MINERAL RESOURCE TECHNICAL REPORT
NEWLAND SIERRA
MERRIAM MOUNTAINS AREA
SAN DIEGO COUNTY, CALIFORNIA

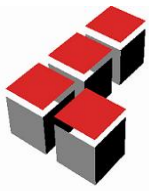
PDS2015-GPA-001, PDS2015-SP-15-001
PDS2015-REZ-15-001, & PDS2015-TM-5597

Prepared for:

NEWLAND SIERRA, L.L.C.
9820 Towne Centre Drive, Suite 100
San Diego, CA 92121

Project No. 10618.007

June 30, 2015



Leighton and Associates, Inc.
A LEIGHTON GROUP COMPANY

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June 30, 2015

Project No. 10618.007

To: Newland Sierra, LLC
9820 Town Centre Drive, Suite 100
San Diego, CA 92121

Attention: Ms. Rita Brandin

Subject: Mineral Resource Technical Report, Newland Sierra, Merriam Mountains Area of San Diego County, California

PDS2015-GPA-001, PDS2015-SP-15-001, PDS2015-REZ-15-001, & PDS2015-TM-5597

In accordance with your request, we have performed a review and prepared this Mineral Resource Technical Report for the Newland Sierra property located in the Merriam Mountains area of San Diego County, California.

Based on the results of our research and review, the site is similar to much of northern San Diego County in that it is underlain by granitic and metavolcanic rock that could possibly be mined and processed and utilized as a source of sand, gravel, and rock. We note that an abandoned quarry is also present on the site and the site has been classified by the State of California as Mineral Resource Zones MRZ-3 and MRZ-2, which indicates the potential for mineral resources in the form of aggregate materials. While the proposed development will encroach into these areas, the majority of the “mapped” areas remain as open space.

This report has been prepared for submittal to the County of San Diego, per the County of San Diego Land Use and Environment Group's Guidelines for Mineral Resource Technical Report Format and Content requirements.

If you have any questions regarding our report, please contact this office. We appreciate this opportunity to be of service.

Respectfully submitted,

LEIGHTON AND ASSOCIATES, INC.

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Distribution: (1) Addressee
(1) Fuscoe Engineering; Attention: Mr. Eric Armstrong

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Leighton

1.0 EXECUTIVE SUMMARY

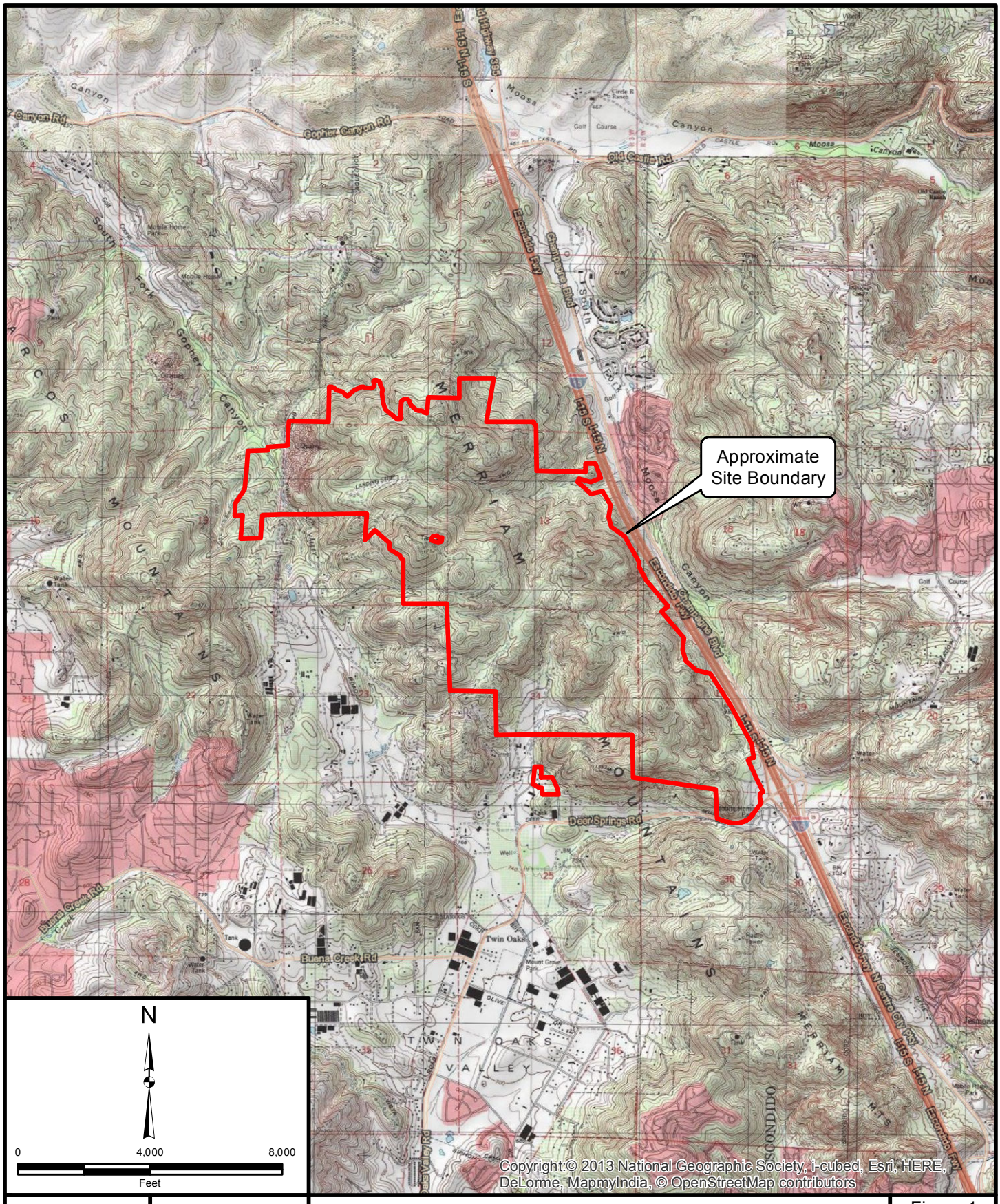
In accordance with your request and authorization, this report presents the results of our review and assessment of the mineral resources for the 1,985 acre Newland Sierra property in the Merriam Mountains area of northern San Diego County. This report has been prepared for the County of San Diego, per the County of San Diego Land Use and Environment Group's Guidelines for Mineral Resource Technical Report Format and Content requirements. The scope of services included review of the site location relative to the current Mineral Resource Zonation (MRZ) and designations per the California Surface Mining and Reclamation Act (SMARA) of 1975.

Topographically, the site generally consists of moderate to steeply sloping hillside terrain with localized valleys and gently sloping terraces. Elevations range from a high of approximately 1,765 feet mean sea level (msl) in the west-central portion of the site to a low of 800 feet (msl) along the southerly site boundary. Granitic rock outcrops dominate the elevated areas at the site.

Generally, natural drainage is presently accomplished through a network of narrow steep-sided canyons in all directions away from the approximately central, northwesterly trending ridgeline. The largest canyon on the site is located along the southerly site boundary and drains in a southward direction. Vegetation on the site ranges from native grasses and weeds in the relatively flat areas canyon bottoms to moderate to thick chaparral on the upper elevations. An abandoned rock quarry is located at the west margin of the property.

Based on the results of this research and review, the site is similar to much of northern San Diego County in that it is underlain by granitic and metavolcanic rock that could possibly be mined and processed and utilized as a source of sand, gravel, and rock. As the site is similar to much of the regional area, it is not unique in this regard. Our geotechnical studies of the site, including mapping and seismic refraction profiling (Leighton, 2004 and 2007) indicate the limited extent of workable surficial and alluvial deposits, and the very hard (unrippable) nature of the underlying granitic rock. While the site is categorized as MRZ-2 and MRZ-3, the property is not being used currently for extraction. With the widespread nature of similar hardrock geology comprising most of eastern San Diego County, the site is not viewed as a unique critical resource from a geotechnical perspective. Areas similar in geologic composition to the Newland Sierra site continue to exist as MRZ-3 zoned areas due to the lack of petition to the state Geologist

for redesignation. When quantified relative to the entire extent of similar granitic rock exposures found across the eastern San Diego County, site development could be considered of negligible relative loss.



Project: 10618.007	Eng/Geol: MRS/RCS
Scale: 1 " = 4,000 '	Date: June 2015

Base Map: ESRI ArcGIS Online 2015
Thematic Information: Leighton
Author: Leighton Geomatics (mmurphy)

SITE LOCATION MAP

Newland Sierra Property
San Marcos, California

Figure 1

Leighton

Map Saved as V:\drafting\10618\003\mAPS\10618-004_F01_SLM_2015-01-13mxd.mxd on 1/15/2015 8:42:33 AM

2.0 INTRODUCTION

2.1 Purpose and Scope

In accordance with your request and authorization, this report presents the results of our review and assessment of the mineral resources for the 1,985 acre site in the northern area of San Diego County, California (Figure 1 and Figure 2). The scope of services included:

- A review of in-house geotechnical reports and aerial photographs pertinent to the area (Section 5.0).

- A reconnaissance of the site.

- Review of the site location relative to the current Mineral Resource Zonation (MRZ) and designations per the California Surface Mining and Reclamation Act (SMARA) of 1975.

- Preparation of this report summarizing the results of our technical study, including:

  - A discussion of the MRZ's located on, adjacent, and within the vicinity of the project site.

  - A discussion of all mine; quarries, and gemstone deposits (both historic and existing) within the vicinity of the project.

  - A discussion of the regional and local geologic setting as it pertains to any mineral resources identified.

  - Analysis of on-site and off-site impacts to the mineral resource, including indication of whether any mineral resources on the project would be minable, processable, and marketable in the near future.

  - A discussion of the economic value and significance of any impacts (if present) considering land use compatibility with the proposed project.

- A discussion of any appropriate mitigation measures and project design considerations.

2.2 Project Location and Description

The property is generally located west of Interstate 15, east of North Twin Oaks Valley Road, Deer Springs Road to the south and Lawrence Welk Lane to the north, in an area of San Diego County named the Merriam Mountains (Figure 1). Figure 2 illustrates the Newland Sierra property limits and associated Assessor's Parcel Numbers for the proposed project graded area shown, consisting of a series of developed parcels across the central and southern area, and a roadway across the northern area (Fuscoe, 2015). Topographically, the site generally consists of moderate to steeply sloping hillside terrain with localized valleys and gently sloping terraces. Elevations range from a high of approximately 1,765 feet mean sea level (msl) in the west-central portion of the site to a low of 800 feet (msl) along the southerly site boundary.

The Newland Sierra Project proposes the development of a 1,985-acre mixed-use community within the unincorporated area of San Diego County designed in accordance with the Community Development Model. The majority of the Community is within the Twin Oaks Valley community of the North County Metropolitan Sub regional Plan area and a portion is within the Bonsall Community Planning area. The Specific Plan (Newland, 2015) includes a residential component consisting of 2,135 dwelling units which equates to an overall density of 1.08 dwelling units per acre (du/ac) over the entire 1,985 acres. The Community Development Model has influenced the design and pattern of the seven neighborhoods (also referred to as planning areas for planning purposes) with the highest densities located in the Town Center. The Town Center permits 81,000 square feet of general commercial uses as well as educational and park uses. The Community also includes an active park system with 14 parks, 18 miles of trails and pathways, and a 6-acre charter school site.

Discretionary approvals submitted concurrently with the Specific Plan include a General Plan Amendment (GPA), Rezone and Tentative Map. Implementing Site Plan(s) will be submitted subsequent to Project approval for setbacks, architecture and private parks.

The Specific Plan proposes a residential community with a maximum of 2,135 homes. Of the 2,135 dwelling units, 1,582 residential units are located in areas designed Semi-Rural 1 (SR-1) and zoned RS (Single Family Residential) and 553 residential units are located in the higher density Town Center and Terraces area that would be designated Village Core Mixed Use (C-5) on the Community Plan Map.

3.0 EXISTING CONDITIONS

3.1 Topographic Setting

The site is located within the coastal subprovince of the Peninsular Ranges Geomorphic Province, near the western edge of the southern California batholith. The topography at the edge of the batholith changes from the rugged landforms developed on the batholith to the more subdued landforms, which typify the softer sedimentary formations of the coastal plain. Primarily, the site is underlain by the Cretaceous-aged granitic rock of the southern California batholith. Erosion and regional tectonic uplift created the valleys and ridges of the area.

The property is generally located west of Interstate 15, east of North Twin Oaks Valley Road, Deer Springs Road to the south and Lawrence Welk Lane to the north, in an area of San Diego County named the Merriam Mountains (Figure 1). Topographically, the site generally consists of moderate to steeply sloping hillside terrain with localized valleys and gently sloping terraces. Elevations range from a high of approximately 1,765 feet mean sea level (msl) in the west-central portion of the site to a low of 800 feet (msl) along the southerly site boundary.

Generally, natural drainage is presently accomplished through a network of narrow steep-sided canyons in all directions away from the approximately central, northwesterly trending ridgeline. The largest canyon on the site is located along the southerly site boundary and drains in a southward direction. Vegetation on the site ranges from native grasses and weeds in the relatively flat areas canyon bottoms to moderate to thick chaparral on the upper elevations.

3.2 Mineral Resource Potential

As mandated by the Surface Mining and Reclamation Act of 1975, the California State Mining and Geology Board classifies California mineral resources with the Mineral Resource Zones (MRZs) system. These zones have been established based on the presence or absence of significant sand and gravel deposits and crushed rock source area, e.g., products used in the production of cement. The classification system emphasizes Portland Cement Concrete (PCC) aggregate, which is subject to a series of specifications to ensure the manufacture of strong durable concrete. The following guidelines are presented in the mineral land

classification for the region (CGS, 1982 and 1996b).

- MRZ-1 - Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- MRZ-2 - Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that there is a high likelihood for their presence.
- MRZ-3 - Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- MRZ-4 - Areas where available information is inadequate for assignment to any other MRZ zone.

Within western San Diego County, which includes the site, the extent of zones classified as MRZ-2 are shown in gray on the Figure 5. The vast majority of existing MRZ-2 zones are mapped in alluvial areas and therefore have irregular, organic limits defined by low-lying topographic drainages. Geologically, these areas are generally characterized by the presence of younger (Quaternary-aged) river channel, floodplain, and terrace deposits that have been eroded from the older (Tertiary to Cretaceous-aged) bedrock units, transported, and re-deposited. They consist of naturally loose mixtures of sands and rounded gravels. Laboratory testing has also confirmed the physical and chemical characteristics of the deposits are appropriate for PCC-grade aggregate.

In contrast, the Newland Sierra site is entirely different in that it is a granitic rock site, with MRZ-2 boundaries not defined by geologic unit limits, but property lines (Figure 3). The majority of the San Diego region is mapped as a MRZ-3 zone (Figure 5). Generally, these areas geologically consist of the older bedrock units, including the crystalline and metavolcanic rocks that are mapped over nearly two thirds of the San Diego County. These areas are also commonly rugged mountainous terrain relatively isolated from existing development and infrastructure. As noted in the updated 1996 DMG classification report, these materials can be crushed to yield PCC-grade aggregate provided they possess the appropriate chemical characteristics. Despite considerable costs associated with crushing, additional processing, and transportation, crushed rock has been a feasible source when more economical alluvial materials are not readily available.

Reclassification of an MRZ-3 zone to a MRZ-2 designation is under the purview of

the California State Geologist. The criteria includes determination that the "deposit is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and meets or exceeds (in 1996 equivalent dollars) $12,150,000 for Construction materials (DMG, 1996b). Note this equated to $5,000,000 in 1978 dollars when the guidelines were first written.

Documented historical aggregate extraction operations are identified on the western portion of the site and were terminated when they ceased to be economically viable, as described below:

3.2.1 Newland Sierra Property

As shown on Figure 3, the Newland Sierra site includes areas zoned as MRZ-2 and MRZ-3. Because it consists of a mountainous terrain as opposed to an alluvial river valley, the site's resource designations result from the presence of crystalline and metavolcanic rocks which, when crushed to suitable sizes, could be considered for construction material in the form of aggregate materials.

Note that the MRZ-2 zone includes two parts. The first (Quarry Parcel) area to the west was originally designated as MRZ-2 in the first classification, California Division of Mines and Geology Special Report 153 (CGS, 1982). This MRZ-2 area is also zoned for extractive use (S82) by the County of San Diego. Within this area, a quarry operation was previously in operation. This site, known as the Twin Oaks Quarry, was historically permitted for aggregate mining by South Coast Asphalt Products. Although they had a use permit for quarrying of rock from the site, they were not permitted to crush, screen, or wash the quarried rock (CGS, 1982).

Also outlined on Figure 3, the Sycamore Ridge Parcel was reclassified as MRZ-2 in response to a petition by HG Fenton Material Company (CGS, 1988). Based on this report, data was utilized to indicate the on-site fresh granitic materials meet quality standards for PCC-grade aggregate.

As part of the evaluation process, the California Geologic Survey (formerly

Division of Mines and Geology) documented that the volcanic rock within the MRZ-2 zoned area is minable, processable, and marketable under the present (1996) and near future technologic and economic conditions. Furthermore, it meets or exceeds the lower threshold value of $12,150,000 for construction materials (1996 equivalent dollars).

The composite area, classified as MRZ-2, was later acquired by Hanson, Aggregate/Pacific Southwest (CGS, 1997-1998). All plans for reactivation of the mine or further exploration were discontinued (North County Times, 2002). It appears that the “mining out” of the existing excavation, along with adverse impacts to the adjacent residential developments and sensitive environmental habitat with increase traffic, noise, etc., along with the limited extent of the mineable aggregate resource, influenced the decision to abandon this quarry.

3.3 Geology

Based on our site visit and review of our referenced geologic maps (Section 5.0), the primary bedrock unit onsite is Cretaceous-aged Granitic rocks (monzogranite), with Jurassic-aged Metavolcanic rock is present along the western margin (Figure 4). These units are in turn overlain by surficial units consisting of alluvium, colluvium, slopewash, and minor undocumented fill soils. Surficial soil deposits generally consist of relatively fine-grained material and are limited in aerial extent.

As part of our prior geotechnical review of the property, we have performed site specific geologic mapping and subsurface investigations at the site (Leighton, 2000, 2004, 2005, 2006, and 2007). We have referenced our geotechnical/mapping of the site as part of this review. Note that because we have completed geologic mapping and surface investigations for geotechnical purposes, these investigations are of greater detail than prior investigations of the site by others.

4.0 MINERAL RESOURCE IMPACT ANALYSES

4.1 Methodology for Determination of Significance

Considering the site characteristics described above, their significance is measured against the County of San Diego Department of Land Use Guidelines (DPLU, 2008). These are based on the State CEQA Guidelines, and establish a measurable standard for determining when an impact will be considered significant pursuant to CEQA.

4.1.1 Land Use Compatibility

The remaining guideline for significance determination involves whether or not the deposit is minable or compatible under the present conditions, or conditions estimated to exist within a 50 year time-frame. In order to be minable, it must be considered compatible with existing land uses, and land uses projected along the 50-year future time line.

The Newland Sierra property is located immediately adjacent and west of Interstate 15, north of Deer Springs Road and east of North Twin Oaks Valley Road. As shown on Figure 3, surrounding land uses generally include residential and limited agricultural uses along the west side of the property. As described in the Specific Plan (Newland, 2015), land uses include 1,888 acres within the North County Metropolitan Plan area which are zoned General Commercial (C36), Office Professional (C30), Rural Residential (RR), Limited Agricultural (A70), Extractive (S82) and General Rural (S92) Use Regulations, and, 97 acres within the Bonsall Community Plan area which are zoned Rural Residential (RR).

In order to provide an adequate buffer to achieve separation from noise and dust, a separation of 1,300 feet is typically utilized. When the development is completed, the northern areas located along the proposed Project in addition to a 1,300 foot buffer zone will be lost to possible future mining efforts. The amount of onsite land of MRZ-2 quality that will be permanently lost as a result of the project is estimated at 37.8 acres. In addition, due to the 1,300 foot buffer zone another approximately 119 acres

of offsite land of MRZ-2 quality will also effectively be lost after completion of the project.

4.1.2 Marketability and Minimum Dollar Value

The Newland Sierra project includes an area classified as MRZ-2. The size of the MRZ-2 zoned area available for eventual extraction would be reduced by the development of the proposed project where it overlaps on the southeast corner of the Sycamore Ridge Property. This area includes a calculated 37.8 acres lost to the residential development. This overlap area is on the order of approximately 5.8 percent of the total 650-acre area designated as MRZ-2. However, a greater area would be affected in order to provide a buffer of separation (approximately 119 acres) between the proposed development and a hypothetical extractive use program designed elsewhere across the Sycamore Ridge parcel.

The existing quarry area is situated on a west facing slope adjacent to the north-south trending North Twin Oaks Valley Road, which provides quarry access. The quarry is separated from the Sycamore Ridge property by a large topographic summit (1,630 feet msl). Under this scenario, the quarry area currently zoned S-82 for extractive use, is not being developed and its access (from the west) is not affected by the proposed development.

The 650-acre area zoned MRZ-2 includes the Sycamore Ridge parcel and the Quarry parcel, with approximated areas of 482 and 168 acres, respectively. It should be considered that under certain planning scenarios not able to be predicted within the scope of this report, the proposed development would serve as an additional negative influence on any future extractive uses in the quarry and surrounding area. Under this scenario, the entirety of the 650-acre area, including the area currently zoned as S-82 for extractive use, would not be available for extraction.

Assuming similar extraction practices as the existing mining site located in the western portion of the site, a price of $20.00 per ton, a density of 0.075 tons per cubic foot and a waste factor of approximately 10 percent a hypothetical mining operation would not have to dig deep to exceed the threshold ($12,500,000) for a significant impact. Utilizing the above

assumptions, and the existing completed mining site in the western portion of the site for sizing purposes, we calculate the value of the onsite MRZ-2 mineral resources to be roughly 63 million dollars.

4.2 Conclusions

4.2.1 Significance of Impacts

Figure 3 illustrates the Newland Sierra property limits and associated Assessor's Parcel Numbers for the proposed project graded area shown, consisting of a series of developed parcels across the central and southern area, and a roadway across the northern area (Fuscoe, 2015). The quarry site is easily identified by the sparsely vegetated (white to light gray) area to the northwest of the proposed development areas, within the county designated S-82 limits. The proposed project overlaps the state-designated MRZ-2 zone, where the northern portion of the residential development areas extend into the Sycamore Ridge parcel. The development of the proposed project would clearly effect the future extraction of the mineral resources in and around this area.

4.2.2 Assumptions

In order to quantify these affects for environmental impact purposes, the following assumptions are made pertaining to the project and mineral resources within a foreseeable near-future (<50 year) time frame.

- Although it is not guaranteed due to unforeseeable technologic and economic factors, *the minimum value of the construction materials (PCC-grade aggregate) continues to exceed $12,500,000 (in 1996 equivalent dollars),* and therefore the MRZ-2 designation remains valid per any updated criteria of the State of California Geologist.

- *The abandoned quarry does not represent an entirely exhausted resource.* Although evidence suggests it is no longer viable, it is considered revivable considering the possibility of future changes in technologic and economic conditions.

- Our prior investigation indicates very hard granitic rock underlies the

site at relatively shallow depths. Seismic refraction profiles indicate accelerations averaging over 11,000 feet per second at a depth of 15 to 25 feet. Therefore, any mining of materials below the surface would necessitate blasting, as accelerations over 7,000 feet per second are generally considered "unrippable" with earthwork equipment. *Therefore, a quarry operation would likely consist of blasting to recover more than the surficial deposits of the site.*

- Although it does not appear to be the case at the current time, *a quarry operation is assumed to be unhindered by environmental constraints posed by noise, pollution, trucking traffic, etc*. The future permitting of the MRZ-2 area for resource extraction is assumed to be feasible. Any restrictions similar to those that have evidently adversely affected the further use of the existing quarry and surrounding area are not factors.

4.2.3 Mitigation Measures and Design Considerations

Based on our analysis, it appears that the granitic materials underlying the majority of the site are of MRZ-2 quality and are a potentially significant resource that currently could be recovered if the County were to issue a permit for the extraction. This potential resource would be effectively lost once the development is complete and loss cannot be completely mitigated.

Potential partial mitigation for this resource would be to extract some of it prior to or in conjunction with the site construction. In addition, as an alternative partial mitigation, a portion of the material could be processed and used on site as part of the construction process thereby eliminating the need to import material from alternate sources.

For estimating purposes, we have assumed a 3-inch layer of pea gravel could be utilized on each lot for slab underlayment and a 6-inch layer of base aggregate for roadways. This would utilize roughly 36,000 and 21,000 tons, respectively of the onsite resource. In addition, utilizing approximately 2-cubic feet per foot of pea gravel for utility trenches, an additional 57,000 tons of the onsite resource can be utilized. In total however this is a small percentage of the total of onsite available resources and only provides partial mitigation.

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Aerial Photographs

Date	Source	Flight	Photo No(s)
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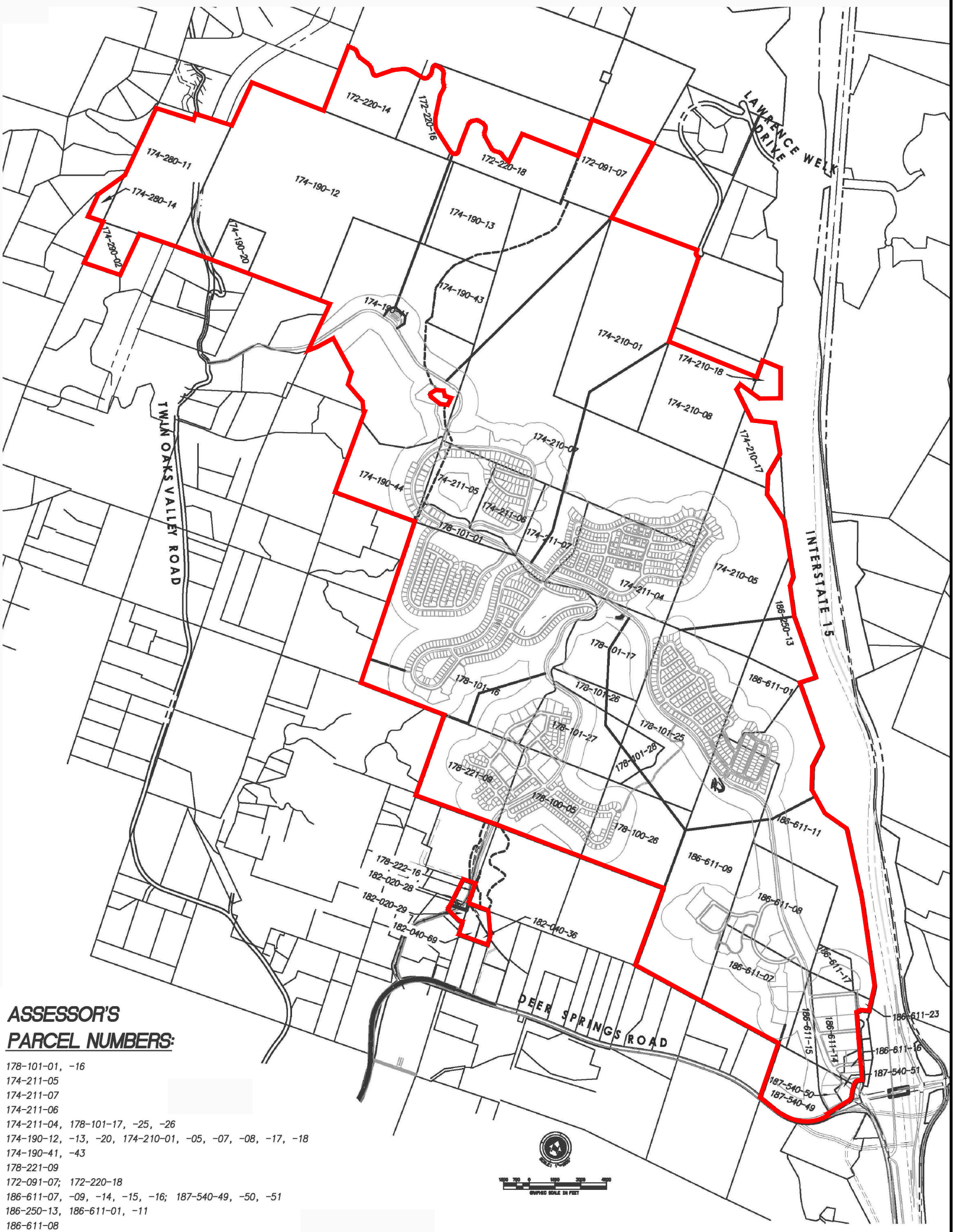
3/31/53	USDA	AXN-3M	162 through 165

FIGURES



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186-250-13, 186-611-01, -11
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178-100-05, -26
174-280-11, -14, 174-290-02
178-101-27, -28
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178-222-16
182-020-28, -29
182-040-36, -69
186-611-17, -23

PROJECT AREA:
1,985.60 acres

Project: 10618.007	Eng/Geol: MRS/RCS
Scale: NTS	Date: June 2015

Reference: Newland Sierra APN Exhibit, Fusco Engineer, Inc., 11/25/2014

Author: MAM

NEWLAND SIERRA APN EXHIBIT

Newland Sierra Property
San Diego, California

Figure 2

Leighton

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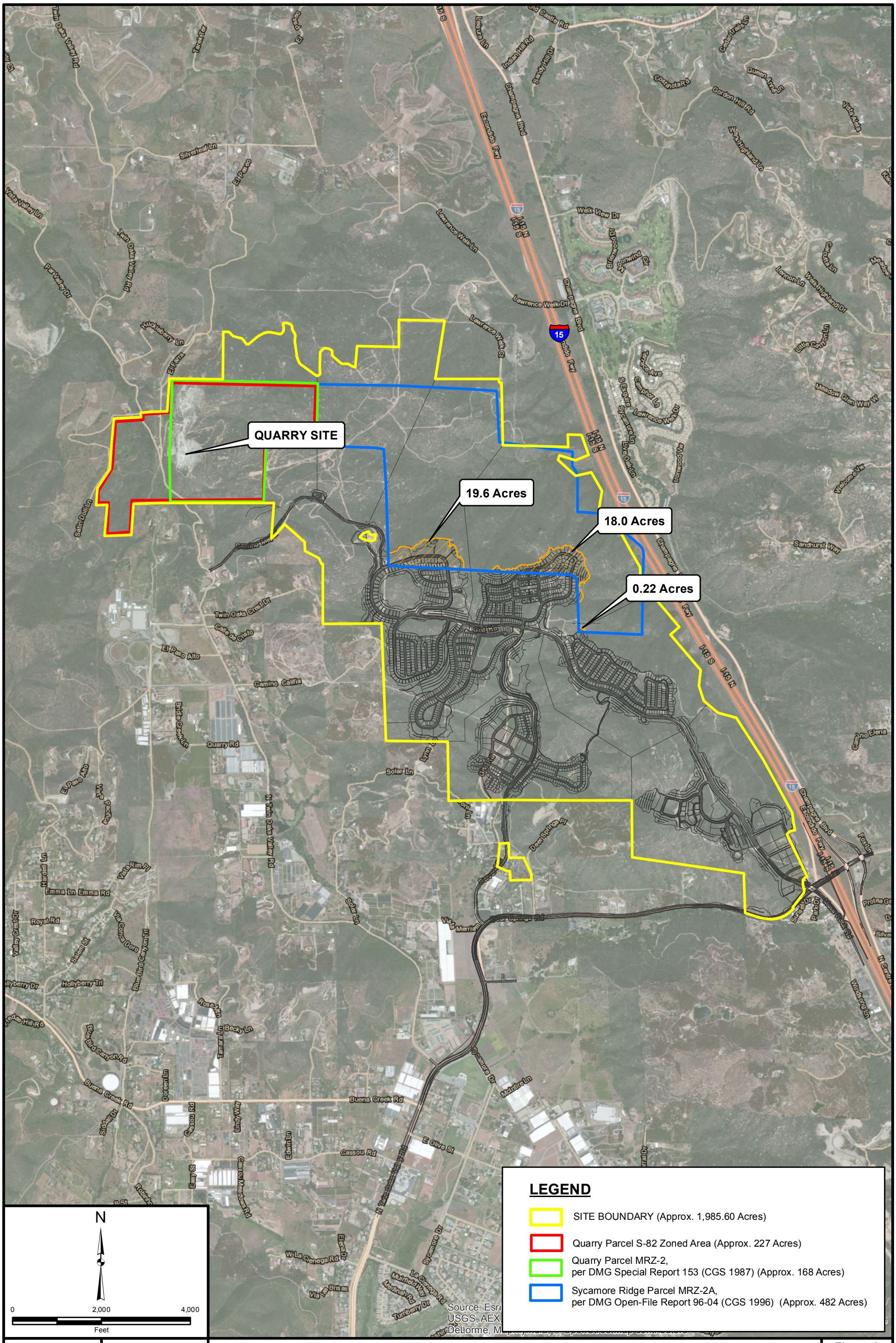


Project:10618.007	Eng/Geol: MRS/RCS
Scale: 1 " = 2,000 '	Date: June 2015

Base Map: ESRI ArcGIS Online 2015
Thematic Information: Leighton
Author: kthomas (mmurphy)

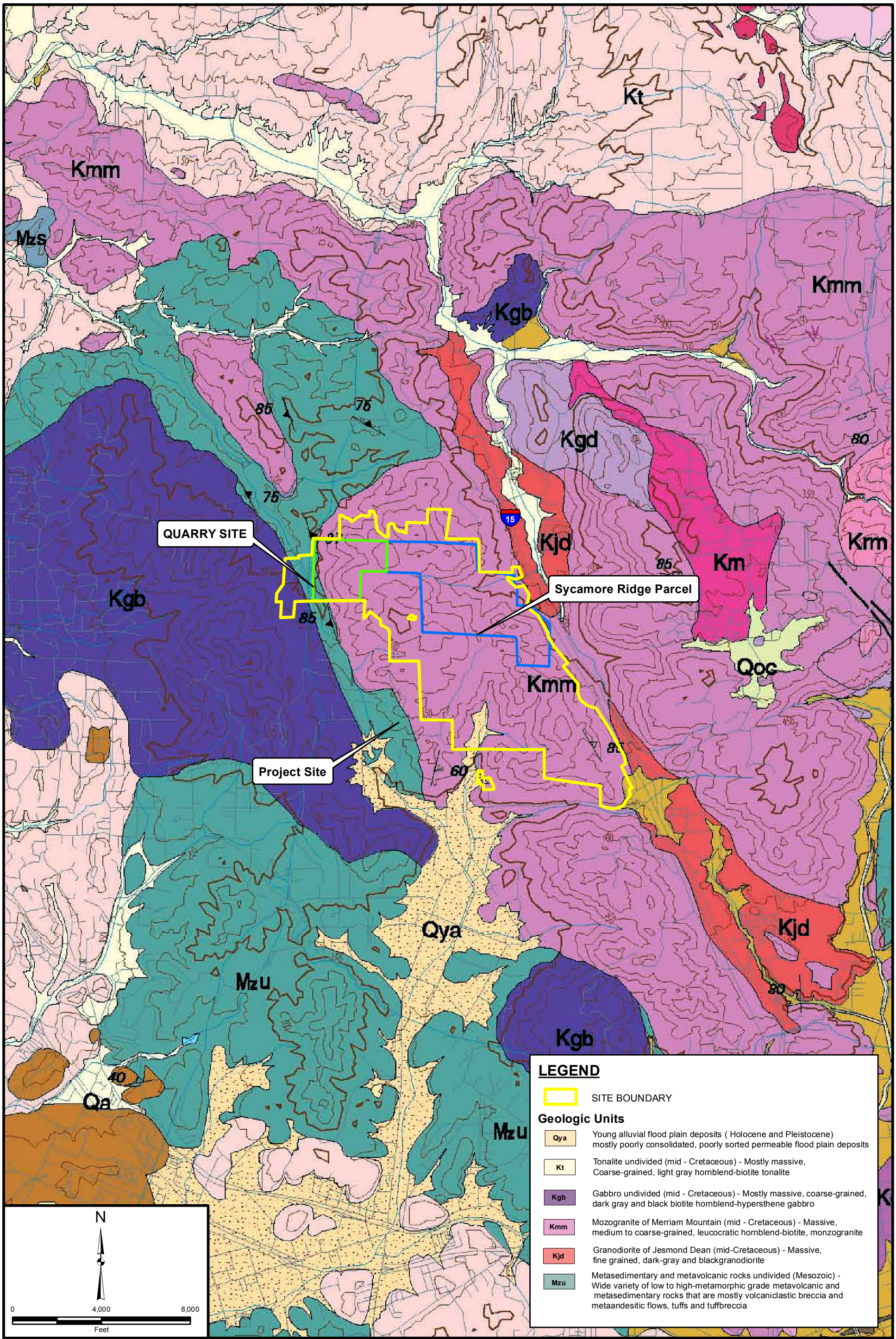
PROPERTY OVERVIEW MAP

Newland Sierra Property
San Marcos, California

Figure 3

Leighton

Map Saved as V:\drafting\10618\003\mAPS\16018-003_F00_POM_2015-01-13.mxd on 1/15/2015 8:26:05 AM



Project: 10618.007	Eng/Geol: MRS/RCS
Scale: 1 " = 4,000 '	Date: June 2015

Base Map: (CGS, 2005) Preliminary Map, Oceanside 30'X60' Quandrangle

Author: kthomas (mmurphy)

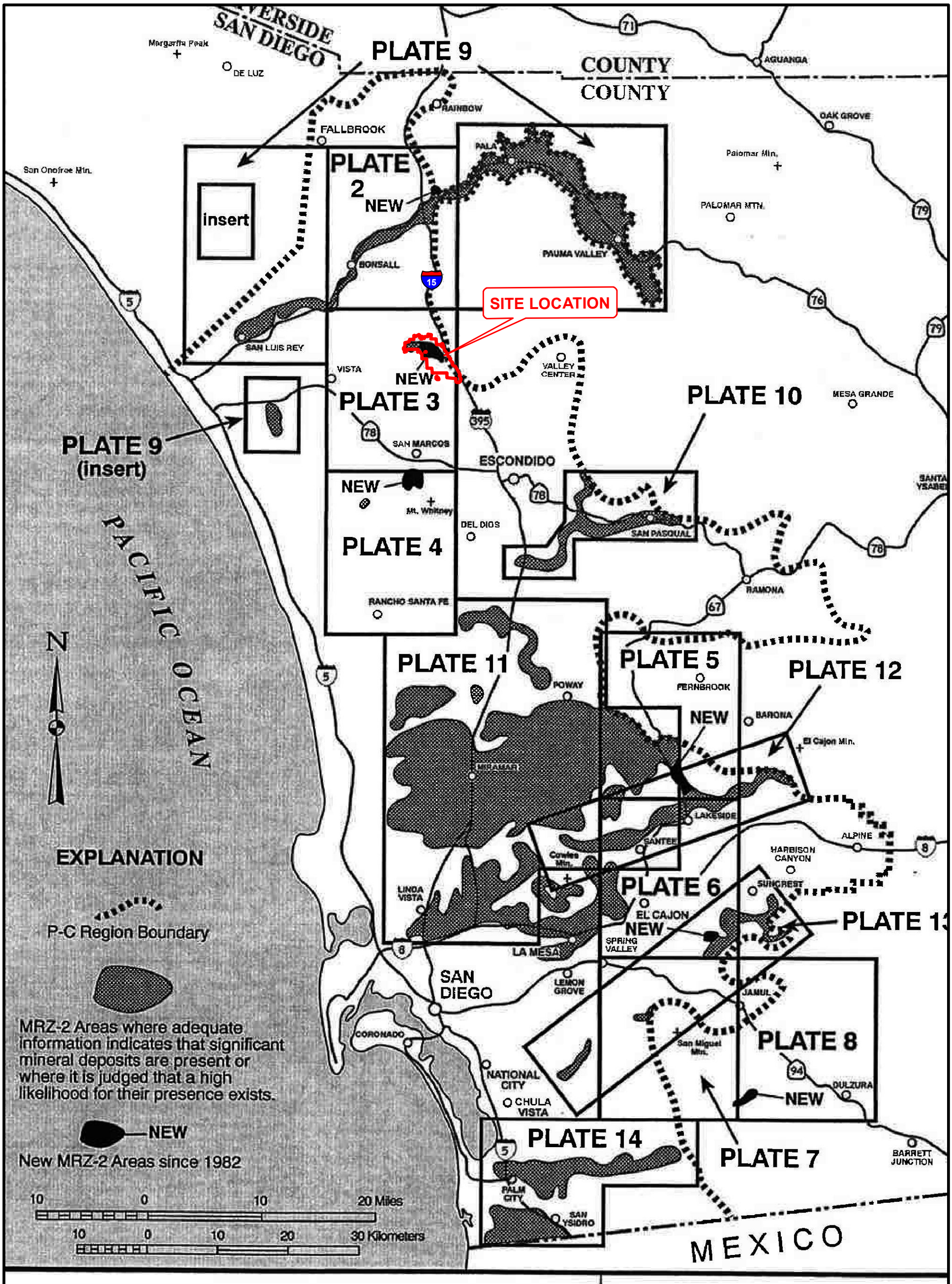
REGIONAL GEOLOGY MAP

Newland Sierra Property
San Diego, California

Figure 4

Leighton

Map Saved as V:\drafting\10618\003\mAPS\10618.004_F04_RGM_2015-01-13.mxd on 1/15/2015 11:07:01 AM



Project:10618.007	Eng/Geol: MRS/RCS
Scale: 1 " = 5 miles	Date: June 2015
Base Map: ESRI ArcGIS Online 2015 Thematic Information: Leighton Author: kthomas (mmurphy)	

HIGHLIGHTED MINERAL RESOURCE ZONES

Newland Sierra Property
San Marcos, California

Figure 5

Leighton

Map Saved as V:\drafting\10618\003\mAPS\16018-003_F05_HMRZ_2015-01-14.mxd on 1/15/2015 8:31:08 AM