COUNTY OF SANTA BARBARA
PLANNING AND DEVELOPMENT

MEMORANDUM

TO: County Planning Commission

FROM: Errin Briggs, Energy Specialist, Energy and Minerals Division
Staff Contact: Joseph Dargel, Planner

DATE: February 20, 2018

HEARING: February 28, 2018

RE: Case Nos. 16DET-00000-00004 & 10RVP-00000-00048
Lompoc Stone Mining Area Expansion Vesting Determination and Reclamation Plan Revision Project
Assessor Parcel Numbers 083-060-015, -009, 083-070-018, & -010

This project was last heard by your Commission on January 10, 2018. At that hearing, the applicant requested a continuance to February 28, 2018 to allow time to draft a response to Mr. Chytilo's letter, dated January 8, 2018. The applicant's response to Mr. Chytilo's letter is included as attachment to this memo. Additionally, the applicant provided a letter from Campbell Geo, Inc. (also attached) as further evidence supporting the vesting determination request.

Attachments:

A. Sid Goldstien Letter, dated February 14, 2018
B. Campbell Geo, Inc. Letter, dated February 14, 2018

Cc**:** Case File (to Planner)
Hearing Support

G:\GROUP\PERMITTING\Case Files\RVP\10 cases\10RVP-00000-00048 Sepulveda Mining Revision\Planning Commission\2018.02

R.C.E. 33042

SID GOLDSTIEN - CIVIL ENGINEER, INC.

planning • design • studies • residential/commercial development
650 ALAMO PINTADO ROAD
SUITE 302
SOLVANG, CA. 93463
(805) 688-1526
FAX (805) 688-6582
SID@SJGCE.COM
VISIT US AT WWW.SJGCE.COM

February 14, 2018

Attn: David Villalobos
Santa Barbara County
Planning Commission
123 East Anapamu Street
Santa Barbara, CA 93101

Re: Sepulveda - Lompoc Stone
16-DET-004, 10RVP-048

Honorable Commissioners:

Sepulveda - Lompoc Stone is requesting that you find that this mining operation is "vested" and approve the Revised Mining Reclamation Plan.

Basis of Vesting

The original application for reclamation was filed in 1990. At that time, County Planning Staff with guidance from County Counsel, made determinations as to whether a CUP was required based on vested rights. On June 31, 1991, the County Planning Department concluded that a CUP was not required and that the mining operation was vested. The staff report for the Planning Commission hearing on December 3, 1997, section 5.6 (Background) makes clear that this mining operation is vested. See attached.

The parcel on which Sepulveda mined in 1985, when it became the lease holder, and the parcel historically mined at least since 1956, was on what is now (since 1972) referred to as the Acin Ranch. Although numerous Assessor Parcels have been designated on this ranch, a Certificate of Compliance recorded in 2015 documents the entire ranch to be one legal parcel. Any reference to APN's does not indicate a separate legal parcel. This is an important point in that vested rights for mining applies to the whole of a parcel wherein the resource being mined exists.

While Sepulveda did not mine this property prior to 1985, it has been validated by historic aerial photos, testimonials from past mine operators and most importantly the USGS topographic survey, that mining has consistently occurred. That mining has further been shown to have progressed from the outer edges of exposed rock to the areas currently mined and intended to be mined by Sepulveda. Further, a letter from Steve Campbell (licensed geologist) provides evidence that the same geologic formation mined in the 1950's extends through this portion of the Acin Ranch to the current mine site and into the area of proposed mining. This geologic data was published in 1950 and made available to the public by USGS.

See attached. Again, the progression of mining shown on aerial photos from the 1950's to current, documents the past and current mine operators' knowledge that suitable resources existed and their intent to follow that resource within this portion of the ranch. Steve Campbell is also able to provide his insight and opinion regarding evidence he recently observed onsite in relation to aspects of the 1958 air photos.

It is our opinion that vested rights were determined and acknowledged by Santa Barbara County in 1991 and confirmed in final action again by Santa Barbara County Planning Commission and the State Department of Conservation in 1998. That determination included all parts of the current Reclamation Plan, which includes 3 acres on APN 009, part of the 28.5 acres now proposed. Vesting applies to the entire parcel on which the resource exists.

USGS Mapped Quarry

A copy of the "Lompoc" USGS quad sheet is attached. This map shows an existing "Quarry" on the subject portion of the Acin Ranch. The map also shows the Rancho Boundary line (red) which is the westerly boundary of the Acin Ranch. Scaling the location of the "Quarry" from USGS map and transposing it to the Sepulveda Site Map (attached) shows its location to be within the Acin Ranch. It also shows its location consistent with historic 1950's mine area based on testimonials and photos already in the record. As a footnote, APN 83-060-019 in 1959 and until 1972 was under the same ownership as APN parcels 83-060-009 and 015. That's why roads and quarry operations randomly cross those artificial assessor lines.

Intent to Mine and Follow the Resource

It has been documented that various mine operators on and property owners of this parcel had access to available data at least since 1950, had active mine operations since at least 1956 and intended to mine the resource from its outer, "easy pickings" areas to and through the rock vein currently being mined. Sepulveda, in fact, in 1985 was mining parts of the very area they now propose to include in a revised reclamation plan. That activity predates the vesting determination made in 1991. It has always been Sepulveda's intent to mine further to the north and east of its current reclamation plan. Such desire was expressed in the 1990's to County staff and Planning Commission.

One need only consider the mining activity well documented by USGS aerial photos dating from the 1950's to current time, testimonials of past mining operators and the supporting data from the Dibblee Maps (1950) to conclude that the progression of mining on this parcel was following the resource known to exist. This provides a rational, well-documented basis for intent to mine all portions of both APNs 009 and 015, including the 28.5 acres proposed with the Revised Reclamation Plan.

Please don't hesitate to call should you have any questions prior to your hearing on February 28, 2018. Thank you for your consideration.

Sincerely yours,

Sid Goldstien

SG:kg
Enc.
C.C. Mike Connors w/attach.
Mike Wise w/attach.
Chip Wullbrandt w/attach.
Joe Dargel w/attach
14-05-101

County of Santa Barbara
RESOURCE MANAGEMENT DEPARTMENT
John Patton, Director

North County

June 24, 1991

Mr. Michael Manus
Sid Goldstien - Civil Engineer, Inc.
650 Alamo Pintado Road
Suite 302
Solvang, CA 93463

RE: Sepulveda Building Materials - 90-RP-001
ACIN SITE

Dear Michael:

We have received your letter dated June 18, 1991 in which you documented the vested status of the quarry at the Acin site, APN 83-060-015. We have reviewed the enclosed U.S.G.S. map dated 1959 and concur with your conclusion that no conditional use permit is required for the mine.

As you have also indicated, we will continue to process the Reclamation Plan application, and look forward to receiving the materials needed to deem the project complete.

Sincerely,

Sandra Emery

SANDRA EMERY
Planner II

a:\rp\90rp0012i.ltr

cc: Richard Corrall, RMD
Brian Baca, Division of Environmental Review
Sepulveda Building Materials, 2936 Sepulveda Blvd., Torrance, CA 90505-2894
Michael Sandecki, State Division of Mines & Geology, 630 Bercut Drive, Sacramento; CA 95814-0189
Frank Acin, P.O. Box 114, Route 1, Lompoc, CA 93436

ALL CCs TO RECEIVE COPY OF 06/18/91 LETTER AND MAP FROM SID GOLDSTIEN'S OFFICE

624 W. Foster Road, Santa Maria, CA 93455
PHONE (805) 934-6250 FAX (805) 934-6258

90-06-104

Applicant Estimate of Costs, from pages 20-21 of Attachment D, Reclamation Plan, Section III.B.6:

Site 1A - The posting of security is required by SMARA. Based upon costs obtained from various seed suppliers for the seed mix as noted in Section III.B.3, the labor cost for broadcasting the seed on the site and the cost of any grading required to finalize reclamation, the estimated amount per acre is $850.00.

Site 1B - The estimated cost per year of removing the stockpiled stone as needed to the Los Angeles sales sites is $4000.00 coupled with the site cleanup of $1350 equals $5350.00.

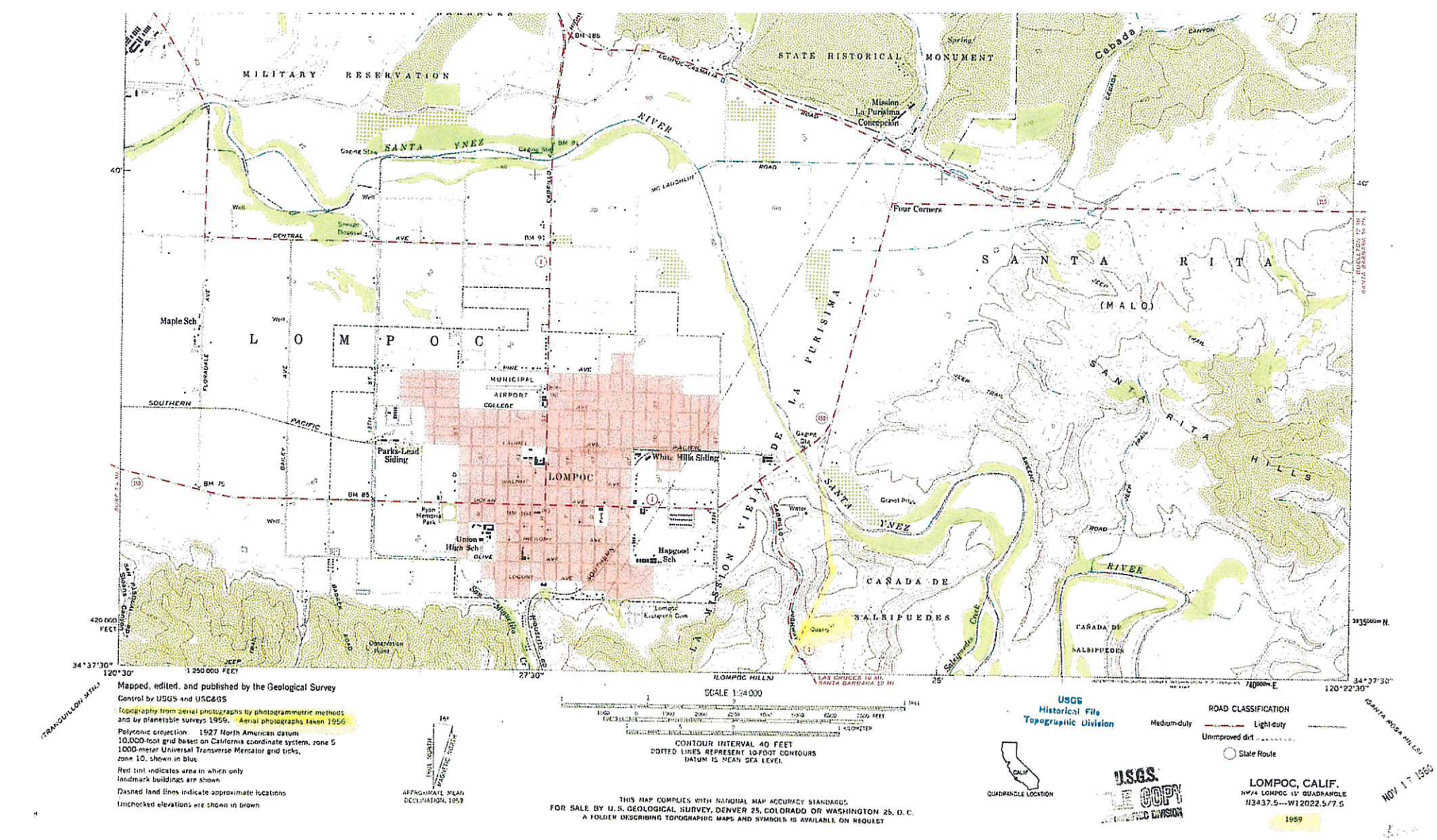
The above amounts may be set aside in financial assurances and in a form acceptable to the State of California and the County. The financial assurances will be submitted to the State Geologist for his review and will be made payable to the SMARA lead agency, the County of Santa Barbara or the State Geologist.

5.6 Background

The Sepulveda mine has been determined to be a vested mining operation continuously operating since prior to 1976 (operations since 1956). The mining operation itself therefore is not subject to any requirement for County conditional use permits. However, the State Surface Mining and Reclamation Act (SMARA) requires all mines operating after 1976, including vested operations, to have reclamation plans adopted by the local planning agency and approved by the State Office of Mine Reclamation.

The Sepulveda Mining Reclamation Plan 90-RP-001 application was submitted in 1990 and determined complete in 1992. Due to a combination of Planning and Development staff turnover, staff reassignments, and workload, the application process for this project did not proceed. Despite workload problems, Planning and Development has complied with all functional elements of the SMARA program in the field during this period by keeping full staffing for the annual inspection program to ensure that ongoing reclamation efforts continued to be in place. The actual mining reclamation operation has not been affected in the field by the prolonged review process. The applicant has not opted to appeal the permit process to the State.

In 1997, Planning and Development staff reviewed work completed to date on the reclamation plan application, and determined that the proposed plan needed to be updated and augmented with additional information to address current requirements of the County and State. In addition, this update allowed the applicant to expand their project description with a revised lease agreement with the owner which extends mining operations to the year 2045. The applicant provided updated information, and, following another staffing delay, staff proceeded to prepare environmental documentation. In August 1997, the State Office of Mine Reclamation requested a specified schedule for completion of the reclamation plan process, under penalty of fines to the operator, and agreed to a schedule leading to Planning Commission consideration of the Reclamation Plan on December 3, 1997.



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by photogrammetric methods and by planetable surveys 1959. Aerial photographs taken 1956

Polyconic projection. 1927 North American datum
10,000-foot grid based on California coordinate system, zone 5
1000-meter Universal Transverse Mercator grid ticks, zone 10, shown in blue

Red tint indicates area in which only landmark buildings are shown

Dashed land lines indicate approximate locations

Unchecked elevations are shown in brown

SCALE 1:24 000

CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 10-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

APPROXIMATE MEAN DECLINATION, 1959

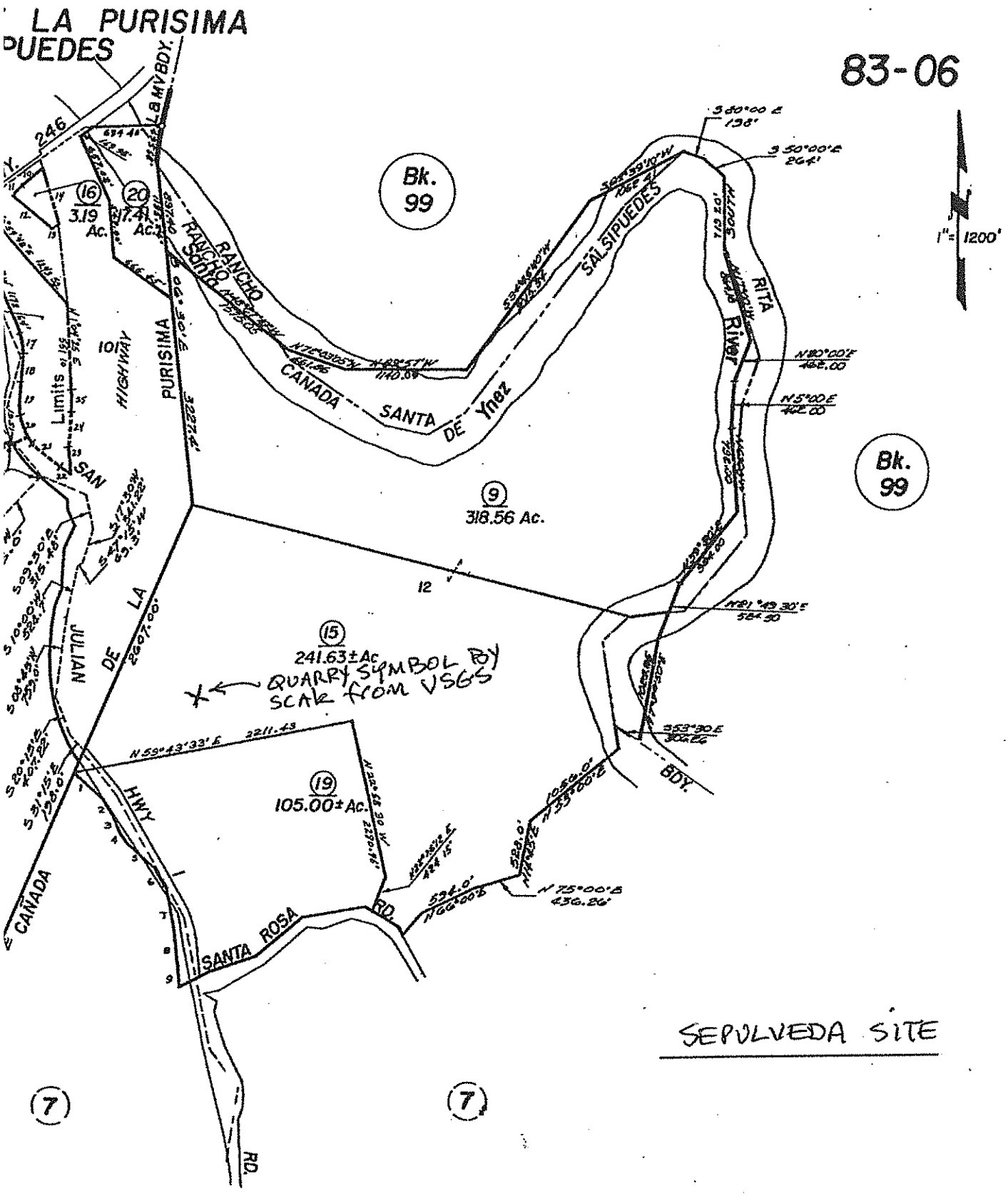
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER 25, COLORADO OR WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

ROAD CLASSIFICATION
Medium-duty — Light-duty
Unimproved dirt
State Route

LOMPOC, CALIF.
NW/4 LOMPOC 15' QUADRANGLE
N3437.5---W12022.5/7.5

1959



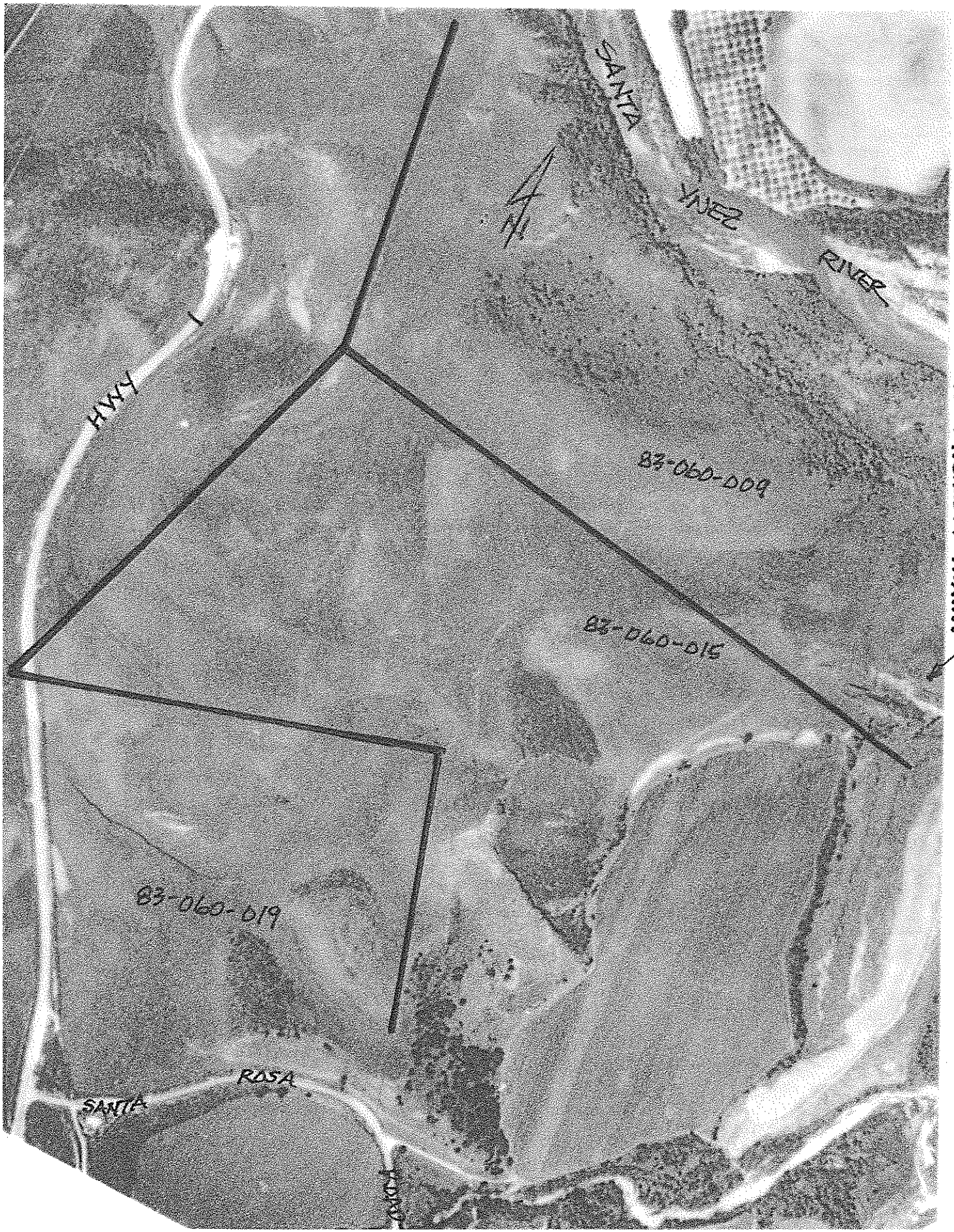
Assessor's Map Bk. 83 - Pg. 06

County of Santa Barbara, Calif.

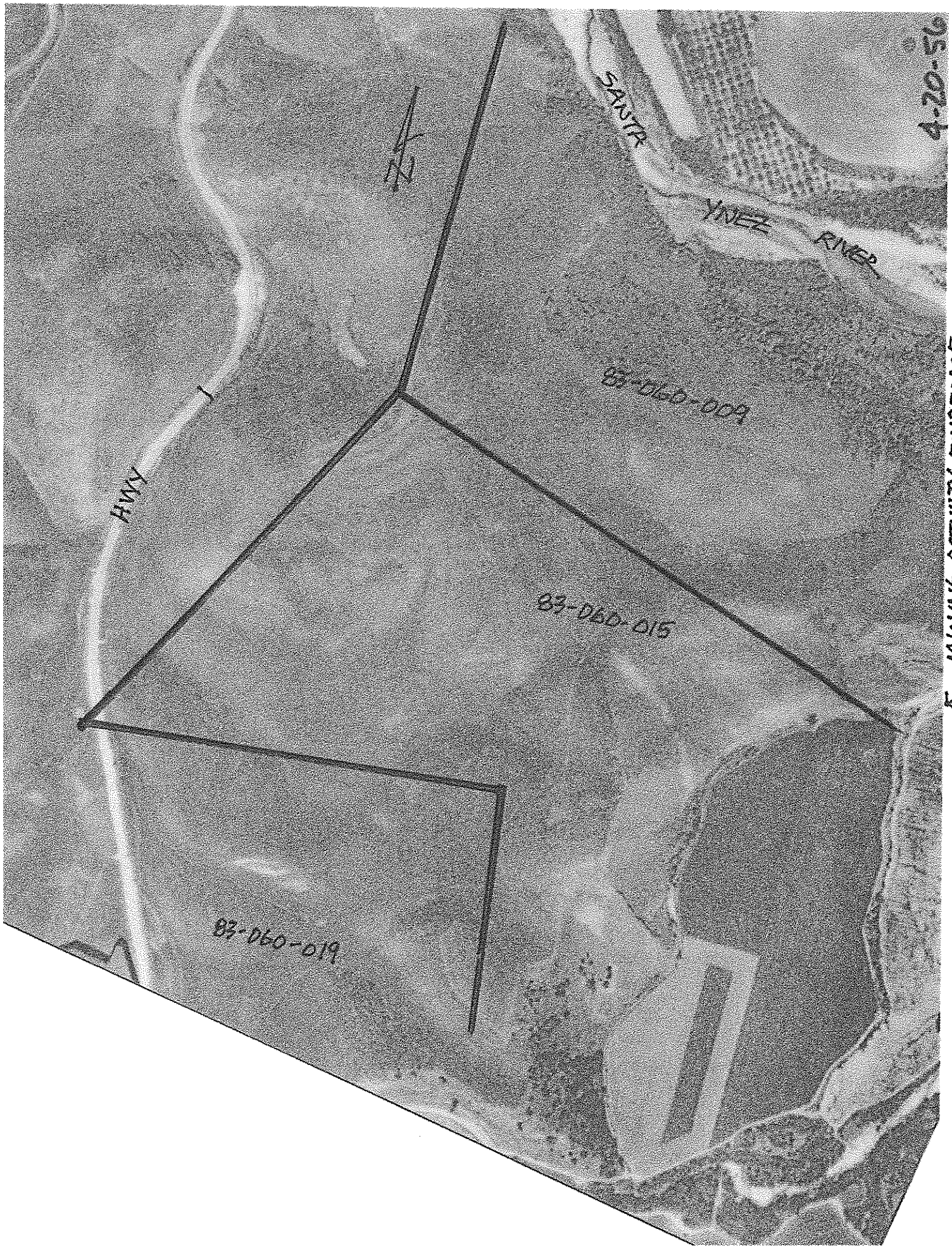
4/87 CITY LIMITS

NOTE - Assessor's Block Numbers Shown in Ellipses.
Assessor's Parcel Numbers Shown in Circles.

UCSB AIR PHOTO LIBRARY
BTM-10K-3
DATED 4-9-54



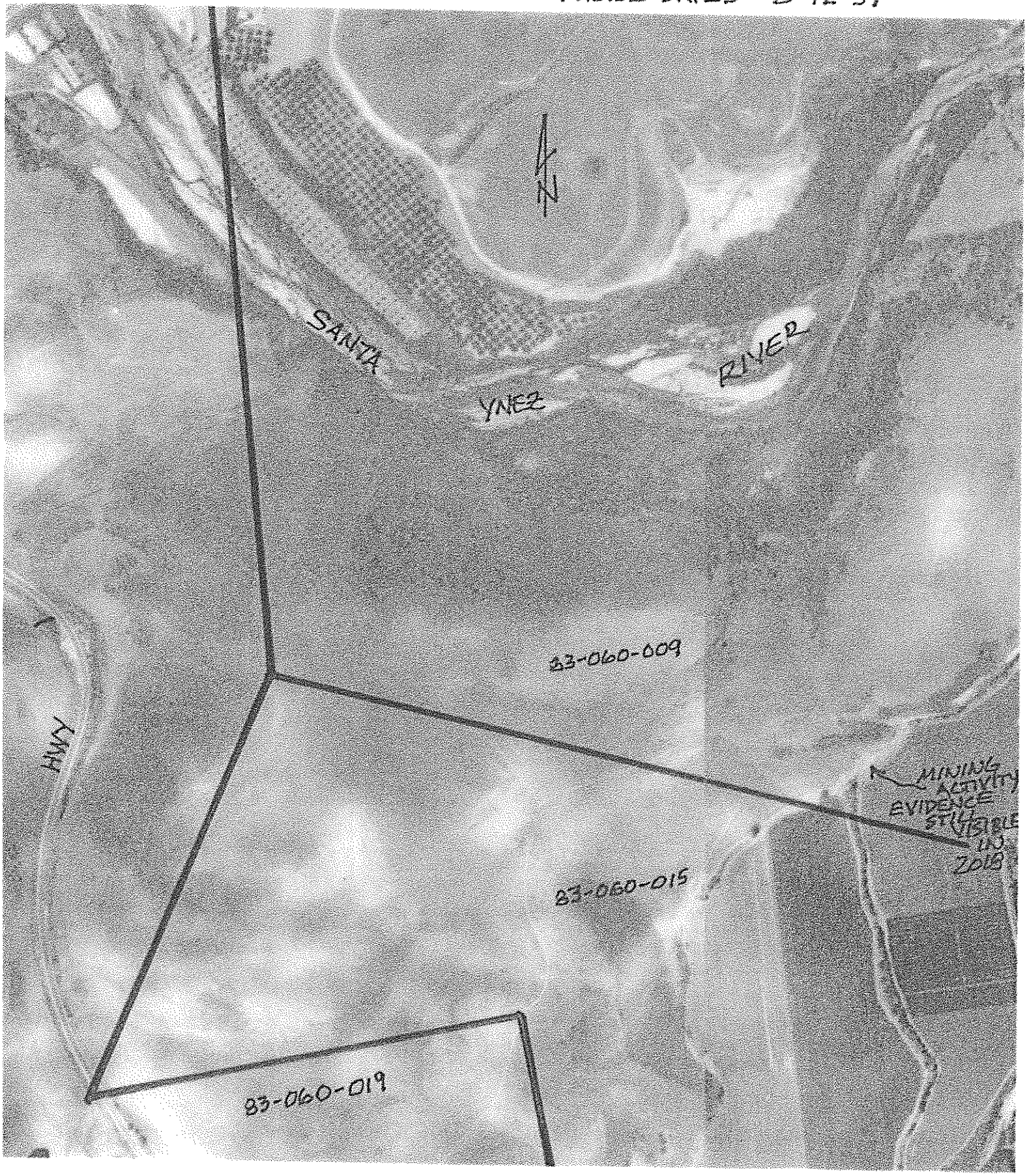
UCSB AIR PHOTO LIBRARY
HA-AN 9-129 DATED 4-20-56



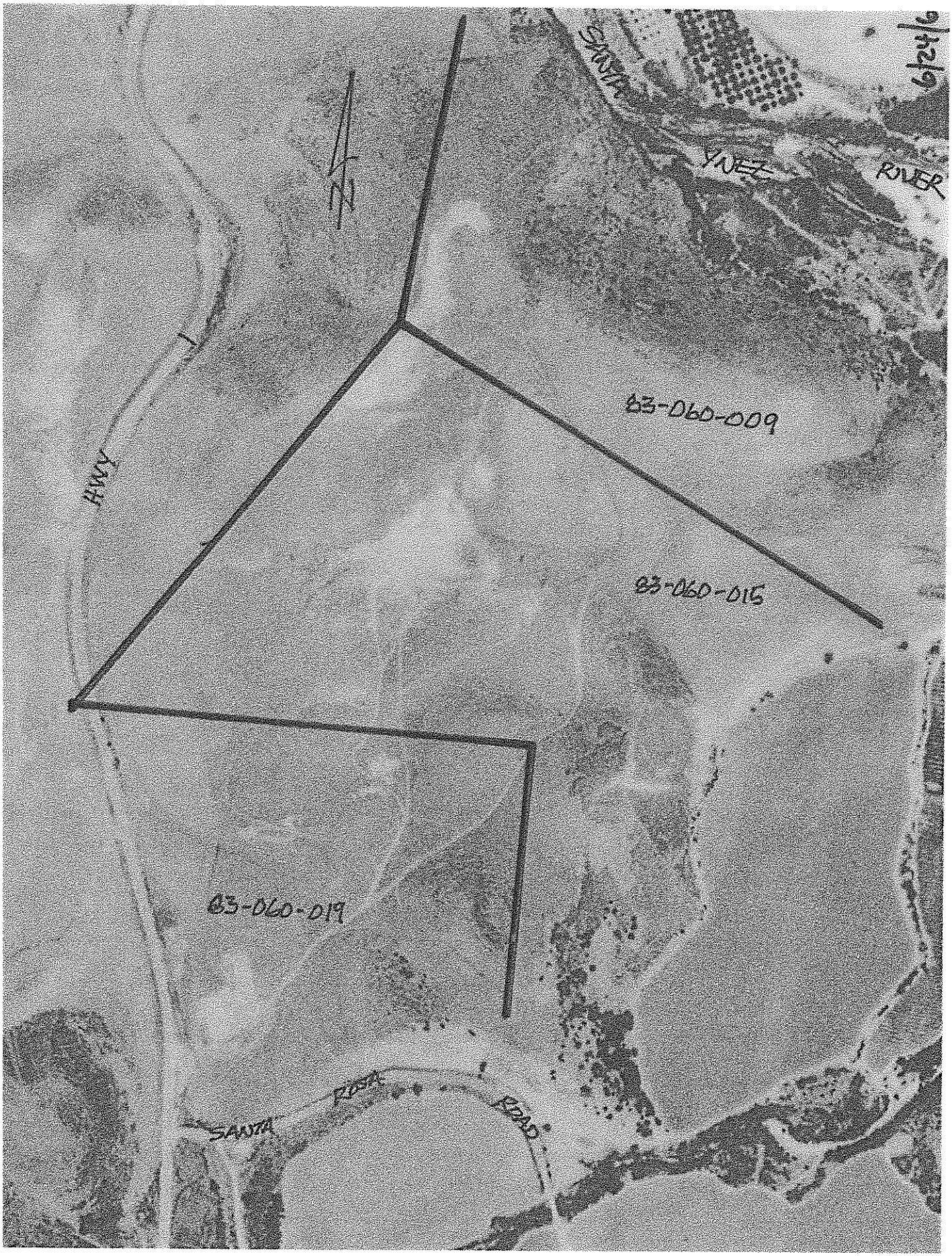
UCSB AIR PHOTO INDEX

HA-CZ-15 | HA-CZ-17

PHOTOS DATED 8-12-59



UCSB AIR PHOTO LIBRARY
BTM-5BB-104
DATED 6-24-61



HWY 1
SANTA ROSA ROAD
DATED 1-5-68
USGS AIR PHOTOS
HC-LH-32
D-490
1968

HWY 1
SANTA ROSA ROAD
AF 74-9
GD9 D.1
1974


8-12-58
HA-CZ-17

CAMPBELL·GEO, INC.
ENGINEERING AND ENVIRONMENTAL GEOSCIENCE

February 14, 2018

Lompoc Stone Quarry
3135 Santa Rosa Road
Lompoc, California 93436

Attn: Mr. Mike Wise, Site Manager

Subject: Geologic and Aerial Photo Review – Lompoc Stone Quarry
3135 Santa Rosa Road
APNs 83-060-015 and -009
Lompoc, California

Dear Mr. Wise:

INTRODUCTION

Campbell·Geo, Inc. is pleased to present this geologic and aerial photo review of the geology and available maps and photos relative to the above referenced parcels located near the intersection of Highway 1 and Santa Rosa Road near Lompoc, California. The analysis provides a preliminary assessment of geologic formations that are present and related to the rock quarry operation we understand has been operating for many years on the parcels. The mining site consists of two Assessor's parcels totaling approximately 561 acres, with the following Assessor Parcel Numbers (APNs): APN 83-060-015 (246.63 acres) and APN 83-060-009 (318.56 acres). APN 83-060-015 contains the currently active rock quarry.

WORK SUMMARY

Our work consisted of the tasks summarized as follows:

- Reviewed historic topographic maps and aerial photos for evidence of historic mining.
- Reviewed geologic maps of the site location to identify lithology and bedding structure.
- Prepared a letter report

327-A EAST HALEY STREET SANTA BARBARA CALIFORNIA 93101-1712
TELEPHONE: (805) 965-5003 FACSIMILE: (805) 963-5371

SITE CONDITIONS

Existing Land Use/Vegetation

The general area of the two parcels is roughly bounded on the west by State Highway 1, on the east and north by the Santa Ynez River, and on the South by Santa Rosa Road. From Santa Rosa Road there is a dirt access road heading north to the rock quarry. There is no residential development and the majority of the parcels are covered in annual grass and weeds. Native trees and shrubs are sparsely populated around the property with denser areas to the northern and eastern areas, on the Santa Ynez River terrace. The eastern portion of APN 083-060-015 and a smaller part of APN 083-060-009 are currently being used for row crop farming.

Topography/Drainage

The property is located on the south and west bank of the Santa Ynez River, where it curves around the parcels. The topography at the site is flat to gently sloping with some moderate to steep slopes in limited areas. The flat to gentle slope area is in the southeast, based on the 1959 topographic map (USGS, Lompoc, 7.5' Quadrangle), which is attached to this report. An elevated area exists in the central portion of the site near the mapped quarry.

GEOLOGY

Regional Setting

The southwestern portion of Santa Barbara County encompasses the western flank of the Santa Ynez Mountains, the southern section of the Santa Maria Basin, and a small part of the San Rafael Mountains, which make up a portion of the Transverse Range Province of California. The Santa Maria Basin in the Lompoc Valley and lower Santa Ynez Valley contains older Franciscan rocks covered by a slightly deformed Tertiary-Quaternary section, including the units described below under Lithology. The regional geologic structure is the result of a recurrent stress system active as far back as the Oligocene epoch, roughly over the last 30 million years.

Site Geology: Lithology

The geologic formations on the site described by Dibblee (1950) are Miocene-period Lower-Monterey (Tm-l), Upper-Monterey (Tm-u), the Orcutt formation (Qo) of the Pleistocene-age, and the Quaternary-period river channel alluvium (Qal). The geologic units are shown on the attached 1950 Dibblee Geologic Map, and are described, oldest to youngest below:

Lower-Monterey (Tm-l)

The Lower Monterey formation is a Miocene period marine unit of alternating hard and soft thin, laminated platy siliceous shale. This unit crops out on parcels 083-060-015 and 083-060-009, and underlies both the Qo and Qa units.

Upper-Monterey (Tm-u)

The Upper Monterey formation is a Miocene period marine unit of hard, laminated platy siliceous shale with cherty shale. The upper Monterey is exposed (crops out) on parcel 083-060-015, and underlies both the Qo and Qa units.

Orcutt (Qo)

The Orcutt formation is thin aeolian sand deposit (up to 5m) that is locally indurated and alternating with a basal pebble conglomerate.

Alluvial deposits (Qal)

Qal is made up of moderately consolidated, poorly sorted, crudely stratified, sand, gravel, and cobbles (and occasionally boulder size fragments). Rarer interbeds of clay, silt and mudstone are found in this deposit.

Site Geologic Structure

There is an east-west trending anticline in the center of the site. The consolidated rocks to the north of the anticline structurally trend east-west and the stratigraphic beds dip to the north, north-west. The consolidated rocks in the southern vicinity of the site structurally trend east-west and the stratigraphic beds dip to the south, south-east under the subject property. Bedding dip angles were all less than 32°, as measured by Dibblee, (1950). The hard sections of Monterey shale are frequently mined for ornamental and construction related uses, such as at the Lompoc Stone Quarry. The Monterey formation is present on both parcels. Dibblee's 1988 geologic map of the Lompoc quadrangle (DF-Map #20) also shows the Monterey formation on both parcels.

Aerial Photographs

We examined the following historical aerial photographs and compared the features in each to present day conditions that we observed in a February 2018 site visit to the property.

Photograph Date	Contractor/Flight Number	Frame Numbers
May 15, 1956	Hurd/ HA-AN	13-3, 13-4 stereo overlap
August 12, 1958	Hurd/ HA-CZ	-15, -16, -17 stereo overlap
April 1, 1960	AF59-45, Roll 6	375 and 418

Single frames of the 1956, 1958 and 1960 photos are appended to this report.

Stereo pairs of the 1956 and 1958 photographs were examined with a stereoscope using a recognized technique to enhance two dimensional photo prints so that landforms, including disturbed topography, are visible in three dimensions.

In the 1956 aerial photos, disturbed areas with hummocky, obviously unnatural topography are visible on the east facing slope of APN 083-060-009. This area correlates exactly to the area examined in February 2018 by photos #1 and #2 (described below). In

addition the road described in 2018 photo #4 and the fence line in 2018 photo #6 are also visible.

In the August 1958 aerial photos viewed stereoscopically show the same features described above for the 1956 photo. In addition there is a disturbed area with little or no vegetation some relief that has the appearance of a rock ridge or possibly a picked over area. This feature is coincident with the "quarry" symbol mapped on the 1959 USGS topographic quadrangle for Lompoc. We noted that what appeared on the site photos as areas of moderate site disturbance (partially revegetated, rounded surface features) were evident by ground truth evaluations to be areas of past grading or other site disturbance. The partially revegetated and rounded features in the photos from the 1950's suggest site activity may have started decades earlier.

Some of the areas showing moderate disturbance in the 1956 and 1958 aerial photos had, by 1960, become much larger and significantly sharper and more evident in the later photos. Please refer to the attached 1956, 1958, and 1960 aerial photographs.

2018 Site Photographs

We collected site photographs during a February 13, 2018 site reconnaissance. Those photos have been collected at features that show ground disturbance in both the 1958 aerial photograph and in the 2018 ground based photographs, which are numbered 1 through 8 and illustrated on the attached sheets. The location and orientation of each of the eight (8) photographs is noted on an attached enlarged print of the 1958 aerial photograph. These photos demonstrate that various levels of site clearing and grading were conducted at least as early as August 1958 and are still visible today. The ground examination clearly confirms these features (roads, hummocky topography) that were visible in the 1958 aerial photo are still evident and are associated with the rock quarry operation.

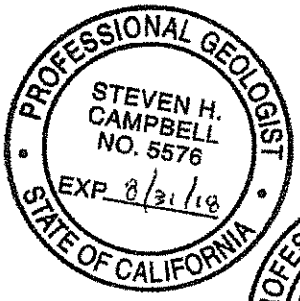
CONCLUSIONS

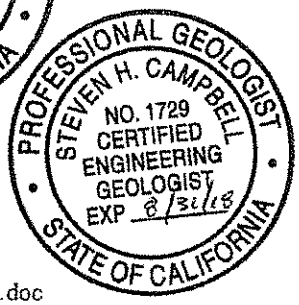
A geologic and aerial photo review has been conducted at the two Assessor's parcels totaling approximately 561-acres located near the intersection of Highway 1 and Santa Rosa Road in Lompoc, California. The 1959 topographic map (USGS, Lompoc 7.5 minute quadrangle) has a quarry mapped at the site. Based on the maps we have reviewed, and our experience and knowledge of the area, we can state with confidence that the Monterey Formation is present at both APN's (083-060-009 and 083-060-015) and that a quarry did exist at the site at least as early as 1959, based on the USGS map of that date.

The aerial photos from 1956, 1958 and 1960 along with the photo-documented features identified by our February 2018 site visit indicate that various areas of ground disturbance and access roads are consistent between the 1956 and 1958 photos and present day features.

If you have any questions concerning this report, please do not hesitate to contact us.

Sincerely,
Campbell·Geo, Inc.

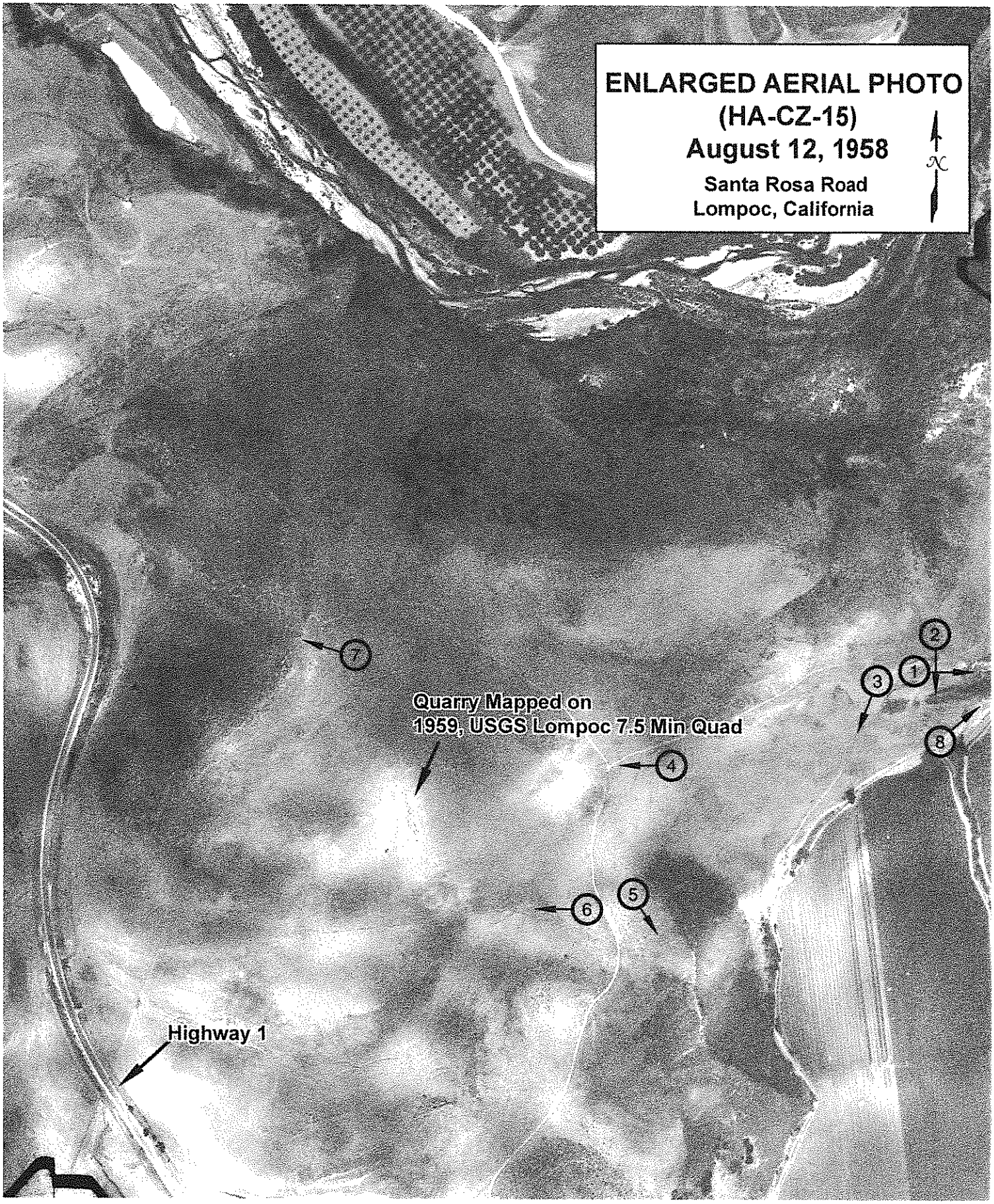




Steven H. Campbell
Professional Geologist
State of California, #5576
Certified Engineering Geologist
State of California, #1729

Clients\Sepulveda\ R1.doc

Attachments: Maps
Photographs



Symbols

① location and orientation of February 13, 2018 site photographs collected at same disturbed features visible in August 12, 1958 aerial photograph

Site Observations – Disturbance Areas Visible in August 12, 1958 Aerial Photo and at February 13, 2018 Site Reconnaissance

Lompoc Stone Quarry
APNS 83-060-009 AND -015
Lompoc, California
February, 2018

Photo #1 – View to East; Previously Graded Area Visible on August 12, 1958 aerial photograph

Photo # 2 – View to South; Same Previously Graded Area as Above Visible on August 12, 1958 aerial photograph

Site Observations – Disturbance Areas Visible in August 12, 1958 Aerial Photo and at February 13, 2018 Site Reconnaissance

Lompoc Stone Quarry
APNS 83-060-009 AND -015
Lompoc, California
February, 2018

Photo # 3 – View to Southwest; Access Road to Quarry Visible on August 12, 1958 aerial photograph

Photo # 4 – View to West; Older Access Road on Left (visible in August 12, 1958) Adjacent to Current Access Road on Right

Site Observations – Disturbance Areas Visible in August 12, 1958 Aerial Photo and at February 13, 2018 Site Reconnaissance

Lompoc Stone Quarry
APNS 83-060-009 AND -015
Lompoc, California
February, 2018

Photo # 5 – View to South; Older Graded Area Visible as Light Area (unvegetated) on August 12, 1958 aerial photograph

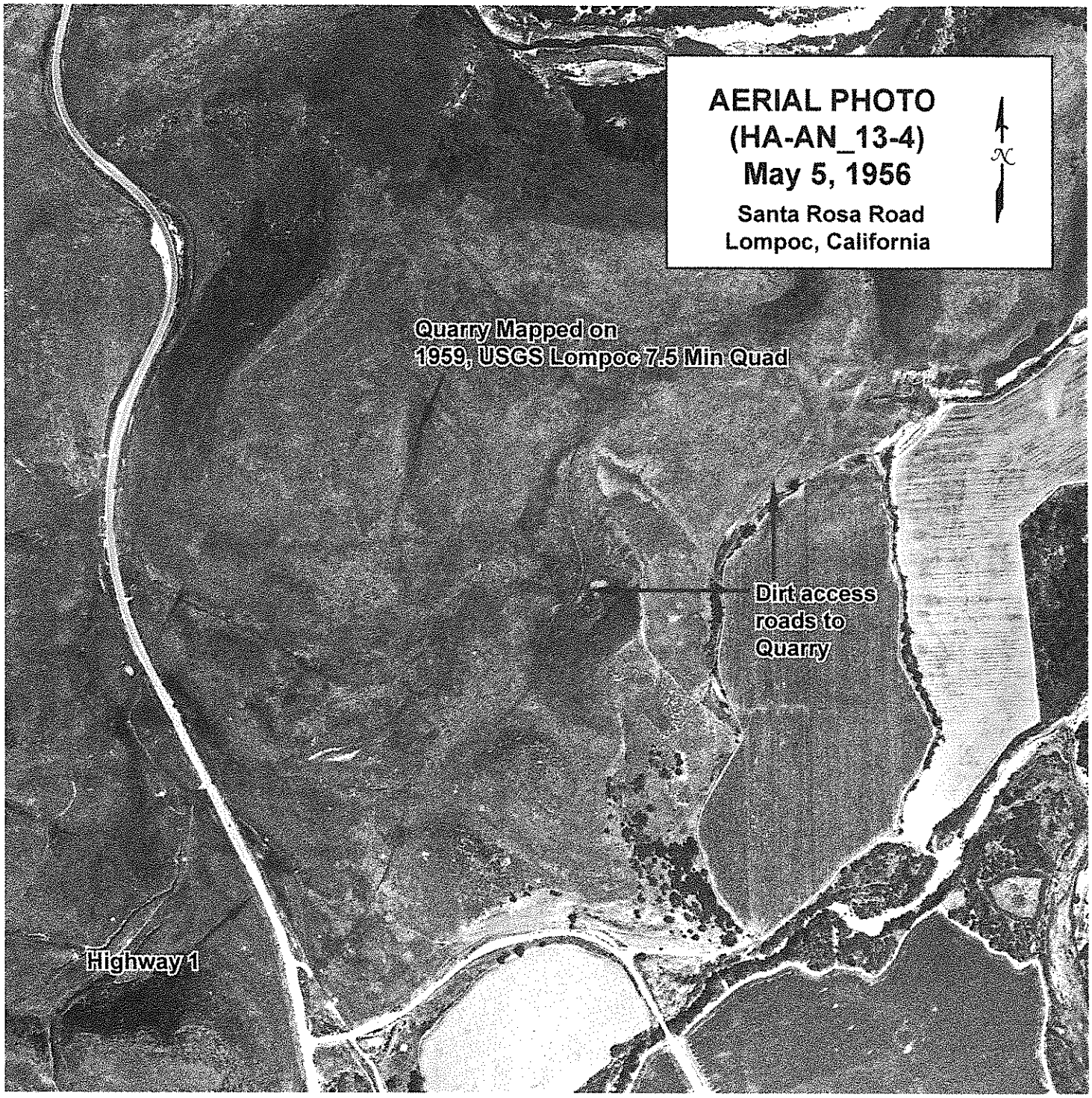
Photo # 6 – View to West of Old Wire Fence Traversing Spoils Piles and other Quarry Disturbances; Fence and Some Disturbances Visible on August 12, 1958 aerial photograph

Site Observations – Disturbance Areas Visible in August 12, 1958 Aerial Photo and at February 13, 2018 Site Reconnaissance

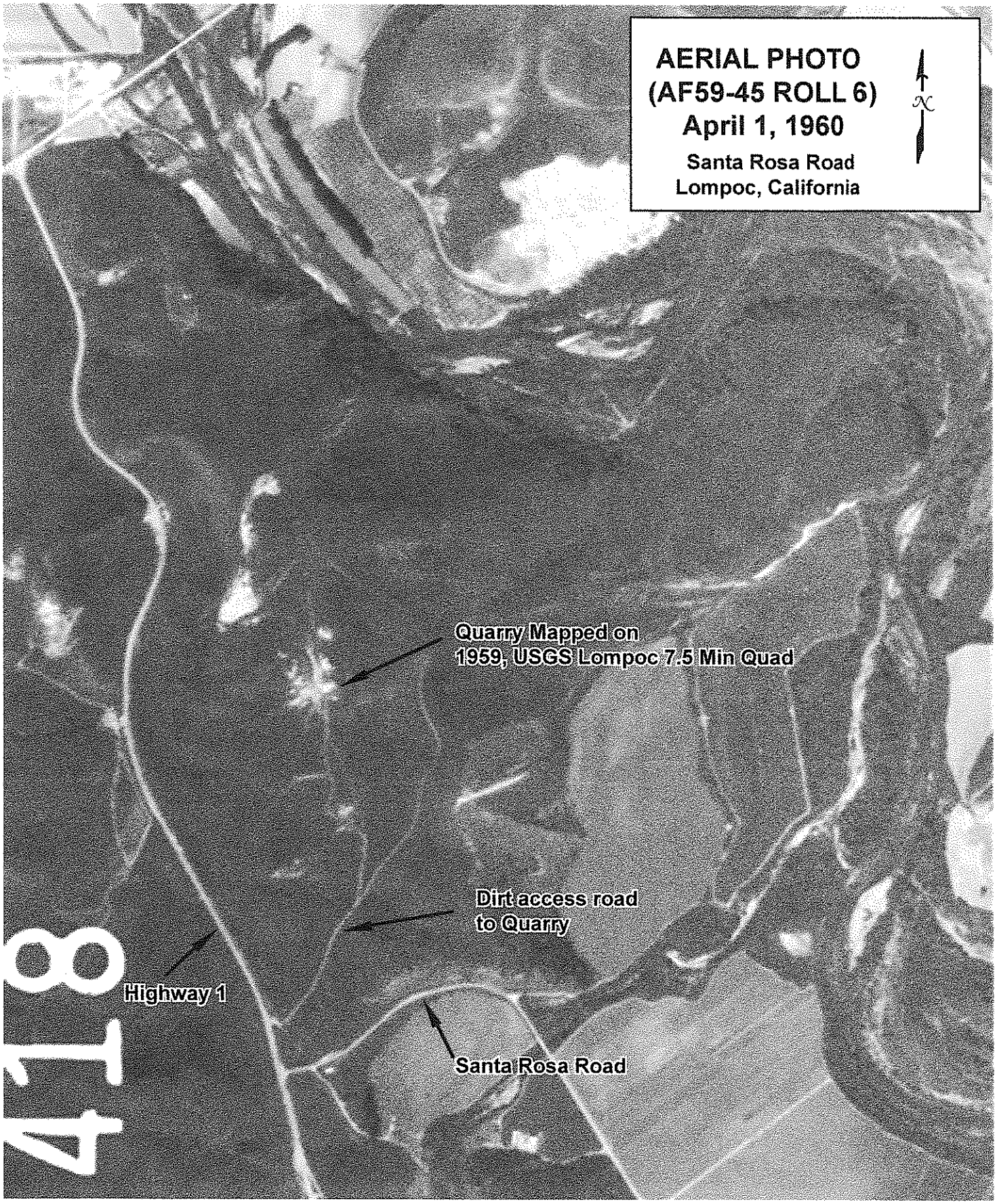
Lompoc Stone Quarry
APNS 83-060-009 AND -015
Lompoc, California
February, 2018

Photo #7 – View to Northwest; Disturbed area on APN 083-060-009 also visible in August 12, 1958 aerial photo

Photo #8 – View to Northeast; Monterey Formation on APN 083-060-009


AERIAL PHOTO
(HA-AN_13-4)
May 5, 1956
Santa Rosa Road
Lompoc, California
N
Quarry Mapped on
1959, USGS Lompoc 7.5 Min Quad
Dirt access
roads to
Quarry
Highway 1


AERIAL PHOTO
(HA-CZ-15)
August 12, 1958
Santa Rosa Road
Lompoc, California
N
Quarry Mapped on
1959, USGS Lompoc 7.5 Min Quad
Dirt access
roads to
Quarry
Highway 1

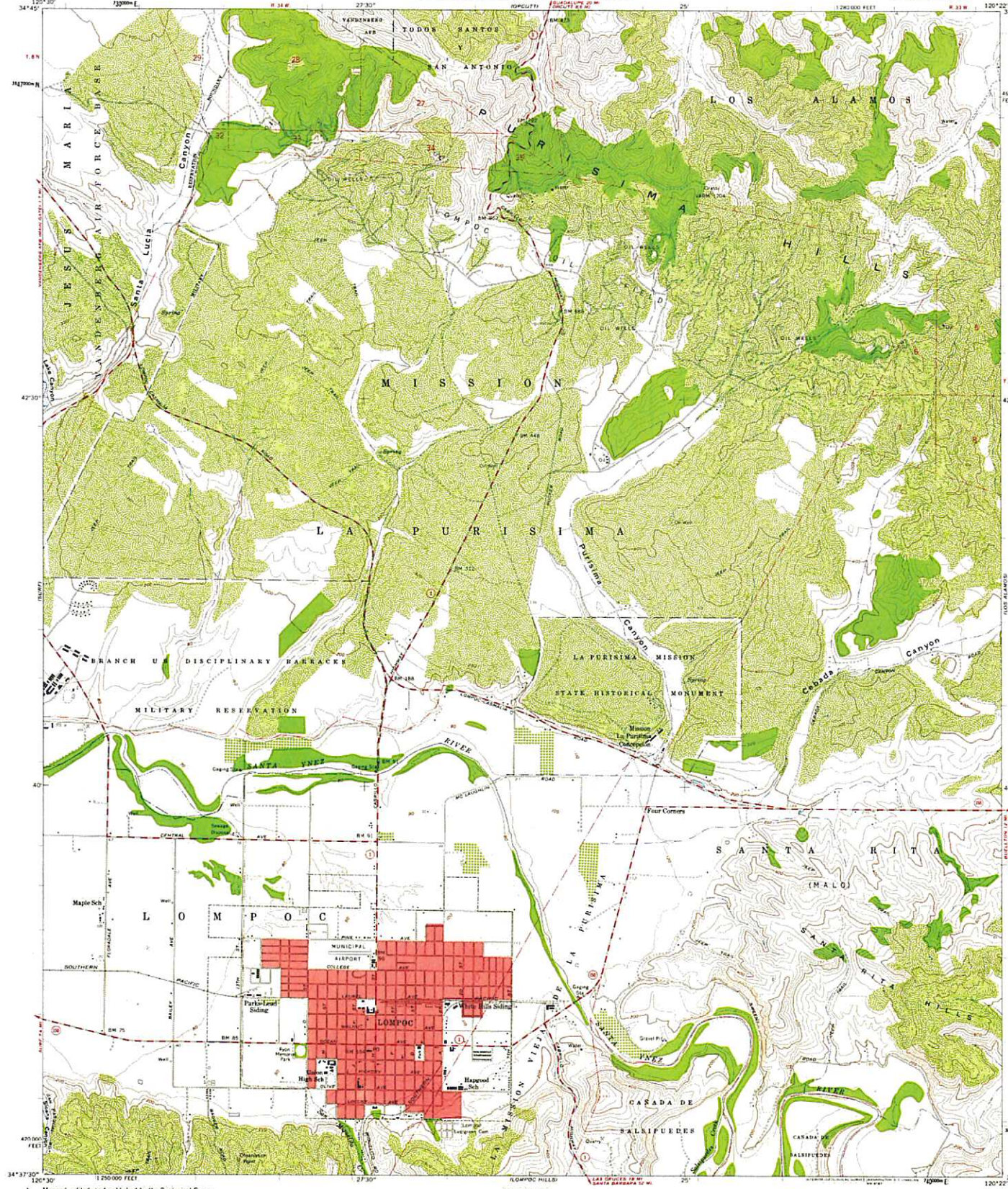

AERIAL PHOTO
(AF59-45 ROLL 6)
April 1, 1960
Santa Rosa Road
Lompoc, California
N
Quarry Mapped on
1959, USGS Lompoc 7.5 Min Quad
Dirt access road
to Quarry
Highway 1
Santa Rosa Road

418

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF CALIFORNIA
EDMUND G. BROWN, GOVERNOR
HARVEY O. BANKS, DIRECTOR OF WATER RESOURCES

LOMPOC QUADRANGLE
CALIFORNIA–SANTA BARBARA CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
NW/4 LOMPOC 15' QUADRANGLE



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by photogrammetric methods and by planetable surveys 1959. Aerial photographs taken 1956

Polyconic projection. 1927 North American datum
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Red tint indicates area in which only landmark buildings are shown

Dashed land lines indicate approximate locations

Unchecked elevations are shown in brown

SCALE 1:24000

CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 10-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

APPROXIMATE MEAN DECLINATION, 1959

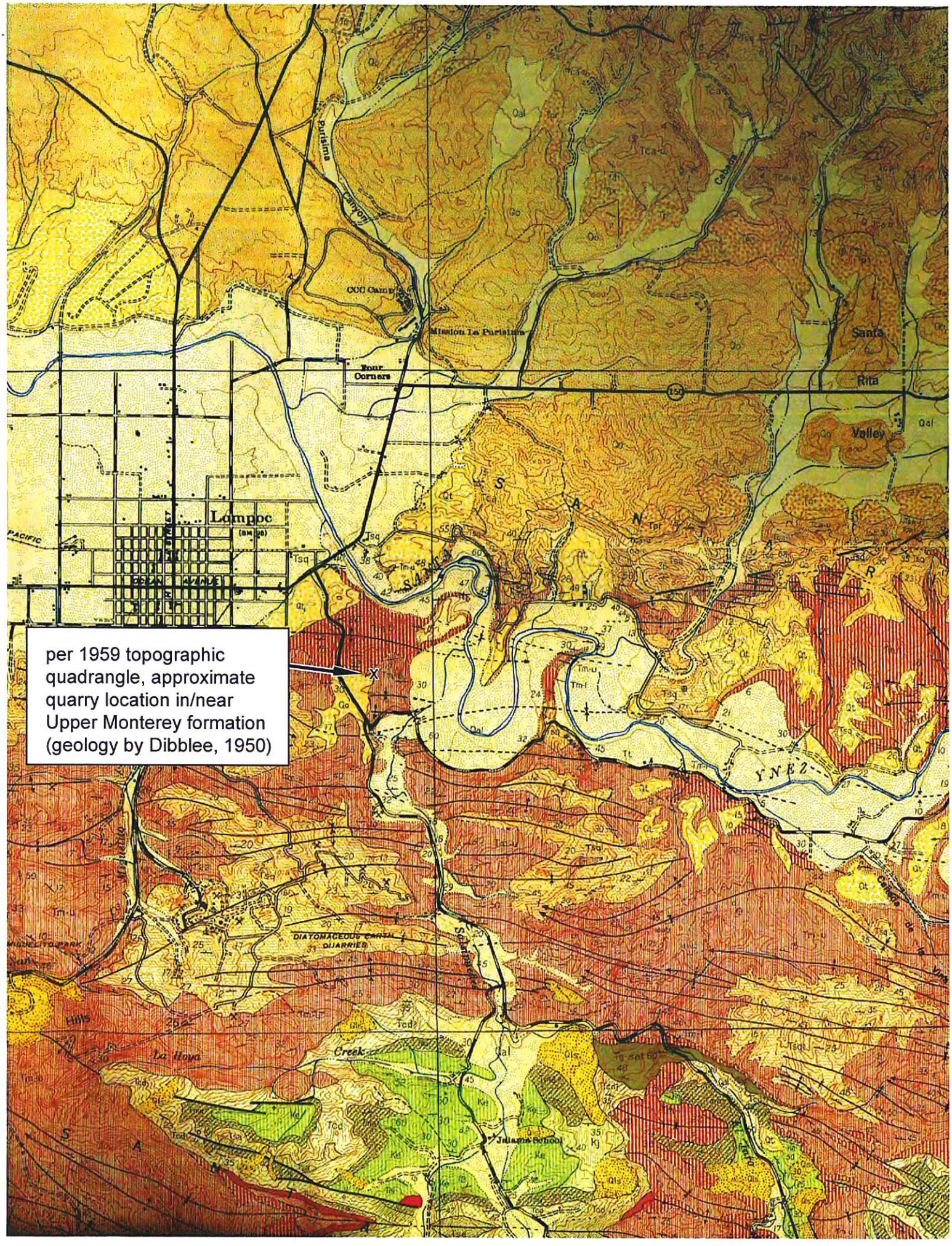
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER 25, COLORADO OR WASHINGTON 25, D.C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

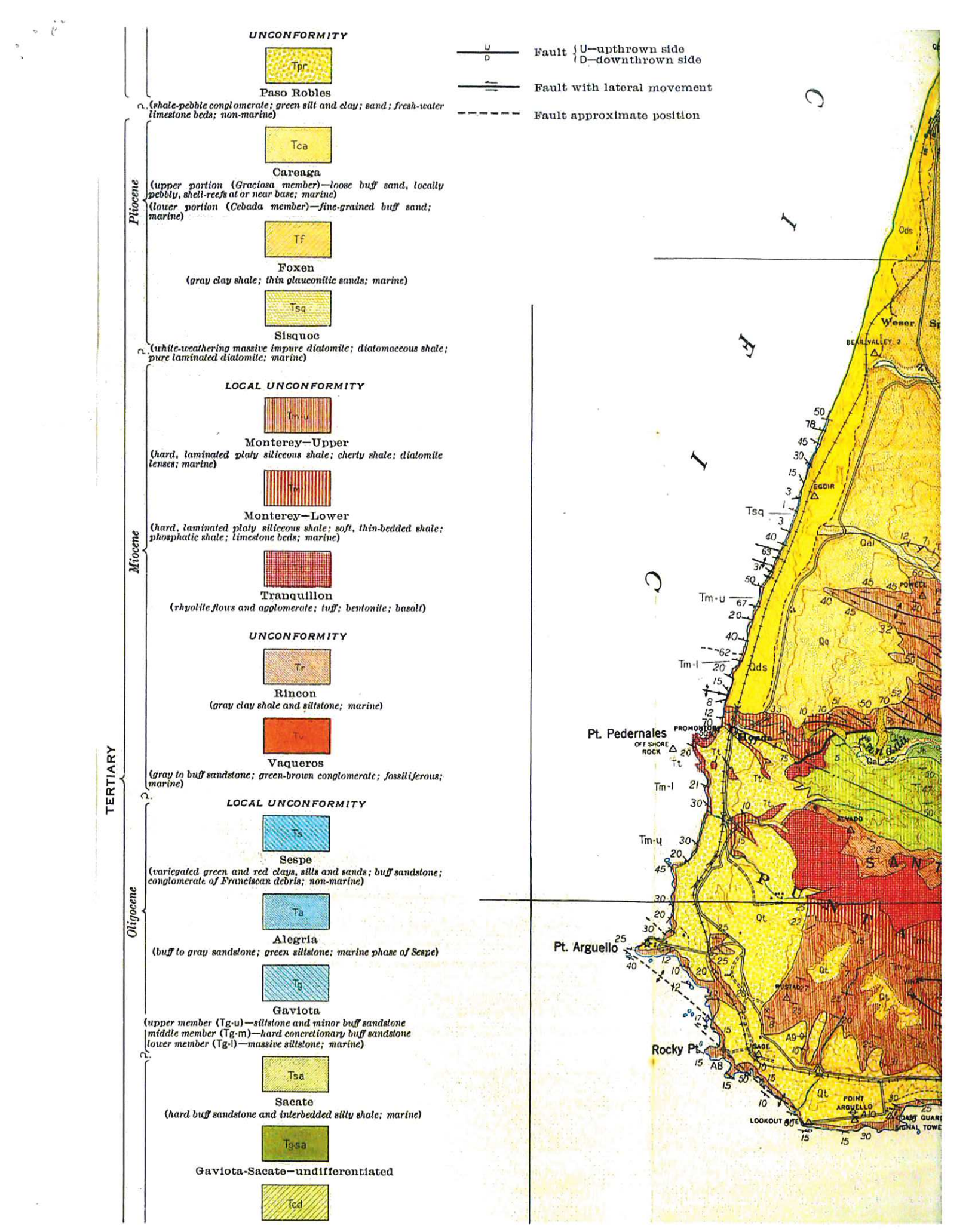
ROAD CLASSIFICATION
Medium duty
Light duty
Unimproved dirt
State Route

QUADRANGLE LOCATION

LOMPOC, CALIF.
NW/4 LOMPOC 15' QUADRANGLE
N3437.5—W12022.5/7.5
1959

5145


per 1959 topographic quadrangle, approximate quarry location in/near Upper Monterey formation (geology by Dibblee, 1950)
Purisima Canyon
CCC Camp
Mission La Purisima
Four Corners
Santa Rita Valley
Lompoc
(airport)
PACIFIC OCEAN AVENUE
SANTA YNEZ
DIATOMACEOUS EARTH DIJARRIES
La Hova Creek
Juliana School


UNCONFORMITY
Tpr
Paso Robles
(shale-pebble conglomerate; green silt and clay; sand; fresh-water limestone beds; non-marine)
Tca
Careaga
(upper portion (Graciosa member)—loose buff sand, locally pebbly, shell-reefs at or near base; marine)
(lower portion (Cebada member)—fine-grained buff sand; marine)
Tf
Foxen
(gray clay shale; thin glauconitic sands; marine)
Tsq
Sisquoc
(white-weathering massive impure diatomite; diatomaceous shale; pure laminated diatomite; marine)
Pliocene
LOCAL UNCONFORMITY
Tm-u
Monterey—Upper
(hard, laminated platy siliceous shale; cherty shale; diatomite lenses; marine)
Tm
Monterey—Lower
(hard, laminated platy siliceous shale; soft, thin-bedded shale; phosphatic shale; limestone beds; marine)
Miocene
Tt
Tranquillon
(rhyolite flows and agglomerate; tuff; bentonite; basalt)
UNCONFORMITY
Tr
Rincon
(gray clay shale and siltstone; marine)
Tv
Vaqueros
(gray to buff sandstone; green-brown conglomerate; fossiliferous; marine)
TERTIARY
LOCAL UNCONFORMITY
Ts
Sespe
(variegated green and red clays, silts and sands; buff sandstone; conglomerate of Franciscan debris; non-marine)
Ta
Alegria
(buff to gray sandstone; green siltstone; marine phase of Sespe)
Oligocene
Tg
Gaviota
(upper member (Tg-u)—siltstone and minor buff sandstone
middle member (Tg-m)—hard concretionary buff sandstone
lower member (Tg-l)—massive siltstone; marine)
Tsa
Sacate
(hard buff sandstone and interbedded silty shale; marine)
Tg-sa
Gaviota-Sacate—undifferentiated
Tcd
U
D
Fault { U—upthrown side D—downthrown side
Fault with lateral movement
Fault approximate position
Pt. Pedernales
Pt. Arguello
Rocky Pt.
Qds
Qal
Qa
Qt
Tsq
Tm-u
Tm-l
Tt
POINT ARGUELLO
LOOKOUT
SAGE
POWELL
EGDIR
BEAR VALLEY

STATE OF CALIFORNIA
EARL WARREN, Governor
DEPARTMENT OF NATURAL RESOURCES
WARREN T. HANNUM, Director

DIVISION OF MINES
FERRY BUILDING, SAN FRANCISCO
OLAF P. JENKINS, Chief

SAN FRANCISCO BULLETIN 150 JUNE 1950

GEOLOGY OF SOUTHWESTERN SANTA BARBARA COUNTY CALIFORNIA

POINT ARGUELLO, LOMPOC, POINT CONCEPTION, LOS OLIVOS, AND GAVIOTA QUADRANGLES

By
T. W DIBBLEE, JR.

Compliments of Tom Dibblee
to Steve Campbell Oct 7 1990