991
Lab No. 23599-3
File No. 91-6253-3

Schmidt Construction Company
Attn: Mr. William C. Schmidt
7002 Owensmouth Avenue
Canoga Park, CA 91305

SUBJECT: **Addendum Stability Analysis and Final Quarry Plan Review**
Schmidt Ojai Quarry
CUP 3489, Ventura County, CA

REFERENCE: PML Geotechnical Exploration Report dated July 25, 1988, Lab No. 20475-3:

Dear Mr. Schmidt:

In accordance with the meeting held October 2, 1990 at LBH Enginnering between Pacific Materials Laboratory, Inc., LBH Engineering, and Ted Bischella of South Coast Mining and Milling, Inc., this addendum geotechnical report was prepared for final approval of the proposed staged grading plan for Schmidt Ojai Quarry. Gross translational stability analyses for Cross Sections E and T contained on Enclosure A herein indicates the currently planned quarry slopes meet the minimum static and pseudo seismic slope factors of safety adopted by the County of Ventura. The proposed slopes lie within the boundaries of the subject property and do not impinge on adjacent forest service property. The presently proposed quarry staged grading and reclamation plans were reviewed and found to be geotechnically acceptable.

STABILITY ANALYSIS

Gross translational stability analysis was conducted for Cross Sections T and E shown on Enclosure A. herein. These sections were traced from the original sections of Sheet 4 of the current quarry plan dated February 1991 which was prepared by LBH Engineering of Simi Valley. The sections indicate a final overall (Phase III) slope repose of 37 degrees. In accordance with our referenced geotechnical exploration report, Page 10, joint set orientations 110/35 and 108/34 are the only joint surfaces inclined out of slope at the planned slope repose. These orientations result in a critical apparent dip out of slope of 34 degrees which was used in the stability analysis. The results of the gross translational analysis indicate calculated static and pseudo seismic factors of safety of 1.65 and 1.30, respectively. These values exceed the minimum allowable factors of safety adopted by the County of Ventura. In addition, translational failure analyses was conducted for bench detail Section E. Similar resulting static and pseudo seismic factors of safety were obtained for Section E which exceeded County requirements.

PLAN REVIEW

The currently proposed quarry and reclamation plan was reviewed for consistency and conformance with our referenced geotechnical exploration. These proposed plans were found to be geotechnically suitable and they satisfy the requirements of our referenced geotechnical exploration. Item 1, Page 18 of our referenced geotechnical exploration is modified herein to include a maximum bench backcut height of 30 feet. This increased backcut height appears suitable as demonstrated by the stability analysis of Section E contained herein.

All other recommendations of our referenced geotechnical exploration are appropriate and shall be incorporated as part of the approved plans.

We would like to take this opportunity to thank you for allowing us to provide this service. If we may be of further service in clarification of information contained herein, please do not hesitate in calling.

Respectfully submitted,
PACIFIC MATERIALS LABORATORY, INC.

K. Mason Redding

K. Mason Redding, Staff Geologist

CERTIFIED ENGINEERING GEOLOGIST
BARRY S. HASKELL
C.E.G. 722
EX. DATE 6-30-92
STATE OF CALIFORNIA

Barry S. Haskell

Barry S. Haskell, CEG 722,
Expiration Date 6-30-92

Douglas C. Papay

Douglas C. Papay, GE 664
Expiration Date 3-31-91

REGISTERED PROFESSIONAL ENGINEER
DOUGLAS C. PAPAY
GE 664
Exp. 3-31-91
GEOTECHNICAL
STATE OF CALIFORNIA

KMR:BSH:DCP:bfm
cc: LBH Eng. (6)
(for appropriate distribution)

LBH ENGINEERING COMPANY

4421 Adam Road
Post Office Box 479
Simi Valley, CA 93062
(805)522-1900 * (818)999-6400

LETTER of TRANSMITTAL

TO: STA INC.
550-C Newport Center Drive
Newport Beach, CA 92660
ATTN: Jayna Moore-Miller

DATE: April 1, 1991
W.O.: 1146-04.2
JOB : Ojai Quarry
RE : Rev. Geology

TRANSMITTING: XX herewith __ under separate cover
via mail the following:

__ Prints __ Survey Notes __ Engineer's Estimates

__ Sepias __ Applications __ Civil Calculations

__ Tracings __ Legal Description XX Copy of addendum

COPIES	DESCRIPTIONS
	*
1	* Addendum Stability Analysis 3/25/91
	*
	*
	*
	*
	*

FOR: XX Your File __ Your approval and return of ____ copies

XX Your use __ Your signature and return

__ Distribution __ Your review and comments

REMARKS: A copy has been sent to Bill Schmidt, Ted Baceglia and Ventura County - Judith Ward and Joe Hanna. Approval of this report and the LBH plans that were sent to you a month ago is in process. You may want to keep in touch with Judith Ward about it.

Copy to: ____________________

Signed: DEBBIE NAVES DN

If enclosures are not as listed, please notify us at once.

Pacific Materials Laboratory, Inc.

150-B Wood R. d
P.O. Box 91
Camarillo, CA 9301
Phone: 482-98

February 10, 1993
Lab No. 24952-3
File No. 93-6253-3

Schmidt Construction Co.
Attn: Mr. William C. Schmidt
7633 Loma Verde Avenue
Canoga Park, CA 91304

SUBJECT: Supplemental Information
EIR, CUP-3489-2

REFERENCE: PML Clarification to Complete
Dated July 15, 1993, Lab No. 24615-3
PML List of Reports
Dated June 3, 1992, Lab No. 24520-3
PML Addendum Stability Analysis
Dated March 25, 1991, Lab No. 23599-3
PML Plan Review, Dated June 30, 1989,
Lab No. 21433-3
PML Geotechnical Exploration Report
Dated July 25, 1988, Lab No. 20475-3

Dear Mr. Schmidt:

As requested by the Ventura County project planner, Ms. Beth Painter, this report has been prepared to complete CUP-3489-3 by addressing outstanding questions raised in the February 18, 1992 Public Works Memorandum and Planning Division Letter of July 1, 1992.

1. The February 19, 1992 memorandum requests "... (an overall geologic map showing the current project boundary, phases and all geologic symbols, etc.)".

In response to this request, Pacific Materials Laboratory, Inc. has included overall geologic information and symbols on the "Quarry Operations Plan" Sheet 1/4, dated 1/91 prepared by LBH Engineering Company. The plan includes the total phased improvement boundaries, the proposed grading phases and has been upgraded to include geologic data and symbols. Please find the overall geologic materials included herein as Enclosure A.

2. The July 1, 1992 County Planning Letter requests "..., it is recommended that a study be conducted to determine the seismic acceleration factor develop(ed) by sight rock-blasting activities."

In response to this question, the Pacific Materials Laboratory, Inc. letter of July 15, 1992 suggests "an experienced mining engineer, experienced with the process and effects of blasting, provide a cursory review of significant blasting episodes, upon the overall slope stability. If on the other hand blasting is to be limited to surficial, small scale episodes, then the effect on the gross stability would be considered negligible and accordingly, a mining engineers review would not be necessary."

In research and documentation of the previous current and future site blasting program, a statement of record of procedures, magnitude and frequency, was sought from the experienced owner. Please find attached hereto a statement of blasting practices by the long-term quarry owner and operator, Mr. Bill Schmidt, dated December 14, 1992.

Based upon review of Mr. Schmidt's letter, it is the opinion of the undersigned that the stated procedures constitute small scale blasting episodes, and as such their affect upon gross slope stability is, therefore, considered to be negligible. Accordingly, based upon construction of a blasting program utilizing the procedures outlined by Mr. Schmidt, a mining engineer, review will not be necessary.

The questions addressed herein are reportedly the only outstanding geotechnical concerns regarding resolution of CUP-3489-2. It is believed that this report resolves the outstanding concerns. If their are any further review items which must be addressed, please contact me at your earliest convenience so I may expedite their resolution.

Thank you for the opportunity of providing this service.

Respectfully submitted,

PACIFIC MATERIALS LABORATORY,

REGISTERED PROFESSIONAL ENGINEER
DOUGLAS C. PAPAY
GE 664
Exp. 3-31-95
GEOTECHNICAL
STATE OF CALIFORNIA

Douglas C. Papay, GE 664
Expiration Date 3-31-95

DCP:cmp/bfm
cc: Addressee (1)
LBH Eng. (1)
Ventura County Planning
Attn: Beth Painter (3)
Attachment: Enclosure A

December 14, 1992

Doug Papay
Pacific Materials Laboratory, Inc.
150-B Wood Road
P.O. Box 91
Camarillo, California 93011

Dear Doug,

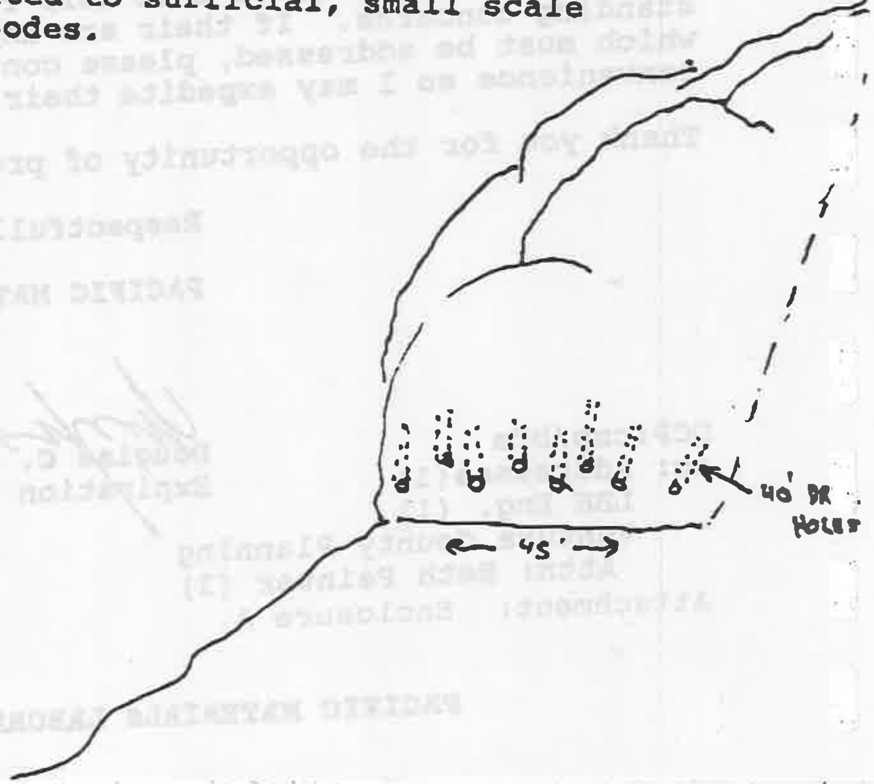
On the matter of Page 21 Item 12 of your Geotechnical Exploration Report, I offer the following information:

1. Due to the precipitous terrain in the Ojai Quarry, we cannot put off large blasts that could (possibly) effect the gross slope stability.
2. We are limited to blasting the end section (45') in contrast to following along the entire front face (900') and enjoying the economies of a large shot!
3. We construct our work benches from the side so a typical hole pattern would look like this....an end view, so to speak.

So...this is a typical eight hole shot (40' depth) using eight primer caps (electric) and eight boxes of dynamite - each shot definately limited to surficial, small scale episodes.

Sincerely,

Bill Schmidt
Schmidt Construction, Inc.



Page 1

EARTH QUANTITIES BY THE CONTOUR METHOD -- SCHMIDT QUARRY

EXCAVATION (CUT) VOLUME

PROJECT: SCHMIDT QUARRY -- PHASE I
W.O. = 1146-04.2
CLIENT = BILL SCHMIDT
DATE = 3/17/93
BY : G. HOVELL

HORIZONTAL SCALE = 50
Yardage Factor = 46.2963
CONTOUR INTERVAL = 15

	CONTOUR ELEVATION	AREA Sq. In.	DOUBLE AREA	VOLUME Cu.Yds.	ACCUMULATED VOLUME (Cu.Yds)
TOP OF CUT =	1605	0.00			
			0.09	63	63
	1590	0.09			
			0.38	264	326
	1575	0.29			
			1.17	813	1,139
	1560	0.88			
			2.28	1,583	2,722
	1545	1.40			
			3.66	2,542	5,264
	1530	2.26			
			5.38	3,736	9,000
	1515	3.12			
			6.85	4,757	13,757
	1500	3.73			
			7.93	5,507	19,264
	1485	4.20			
			8.80	6,111	25,375
	1470	4.60			
			9.62	6,681	32,056
	1455	5.02			
			10.58	7,347	39,403
	1440	5.56			
			11.64	8,083	47,486
	1425	6.08			
			12.25	8,507	55,993
	1410	6.17			
			12.48	8,667	64,660
	1395	6.31			
			12.63	8,771	73,431
	1380	6.32			
			13.78	9,569	83,000
	1365	7.46			
			14.67	10,188	93,188
	1350	7.21			
			14.98	10,403	103,590
	1335	7.77			
			15.55	10,799	114,389
	1320	7.78			
			15.84	11,000	125,389
	1305	8.06			
			9.35	0	125,389
CONTOUR ----	1305	1.29			
INTERVAL			2.33	1,079	126,468
CHANGES	1295	1.04			
			2.06	954	127,421

Summary:

Phase I = 143,431 cy

Phase II = 91,538 cy

Phase III = 470,986

Total = 705,955

Page 2

EARTH QUANTITIES BY THE CONTOUR METHOD -- SCHMIDT QUARRY

1285	1.02			
		1.90	880	128,301
1275	0.88			
		1.71	792	129,093
1265	0.83			
		1.54	713	129,806
1255	0.71			
		1.44	667	130,472
1245	0.73			
		1.24	574	131,046
1235	0.51			
		0.83	384	131,431
1225	0.32			
		0.46	213	131,644
1215	0.14			
		0.56	259	131,903
1205	0.42			
		1.12	519	132,421
1195	0.70			
		2.06	954	133,375
1185	1.36			
		3.38	1,565	134,940
1175	2.02			
		3.77	1,745	136,685
1165	1.75			
		3.22	1,491	138,176
1155	1.47			
		2.87	1,329	139,505
1145	1.40			
		2.75	1,273	140,778
1135	1.35			
		2.53	1,171	141,949
1125	1.18			
		2.19	1,014	142,963
1115	1.01			
		1.01	468	143,431
1105	0.00			

PHASE I YARDAGE = 143,431

EARTH QUANTITIES BY THE CONTOUR METHOD

EXCAVATION (CUT) VOLUME

PROJECT: SCHMIDT QUARRY -- PHASE II
W.O. = 1146-04.2
CLIENT = BILL SCHMIDT
DATE = 3/17/93
BY : G. HOVELL

HORIZONTAL SCALE = 50
Yardage Factor = 46.2963
CONTOUR INTERVAL = 30

	CONTOUR ELEVATION	AREA Sq. In.	DOUBLE AREA	VOLUME Cu.Yds.	ACCUMULATED VOLUME (Cu.Yds)
TOP OF CUT =	1737	0.00			
			0.34	205	205
	1724	0.34			
			1.36	1,889	2,094
	1694	1.02			
			1.24	0	2,094
	1694	0.22			
			1.88	2,611	4,705
	1664	1.66			
			2.45	0	4,705
	1664	0.79			
			3.58	4,972	9,677
	1634	2.79			
			4.57	0	9,677
	1634	1.78			
			5.95	8,264	17,941
	1604	4.17			
			7.02	0	17,941
	1604	2.85			
			7.87	10,931	28,871
	1574	5.02			
			8.69	0	28,871
	1574	3.67			
			9.67	13,431	42,302
	1544	6.00			
			10.57	0	42,302
	1544	4.57			
			11.17	15,514	57,816
	1514	6.60			
			11.92	0	57,816
	1514	5.32			
			12.19	16,931	74,746
	1484	6.87			
			11.97	0	74,746
	1484	5.10			
			12.09	16,792	91,538
	1454	6.99			

PHASE II YARDAGE = 91,538

Page 4

EARTH QUANTITIES BY THE CONTOUR METHOD

EXCAVATION (CUT) VOLUME
========================

PROJECT: SCHMIDT QUARRY -- PHASE III
W.O. = 1146-04.2
CLIENT = BILL SCHMIDT
DATE = 3/17/93
BY : G. HOVELL

HORIZONTAL SCALE = 50
Yardage Factor = 46.2963
CONTOUR INTERVAL = 30

	CONTOUR ELEVATION	AREA Sq. In.	DOUBLE AREA	VOLUME Cu.Yds.	ACCUMULATED VOLUME (Cu.Yds)
TOP OF CUT =	1905	0.00			
=============			1.72	2,389	2,389
	1875	1.72			
			2.98	0	2,389
	1875	1.26			
			4.96	6,889	9,278
	1845	3.70			
			6.57	0	9,278
	1845	2.87			
			9.66	13,417	22,694
	1815	6.79			
			12.51	0	22,694
	1815	5.72			
			14.66	20,361	43,056
	1785	8.94			
			16.67	0	43,056
	1785	7.73			
			18.38	25,528	68,583
	1755	10.65			
			20.11	0	68,583
	1755	9.46			
			20.83	28,931	97,514
	1725	11.37			
			21.52	0	97,514
	1725	10.15			
			22.16	30,778	128,292
	1695	12.01			
			22.45	0	128,292
	1695	10.44			
			22.28	30,944	159,236
	1665	11.84			
			22.08	0	159,236
	1665	10.24			
			22.00	30,556	189,792
	1635	11.76			
			21.91	0	189,792
	1635	10.15			
			21.23	29,486	219,278
	1605	11.08			
			20.54	0	219,278
	1605	9.46			
			20.45	28,403	247,681
	1575	10.99			
			20.14	0	247,681
	1575	9.15			
			19.41	26,958	274,639

EARTH QUANTITIES BY THE CONTOUR METHOD

1545	10.26			
		18.40	0	274,639
1545	8.14			
		17.18	23,861	298,500
1515	9.04			
		16.11	0	298,500
1515	7.07			
		14.94	20,750	319,250
1485	7.87			
		13.79	0	319,250
1485	5.92			
		12.32	17,111	336,361
1455	6.40			
		10.72	0	336,361
1455	4.32			
		16.20	22,500	358,861
1425	11.88			
		21.03	0	358,861
1425	9.15			
		18.42	25,583	384,444
1395	9.27			
		16.43	0	384,444
1395	7.16			
		13.60	18,889	403,333
1365	6.44			
		10.55	0	403,333
1365	4.11			
		9.21	12,792	416,125
1335	5.10			
		7.60	0	416,125
1335	2.50			
		11.19	15,542	431,667
1305	8.69			
		15.16	0	431,667
1305	6.47			
		12.22	16,972	448,639
1275	5.75			
		10.22	0	448,639
1275	4.47			
		8.24	11,444	460,083
1245	3.77			
		6.65	0	460,083
1245	2.88			
		6.01	8,347	468,431
1215	3.13			
		4.97	0	468,431
1215	1.84			
		1.84	2,556	470,986
1185	0.00			

PHASE III YARDAGE = 470,986

RESPONSE TO COMMENTS

SCHMIDT ROCK QUARRY
ENVIRONMENTAL IMPACT REPORT
STATE CLEARINGHOUSE NUMBER 89032904

PREPARED FOR:

COUNTY OF VENTURA
800 SOUTH VICTORIA AVENUE
VENTURA, CALIFORNIA 93009

PREPARED BY:

EDAW, INC.
1920 MAIN STREET, SUITE 450
IRVINE, CALIFORNIA 92714
(714) 660-8044

SEPTEMBER 1, 1993

TABLE OF CONTENTS

I. INTRODUCTION

This document serves as the Response to Comments on the Draft Environmental Impact Report (EIR) for the Schmidt Rock Quarry CUP - 3489 (MOD2). This document contains all information available in the public record related to the Draft EIR as of June 2, 1993 and responds to comments in accordance with Section 15088 of the California Environmental Quality Act (CEQA) Guidelines.

This document contains five sections. In addition to this Introduction, these sections are Public Participation and Review, Comments, Responses to Comments, and Errata to the Draft EIR.

The Public Participation section outlines the various methods the County of Ventura has used to provide public review and solicit input on the Draft EIR. The Comments section contains those written comments received from agencies, groups, organizations, and individuals as of June 2, 1993. The Response to Comments section contains responses to each comment. The Errata to the Draft EIR is provided to show corrections of minor errors and inconsistencies in the Draft EIR text.

It is the intent of the County of Ventura to include this document in the official public record related to the Draft EIR. Based on the information contained in the public record, the decision makers will be provided with an accurate and complete record of all information related to the environmental consequences of the project.

II. PUBLIC PARTICIPATION AND REVIEW

The County of Ventura notified all responsible and trustee agencies, interest groups, organizations, and individuals that a Draft EIR had been completed for the proposed project. The County also used several methods to solicit input during the preparation, distribution, and review period of the Draft EIR. The following is a list of actions taken during the preparation, distribution, and review of the Draft EIR.

1. The Notice of Preparation (NOP) was received by the State Clearinghouse on March 27, 1989. The State Clearinghouse assigned Clearinghouse Number 89032904 to the proposed project.

2. The NOP was distributed by the State Clearinghouse to all responsible and trustee agencies on March 27, 1989 for a 30-day public review. Copies of the comments received on the NOP and responses to these comments were included in the Draft EIR as Appendix A.

3. During the preparation of the Draft EIR, all public and quasi-public institutions, agencies, and companies serving the site were contacted. Copies of their responses were included in the Draft EIR as Appendix A.

4. A Notice of Completion (NOC) and copies of the Draft EIR were filed with the State Clearinghouse on April 9, 1993. The Draft EIR and NOC were distributed to agencies, groups, organizations, and individuals. A copy of the NOC and the State Clearinghouse distribution list is available for review and inspection at the County of Ventura, 800 South Victoria Avenue, Ventura, California 93009.

5. An official forty-five (45) day public review period for the Draft EIR was established by the State Clearinghouse. It began on April 9, 1993 and ended on May 26, 1993. Public comment letters were accepted by the County of Ventura through June 2, 1993.

III. COMMENTS

Copies of all written comments received as of June 2, 1993 are contained in this section of the document. All comments have been numbered and are listed on the following pages. All comments from letters received have been retyped verbatim in a comment - response format for clarity and provided in Section IV. Response to Comments.

Some comments do not address the completeness or adequacy of the Draft EIR, do not raise significant environmental issues, or request additional information. A substantive response to such comments is not appropriate within the context of the California Environmental Quality Act (CEQA). Such comments are responded to with a "comment acknowledged" reference. This indicates that the comment will be forwarded to all appropriate decision makers for their review and consideration. In accordance with Section 15088 of the CEQA Guidelines, this document contains responses to each comment which raised an environmental issue.

SCHMIDT ROCK QUARRY EIR
LIST OF COMMENTS

WRITTEN COMMENTS		COMMENT/RESPONSE SERIES
1.	Ms. Beth Painter Planning Division County of Ventura 800 South Victoria Avenue, L #1740 Ventura, CA 93009	CVPD 1-14
2.	Mr. Jim Fisher Public Works Agency County of Ventura 800 South Victoria Avenue Ventura, California 93009	CVPWA 1-9
3.	Mr. Stephen E. Oliva Division of Mines and Geology Department of Conservation Office of Governmental and Environmental Relations	DMG 1-14
4.	Mr. Brent Backus Air Pollution Control District County of Ventura 800 South Victoria Avenue, L #1740 Ventura, California 93009	APCD 1-2
5.	Mr. Wilford Melton California State Department of Transportation District 7	DOT 1-2
6.	Mr. Fred Boroumand Public Works Agency - Transportation Department County of Ventura 800 South Victoria Avenue, L #1740 Ventura, California 93009	CVPWA2 1
7.	Environmental Report Review Committee County of Ventura 800 South Victoria Avenue, L #1740 Ventura, California 93009	ERRC 1

COUNTY OF VENTURA

RESOURCE MANAGEMENT AGENCY
PLANNING DIVISION

M E M O R A N D U M

April 26, 1993

TO: ERRC MEMBERS

FROM: BETH PAINTER, PLANNING DIVISION BP

SUBJECT: COMMENTS TO DRAFT EIR FOR SCHMIDT QUARRY, CUP-3489-2

I have requested that the consultant for the above referenced DEIR make text changes on the following pages. Xerox copies of all pages requiring changes have been mailed directly to the consultant. Changes which involve the insertion of new information are described below: CVPD-1

PAGE NUMBER	PROPOSED TEXT CHANGE	
54, Paragraph 7	Provide references for the studies mentioned in the last paragraph or rewrite the paragraph	CVPD-2
Exhibit 17	Highlight the location of the residences in the foreground who can see the project site. This will visually demonstrate that a very small area within the foreground actually can see the site.	CVPD-3
59, **SUMMARY**	Include a discussion in the Summary Section which explains that the General Plan provides the ability to make overriding considerations for discretionary development which would significantly degrade visual resources; therefore this impact is not inconsistent with General Plan Policy. The Scenic Resources section of the General Plan should be inserted for reference in the Appendix.	CVPD-4
61	Expand the discussion under the heading of "Level of Significance" to explain that even though only a small percentage of those viewers in the foreground and middle ground will be impacted, this impact remains as significant and unavoidable. Otherwise it is questionable as to whether or not this impact is significant.	CVPD-5

The following pages require minor text changes which involve no new information.

PAGE NUMBER	PROPOSED TEXT CHANGE	
3, Paragraph 4	Public Works Administration should read Public Works Agency	CVPD-6
4, Paragraph 1	requesting expansion should read requesting continuation of the existing operation and expansion	CVPD-7
4, Paragraph 1	Public Works Administration should read Public Works Agency	CVPD-8
7, last line	Conditional Use Permit should read Conditional Use Permit Modification	CVPD-9
12, item 1.	Geology/Soils Mitigation Measure 1: backcut slopes shall be limited to a maximum of 20 feet should read backcut slopes shall be limited to a maximum of 30 feet.	CVPD-10
18-21	Alternatives - Summary of Impacts: Proposed Project Impacts heading should read Proposed Project	CVPD-11
22, Paragraph 4	north and east should read east and north/east	CVPD-12
27, Paragraph 2	Sentences 2 and 3 should be combined to read: Significant cuts into the natural hillside within the quarry area have been made as a result of the mining activity and has resulted in unstable and unsafe hillside slopes on the parcel.	CVPD-13
29, Paragraph 1	proposed continuation should read proposed 9 acre expansion	CVPD-14

COUNTY OF VENTURA
PUBLIC WORKS AGENCY
DEVELOPMENT & INSPECTION SERVICES
800 South Victoria Avenue
Ventura, CA 93009
(805) 654-2030

DATE: May 5, 1993

TO: Rich Guske

FROM: Jim Fisher

SUBJECT: **GEOLOGY & SOILS REVIEW: Draft Environmental Impact Report**

REFERENCE: CUP3489 MD2/Schmidt Quarry [Hwy 33]

Ref: EDAW, Inc. (1993), Draft Environmental Impact Report, Schmidt Rock Quarry, CUP-3489 (MOD 2), dated March 19.

I have completed a review of the referenced DEIR from a geology and soils standpoint. I find the document straight-forward and complete, with minor exceptions that can be addressed fairly readily. CVPWA-1

1. Page 3: "Public Works Administration" should be Public Works Agency. Same comment, page 4. CVPWA-2

2. Page 12: General Summary of Impacts, Biology/Sedimentation. Measure no. 3 states, "Prior to issuance of grading permits..." There will be no grading permits issued for the project. CVPWA-3

3. Exhibits 8 and 8A indicate a 30-foot bench height. The consultant report, Appendix C, Page 18 and the Summary of Mitigation Measures, Page 12 indicate a 20-foot bench height. CVPWA-4

4. Page 50: The annual adjustment of the reclamation financial assurances also reflects any areas successfully reclaimed in the previous year. CVPWA-5

5. Page 69: Local Geology. The western Ventura Basin proper was not present in Eocene time, as it didn't begin to form until the Early Miocene. CVPWA-6

6. Page 76: Slope Stability, second paragraph. A "proposed 9 acre site" is referred to. A reference to an Exhibit or figure should be provided. Same comment, page 77. CVPWA-7

7. Page 78: Mitigation Measures, no.1. Same comment as no.3, above. CVPWA-8

8. A Mitigation Measure should be provided to address the relationship of the final, mined configuration of the site and the site boundarys. The concern is with respect to slope setbacks, rock-bolted blocks, slopes mined to a stable configuration or other means to assure that no unstable or daylighted blocks are left perched at the top of slope. CVPWA-9

END OF TEXT

Jim Fisher
Engineering Geologist

State of California **THE RESOURCES AGENCY OF CALIFORNIA**

MEMORANDUM

To: Mr. Douglas P. Wheeler
Secretary for Resources

Date: May 13, 1993

Ms. Beth Painter
County of Ventura
800 South Victoria Avenue
Ventura, CA 93009

From: **Department of Conservation - Office of Governmental and Environmental Relations**

Subject: Draft Environmental Impact Report (DEIR) for the Schmidt Rock Quarry CUP 3489. **SCH #89032904**

The Mined-Land Reclamation Project staff of the Department of Conservation's Division of Mines and Geology (DMG) has reviewed DEIR and the reclamation plan for the Schmidt Rock Quarry (CUP # 3489 (MOD 2) located east of Highway 33 near Matilija Road. The following comments are offered to assist in your review of this project.

The Surface Mining and Reclamation Act of 1975 (SMARA - Public Resources Code (PRC) §§ 2710 et seq.) and the State Mining and Geology Board regulations for surface mining and reclamation practice (California Code of Regulations (CCR), Title 14, Chapter 8, Article 1, §§ 3500 et seq.) require that specific items be addressed or included in reclamation plans. For all reclamation plans approved or substantially amended after January 15, 1993, reclamation must be in conformance with the recently adopted Article 9 Reclamation Standards (copies enclosed). The following items were either not included or not sufficiently addressed in the documents we reviewed. **DMG-1**

Hydrology and Water Quality

(Refer to SMARA (PRC) Sections 2772(h)(1),(h)(2), 2773(a), CCR Sections 3503(a)(3),(b)(1),(d), 3706(c),(d),(e),(f),(g), 3710 (b),(c), 3711(e), 3712)

- The DEIR evaluates the potential impacts from expansion of the Schmidt Rock Quarry mining operations. Included as part of the DEIR are several plan map sheets and map sheet notes which describe the proposed reclamation of the mine site. As presently written, the DEIR with the included reclamation plan map sheets constitutes the reclamation plan. Apparently, no stand-alone reclamation plan will be prepared. As presently written, the DEIR provides that mitigation measures for erosion and sediment control will be developed at a future date. We recommend that a stand-alone reclamation plan be prepared and that a site-specific erosion control and water quality monitoring plan be included in the document that is approved as the final reclamation plan. If a storm water pollution prevention **DMG-2** plan for the mine site will be prepared for the Regional Water Quality Control Board, this plan might also be used to fulfill SMARA requirements. DMG-2 (cont'd)

- The DEIR requires that the quarry operator recontour the area of interface between the quarry and Matilija Creek to provide protection for the riparian habitat and to prevent future slope failures from impacting the stream. CCR Sections 3700 (c), (d), (e), and (g) require that the reclamation plan discuss methods for erosion and sediment control necessary to minimize siltation of watercourses. We recommend that the proposed future recontouring design for Matilija Creek be included in the reclamation plan and that site-specific monitoring and mitigation standards be developed to evaluate the success of the recontouring. DMG-3

Geotechnical Requirements

(Refer to CCR Sections 3502(b)(3),(b)(4), 3704 (a),(b), d), f)

- CCR Section 3704(d) requires that final reclaimed fill slopes not exceed 2 horizontal to 1 vertical (2H:1V) except when site-specific engineering analysis demonstrates that the proposed final slopes will have a minimum slope stability factor of safety that is suitable for the proposed end use, and when the proposed final slope can be successfully revegetated. The DEIR indicates that the waste fill material for the mine site has been placed adjacent to Matilija Creek and has caused degradation of the stream. Item 2.0 of the Reclamation Notes, Exhibit 8A, attached to the reclamation plan maps states that all existing quarry tailing fill slopes shall be verified to be stable or reworked using certified fill to a stable 1:1 slope, as shown in Detail (H). Since Detail (H) states that final reclamation fill slopes will be at a 2H:1V gradient, Reclamation Notes Item 2.0 of Exhibit 8A should be corrected to state that final fill slopes will be at a 2H:1V gradient unless engineering slope stability analysis demonstrate that they will be stable at a steeper gradient and successfully revegetated. DMG-4

- The DEIR indicates that the No Project Alternative would not allow for stabilization of the existing over-steepened cut slopes and that the potential impacts to Matilija Creek would be greater than the proposed expanded mining alternative. However, the attached project geotechnical report recommends that the unstable slopes, including those in the northwestern portion of the mine site, either be removed or buttressed to prevent potential translational movement. The DEIR does not provide an evaluation of the potential feasibility and associated impacts of buttressing the existing oversteepened and unstable slopes and continuing mining within the existing approved permit area. We recommend that this alternative be included in the DEIR. DMG-5

Environmental Setting and Protection of Fish and Wildlife Habitat

(Refer to CCR Sections 3502(b)(1), 3503(c), 3703 (a),(b),(c), 3704(g), 3705(a), 3706(a),(f),(g), 3710(a),(b),(c),(d), 3713(b)

- CCR Section 3502 (b)(1) requires that the reclamation plan include a description of the environmental setting of the mine site. The DEIR provides a Biological Assessment of the proposed project site, but does not include sufficient information to fully ascertain the impact of mining on the environment. A full description of the site is necessary for the following three reasons: 1) to document baseline conditions, 2) to aid in development and evaluation of an appropriate revegetation plan, and 3) to evaluate purported mining and reclamation impacts on wildlife habitat. DMG-6

  The description of the environmental setting should include a survey for sensitive species conducted at the appropriate time for observing each species. The survey conducted for the Biological Assessment in the DEIR was conducted on one day. A survey conducted for one day is not sufficient to observe every species, especially migratory wildlife or early blooming plants. DMG-7

  In addition, the description should include percent cover or density, and diversity measurements for each of the vegetation types that will be re-created on the reclaimed landform. The Biological Assessment listed species but not their percent cover or densities. Such quantitative data can also be used to guide the design of an appropriate revegetation plan. DMG-8

  Also prior to any site disturbance, the purported lack of impacts to sensitive, rare, threatened, and endangered plants and animals should be verified. The California Department of Fish and Game Natural Diversity Data Base reports the following sensitive species in the vicinity of the project: DMG-9

California Condor *Gymnogyps californianus*	Federal: Endangered State: Endangered
Ojai Fritillary *Fritillaria ojaiensis*	Federal: Category 2 CNPS List: 1B
Least Bells Vireo *Vireo belli pusillus*	Federal: Endangered State: Endangered

  The revegetation of the site should be designed to help lessen impacts to unique species. Without the knowledge of which species occur on the site, the revegetation design cannot target those species. We recommend that a survey be conducted at the appropriate time for these sensitive species. DMG-10

Resoiling and Revegetation

(Refer to SMARA Section 2773(a), CCR Sections 3503(a)(1),(f),(g), 3704(c), 3705(a),(b),(c),(d),(e),(f),(g),(h),(i),(j),(k),(l),(m), 3707(b),(d), 3711(a),(b),(c),(d),(e))

The DEIR does not address the reclamation of the biotic resources on the proposed project site. We recommend that the Final EIR include an approved reclamation plan as required by SMARA.

- o CCR Section 3503(f) addresses resoiling and CCR Section 3707 and 3711 address protection and distribution of topsoil. The DEIR does not address these sections. Resoiling and topsoil management are critical components of revegetation. We recommend that the DEIR adequately address the aforementioned sections. DMG-11

- o CCR Section 3503(g) requires that appropriate species be used for revegetating a site and CCR Section 3705 establishes performance standards for revegetation. The DEIR did not address revegetation of the site. We recommend that the DEIR adequately address site revegetation as required in the aforementioned sections. DMG-12

- o CCR Section 3705 (c) and (d) require compacted soils on all access roads, haul roads, and other traffic routes be reclaimed, stripped of any remaining roadbase materials, prepared in accordance with subsection 3705(g), covered with suitable growth media or topsoil, and revegetated. The DEIR did not address the reclamation of compacted roads. We recommend that the DEIR address these sections. DMG-13

If you have any questions on these comments or require any assistance with other mine reclamation issues, please contact James Pompy, Mined-Land Reclamation Project Manager, at (916) 323-8565. DMG-14

Stephen E. Oliva
Acting Environmental Program Coordinator

Attachments

MAY-24-93 MON 9:50 P.01

RECEIVED

MAY 24 1993

EDAW, INC., IRVINE, CA

93 MAY 24

FAX DATE # PGS 1

TO Sally Salavea

CO. EDAW, INC. FAX# (714) 660-1046

FROM Beth Painter

AVERY FX-10

COUNTY OF VENTURA
RESOURCE MANAGEMENT AGENCY/APCD
Memorandum

TO: Beth Painter, Planning DATE: May 20, 1993

FROM: Brent ~~Backus~~, APCD

SUBJECT: Draft Environmental Impact Report (DEIR) for the Schmidt Rock Quarry (CUP 3489-2)

Air Pollution Control District staff has reviewed the subject DEIR and offers the following comments:

1) The DEIR should quantify reactive organic compounds (ROC) and oxides of nitrogen (NOx) emissions, as well as, particulate matter (PM10) for the project. ROC and NOx emissions would occur from excavation of rock, transportation of rock to market, and employee vehicles. Total project emissions should be based on the extraction of 50,000 tons of rock per year.

   The project is located in the Los Padres National Forest. The Los Padres National Forest is considered an attainment area for the National Ambient Air Quality Standards. However, the project is adjacent to the non-attainment area of Ventura County. Therefore, a discussion of regional air quality should be included into the EIR.

CVADCD -1

2) The following are recommended permit conditions for the project:

   A) Site access roads shall be watered or otherwise treated with environmentally-safe dust palliatives to minimize fugitive dust during operation of the facility.

   B) Excavation activities shall use new technologies to control ozone precursor emissions as they become available and feasible.

   C) All diesel-powered vehicles and equipment shall be operated with fuel injection timing retarded 4 degrees from the manufacture's recommendation, and all engines shall be properly operated and maintained.

   D) All diesel fuel shall be 0.05 weight percent sulfur or less.

CVADCD -2

If I can be of further assistance, please feel free to contact me at 805/645-1428.

State of California

Business, Transportation and Housing Agency

Memorandum

To : Mr. Tom Loftus
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

Date May 20, 1993

File No.: IGR/CEQA/DEIR
Schmidt Rock Quarry
expansion of quarry
Maricopa Highway
Vic. VEN-33-15.44

Wilford Melton -District 7

From : DEPARTMENT OF TRANSPORTATION

Subject : Project Review Comments

SCH NO. 89032904

Caltrans has reviewed the above-referenced document proposing the expansion of the Schmidt Rock Quarry from 4 to 13 acres. Based on the information received, we find no apparent impact on the State Transportation at this time. DOT-1

However any transport of heavy construction equipment which requires the use of oversize transport vehicles on State Freeways/Highways will require a Caltrans transportation permit. We recommend that truck trips be limited to off-peak commute periods. Also, transport of hazardous waste shall conform to all applicable State regulations and standards. DOT-2

If you have any questions regarding this response, please call me at (213) 897-1338.

Original Signed By

WILFORD MELTON
Senior Transportation Planner
IGR/CEQA Coordinator
Advance Planning Branch

cc: Beth Painter, County of Ventura
800 S. Victoria Ave., Ventura, CA 93009

COUNTY OF VENTURA

PUBLIC WORKS AGENCY

Transportation Department

MEMORANDUM

May 17, 1993

TO: DEVELOPMENT AND INSPECTION SERVICES

FROM: Fred Boroumand FB

SUBJECT: **EIR CUP 3489 (MOD 2) - Highway 33 Unincorporated Area of Ojai**

We have reviewed the Draft Environmental Impact Report (D.E.I.R.) for the expansion of Schmidt Rock Quarry located in the unincorporated area of Ojai.

We find that the project will have no significant impact on the roadways in the unincorporated area of the County. However, Highway 33 is under the jurisdiction of the State Department of Transportation, therefore this DEIR should also be reviewed by Caltrans. CVPWA2-1

The DEIR states on Page 81 that the project is a continuation of an existing quarry operation and there will be no increase in truck traffic, if the project is approved. Therefore, approval of the project would not worsen traffic. CVPWA2-2

FB/DF.010:m

c: Steve Manz

IV. RESPONSE TO COMMENTS

The Draft EIR for the Schmidt Rock Quarry CUP - 3489 (MOD 2) was distributed to responsible agencies, interest groups, organizations, and individuals. The report was made available for public review and comment for a period of forty-five (45) days. The public review period for the Draft EIR established by the State Clearinghouse commenced on April 9, 1993 and expired on May 26, 1993. The County of Ventura accepted comment letters through June 2, 1993. Comments and responses have been correspondingly numbered. Responses are presented for each comment which raised a significant environmental issue.

Several comments do not address the completeness or adequacy of the Draft EIR, do not raise significant environmental issues, or request additional information. A substantive response to such comments is not appropriate within the context of the California Environmental Quality Act (CEQA). Such comments are responded to with a "comment acknowledged" reference. This indicates that the comment will be forwarded to all appropriate decision makers for their review and consideration.

WRITTEN COMMENTS AND RESPONSES

COUNTY OF VENTURA PLANNING DEPARTMENT (BETH PAINTER, PLANNER)(CVPD)

CVPD 1 Comment

I have requested that the consultant for the above referenced DEIR make text changes on the following pages. Xerox copies of all pages requiring changes have been mailed directly to the consultant. Changes which involve the insertion of new information are described below:

CVPD 1 Response

The comment is acknowledged and will be forwarded to the appropriate decision makers.

CVPD 2 Comment

Page Number 54, Paragraph 7 - Provide references for the studiies mentioned in the last paragraph or rewrite the paragraph

CVPD 2 Response

Page 54, Paragraph 7 has been revised to read:

> ~~Studies conducted in Ventura County in the past have demonstrated that substantial concern with visual resources exists and preservation of visual resources is very important. By assuming that this attitude still prevails, t~~*T*he view area from the communities surrounding the proposed project site ~~can be judged to have~~ *has* a high sensitivity level (sensitivity level 1).

Refer to Section V. Errata to Draft EIR for revised text.

CVPD 3 Comment

Exhibit 17 - Highlight the location of the residences in the foreground who can see the project site. This will visually demonstrate that a very small area within the foreground actually can see the site.

CVPD 3 Response

Page 57, Paragraph 2 has been revised to read:

> Immediately surrounding the 9 acre project site are 7 residences to the north and 29 to the south within the foreground view zone which are on the opposite side of intervening ridgelines. These ridgelines visually seclude the proposed project site from surrounding areas to a great degree. Due to the topography of the area, neither

the existing nor proposed quarry is completely visible beyond 2.5 miles from the site. Exhibit 17A indicates a view analysis from local residences. The dotted pattern on Exhibit 17A depicts the areas within the foreground, south of the project site, where there is a view of the site.

Refer to Section V. Errata to Draft EIR for the added Exhibit 17A. Exhibit 17A has been added to highlight the location of the residences in the foreground who can see the project site.

CVPD 4 Comment

Page 59, SUMMARY - Include a discussion in the Summary Section which explains that the General Plan provides the ability to make overriding considerations for discretionary development which would significantly degrade visual resources; therefore this impact is not inconsistent with General Plan Policy. The Scenic Resources section of the General Plan should be inserted for reference in the Appendix

CVPD 4 Response

Page 52 of the Draft EIR has been revised to read:

The County General Plan contains a Scenic Resources section which discusses the visual beauty and aesthetic quality of the natural landscape in Ventura County. The Scenic Resources section contains Goals, Policies, and Programs applicable to scenic resources within the County. According to Policy 1.7.2.4, "Discretionary development which would significantly degrade visual resources or significantly alter or obscure public views of visual resources shall be prohibited unless no feasible mitigation measures are available and the decision-making body determines there are overriding considerations." Please refer to Appendix D of this EIR for the Scenic Resource Policy.

Refer to Section V. Errata to Draft EIR for revised text.

Page 60, SUMMARY of the Draft EIR has been revised to read:

The General Plan Scenic Resources section provides the County with the ability to make overriding considerations for discretionary development which would significantly degrade visual resources; therefore, the project-specific impact to visual resources is not inconsistent with General Plan Policy.

Refer to Section V. Errata to Draft EIR for revised text. Appendix D Scenic Resource Policy has been added to the Final EIR Appendices.

CVPD 5 Comment

Page 61 - Expand the discussion under the heading of "Level of Significance" to explain that even though only a small percentage of those viewers in the foreground and middle ground will be impacted, this impact remains as significant and unavoidable. Otherwise it is questionable as to whether or not this impact is significant.

CVPD 5 Response

Page 61 Level of Significance section of the Draft EIR has been revised to read:

> Project-specific and cumulative impacts will be mitigated to a less than significant level for viewers in the background view zone. Implementation of mitigation measures which have been incorporated into this EIR will not mitigate project-specific and cumulative impacts to a less than significant level for those viewers in the foreground and middle ground view zone. *Although only a small percentage of those viewers in the foreground and middle ground will be impacted,* this impact remains as significant and unavoidable.

Refer to Section V. Errata to the Draft EIR for revised text.

CVPD 6 Comment

The following pages require minor text changes which involve no new information.

Page 3, Paragraph 4 - Public Works Administration should read Public Works Agency

CVPD 6 Response

Page 3, Paragraph 4 has been revised to read:

> The plan was subsequently refused by the Public Works ~~Administration~~ *Agency.*

Refer to Section V. Errata to the Draft EIR for revised text.

CVPD 7 Comment

Page 4, Paragraph 1 - requesting expansion should read requesting continuation of the existing operation and expansion

CVPD 7 Response

Page 4, Paragraph 1 has been revised to read:

> An application for a Major Modification was submitted on March 17, 1986 requesting *continuation of the existing operation and* expansion of quarry operational area.

Refer to Section V. Errata to the Draft EIR for revised text.

CVPD 8 Comment

Page 4, Paragraph 1 - Public Works Administration should read Public Works Agency

CVPD 8 Response

Page 4, Paragraph 1 has been revised to read:

> This application remained incomplete for several months while the applicant was responding to Public Works ~~Administration~~ *Agency* (PWA) requirements.

Refer to Section V. Errata to the Draft EIR for revised text.

CVPD 9 Comment

Page 7, last line - Conditional Use Permit should read Conditional Use Permit Modification

CVPD 9 Response

Page 7, last line has been revised to read:

- Approval of Conditional Use Permit *Modification*

Refer to Section V. Errata to the Draft EIR for revised text.

CVPD 10 Comment

Page 12, item 1 - Geology/Soils Mitigation Measure 1: backcut slopes shall be limited to a maximum of 20 feet should read backcut slopes shall be limited to a maximum of 30 feet.

CVPD 10 Response

Page 12, Mitigation Measure 1 under the Geology/Soils section has been revised to read:

> During quarry operations, bench backcut slopes shall be limited to a maximum of ~~20~~ *30* feet in vertical height and laid back at a temporary repose not to exceed 60 degrees.

Refer to Section V. Errata to the Draft EIR for revised text.

CVPD 11 Comment

Pages 18-21 - Alternatives - Summary of Impacts: Proposed Project Impacts heading should read Proposed Project

CVPD 11 Response

Pages 18-21 have been revised to read Proposed Project instead of Proposed Project Impacts.

Refer to Section V. Errata to the Draft EIR for revised text.

CVPD 12 Comment

Page 22, Paragraph 4 - north and east should read east and north/east

CVPD 12 Response

Page 22, Paragraph 4 has been revised to read:

> The areas surrounding the subject site include the Los Padres National Forest to the ~~north~~ *east* and *north*/east.

Refer to Section V. Errata to the Draft EIR for revised text.

CVPD 13 Comment

Page 27, Paragraph 2 - Sentences 2 and 3 should be combined to read: Significant cuts into the natural hillside within the quarry area have been made as a result of the mining activity and has resulted in unstable and unsafe hillside slopes on the parcel.

CVPD 13 Response

Page 27, Paragraph 2 has been revised to read:

> Significant cuts into the natural hillside within the quarry area have been made as a result of the mining activity~~. Previous mining activities at the existing quarry have~~ *and has* resulted in unstable and unsafe hillside slopes on the parcel.

Refer to Section V. Errata to the Draft EIR for revised text.

CVPD 14 Comment

Page 29, Paragraph 1 - proposed continuation should read proposed 9 acre expansion

CVPD 14 Response

Page 29, Paragraph 1 has been revised to read:

> Exhibits 7 and 8 illustrate the reclamation plan for the proposed ~~continuation~~ *9 acre expansion* area.

COUNTY OF VENTURA PUBLIC WORKS AGENCY, DEVELOPMENT AND INSPECTION SERVICES (JIM FISHER)

CVPWA 1 Comment

I have completed a review of the referenced DEIR from a geology and soils standpoint. I find the document straight-forward and complete, with minor exceptions that can be addressed fairly readily.

CVPWA 1 Response

The comment is acknowledged and will be forwarded to the appropriate decision makers.

CVPWA 2 Comment

1. Page 3: "Public Works Administration" should be Public Works Agency. Same comment, page 4.

CVPWA 2 Response

Page 3 has been revised to read:

> The Plan was subsequently refused by the Public Works ~~Administration~~ *Agency*.

Page 4 has been revised to read:

> This application remained incomplete for several months while the applicant was responding to Public Works ~~Administration~~ *Agency* (PWA) requirements.

Refer to Section V. Errata to the Draft EIR for revised text.

CVPWA 3 Comment

2. Page 12: General Summary of Impacts, Biology/Sedimentation. Measure no. 3 states, "Prior to issuance of grading permits..." There will be no grading permits issued for the project.

CVPWA 3 Response

Page 12: General Summary of Impacts, Biology/Sedimentation Mitigation Measure 3 has been revised to read:

Prior to issuance of ~~grading permits~~ *a Zoning Clearance*, the project engineer shall develop and implement erosion and siltation control plans, during all phases of quarry operations, to prevent erosion and siltation resulting in the transport of sediment into the drainages onsite and downstream to Matilija Creek where it may adversely impact riparian and aquatic habitat areas.

Refer to Section V. Errata to the Draft EIR for revised text.

CVPWA 4 Comment

3. Exhibits 8 and 8A indicate a 30-foot bench height. The consultant report, Appendix C, Page 18 and the Summary of Mitigation Measures, Page 12 indicate a 20-foot bench height.

CVPWA 4 Response

Page 12 Mitigation Measure 1 under Geology/Soils section has been revised to read:

During quarry operations, bench backcut slopes shall be limited to a maximum of ~~20~~ *30* feet in vertical height and laid back at a temporary repose not to exceed 60 degrees.

Refer to Section V. Errata to the Draft EIR for revised text.

CVPWA 5 Comment

4. Page 50: The annual adjustment of the reclamation financial assurances also reflects any areas successfully reclaimed in the previous year.

CVPWA 5 Response

Page 50 of the Draft EIR has been revised to read:

3. The operator must provide a financial assurance to cover the costs of reclamation to the DMG and local lead agency that can be adjusted annually to reflect the acreage of land to be reclaimed *and any areas successfully reclaimed in the previous year.*

Refer to Section V. Errata to Draft EIR for revised text.

CVPWA 6 Comment

5. Page 69: Local Geology. The western Ventura Basin proper was not present in Eocene time, as it didn't begin to form until the Early Miocene.

CVPWA 6 Response

Page 69: Local Geology has been revised to read:

The rocks of the area were deposited in the western Ventura Basin during ~~Eocene~~ *early Miocene* time.

CVPWA 7 Comment

6. Page 76: Slope Stability, second paragraph. A "proposed 9 acre site" is referred to. A reference to an Exhibit or figure should be provided. Same comment, page 77.

CVPWA 7 Response

Page 76: Slope Stability, second paragraph has been revised to read:

> The potential of rock toppling was also noted on the proposed 9 acre site as indicated by several upslope boulders which are currently being undermined by ongoing quarry activity. *Please refer to Exhibit 2 in the Project Description section of the EIR for the location of the proposed 9 acre site and to Exhibit 5 which depicts the existing and proposed grades.*

Refer to Section V. Errata to Draft EIR for revised text.

CVPWA 8 Comment

7. Page 78: Mitigation Measures, no.1. Same comment as no.3, above.

CVPWA 8 Response

Page 78: Mitigation Measure 1 states a 30-foot bench height. This is the correct bench height.

CVPWA 9 Comment

A Mitigation Measure should be provided to address the relationship of the final, mined configuration of the site and the site boundarys. The concern is with respect to slope setbacks, rock-bolted blocks, slopes mined to a stable configuration or other means to assure that no unstable or daylighted blocks are left perched at the top of slope.

CVPWA 9 Response

As indicated on page 20 Item 8 of the original July 25, 1988 geotechnical exploration report prepared by Pacific Materials Laboratory, Inc., rock bolted blocks would not apply to Phase 3. Final quarry slope has an overall slope of 37 degrees, and rock bolts are intended for blocks which are daylighted in excess of 44 degrees. Please refer to Appendix C for a discussion of this issue.

DEPARTMENT OF CONSERVATION DIVISION OF MINES AND GEOLOGY (MR. DOUGLAS P. WHEELER)

DMG 1 Comment

The Mined-Land Reclamation Project staff of the Department of Conservation's Division of Mines and Geology (DMG) has reviewed DEIR and the reclamation plan for the Schmidt Rock Quarry (CUP # 3489 (MOD 2) located east of Highway 33 near Matilija Road. The following comments are offered to assist in your review of this project.

The Surface Mining and Reclamation Act of 1975 (SMARA - Public Resources Code (PRC) SS 2710 et seq.) and the State Mining and Geology Board regulations for surface mining and reclamation practice (California Code of Regulations (CCR), Title 14, Chapter 8, Article 1, SS 3500 et seq.) require that specific items be addressed or included in reclamation plans. For all reclamation plans approved or substantially amended after January 15, 1993, reclamation must be in conformance with the recently adopted Article 9 Reclamation Standards (copies enclosed). The following items were either not included or not sufficiently addressed in the documents we reviewed.

DMG 1 Response

The comment is acknowledged and will be forwarded to the appropriate decision makers.

The purpose of the Draft EIR is to provide an overall analysis of potential impacts associated with implementation of the prooposed project. The mitigation measures developed for this project will reduce all geological and biological project related and cumulative impacts to a less than significant level. Your concerns are not related to the adequacy of the proposed mitigation measures, but rather focus on the development of a final Reclamation Plan. The Reclamation Plan contained in the Draft EIR, while sufficient for determining County or State standards (SMARA) for project approval.

However, the applicant will be required to prepare such plan prior to proceeding to the Planning Commission for consideration of the Conditional Use Permit. This plan will incorporate the mitigation measures required in the FEIR.

DMG 2 Comment

The DEIR evaluates the potential impacts from expansion of the Schmidt Rock Quarry mining operations. Included as part of the DEIR are several plan map sheets and map sheet notes which describe the proposed reclamation of the mine site. As presently written, the DEIR with the included reclamation plan map sheets constitutes the reclamation plan. Apparently, no stand-alone reclamation plan will be prepared. As presently written, the DEIR provides tht mitigation measures for erosion and sediment control will be developed at a future date. We recommend that a stand-alone reclamation plan be prepared and that a site-specific erosion control and water quality monitoring plan be included in the document that is approved as the final reclamation plan. If a storm water pollution prevention plan for the mine site will be prepared for the Regional Water Quality Control Board, this plan might also be used to fulfill SMARA requirements.

DMG 2 Response

A Reclamation Plan which meets both County and State standards will be prepared prior to project approval and will contain more detail regarding site-specific erosion control and a water quality monitoring plan to evaluate the success of erosion control measures.

DMG 3 Comment

The DEIR requires that the quarry operator recontour the area of interface between the quarry and Matilija Creek to provide protection for the riparian habitat and to prevent future slope failures from impacting the stream. CCR Sections 3700 (c), (d), (e), and (g) require that the reclamation plan discuss methods for erosion and sediment control necessary to minimize siltation of watercourses. We recommend that the proposed future recontouring design for Matilija Creek be included in the reclamation plan and that site-specific monitoring and mitigation standards be developed to evaluate the success of the recontouring.

DMG 3 Response

The comment is acknowledged and will be forwarded to the appropriate decision makers. The final Reclamation Plan will include more detail regarding a recontouring design plan along the interface between the quarry and Matilija Creek. A site-specific monitoring plan will be included which will evaluate the success of the recontouring.

DMG 4 Comment

CCR Section 3704 (d) requires that final reclaimed fill slopes not exceed 2 horizontal to 1 vertical (2H:1V) except when site-specific engineering analysis demonstrates that the proposed final slopes will have a minimum slope stability factor of safety that is suitable for the proposed end use, and when the proposed final slope can be successfully revegetated. The DEIR indicates that the waste fill material for the mine site has been placed adjacent to Matilija Creek and has caused degradation of the stream. Item 2.0 of the Reclamation Notes, Exhibit 8A, attached to the reclamation plan maps states that all existing quarry tailing fill slopes shall be verified to be stable or reworked using certified fill to a stable 1:1 slope, as shown in Detail (H). Since Detail (H) states that final reclamation fill slopes will be at a 2H:1V gradient, Reclamation Notes Item 2.0 of Exhibit 8A should be corrected to state that final fill slopes will be at a 2H:1V gradient unless engineering slope stability analysis demonstrate that they will be stable at a steeper gradient and successfully revegetated.

DMG 4 Response

Reclamation Notes Item 2.0 of Exhibit 8A has been revised to read:

> ALL EXISTING SLOPES WHERE QUARRY TAILINGS (UNCERTIFIED FILL) WERE USED SHALL BE INSPECTED BY THE ENGINEERING GEOLOGIST TO VERIFY ITS SLOPE STABILITY. ~~IF FOUND UNSTABLE, SAID SLOPE SHALL~~

~~BE REWORKED USING CERTIFIED FILL TO A STABLE 1:1 SLOPE.~~ *FINAL FILL SLOPES MAY BE AT A 1.5H:1V GRADIENT ONLY IF ENGINEERING SLOPE STABILITY ANALYSIS DEMONSTRATES THAT THEY WILL BE STABLE AT THIS GRADIENT AND SUCCESSFULLY REVEGETATED. OTHERWISE FINAL FILL SLOPES WILL BE AT A 2H:1V GRADIENT.* SEE DETAIL (H). PLANT TREES OR NATIVE SHRUBS WHERE SHOWN ON RECLAMATION PLAN, SHEET 2 OF 4.

Refer to Section V. Errata to Draft EIR for revised Exhibit 8A.

DMG 5 Comment

The DEIR indicates that the No Project Alternative would not allow for stabilization of the existing over-steepened cut slopes and that the potential impacts to Matilija Creek would be greater than the proposed expanded mining alternative. However, the attached project geotechnical report recommends that the unstable slopes, including those in the northwestern portion of the mine site, either be removed or buttressed to prevent potential translational movement. The DEIR does not provide an evaluation of the potential feasibility and associated impacts of buttressing the existing oversteepened and unstable slopes and continuing mining within the existing approved permit area. We recommend that this alternative be included in the DEIR.

DMG 5 Response

The Draft EIR does not provide an evaluation of the potential feasibility and associated impacts of buttressing the existing oversteepened and unstable slopes and continuing mining within the existing approved permit area. This alternative would not prove to be economically feasible due to the fact that the existing approved permit area has almost reached its mining potential.

According to Pacific Materials Laboratory, the certified geotechnical engineers for this project, no room exists for buttressing of the unstable slopes. Buttressing of the unstable slopes would result in the blockage of Matilija Creek.

DMG 6 Comment

CCR Section 3502 (b)(1) requires that the reclamation plan include a description of the environmental setting of the mine site. The DEIR provides a Biological Assessment of the proposed project site, but does not include sufficient information to fully ascertain the impact of mining on the environment. A full description of the site is necessary for the following three reasons: 1) to document baseline conditions, 2) to aid in development and evaluation of an appropriate revegetation plan, and 3) to evaluate purported mining and reclamation impacts on wildlife habitat.

DMG 6 Response

A biological assessment was prepared by S. Gregory Nelson on July 24, 1991, and incorporated into the Draft EIR. Baseline conditions are provided under the existing conditions heading of the biology/sedimentation section. Biological resources of the subject property were described and evaluated with regard to their significance; potential impacts to those resources as a result of the proposed project were analyzed and discussed; and, recommendations for mitigation measures were made.

A literature review relating to sensitive and/or significant biological resources known to occur in the vicinity of the property was conducted in order to identify any significant and/or sensitive biological resources which potentially occur on site and therefore should be specifically evaluated and searched during field investigation.

Based upon the literature review, the biological assessment addresses species considered to be of special concern (Cooper's hawk and Sharp-shinned hawk). The assessment provides a description of resources found on the site through conducted literature review and field survey.

DMG 7 Comment

The description of the environmental setting should include a survey for sensitive species conducted at the appropriate time for observing each species. The survey conducted for the Biological Assessment in the DEIR was conducted on one day. A survey conducted for one day is not sufficient to observe every species, especially migratory wildlife or early blooming plants.

DMG 7 Response

Please refer to DMG 6 Response.

DMG 8 Comment

In addition, the description should include percent cover or density, and diversity measurements for each of the vegetation types that will be re-created on the reclaimed landform. The Biological Assessment listed species but not their percent cover or densities. Such quantitative data can also be used to guide the design of an appropriate revegetation plan.

DMG 8 Response

Please refer to DMG 6 Response.

DMG 9 Comment

Also prior to any site disturbance, the purported lack of impacts to sensitive, rare, threatened, and endangered plants and animals should be verified. The California Department of Fish and Game Natural Diversity Data Base reports the following sensitive species in the vicinity of the project:

California Condor *Gymnogyps californianus*	Federal: Endangered State: Endangered

Ojai Fritillary *Fritillaria ojaiensis*	Federal: Category 2 CNPS List: 1B
Least Bells Vireo	Federal: Endangered
Vireo belli pusillus	State: Endangered

DMG 9 Response

Please refer to DMG 6 Response.

DMG 10 Comment

The revegetation of the site should be designed to help lessen impacts to unique species. Without the knowledge of which species occur on the site, the revegetation design cannot target those species. We recommend that a survey be conducted at the appropriate time for these sensitive species.

DMG 10 Response

Please refer to DMG 6 Response.

DMG 11 Comment

The DEIR does not address the reclamation of the biotic resources on the proposed project site. We recommend that the Final EIR include an approved reclamation plan as required by SMARA.

> CCR Section 3503 (f) addresses resoiling and CCR Section 3707 and 3711 address protection and distribution of topsoil. The DEIR does not address these sections. Resoiling and topsoil management are critical components of revegetation. We recommend that the DEIR adequately address the aforementioned sections.

DMG 11 Response

The proposed expansion area contains very little topsoil. The Draft EIR specifies that revegetation of this area shall use native species only. The recontouring plan along the interface of the quarry and Matilija Creek (as described in response No. 3) shall include proper management of the existing topsoil in that area.

DMG 12 Comment

> CCR Section 3503 (g) requires that appropriate species be used for revegetating a site and CCR Section 3705 establishes performance standards for revegetation. The DEIR did not address revegetation of the site. We recommend that the DEIR adequately address site revegetation as required in the aforementioned sections.

DMG 12 Response

The Draft EIR requires that relandscaping be a part of the Reclamation Plan and use natve species of trees, shrubs, and groundcover only. The Draft EIR includes a list of recommended native species of trees, shrubs, and groundcover which are to be used for revegetation.

DMG 13 Comment

CCR Section 3705 (c) and (d) require compacted soils on all access roads, haul roads, and other traffic routes be reclaimed, stripped of any remaining roadbase materials, prepared in accordance with subsection 3705(g), covered with suitable growth media or topsoil, and revegetated. The DEIR did not address the reclamation of compacted roads. We recommend that the DEIR address these sections.

DMG 13 Response

The Draft EIR specifies that the existing road surfaces shall be regraded as designed by an Engineering Geologist. New bench cut areas shall be landscaped. All final revegetation of the existing roads and proposed bench cuts shall be included in the final reclamation plan and shall utilize species from the list referenced under DMG 12 Response above.

DMG 14 Comment

If you have any questions on these comments or require any assistance with other mine reclamation issues, please contact James Pompy, Mined-Land Reclamation Project Manager, at (916) 323-8565.

DMG 14 Response

Refer to DMG 1 Response.

COUNTY OF VENTURA AIR POLLUTION CONTROL DISTRICT (MR. BRENT BACKUS)

CVAPCD 1 Comment

Air Pollution Control District staff has reviewed the subject DEIR and offers the following comments:

1) The DEIR should quantify reactive organic compounds (ROC) and oxides of nitrogen (NOx) emissions, as well as, particulate matter (PM10) for the project. ROC and NOx emissions would occur from excavation of rock, transportation of rock to market, and employee vehicles. Total project emissions should be based on the extraction of 50,000 tons of rock per year.

   The project is located in the Los Padres National Forest. The Los Padres National Forest is considered an attainment area for the National Ambient Air Quality Standards. However, the project is adjacent to the non-attainment area of Ventura County. Therefore, a discussion of regional air quality should be included into the EIR.

CVAPCD 1 Response

During the Initial Study process for this project, the APCD indicated that since the facility has been in existence for many years, there will be an impact to air quality, but the impact will be insignificant. In addition, the APCD stated that due to the project's remote location and its intermittent operating schedule, there may be some dust impacts, but the impacts will not be significant. As a result of these comments, the Scope-of-Work developed for this project did not include an analysis of air quality impacts.

CVAPCD 2 Comment

The following are recommended permit conditions for the project:

A) Site access roads shall be watered or otherwise treated with environmentally-safe dust palliatives to minimize fugitive dust during operation of the facility.

B) Excavation activities shall use new technologies to control ozone precursor emissions as they become available and feasible.

C) All diesel-powered vehicles and equipment shall be operated with fuel injection timing retarded 4 degrees from the manufacture's recommendation, and all engines shall be properly operated and maintained.

D) All diesel fuel shall be 0.05 weight percent sulfur or less.

If I can be of further assistance, please feel free to contact me at 805/645-1428.

CVAPCD 2 Response

The comment is acknowledged and these conditions will be incorporated into the recommended conditions of approval for the Conditional Use Permit.

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION - DISTRICT 7 (WILFORD MELTON)(DOT)

DOT 1 Comment

Caltrans has reviewed the above-referenced document proposing the expansion of the Schmidt Rock Quarry from 4 to 13 acres. Based on the information received, we find no apparent impact on the State Transportation at this time.

DOT 1 Response

The comment is acknowledged and will be forwarded to the appropriate decision makers.

DOT 2 Comment

However any transport of heavy construction equipment which requires the use of oversize transport vehicles on State Freeways/Highways will require a Caltrans transportation permit. We recommend that truck trips be limited to off-peak commute periods. Also, transport of hazardous waste shall conform to all applicable State regulations and standards.

If you have any questions regarding this response, please call me at (213) 897-1338.

DOT 2 Response

The comment is acknowledged and these conditions will be incorporated into the recommended conditions of approval for the Conditional Use Permit.

COUNTY OF VENTURA PUBLIC WORKS AGENCY - TRANSPORTATION DEPARTMENT (FRED BOROUMAND) (CVPWA2)

CVPWA2 1 Comment

We have reviewed the Draft Environmental Impact Report (D.E.I.R.) for the expansion of Schmidt Rock Quarry located in the unincorporated area of Ojai.

We find that the project will have no significant impact on the roadways in the unincorporated area of the County. However, Highway 33 is under the jurisdiction of the State Department of Transportation, therefore this DEIR should also be reviewed by Caltrans.

CVPWA2 1 Response

The comment is acknowledged and will be forwarded to the appropriate decision makers.

ENVIRONMENTAL REPORT REVIEW COMMITTEE (ERRC)

ERRC 1 Comment

Any reference to "prior to issuance of grading permits" made within the Draft EIR should be revised to indicate "prior to issuance of a zoning clearance."

ERRC 1 Response

Pages 12, 67, and 68 of the Draft EIR - Mitigation Measures 3, 4, and 5 of the Biology/Sedimentation section of the Draft EIR have been revised to read:

3. Prior to issuance of ~~grading permits~~ *a zoning clearance*, the project engineer shall develop and implement erosion and siltation control plans, during all

phases of quarry operations, to prevent erosion and siltation resulting in the transport of sediment into the drainages onsite and downstream to Matilija Creek where it may adversely impact riparian and aquatic habitat areas.

4. Prior ot issuance of ~~grading permits~~ *a zoning clearance*, the existing interface between the quarry operations and Matilija Creek shall be recontoured so as to provide a protective berm along, but outside, of the riparian habitat. The purpos of this berm would be to stop any minor failures or slumping from reaching the creek and creating a sedimentation problem.

5. Prior to the issuance of ~~grading permits~~ *a zoning clearance*, a silt fence shall be placed at the bottom of the berm recommended in Mitigation Measure 3 on the creek side, to prevent the run-off of water borne sediments from the berm into the creek.

V. ERRATA TO DRAFT EIR

The following changes to the Draft EIR are as noted below. Additions to the text are indicated with italics. Deletions to the text are indicated with strikeouts. The changes to the Draft EIR as they relate to issues contained within this errata sheet do not affect the overall conclusions of the environmental document. The changes are identified by the comment reference.

CVPD 2 Response

On page 54, paragraph 7 has been revised to read:

> ~~Studies conducted in Ventura County in the past have demonstrated that substantial concern with visual resources exists and preservation of visual resources is very important. By assuming that this attitude still prevails, t~~*T*he view area from the communities surrounding the proposed project site ~~can be judged to have~~ *has* a high sensitivity level (sensitivity level 1).

CVPD 3 Response

On page 57, Paragraph 2 has been revised to read:

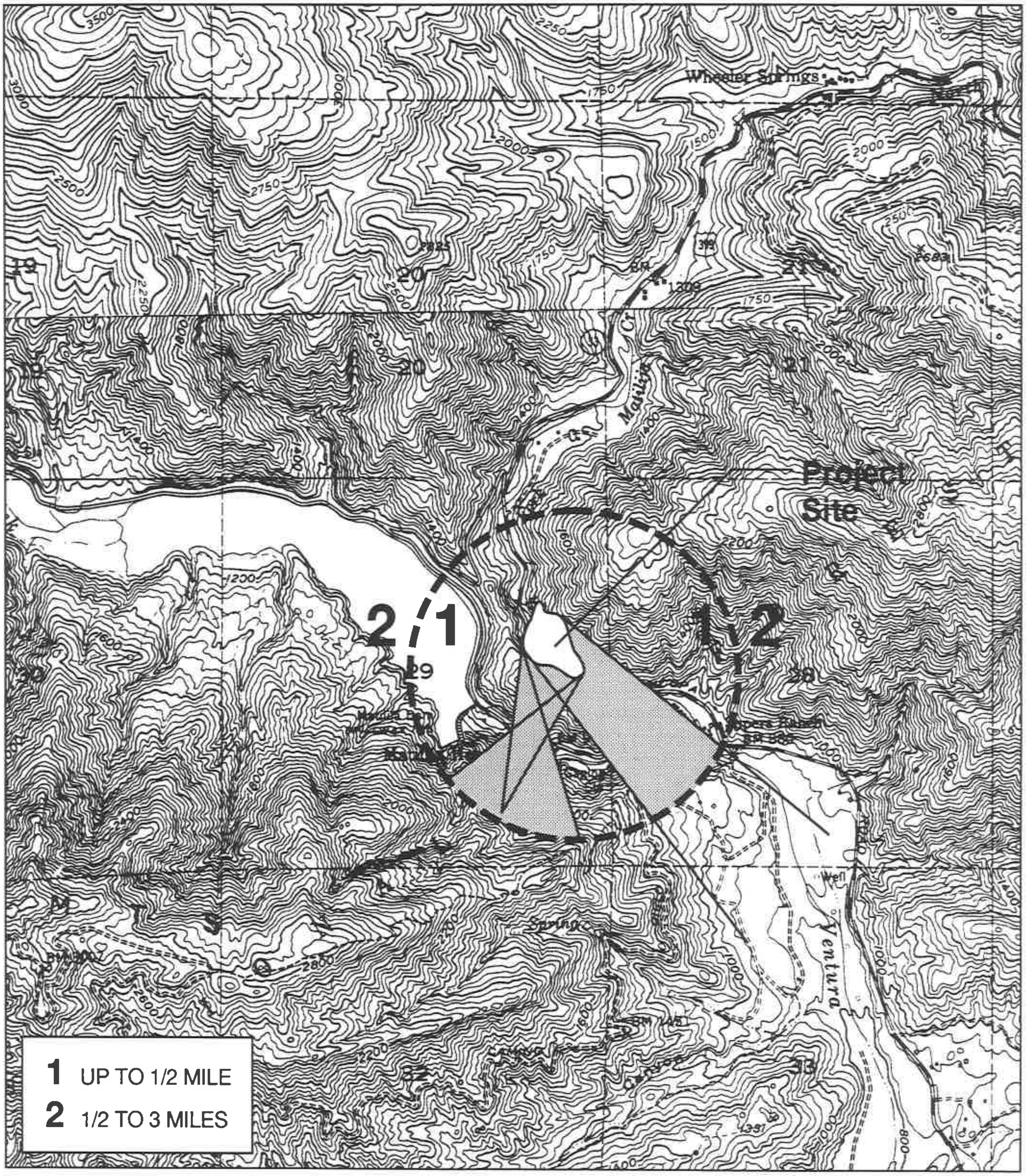
> Immediately surrounding the 9 acre project site are 7 residences to the north and 29 to the south within the foreground view zone which are on the opposite side of intervening ridgelines. These ridgelines visually seclude the proposed project site from surrounding areas to a great degree. Due to the topography of the area, neither the existing nor proposed quarry is completely visible beyond 2.5 miles from the site. *Exhibit 17A indicates a view analysis from local residences. The dotted pattern on Exhibit 17A depicts the areas within the foreground, south of the project site, where there is a view of the site.*

Exhibit 17A has been added to highlight the location of the residences in the foreground where there is a view of the site.

CVPD 4 Response

Page 52 of the Draft EIR has been revised to read:

> *The County General Plan contains a Scenic Resources section which discusses the visual beauty and aesthetic quality of the natural landscape in Ventura County. The Scenic Resources section contains Goals, Policies, and Programs applicable to scenic resources within the County. According to Policy 1.7.2.4, "Discretionary development which would significantly degrade visual resources or significantly alter or obscure public views of visual resources shall be prohibited unless no feasible mitigation*



Source: USGS Quad Map - Wheeler Springs & Matilija

VIEW ANALYSIS FROM LOCAL RESIDENCES

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 17A

measures are available and the decision-making body determines there are overriding considerations." Please refer to Appendix D of this EIR for the Scenic Resource Policy.

Page 60, SUMMARY of the Draft EIR has been revised to read:

> *The General Plan Scenic Resources section provides the County with the ability to make overriding considerations for discretionary development which would significantly degrade visual resources; therefore, the project-specific impact to visual resources is not inconsistent with General Plan Policy.*

Appendix D Scenic Resource Policy has been added to the EIR Appendices. Refer to Appendix A of this response to comments document for Appendix D of the EIR.

CVPD 5 Response

Page 61 Level of Significance section of the Draft EIR has been revised to read:

> Project-specific and cumulative impacts will be mitigated to a less than significant level for viewers in the background view zone. Implementation of mitigation measures which have been incorporated into this EIR will not mitigate project-specific and cumulative impacts to a less than significant level for those viewers in the foreground and middle ground view zone. *Although only a small percentage of those viewers in the foreground and middle ground will be impacted,* this impact remains as significant and unavoidable.

CVPD 6 Response

Page 3, Paragraph 4 has been revised to read:

> The plan was subsequently refused by the Public Works ~~Administration~~ *Agency.*

CVPD 7 Response

Page 4, Paragraph 1 has been revised to read:

> An application for a Major Modification was submitted on March 17, 1986 requesting *continuation of the existing operation and* expansion of quarry operational area.

CVPD 8 Response

Page 4, Paragraph 1 has been revised to read:

> This application remained incomplete for several months while the applicant was responding to Public Works ~~Administration~~ *Agency* (PWA) requirements.

CVPD 9 Response

Page 7, last line has been revised to read:

- Approval of Conditional Use Permit *Modification*

CVPD 10 Response

Page 12, Mitigation Measure 1 under the Geology/Soils section has been revised to read:

> During quarry operations, bench backcut slopes shall be limited to a maximum of ~~20~~ *30* feet in vertical height and laid back at a temporary repose not to exceed 60 degrees.

CVPD 11 Response

Pages 18-21 have been revised to read Proposed Project instead of Proposed Project Impacts.

CVPD 12 Response

Page 22, paragraph 4 has been revised to read:

> The areas surrounding the subject site include the Los Padres National Forest to the ~~north~~ *east* and *north*/east.

CVPD 13 Response

Page 27, Paragraph 2 has been revised to read:

> Significant cuts into the natural hillside within the quarry area have been made as a result of the mining activity~~. Previous mining activities at the existing quarry have~~ *and has* resulted in unstable and unsafe hillside slopes on the parcel.

CVPD 14 Response

Page 29, Paragraph 1 has been revised to read:

> Exhibits 7 and 8 illustrate the reclamation plan for the proposed ~~continuation~~ *9 acre expansion* area.

CVPWA 2 Response

Page 3 has been revised to read:

> The Plan was subsequently refused by the Public Works ~~Administration~~ *Agency*.

Page 4 has been revised to read:

This application remained incomplete for several months while the applicant was responding to Public Works ~~Administration~~ *Agency* (PWA) requirements.

CVPWA 3 Response

Page 12: General Summary of Impacts, Biology/Sedimentation Mitigation Measure 3 has been revised to read:

Prior to issuance of ~~grading permits~~ *a Zoning Clearance*, the project engineer shall develop and implement erosion and siltation control plans, during all phases of quarry operations, to prevent erosion and siltation resulting in the transport of sediment into the drainages onsite and downstream to Matilija Creek where it may adversely impact riparian and aquatic habitat areas.

CVPWA 4 Response

Page 12 Mitigation Measure 1 under Geology/Soils sectioon has been revised to read:

During quarry operations, bench backcut slopes shall be limited to a maximum of ~~20~~ *30* feet in vertical height and laid back at a temporary repose not to exceed 60 degrees.

CVPWA 5 Response

Page 50 of the Draft EIR has been revised to read:

3. The operator must provide a financial assurance to cover the costs of reclamation to the DMG and local lead agency that can be adjusted annually to reflect the acreage of land to be reclaimed *and any areas successfully reclaimed in the previous year.*

CVPWA 6 Response

Page 69: Local Geology has been revised to read:

The rocks of the area were deposited in the western Ventura Basin during ~~Eocene~~ *early Miocene* time.

CVPWA 7 Response

Page 76: Slope Stability, second paragraph has been revised to read:

The potential of rock toppling was also noted on the proposed 9 acre site as indicated by several upslope boulders which are currently being undermined by ongoing quarry activity. *Please refer to Exhibit 2 in the Project Description section of the EIR for the location of the proposed 9 acre site and to Exhibit 5 which depicts the existing and proposed grades.*

DMG 4 Response

Reclamation Notes Item 2.0 of Exhibit 8A has been revised to read:

> ALL EXISTING SLOPES WHERE QUARRY TAILINGS (UNCERTIFIED FILL) WERE USED SHALL BE INSPECTED BY THE ENGINEERING GEOLOGIST TO VERIFY ITS SLOPE STABILITY. ~~IF FOUND UNSTABLE, SAID SLOPE SHALL BE REWORKED USING CERTIFIED FILL TO A STABLE 1:1 SLOPE.~~ *FINAL FILL SLOPES MAY BE AT A 1.5H:1V GRADIENT ONLY IF ENGINEERING SLOPE STABILITY ANALYSIS DEMONSTRATES THAT THEY WILL BE STABLE AT THIS GRADIENT AND SUCCESSFULLY REVEGETATED. OTHERWISE FINAL FILL SLOPES WILL BE AT A 2H:1V GRADIENT.* SEE DETAIL (H). PLANT TREES OR NATIVE SHRUBS WHERE SHOWN ON RECLAMATION PLAN, SHEET 2 OF 4.

ERRC 1 Response

Pages 12, 67, and 68 of the Draft EIR have been revised to read:

3. Prior to issuance of ~~grading permits~~ *a zoning clearance*, the project engineer shall develop and implement erosion and siltation control plans, during all phases of quarry operations, to prevent erosion and siltation resulting in the transport of sediment into the drainages onsite and downstream to Matilija Creek where it may adversely impact riparian and aquatic habitat areas.

4. Prior to issuance of ~~grading permits~~ *a zoning clearance*, the existing interface between the quarry operations and Matilija Creek shall be recontoured so as to provide a protective berm along, but outside, of the riparian habitat. The purpos of this berm would be to stop any minor failures or slumping from reaching the creek and creating a sedimentation problem.

5. Prior to the issuance of ~~grading permits~~ *a zoning clearance*, a silt fence shall be placed at the bottom of the berm recommended in Mitigation Measure 3 on the creek side, to prevent the run-off of water borne sediments from the berm into the creek.

RECLAMATION NOTES:

1.0 ALL ACCESS ROADS SHALL BE GRADED TO DRAIN INTO HILLSIDE WITH BOULDERS PLACED ALONG OUTSIDE OF ROADWAY AS SHOWN IN DETAIL (F).

2.0 ALL EXISTING SLOPES WHERE QUARRY TAILINGS (UNCERTIFIED FILL) WERE USED SHALL BE INSPECTED BY THE ENGINEERING GEOLOGIST TO VERIFY ITS SLOPE STABILITY. ~~IF FOUND UNSTABLE, SAID SLOPE SHALL BE REWORKED USING CERTIFIED FILL TO A STABLE 1:1 SLOPE.~~ *FINAL FILL SLOPES MAY BE AT A 1.5H:1V GRADIENT ONLY IF ENGINEERING SLOPE STABILITY ANALYSIS DEMONSTRATES THAT THEY WILL BE STABLE AT THIS GRADIENT AND SUCCESSFULLY REVEGETATED. OTHERWISE FINAL FILL SLOPES WILL BE AT A 2H:1V GRADIENT.* SEE DETAIL (H). PLANT TREES OR NATIVE SHRUBS WHERE SHOWN ON RECLAMATION PLAN, SHEET 2 OF 4.

3.0 ALL ACCESS ROAD DRAINAGE CANAL/DITCHES SHALL BE CONSTRUCTED ON EXISTING BEDROCK.

4.0 THIS RECLAMATION PLAN WAS PREPARED BASED ON THE QUARRY EXCAVATION SCHEME AS SHOWN IN THE QUARRY PLAN, BUT DUE TO POSSIBLE CHANGES IN QUARRY OPERATIONS DUE TO CHANGE IN STRUCTURAL GEOLOGY OF UNDERLYING STRATA, THIS RECLAMATION PLAN MAY BE REVISED ACCORDINGLY, SUBJECT TO THE REVIEW AND APPROVAL OF THE LEAD AGENCY.

5.0 QUARRY EXCAVATION SHALL BE UNDER THE OBSERVATION OF AN ENGINEERING GEOLOGIST WHO SHALL PROVIDE PERIODIC INSPECTION ON AT LEAST AN ANNUAL BASIS OF MEASURES TO MITIGATE QUARRY SAFETY AND TO AID IN IDENTIFICATION OF ANY CHANGES IN TERRAIN DISTURBANCE WITHIN OR ADJACENT TO THE QUARRY SITE. ANY CHANGE IN SLOPE PERFORMANCE OR EROSION/SEDIMENTATION CONDITIONS MAY REQUIRE REVISION TO THIS RECLAMATION PLAN. RESULTS OF THE ANNUAL INSPECTION SHALL BE SUMMARIZED IN A REPORT PREPARED BY THE ENGINEERING GEOLOGIST.

6.0 QUARRY EXCAVATION SHALL BE LIMITED TO 30 FOOT MAX. BENCHES WITH TEMPORARY QUARRY EXCAVATION SLOPE NOT TO EXCEED 60 DEGREE ANGLE OF REPOSE. TEMPORARY SLOPES ARE DEFINED AS SLOPES GRADED WITHIN THE PREVIOUS 12 MONTHS. FINAL SLOPES SHALL NOT EXCEED A 45 DEGREE ANGLE OF REPOSE AND SHALL HAVE 10 FOOT WIDE BENCHES EVERY 30 VERTICAL FEET. NO PERCHED BOULDERS SHALL EXIST AT ANY TIME ON THE SITE.

7.0 WARNING SIGN INDICATING QUARRY HAZARD AND POSSIBLE ROCKFALL DANGER SHALL BE POSTED ALONG HIGHWAY 33 BELOW QUARRY SITE. WARNING SIGN SHALL ALSO BE POSTED INDICATING NO RECREATIONAL USE OF CREEK BELOW QUARRY SITE.

8.0 THE WESTERLY EDGE OF THE QUARRY SITE SHALL BE SLOPED AND BERMED TO PREVENT ANY MATERIALS FROM ROLLING DOWN THE NATURAL SLOPE INTO HIGHWAY 33 OR MATILIJA CREEK. IN THE EVENT THAT QUARRY MATERIALS FALL INTO MATILIJA CREEK, SAID MATERIALS SHALL BE REMOVED IMMEDIATELY BY CONTRACTOR.

QUARRY NOTES

1.0 THIS PLAN WAS PREPARED TAKING INTO CONSIDERATION FINDINGS AND RECOMMENDATIONS OF PACIFIC MATERIALS LABORATORY, INC. REPORT DATED JULY 25, 1988.

2.0 PRIOR TO ANY QUARRY EXCAVATION, ANY ON-SITE PERCHED BOULDERS OR LAND/ROCKSLIDES UPSLOPE THAT POSE DANGER TO ANY DOWNSLOPE QUARRY EXCAVATION SHALL BE REMOVED FIRST.

3.0 QUARRY EXCAVATION SHALL BE DONE IN STAGES. INITIAL STATE SHALL BE LIMITED TO PHASE I EXCAVATION AS FOLLOWS:

STAGE	**PURPOSE**
3.01 Phase 1-A	TO PREVENT ANY POSSIBLE FAILURE ALONG ASSUMED FAILURE PLANE "D" AND "A" AS SHOWN IN GEOLOGIC SECTION "D- E-F-G" AND "A-B-C" RESPECTIVELY. (ENCLOSURE "B-2" AND "B-1" OF PMLI REPORT DATED JULY 24, 1988)
3.02 Phase 1-B	TO PREVENT ANY POSSIBLE FAILURE ON THE NORTHERLY SIDE OF THE QUARRY ALONG ASSUMED FAILURE PLANE "F". THIS ASSUMED FAILURE PLANE "F" IS SHOWN IN GEOLOGIC SECTION "H- I-J-K" OF SAME REPORT (ENCLOSURE "B-3"). NO ROCKSLIDE IS ANTICIPATED DURING QUARRY EXCAVATION. HOWEVER, IN THE EVENT ANY ROCKSLIDE OCCURS, SUCH ROCKSLIDE WILL BE TOWARDS THE QUARRY SITE AND SHALL NOT POSE ANY DANGER TO THE NEARBY MARICOPA ROAD.

4.0 QUARRY WORK ON PHASE I-A AND PHASE I-B CAN BE DONE TOGETHER. ALL QUARRY EXCAVATION SHALL COMMENCE FROM THE TOP OF SLOPE PROCEEDING DOWNWARD AND SHALL BE PERFORMED ACCORDING TO TYPICAL BENCH DETAIL D.

Source: LBH Engineering

RECLAMATION AND QUARRY NOTES

SCHMIDT ROCK QUARRY
County of Ventura

EDAW

No Scale

Exhibit 8A

APPENDIX A

(Note: The following is Appendix D to the EIR)

APPENDIX D
SCENIC RESOURCE POLICY

2. The Planning Division, in conjunction with the Agricultural Commissioner, Farm Advisor and Agricultural Advisory Committee, will develop and implement standards governing development adjacent to agricultural uses. The standards should address fencing and spray buffers between agricultural areas and residences, off-site flood control measures, siltation control from grading operations and the development of a standard County-imposed entitlement condition which notifies new property owners of County and State laws protecting agricultural operations. After the development of standards, they could be added as policies into the General Plan to guide future land use decisions.

3. The Planning Division will continue to work with State and Federal agencies to periodically update the Important Farmlands Inventory Map to reflect current conditions.

4. The Planning Division will prepare an annual status report on Land Conservation Act Contracts (LCA), agricultural acreage, and other agriculture related information.

1.7 SCENIC RESOURCES

The visual beauty and aesthetic quality of the natural landscape in Ventura County is perhaps one of its most significant resources. The scenic resources of Ventura County, especially the coastline, within the viewshed of the County's lakes, and along designated State and County Scenic Highways, are of considerable value both in providing a pleasurable environment for local citizens and in stimulating tourism. Coastline resources are discussed in the Coastal Area Plan, and lake resources and scenic highways are discussed in the Resources Appendix.

The County's natural visual resources are largely composed of the varied topography, exposed geological formations, heterogeneous vegetation, beaches and waterways. The man-made environment of parks, golf courses, harbors, public buildings, and major commercial, industrial, and residential developments can also contribute to, or detract from, scenic resource quality.

Conservation of scenic resources is most critical where the resources will be frequently and readily viewed, as from a highway, or where the resource is particularly unique. Ventura County has identified the viewsheds of lakes and other scenic areas as may be identified by an area plan, as being worthy of special protection via identification as **Scenic Resource Areas** on the Resource Protection Map (Figure 1).

The Resources Appendix describes the provisions of the State Scenic Highway Law for the regulation of land uses within the viewshed of a State Scenic Highway. The entire length of Highway 33 from milepost 17.5 to the Santa Barbara County line has been designated as a State Scenic Highway, and is identified as a **Scenic Highway Area** on the Resource Protection Map (Figure 1).

The goals, policies and programs which apply to scenic resources include:

1.7.1 *GOALS*

1. Preserve and protect the significant open views and visual resources of the County.

2. Protect the visual resources within the viewshed of designated scenic highways, lakes and other scenic areas as may be identified by an area plan.

3. Enhance and maintain the visual appearance of buildings and developments.

1.7.2 *POLICIES*

1. Scenic Resource Areas as depicted on the Resource Protection Map (Figure 1) shall be governed by the provisions of the Scenic Resource Protection (SRP) Overlay Zone which include the following:

    (1) Any request for significant grading shall be evaluated through the discretionary permit process.

    (2) Removal, damaging or destruction of protected trees shall be in compliance with the County's "Tree Protection Regulations".

    (3) No discretionary development shall be approved which would significantly degrade or destroy a scenic view or vista.

    (4) No freestanding off-site advertising signs shall be permitted.

    Federally-owned land is not subject to the Scenic Resource Protection Overlay Zone and is not subject to any permit requirements as specified under (1) or (2) above. To the extent possible, the agencies responsible for the administration of land use activities on Federally owned land should consider Policies (3) and (4) above in the planning and administration of new land uses within scenic resource areas.

2. Scenic Highway Areas as depicted on the Resource Protection Map (Figure 1) shall be governed by the provisions of the Scenic Highway Protection (SHP) Overlay Zone which includes the following:

    (1) All development shall require a Planned Development Permit.

    (2) Removal, damaging or destruction of a protected tree shall be in compliance with the County's "Tree Protection Regulations".

    (3) All new development shall be sited and designed to:

        a. Minimize alteration of the natural topography and physical processes;

        b. Prevent significant degradation of the scenic resource;

        c. Minimize cut and fill operations, and area of disturbance;

        d. Utilize native plants indigenous to the area whenever possible for revegetation;

        e. Incorporate best feasible mitigation measures; and

        f. Incorporate tree protection during construction.

    (4) Off-site signs are prohibited in the SHP Overlay Zone.

    Federally-owned land is not subject to the Scenic Highway Protection Overlay Zone and is not subject to any permit requirements as specified under (1) or (2) above. To the extent possible, the agencies responsible for the administration of land use activities on Federally owned land should consider Policies (3) and (4) above in the planning and administration of new land uses within scenic highway areas.

3. Proposed undergrounding of overhead utilities within Scenic Resource Areas or Scenic Highway Areas shall be given first priority by the Public Works Agency in utilizing the County's allocation of Utility Undergrounding Funds.

4. Discretionary development which would significantly degrade visual resources or significantly alter or obscure public views of visual resources shall be prohibited unless no feasible mitigation measures are available and the decision-making body determines there are overriding considerations.

5. The Planning Division shall continue to implement the landscaping requirements of the Zoning Ordinance and the "Guide to Landscape Plans" to enhance the appearance of discretionary development.

1.7.3 *PROGRAMS*

1. The Planning Division, in coordination with appropriate State and local agencies, will inventory and take steps to preserve and maintain unique natural features, and other scenic resources. These areas could be included in future Scenic Resource Areas and Scenic Highway Areas for consideration by the Board of Supervisors.

2. The Planning Division will continue to seek official State Scenic Highway designations for County designated Scenic Highways.

1.8 PALEONTOLOGICAL AND CULTURAL RESOURCES

Paleontological resources are the fossilized remains of ancient plants and animals.

A wide variety of paleontological resources exist in both the North and South halves of the County. The diverse geology of the Transverse Ranges encompasses many different kinds of fossil organisms. These fossil remains provide a record of lifeforms over millions of years, as well as having potential economic value.

The term cultural resources is most frequently identified with prehistoric (archaeological) or historic material items. These include prehistoric and historic districts, sites, structures, artifacts and other evidence of human use considered to be of importance to a culture, subculture, or a community for traditional, religious, scientific or other reasons. Cultural resources in Ventura County include: prehistoric aboriginal Indian sites, historic areas of occupation and activity, or features of the natural environment. Cultural resources also include less tangible, nonmaterial resources. These may include cognitive systems (including meanings and values attached to items of material culture, biota, and the physical environment), religion and world views, traditional or customary behavior patterns, kinship and social organization, folklore, and so on.

Archaeological resources refer to the material remains (artifacts, structures, refuse, etc.) produced purposely or accidentally by human beings. The scientific study of these remains can result in the identification of activities, types of adaption to the environment, and changes in activities and organization that were experienced by groups of people in the past. Furthermore, these remains often have special significance to Native Americans, ethnic groups, special interest groups (i.e., avocational archaeologists), and the general public.

Archaeological sites exist throughout the County, particularly adjacent to existing and previously existing natural water and food sources. Many sites have been located, and according to existing data, many potential sites remain undiscovered.

In the North Half there are 106 cultural resource sites which are recorded with Ventura County numbers in the official clearinghouse (at the University of California - Los Angeles). The Forest Service has surveyed and recorded an additional 71 sites and the Bureau of Land Management surveyed the Hungry Valley area and recorded 57 for a total of 234 known sites as of 1987. Two archaeological sites in the North Half are listed on the National Register of Historic Places and are characterized by a variety of remains including shells and sharks teeth.

Several Chumash villages in the North Half contain caves with elaborate artwork. A preliminary list of special management properties compiled by the Forest Service in the Los Padres National Forest (as of March, 1985) included both Mount Pinos and Frazier Mountain as sites of value to the practice of Indian religion. These sites are considered by many Native Americans to be the center of the Chumash world. Sespe Hot Springs and Nordhoff Peak are also significant religious sites.

In the South Half there are three archaeological sites on the National Register: Burro Flats Painted Cave, Calleguas Creek Archaeological Site and a lithic scatter (the remnants of stone implement fabrication) in Senior Canyon. In addition, many other significant sites are located in the South Half, including many large villages located near the coast and along major waterways.

Historical resources refer to the material and nonmaterial expressions of human adaptations which characterized the post-contact or historic period. These resources include historic event or activity sites, historic archaeological sites, standing architecture and other significant properties, and documents and other sources of historical information, objects of material culture, and, secondarily, the more nonmaterial cultural qualities such as folklore, social organization, and value systems which are associated with these properties.

The Ventura County Cultural Heritage Board recommends cultural, archaeological and historical resources for designation as County Historical Landmarks. The 42 landmark categories range from adobes to wharf sites. There are 136 sites designated Countywide. In the North Half, three sites are so designated. Sites in the South Half include homes, oil industry workings, ranches, groves of trees, cemeteries, portions of the Mission Aqueduct, and others. The list is quite diverse and properties are regularly considered for addition to the Landmarks list by the Cultural Heritage Board.

There are 16 historic sites listed on the National Register of Historic Places. Thirteen of these are also designated as County Landmarks and five of the 13 are California Historical Landmarks.

The goals, policies and programs which apply to paleontological and cultural resources are as follows:

1.8.1 *GOALS*

1. Identify, inventory, preserve and protect the paleontological and cultural resources of Ventura County (including archaeological, historical and Native American resources) for their scientific, educational and cultural value.

2. Enhance cooperation with cities, special districts, other appropriate organizations, and private landowners in acknowledging and preserving the County's paleontological and cultural resources.

1.8.2 *POLICIES*

1. Discretionary developments shall be assessed for potential paleontological and cultural resource impacts, except when exempt from such requirements by CEQA. Such assessments shall be incorporated into a Countywide paleontological and cultural resource data base.

2. Discretionary development shall be designed or re-designed to avoid potential impacts to significant paleontological or cultural resources whenever possible. Unavoidable impacts, whenever possible, shall be reduced to a less than significant level and/or shall be