



Paleontological Records Search
San Diego Gas and Electric
Sunrise Powerlink Project

Prepared for:

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Introduction

The SDG&E Sunrise Powerlink transmission line right-of-way (ROW) traverses, from east to west, a portion of southwestern Imperial County beginning in Yuha Basin and skirting the southern end of the Coyote Mountains before crossing into eastern San Diego County along the Interstate 8 corridor. From here the ROW follows a circuitous route through Jacumba, McCain, Lost, and La Posta valleys, continues south of Lake Morena, Hauser Canyon, and Barrett Lake before turning north towards Japatul Valley and Interstate 8, which it parallels to the west through Alpine and then north again past El Capitan Reservoir and San Vicente Reservoir to terminate in the mesa and canyonlands east of Scripps Ranch. Along this ROW the transmission line crosses the western portion of the Colorado Desert, ascends the eastern escarpment of the Peninsular Ranges, traverses a series of mountain ranges and intervening alluvial valleys, and descends into the coastal plain. Crystalline basement rocks exposed in the core of the Peninsular Ranges are dominated by plutonic igneous rocks of the Peninsular Ranges Batholith, but also include Mesozoic and Paleozoic(?) pre-batholithic metavolcanic and metasedimentary rocks as well as some Tertiary volcanic rocks. Thick accumulations of Tertiary sedimentary rocks are widely exposed both east and west of the Peninsular Ranges. These include marine and nonmarine deposits of Miocene (~15 million years old, Ma) through Pleistocene (~1 Ma) age in the Colorado Desert and marine and nonmarine deposits of Cretaceous (~75 Ma) through Pleistocene (~1 Ma) age in the coastal plain. Remnant patches of Miocene (~16 Ma) age sedimentary rocks also occur beneath younger volcanic flow rocks in the Jacumba Valley area.

The paleontological record preserved in these sedimentary rocks is significant on both a regional and global level. In the Colorado Desert, Miocene deposits of the Imperial Group contain fossils of tropical marine corals, mollusks, and sea urchins that lived in a northern extension of an ancestral Gulf of California. Pliocene and Pleistocene nonmarine deposits of the Palm Spring Group contain what is arguably the most complete sequence of Plio-Pleistocene terrestrial vertebrate fossils in North America. Turning to the coastal plain, the Eocene sedimentary rocks of the Pomerado Conglomerate, Stadium Conglomerate, and Friars Formation preserve some of the most diverse assemblages of early land mammals known from California.

As defined here, paleontological resources (i.e., fossils) are the remains and/or traces of prehistoric plant and animal life exclusive of humans. Fossil remains such as bones, teeth, shells, leaves, and wood are found in the geologic deposits (rock formations) within which they were originally buried. For the purposes of this report, paleontological resources can be thought of as including not only actual fossil remains, but also the collecting localities where those remains are recovered and the geologic formations containing the collecting localities. This emphasizes the direct relationship between fossils and the geologic formations within which they are entombed. With this relationship in mind knowledge of the geology of a particular area and the paleontological resource sensitivity (i.e., fossil productivity) of particular rock formations makes it possible to predict where fossils might (or might not) be encountered.

This report describes the existing geologic conditions for 18 segments along the ROW, summarizes the results of a review of institutional paleontological collecting records, and provides a discussion of the paleontological resource potential for each segment. The report was prepared by Thomas A. Deméré, Sarah A. Siren, and Kesler A.

Randall of the Department of PaleoServices at the San Diego Natural History Museum. Resources consulted include published geologic reports (Weber, 1963; Morton, 1977; Kennedy and Peterson, 1975; Todd, 2004; Kennedy and Tan, 2005), published and unpublished paleontological reports (Walsh, 1991, 1996; Demere and Walsh, 1993; Jefferson and Lindsay, 2006), and museum paleontological collecting records (Department of Invertebrate Paleontology, Natural History Museum of Los Angeles County, LACMIP; Division of Geological Sciences, San Bernardino County Museum, SBCM; and Department of Paleontology, San Diego Natural History Museum, SDNHM).

Existing Conditions

The following is an annotated listing of existing geologic and paleontological conditions and resource sensitivity for the 18 project segments (in order from east to west). Maps contained in Appendix A (Maps 1-28) summarize the areal extent of mapped geologic rock units within one-mile of the project alignment and include locations of recorded paleontological collecting sites (detailed in Appendices B and C). Keeping in mind the direct relationship between fossils and the geologic formations within which they are entombed, the geologic mapping serves as a reliable indicator of the areal distribution of paleontological resources. Appendix D contains a detailed listing of the linear footprint (for every tenth of a mile) of specific rock units underlining the immediate area of the proposed transmission line.

Imperial County - Segments 1-4:

Segment 1 (MP 0 – Imperial Valley Substation)

Geology: Pleistocene older alluvium (Qoa) is mapped (Map 1) at the Imperial Valley Substation location (Ludington, 2005; Morton, 1977).

Paleontology: No SDNHM or LACMIP fossil localities are mapped within a half-mile of the Imperial Valley Substation.

Resource Sensitivity: Pleistocene older alluvium (Qoa) has an unknown, but possibly high potential to contain paleontological resources (Table 1).

Segment 2 (MP 0 to 19.2)

Geology: Holocene young alluvium (Qya), Pleistocene older alluvium (Qoa), lake beds of ancient Lake Cahuilla (Ql), the Palm Spring Formation (now referred to as the Palm Spring Group [Tps]), the Imperial Formation (now referred to as the Imperial Group [Ti]), and Middle and Upper Jurassic migmatitic schist and gneiss of Stephenson Peak (Jsp) are mapped (Maps 1-6) along this segment (Ludington, 2005; Morton, 1977; Todd, 2004).

Paleontology: SDNHM Localities 351 and 2698 are located north of the alignment within Section 14, as shown on the Carrizo Mountain 7.5' Topographic Quadrangle (Map 6). These localities were discovered in Alverson Canyon (a.k.a. Fossil Canyon) in the southern Coyote Mountains (see Appendix B). The fossil-bearing sedimentary rocks here were mapped as the Imperial Formation by Morton (1977); however, more recent publications have elevated the Imperial Formation (Ti) to group status (Jefferson and Lindsay, 2006). Within the Imperial Group, SDSNH Localities 351

and 2698 were discovered in the basal sandstones of the late Miocene-age Latrania Formation. The fossils found consist of remains of marine mollusks including snails (e.g., bubble shells, staircase shells, and conchs) and bivalves (e.g., scallops and lucine clams). Further east of these two localities, SDSNH Locality 4981 is located within Section 10 on the eastern edge of the Coyote Mountains and south of the proposed alignment, as shown on the Painted Gorge 7.5' Topographic Quadrangle in Imperial County (Map 4). This locality yielded fossil remains of additional marine invertebrates including shipworm clams, jingle shells, oysters, scallops, cockles, and barnacles, all discovered weathering out of natural outcroppings of sedimentary rocks. The nearest LACMIP Locality 17401 is located more than one mile north of MP 15.5, on the southeast flank of the Coyote Mountains (Map 5). This locality was discovered in sedimentary rocks of the Latrania Formation and consisted of strata containing fossil remains of scallops (see Appendix C).

Resource Sensitivity: Sedimentary rocks of the Palm Spring Group and Imperial Group have a high potential to produce significant paleontological resources, while sedimentary deposits of Pleistocene older alluvium (Qoa) and lake beds of ancient Lake Cahuilla (Ql) have an unknown, but possibly high potential to contain paleontological resources. Sedimentary deposits of Holocene young alluvium (Qya) have a low potential to contain paleontological resources. In contrast, metamorphic rocks (Jsp) along this portion of the alignment have no potential to contain paleontological resources (Table 1).

Segment 3 (MP 19.2 to 23.2)

Geology: Holocene young alluvium (Qya) and Miocene Jacumba Volcanics (Tj) are mapped (Maps 6 & 7) along this segment (Todd, 2004).

Paleontology: No SDNHM or LACMIP fossil localities are mapped within a half-mile of this segment.

Resource Sensitivity: The Holocene young alluvium (Qya) has a low paleontological resource potential, while the volcanic rocks (Tj) along this portion of the alignment have no potential to contain paleontological resources (Table 1).

Segment 4 (MP 23.2 to 30.3)

Geology: Holocene young alluvium (Qya), Miocene Split Mountain Formation (Tsm), Miocene Jacumba Volcanics (Tj), Lower and Upper Cretaceous tonalite of La Posta (Klp), and Mesozoic and Paleozoic? rocks of Jacumba Mountains (MzPzm; Todd, 2004) are mapped (Maps 7 & 8) along this segment. The Split Mountain Formation, however, does not crop out along the centerline of the ROW. The tonalite of La Posta represents an individual pluton within the larger Peninsular Ranges Batholith.

Paleontology: No SDNHM or LACMIP fossil localities are mapped within a half-mile of this segment of the alignment.

Resource Sensitivity: Holocene young alluvium (Qya) has a low potential to yield significant fossils, whereas Pleistocene older alluvium (Qoa) and the Split Mountain Formation have an unknown potential to contain paleontological resources. Igneous rocks (Tj and Klp) and pre-batholithic metamorphic rocks (MxPzm) along this portion of the alignment have no potential to contain paleontological resources (Table 1).

San Diego County – Segments 5-18:

Segment 5 (MP 30.3 to 39.7)

Geology: Holocene young alluvium (Qya), Pleistocene older alluvium (Qoa), Miocene Anza Formation (Ta), Miocene Jacumba Volcanics (Tj), Lower and Upper Cretaceous tonalite of La Posta (Klp), Upper Cretaceous Indian Hill granodiorite of Parrish and others, 1986 (Kih), and Middle and Upper Jurassic migmatitic schist and gneiss of Stephenson Peak (Jsp) are mapped (Maps 8-11) along the alignment in this location (Todd, 2004). The Indian Hill granodiorite represents an individual pluton within the larger Peninsular Ranges Batholith.

Paleontology: SDSNH Localities 4801 to 4802 and 4805 to 4806 are located north of the proposed alignment within Section 5, as shown on the Jacumba 7.5' Topographic Quadrangle near the community of Jacumba in eastern San Diego County (Map 10). South of the proposed alignment, SDSNH Locality 4852 is located within Section 6 (Map 10). These fossil collecting localities were discovered in sedimentary rocks of the Miocene Anza Formation (equals Table Mountain Formation of other workers) and yielded vertebrate fossil remains, including bones of rabbits and camels, all discovered weathering out of surface outcroppings (see Appendix B).

Resource Sensitivity: Holocene young alluvium (Qya) has a low potential to yield significant fossils, while sedimentary deposits of Pleistocene older alluvium (Qoa) have an unknown, but possibly high potential to contain paleontological resources. The non-marine sandstones of the Miocene Anza Formation have a high potential to produce significant paleontological resources based on the known occurrence of vertebrate fossils in this rock unit. In contrast, Miocene volcanic rocks (Tj) and older plutonic (Klp and Kih) and metamorphic (Jsp) rocks mapped along this segment have no potential to yield paleontological resources (Table 1).

Segment 6 (MP 39.7 to 52.5)

Geology: Holocene young alluvium (Qya), Pleistocene older alluvium (Qoa), Lower and Upper Cretaceous tonalite of La Posta (Klp), and Jurassic and Triassic metasedimentary and metavolcanic rocks equivalent to the Julian Schist (JT_{r,m}) are mapped (Maps 11-14) along this segment (Todd, 2004).

Paleontology: No SDNHM or LACMIP fossil localities are mapped within a half-mile of this segment.

Resource Sensitivity: Holocene young alluvium (Qya) has a low potential to yield significant fossils, whereas Pleistocene older alluvium (Qoa) has an unknown, but possibly high potential to contain paleontological resources. Igneous (Klp) and metavolcanic (JT_{r,m}) rocks along the alignment have no potential to yield significant fossil. However, metasedimentary rocks of the Julian Schist (JT_{r,m}) have an unknown potential based on discovery of an ammonite (prehistoric cephalopod) from slightly metamorphosed shale within the Julian Schist discovered elsewhere in San Diego County (Table 1).

Segment 7 (MP 52.5 to 61.3)

Geology: Holocene young alluvium (Qya), Pleistocene older alluvium (Qoa), Lower Cretaceous Cuyamaca gabbro (Kc), Lower Cretaceous tonalite of Granite

Mountain (Kgm), Lower and Upper Cretaceous tonalite of La Posta (Klp), Middle and Upper Jurassic granodiorite of Cuyamaca Reservoir (Jcr), and Jurassic and Triassic metasedimentary and metavolcanic rocks equivalent to the Julian Schist (JT,m) are mapped (Maps 14-16) along this segment (Todd, 2004). The Cuyamaca gabbro, tonalite of Granite Mountain, and granodiorite of Cuyamaca Reservoir represent individual plutons within the larger Peninsular Ranges Batholith.

Paleontology: No SDNHM or LACMIP fossil localities are mapped within a half-mile of this segment.

Resource Sensitivity: Holocene young alluvium (Qya) has a low potential to yield significant fossils, whereas Pleistocene older alluvium (Qoa) has an unknown, but possibly high potential to contain paleontological resources. Igneous (Kc, Kgm, Klp, and Jcr) and metavolcanic (JT,m) rocks mapped along this segment have no potential to yield significant fossils. However, the metasedimentary rocks of the Julian Schist (JT,m) have an unknown potential to yield fossil resources (Table 1).

Segment 8 (MP 61.3 to 65.4)

Geology: Only plutonic igneous rocks of the Lower and Upper Cretaceous tonalite of La Posta (Klp) are mapped (Map 16) along this segment.

Paleontology: No SDNHM or LACMIP fossil localities are mapped within a half-mile of this segment.

Resource Sensitivity: Cretaceous plutonic igneous rocks (Klp) mapped along this segment have no potential to contain paleontological resources (Table 1).

Segment 9 (MP 65.4 to 70.9)

Geology: Holocene young alluvium (Qya), Lower Cretaceous tonalite of Granite Mountain including subunits 1-3 (Kgm), and Lower and Upper Cretaceous tonalite of La Posta, (Klp) are mapped (Maps 16-18) along this segment (Todd, 2004).

Paleontology: No SDNHM or LACMIP fossil localities are mapped within a half-mile of this segment.

Resource Sensitivity: Holocene young alluvium (Qya) has a low potential to contain paleontological resources. Plutonic igneous rocks (Kgm and Klp) mapped along this segment have no potential to contain paleontological resources (Table 1).

Segment 10 (MP 70.9 to 74.8)

Geology: Holocene young alluvium (Qya), Lower Cretaceous Corte Madera monzogranite (Kcm), Lower Cretaceous tonalite of Granite Mountain including subunits 2 and 3 (Kgm), and Lower and Upper Cretaceous tonalite of La Posta (Klp) are mapped (Maps 18 & 19) along this segment (Todd, 2004). The Corte Madera monzogranite represents an individual pluton within the larger Peninsular Ranges Batholith.

Paleontology: No SDNHM or LACMIP fossil localities are mapped within a half-mile of this segment.

Resource Sensitivity: Holocene young alluvium (Qya) has a low potential to contain paleontological resources. Plutonic igneous rocks (Kcm, Kgm, and Klp) mapped along this segment have no potential to contain paleontological resources (Table 1).

Segment 11 (MP 74.8 to 77.6)

Geology: Only the Lower Cretaceous Corte Madera monzogranite (Kcm) is mapped (Maps 19 & 20) along this segment.

Paleontology: No SDNHM or LACMIP fossil localities are mapped within a half-mile of this segment.

Resource Sensitivity: The Cretaceous plutonic igneous rocks (Kcm) mapped along this segment have no potential to contain paleontological resources (Table 1).

Segment 12 (MP 77.6 to 90.0)

Geology: Holocene young alluvium (Qya), Pleistocene older alluvium (Qoa), Early Cretaceous tonalite of Alpine (Ka), Early Cretaceous Cuyamaca gabbro (Kc), lower Cretaceous Corte Madera monzogranite (Kcm), Lower Cretaceous Japatul Valley tonalite (Kjv), Cretaceous and Jurassic? metavolcanic and metasedimentary rocks (Kjvs), Lower Cretaceous metavolcanic rocks (Kmv), and Middle and Upper Jurassic granodiorite of Cuyamaca Reservoir (Jcr) are mapped (Maps 20-22) along this segment (Todd, 2004). The Japatul Valley tonalite represents an individual pluton within the larger Peninsular Ranges Batholith.

Paleontology: No SDNHM or LACMIP fossil localities are mapped within a half-mile of this segment.

Resource Sensitivity: Holocene young alluvium (Qya) has been assigned a low paleontological resource potential, whereas Pleistocene older alluvium (Qoa) has an unknown, but possibly high potential to contain paleontological resources. Igneous and metamorphic rocks (Ka, Kc, Kcm, Kjv, Kjvs, Kmv, and Jcr) underlying this portion of the alignment have no potential to yield fossil resources (Table 1).

Segment 13 (Suncrest Substation, between MP 89 and 90)

Geology: Cretaceous and Jurassic? metavolcanic and metasedimentary rocks (Kjvs), Lower Cretaceous Corte Madera monzogranite (Kcm), and Middle and Upper Jurassic granodiorite of Cuyamaca Reservoir (Jcr) are mapped (Map 22) at the Suncrest Substation (Todd, 2004).

Paleontology: No SDNHM or LACMIP fossil localities are mapped within a half-mile of this segment.

Resource Sensitivity: Igneous and metamorphic rocks (Kjvs, Kcm, and Jcr) mapped along this portion of the alignment have no potential to yield significant fossils (Table 1).

Segment 14 (MP 90.0 to 92.8)

Geology: Only the Lower Cretaceous tonalite of Alpine (Ka) is mapped (Map 22) along this segment (Todd, 2004). The tonalite of Alpine represents an individual pluton within the larger Peninsular Ranges Batholith.

Paleontology: No SDNHM or LACMIP fossil localities are mapped within a half-mile of this segment.

Resource Sensitivity: Plutonic igneous rocks (Ka) mapped along this portion of the alignment have no potential to contain paleontological resources (Table 1).

Segment 15 (MP 92.8 to 99.0)

Geology: Holocene young alluvium (Qya), Upper Cretaceous Lusardi Formation (Kl), Lower Cretaceous tonalite of Alpine (Ka), Lower Cretaceous tonalite of Las Blancas (Klb), and Upper Cretaceous and Upper Jurassic leucogranite dikes (KJld) are mapped (Maps 22-24) along this segment (Todd, 2004). The tonalite of Las Blancas represents an individual pluton within the larger Peninsular Ranges Batholith.

Paleontology: No SDNHM or LACMIP fossil localities are mapped within a half-mile of this segment.

Resource Sensitivity: Sedimentary deposits of Holocene young alluvium (Qya) and Cretaceous Lusardi Formation have a low potential to contain paleontological resources. Plutonic igneous rocks (Ka, Klb, and KJld) underlying this portion of the alignment have no potential to yield significant fossils (Table 1).

Segment 16 (MP 99.0 to 105.5)

Geology: Holocene young alluvium (Qya), Pleistocene older alluvium (Qoa), Lower Cretaceous tonalite of Alpine (Ka), Lower Cretaceous Cuyamaca gabbro (Kc), Lower Cretaceous tonalite of Las Blancas (Klb), and Lower Cretaceous metavolcanic rocks (Kmv) are mapped (Maps 24 & 25) along this segment (Todd, 2004).

Paleontology: No SDNHM or LACMIP fossil localities are mapped within a half-mile of this segment.

Resource Sensitivity: Holocene young alluvium (Qya) has been assigned a low potential, whereas Pleistocene older alluvium (Qoa) has an unknown, but possibly high potential to contain paleontological resources. Plutonic rocks (Ka, Kc, and Klb) and metavolcanic rocks (Kmv) have no potential to contain paleontological resources (Table 1).

Segment 17 (MP 105.5 to 112.7)

Geology: Holocene young alluvium (Qya), Eocene Pomerado Conglomerate (Tp), Eocene Stadium Conglomerate (Tst), Upper Cretaceous Lusardi Formation (Kl), Lower Cretaceous granitoid rocks (Kgr), and Lower Cretaceous Santiago Peak Volcanics (Ksp) are mapped (Maps 25-27) along this segment, with the potential to encounter Pleistocene older alluvium (Qoa) and Eocene Friars Formation (Tf) at depth (Todd, 2004).

Paleontology: Although no fossil collecting localities are recorded from within a half-mile of this portion of the alignment, significant vertebrate fossils have been recovered nearby from Eocene sedimentary rocks of the Pomerado Conglomerate, Stadium Conglomerate, and Friars Formation.

Resource Sensitivity: Sedimentary deposits of Holocene young alluvium (Qya) and Cretaceous Lusardi Formation have a low potential to contain paleontological resources. Eocene sedimentary rocks of the Pomerado Conglomerate and Stadium Conglomerate have a high potential to produce significant paleontological resources. Also, at an unknown depth below Holocene young alluvium (Qya-low potential) at MP 109, Pleistocene older alluvium (Qoa) and Eocene Friars Formation (Tf) (high potential) may be encountered. Plutonic rocks (Kgr) and metavolcanic rocks (Ksp) have no potential to contain paleontological resources (Table 1).

Segment 18 (MP 112.7 to 118.1)

Geology: Holocene young alluvium (Qya), Eocene Pomerado Conglomerate (Tp), Eocene Mission Valley (Tmv), Eocene Stadium Conglomerate (Tst), Eocene Friars Formation (Tf), Lower Cretaceous granitoid rocks (Kgr), and Lower Cretaceous Santiago Peak Volcanics (Ksp) are mapped (Maps 27 & 28) along this segment (Kennedy and Peterson, 1975).

Paleontology: Within this segment, north of State Route 52 in the vicinity of Sycamore Canyon, Eocene-age sedimentary rock units (e.g., Pomerado and Stadium conglomerates, and the Mission Valley Formation, MP 113 to MP 118) are known to produce significant vertebrate fossil remains. Although unmapped at the surface, there are several recorded fossil collecting localities in the area from the Friars Formation (Tf). SDSNH Localities 5615 and 5616 are located within Section 30, north of the proposed alignment along Beeler Canyon (Map 28). Each of these recorded localities yielded vertebrate fossil remains of lizards, marsupials, insectivores, primates, rodents, and oreodonts. The localities were discovered during paleontological monitoring of construction-related mass-grading activities.

Resource Sensitivity: Holocene young alluvium (Qya) has a low potential to contain paleontological resources, while plutonic rocks (Kgr) and metavolcanic rocks (Ksp) have no potential to contain paleontological resources. Eocene-age sedimentary rock units (Tp, Tmv, Tst, and Tf) have a high paleontological resource potential. Also, at an unknown depth below Holocene young alluvium (Qya-low potential), Pleistocene older alluvium (Qoa-high potential) may be encountered.

Discussion

The distribution of paleontological resources along the proposed Sunrise Powerlink transmission line is not uniform, with significant paleontological resources located only along the extreme eastern (Segments 2 and 5) and extreme western (Segments 17 and 18) portions of the ROW. See Appendix D for a detailed inventory of paleontological resources by milepost. Segment 2 crosses marine sedimentary rocks of Late Miocene and Early Pliocene age (Imperial Group) and non-marine sedimentary rocks of Late Pliocene and Early Pleistocene age (Palm Spring Group). Segment 5 crosses non-marine sedimentary rocks of Middle Miocene age (Anza Formation), while Segment 18 crosses non-marine sedimentary rocks of Middle Eocene age (Pomerado Conglomerate, Stadium Conglomerate, and Friars Formation). All of these sedimentary rock units have produced significant paleontological resources as documented in institutional records. Pleistocene older alluvium occurs as isolated outliers along portions of Segments 1, 2, 3, 4, 5, 6, 7, 12, and 16 and has an unproven potential to produce significant paleontological resources. Metasedimentary rocks of the Julian Schist occur along Segments 6 and 7 and retain an unknown potential to preserve significant paleontological resources.

Between Segments 5 and 17 the geology of the ROW is dominated by plutonic igneous rocks of the Peninsular Ranges Batholith, a regional plutonic mass made up of individual plutons of tonalite, granodiorite, monzogranite, and gabbro composition, as well as leucogranitic dike rocks. These plutonic rocks and the surrounding metavolcanic rocks they intruded formed under high temperature conditions that preclude the

occurrence of paleontological resources. Prebatholithic metasedimentary rocks of the Julian Schist exposed along Segments 6 and 7 were also intruded by plutonic rocks, but retain the potential to preserve significant paleontological resources because of their Mesozoic marine sedimentary origin.

Table 1 – Paleontological Resource Potential by Project Segment

Segment	Resource Potential				SDNHM Locality	LACMIP Locality
	High	Unknown	Low	No		
1		Qoa			None	None
2	Tps, Ti	Qoa	Qya	Jsp	351, 2698, 4981	17401
3		Qoa		Tj	None	None
4		Qoa	Qya	Tj & MzPzm	None	None
5	Ta	Qoa	Qya	Tj, Klp, Kih, & Jsp	4801, 4802, 4805, 4806, 4852	None
6		Qoa & JTrm	Qya	Klp	None	None
7		Qoa & JTrm	Qya	Kc, Kgm, Klp, & Jcr	None	None
8				Klp	None	None
9			Qya	Kgm & Klp	None	None
10			Qya	Kcm, Kgm, & Klp	None	None
11				Kcm	None	None
12		Qoa	Qya	Ka, Kc, Kcm, Kjv, Kjvs, Kmv, & Jcr	None	None
13				Kjvs, Kcm, & Jcr	None	None
14				Ka	None	None
15			Qya	Ka, Klb, & KJld	None	None
16		Qoa	Qya	Ka, Kc, Klb, & Kmv	None	None
17	Tp & Tst	Qoa	Qya	Kgr & Ksp	None	None
18	Tp, Tst, & Tf	Qoa	Qya	Kgr & Ksp	5615, 5616	None

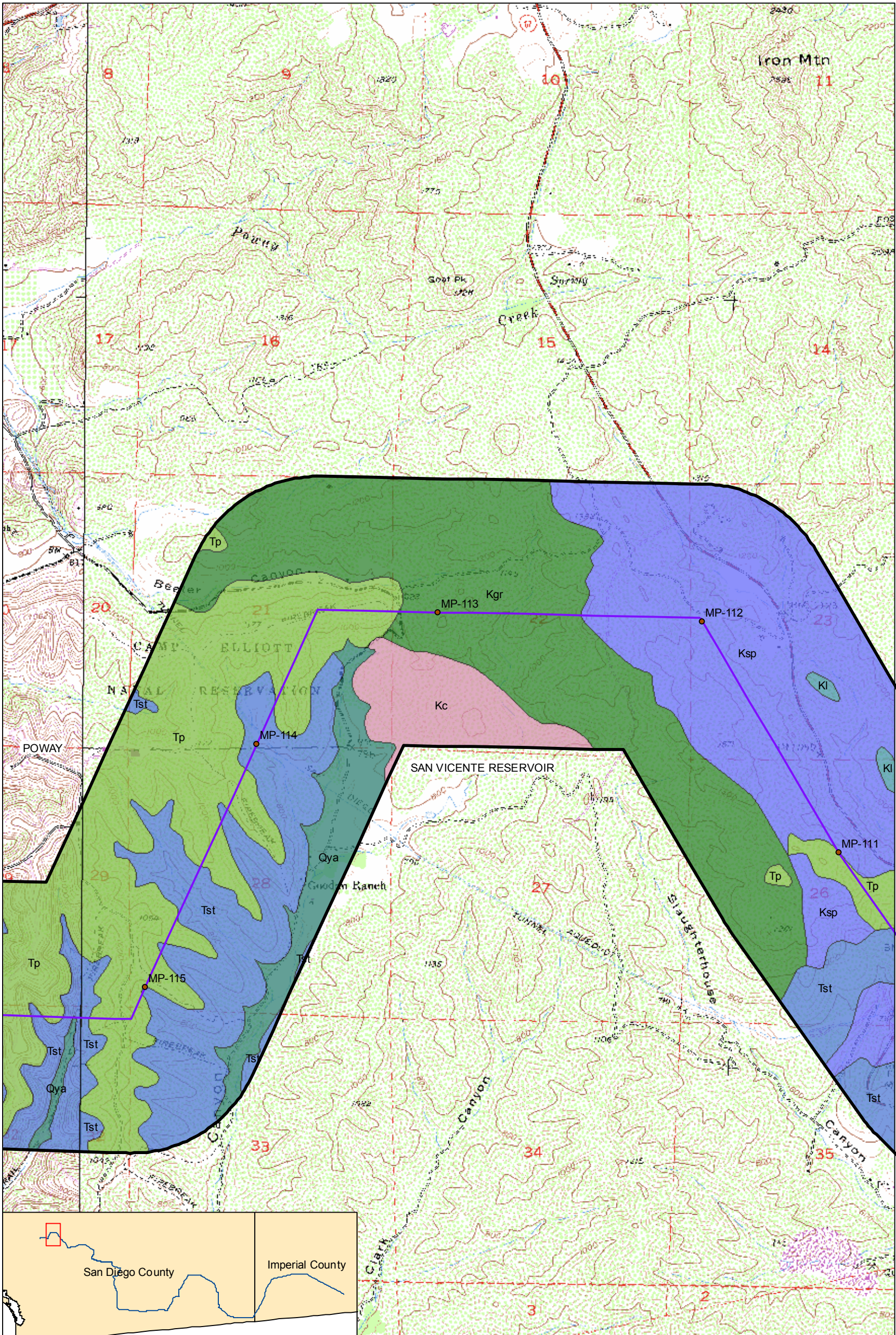
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Appendices

Appendix A

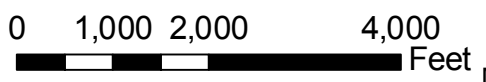
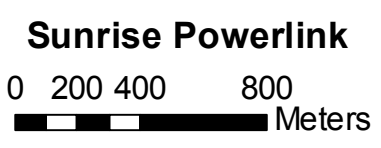
Resource Maps



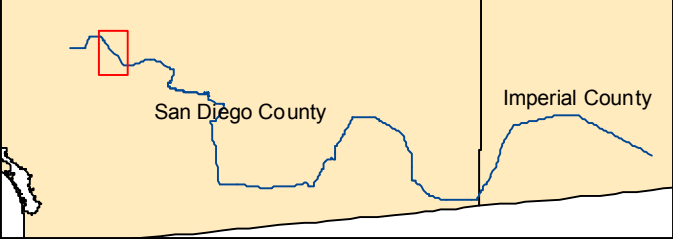
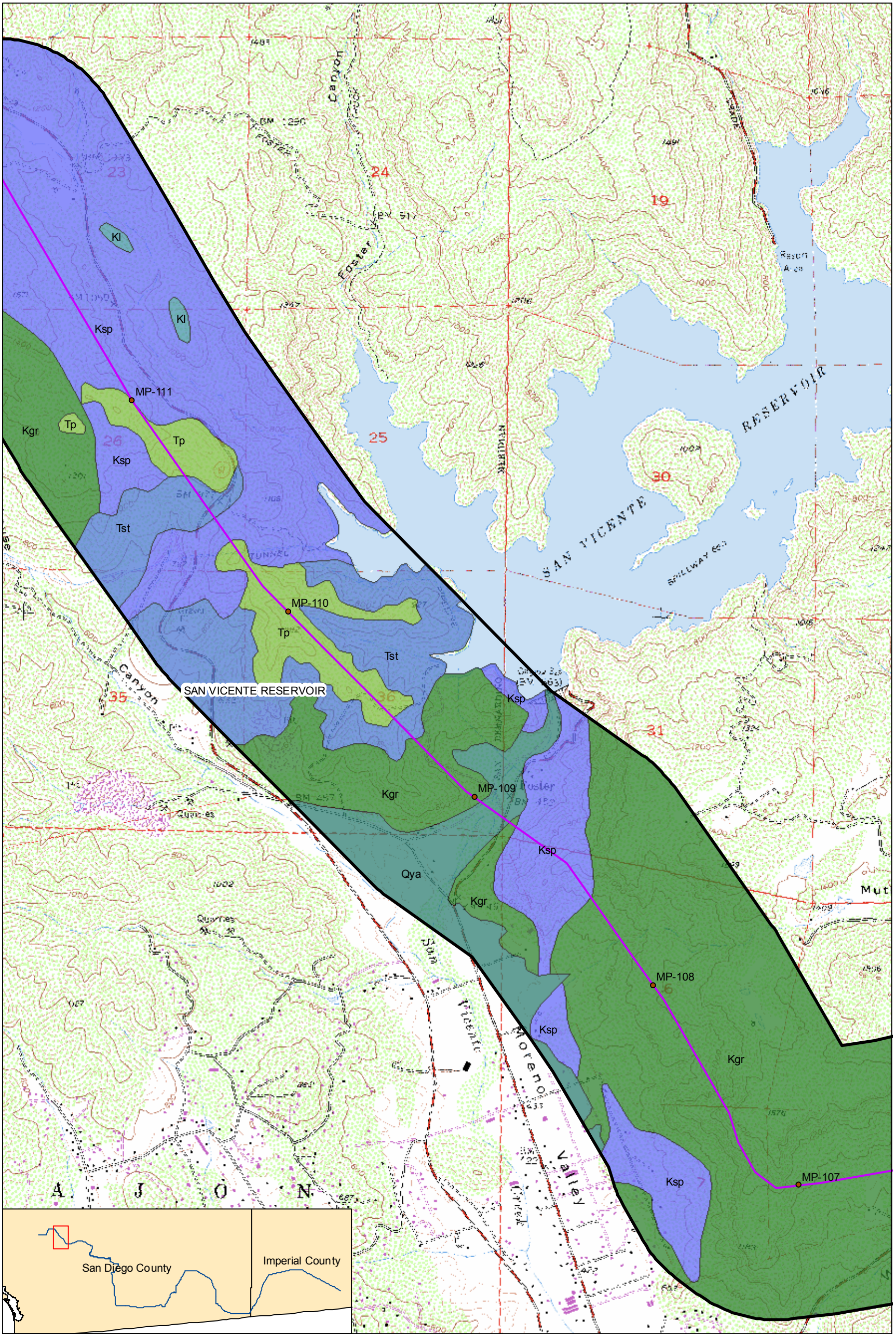
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San Diego Gas & Electric

- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Tp, Pomerado Conglomerate
- Tst, Stadium Conglomerate
- Kl, Lusardi Formation
- Kc, Cuyamaca Gabbro
- Ksp, Santiago Peak Volcanics
- Kcm, Corte Madera Monzogranite
- Kgr, Granitoid rocks

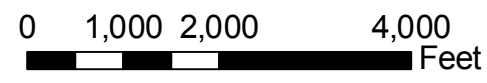


Geology from Todd, 2004 and Kennedy and Tan, 2005



San Diego Gas & Electric 1:24,000

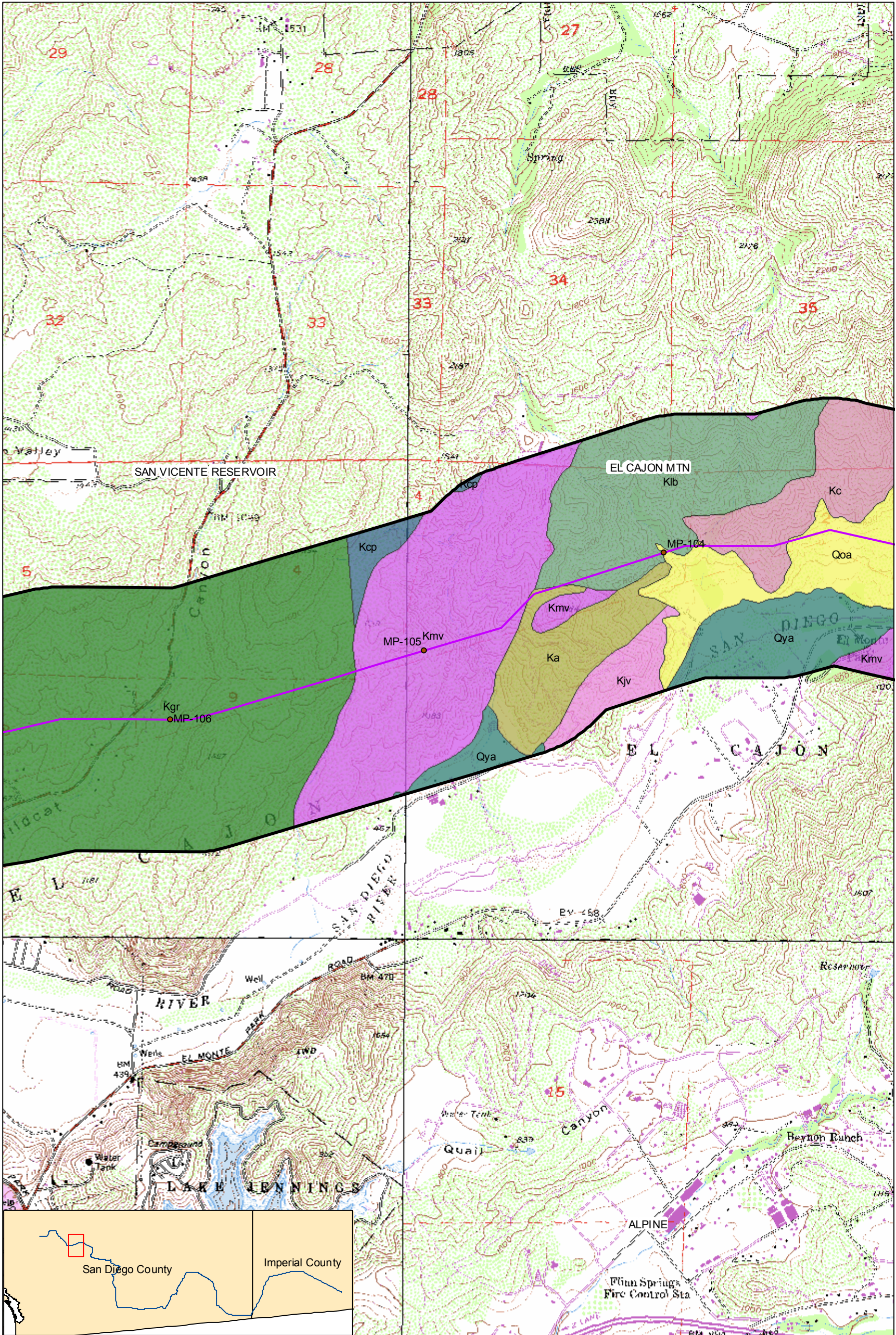
Sunrise Powerlink



Map 26 of 28

- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Tp, Pomerado Conglomerate
- Tst, Stadium Conglomerate
- Kl, Lusardi Formation
- Kgr, Granitoid rocks
- Ksp, Santiago Peak Volcanics

Geology from Todd, 2004



San Diego Gas & Electric 1:24,000

Sunrise Powerlink

● Fossil Localities

— Sunrise Powerlink

□ 1 Mile Buffer

<p>Qya, Holocene Young Alluvium</p> <p>Qoa, Pleistocene Older Alluvium</p> <p>Ka, Tonalite of Alpine</p> <p>Kc, Cuyamaca Gabbro</p> <p>Kcp, Chiquito Peak Monzogranite</p>	<p>Kgr, Granitoid rocks</p> <p>Kjv, Japatul Valley Tonalite</p> <p>Klb, Tonalite of Las Bancas</p> <p>Kmv, Metavolcanic rocks</p>
--	---

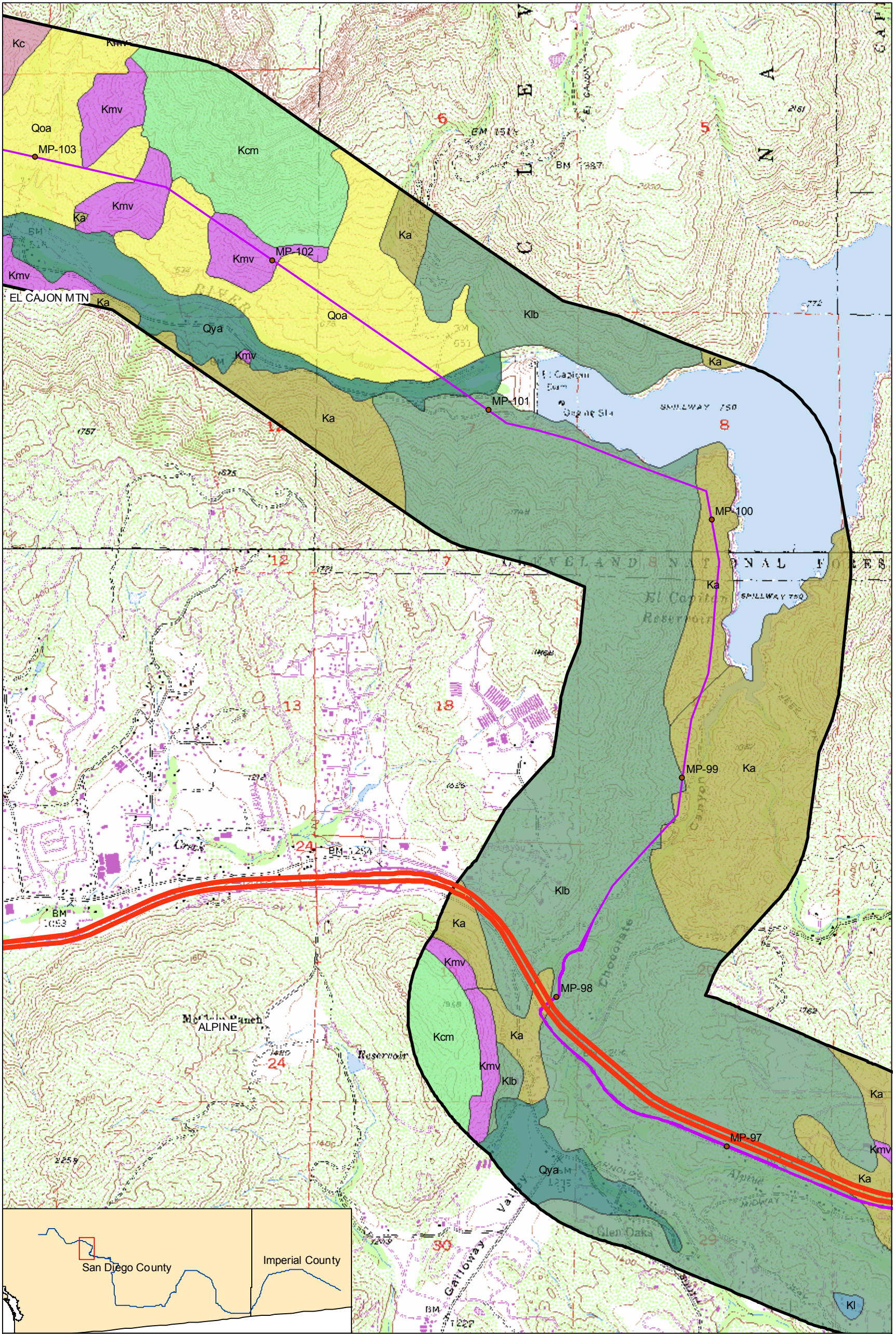
0 200 400 800 Meters

0 1,000 2,000 4,000 Feet

N

Map 25 of 28

Geology from Todd, 2004



San Diego Gas & Electric 1:24,000

Sunrise Powerlink

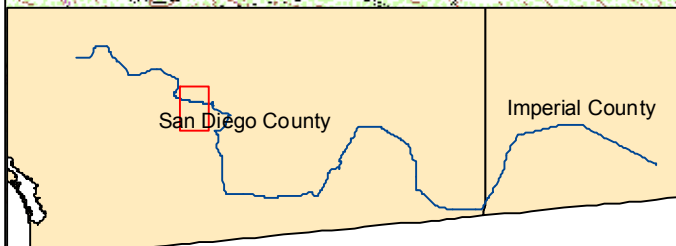
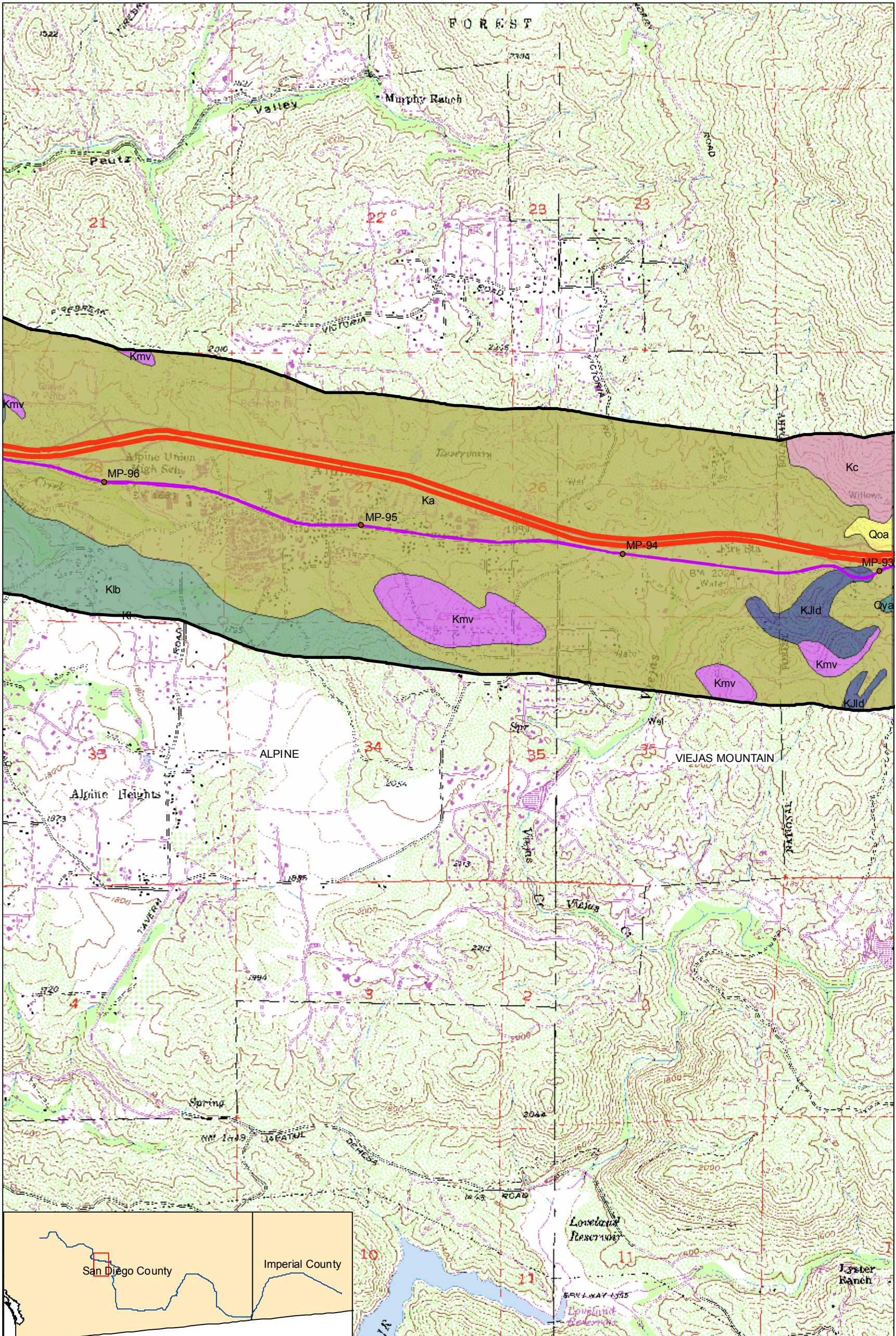
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0 1,000 2,000 4,000 Feet



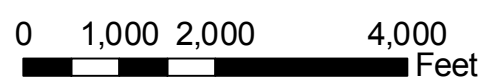
- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Qoa, Pleistocene Older Alluvium
- Kl, Lusardi Formation
- Ka, Tonalite of Alpine
- Kc, Cuyamaca Gabbro
- Kcm, Corte Madera Monzogranite
- Klb, Tonalite of Las Bancas
- Kmv, Metavolcanic rocks

Geology from Todd, 2004



San Diego Gas & Electric 1:24,000

Sunrise Powerlink

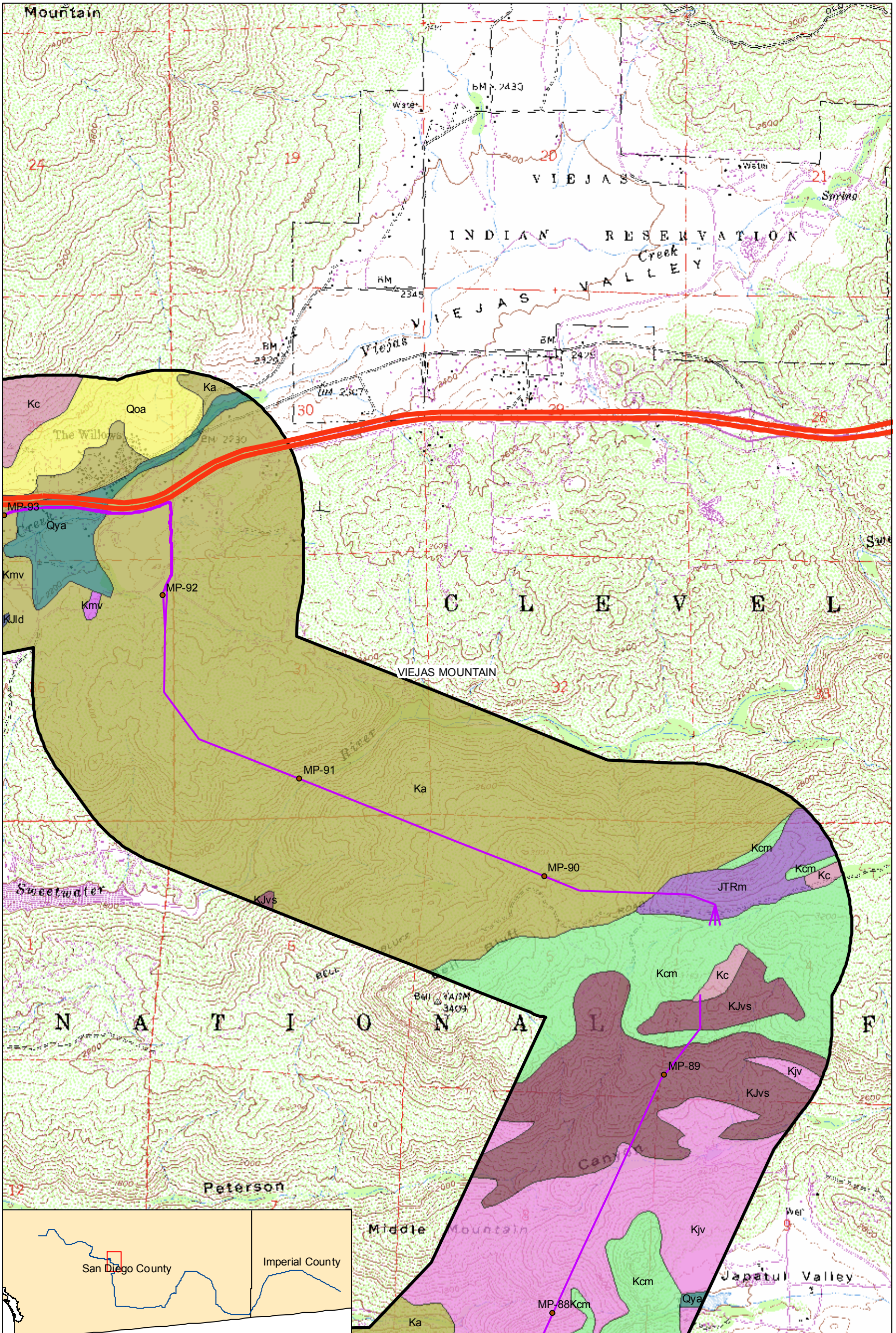


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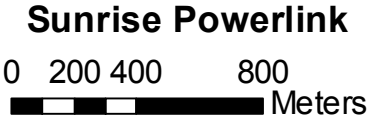
- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Qoa, Pleistocene Older Alluvium
- Kl, Lusardi Formation
- KJld, Leucocratic dikes
- Ka, Tonalite of Alpine
- Kc, Cuyamaca Gabbro
- Klb, Tonalite of Las Bancas
- Kmv, Metavolcanic rocks

Geology from Todd, 2004

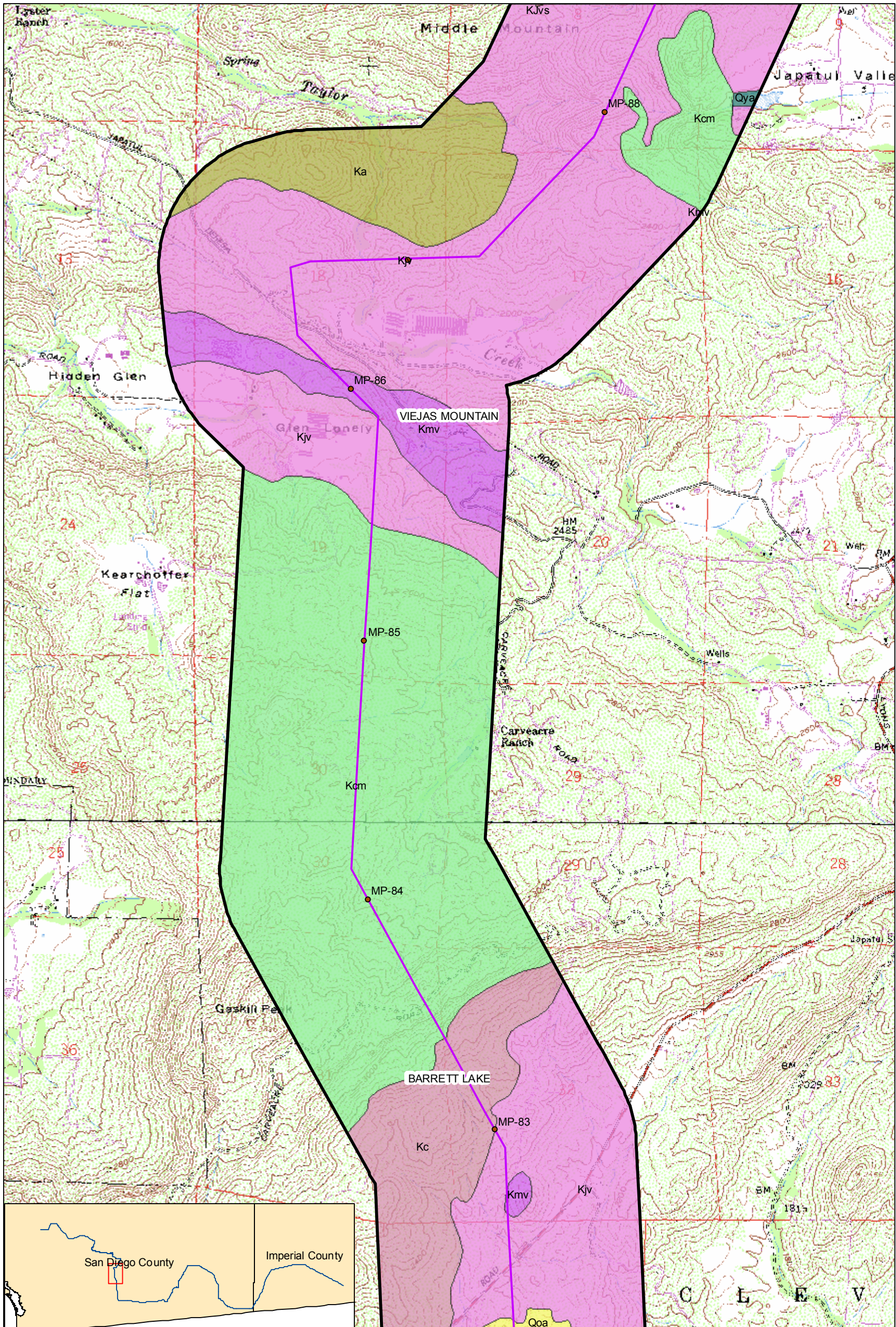


San Diego Gas & Electric 1:24,000

- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Qoa, Pleistocene Older Alluvium
- KJld, Leucocratic dikes
- Ka, Tonalite of Alpine
- Kc, Cuyamaca Gabbro
- Kcm, Corte Madera Monzogranite
- KJv, Japatul Valley Tonalite
- Kmv, Metavolcanic rocks
- KJvs, Metavolcanic and metasedimentary rocks
- JTRm, Metasedimentary and metavolcanic rocks



Geology from Todd, 2004



San Diego Gas & Electric 1:24,044

- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Qoa, Pleistocene Older Alluvium
- Ka, Tonalite of Alpine
- Kc, Cuyamaca Gabbro
- Kcm, Corte Madera Monzogranite
- Kjv, Japatul Valley Tonalite
- Kmv, Metavolcanic rocks
- KJvs, Metavolcanic and metasedimentary rocks

Sunrise Powerlink

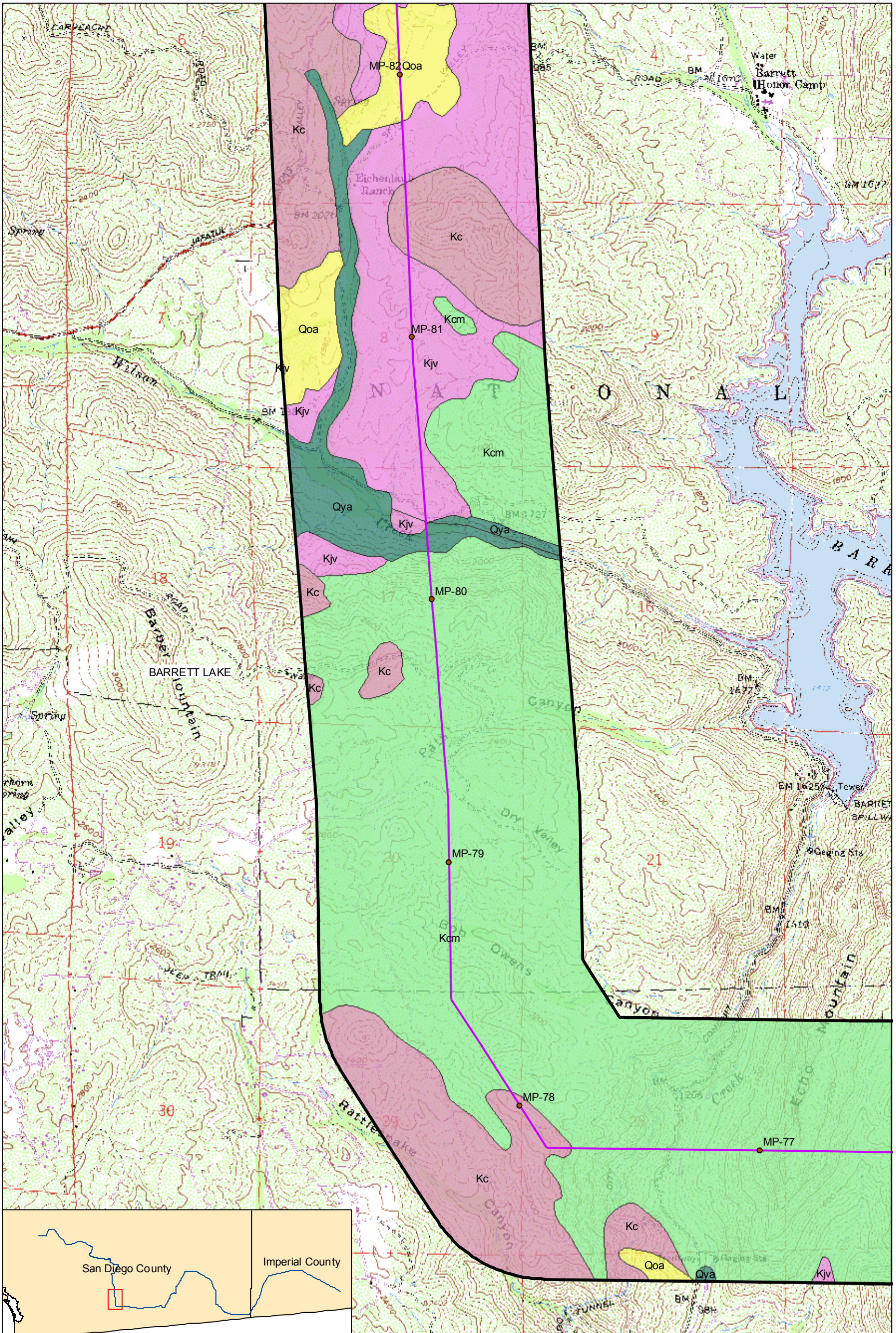
0 200 400 800 Meters

0 1,000 2,000 4,000 Feet



Geology from Todd, 2004

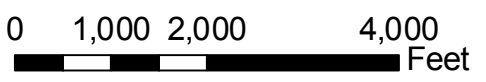
Map 21 of 28



San Diego Gas & Electric 1:24,000

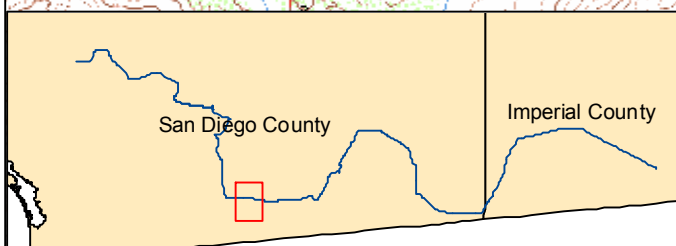
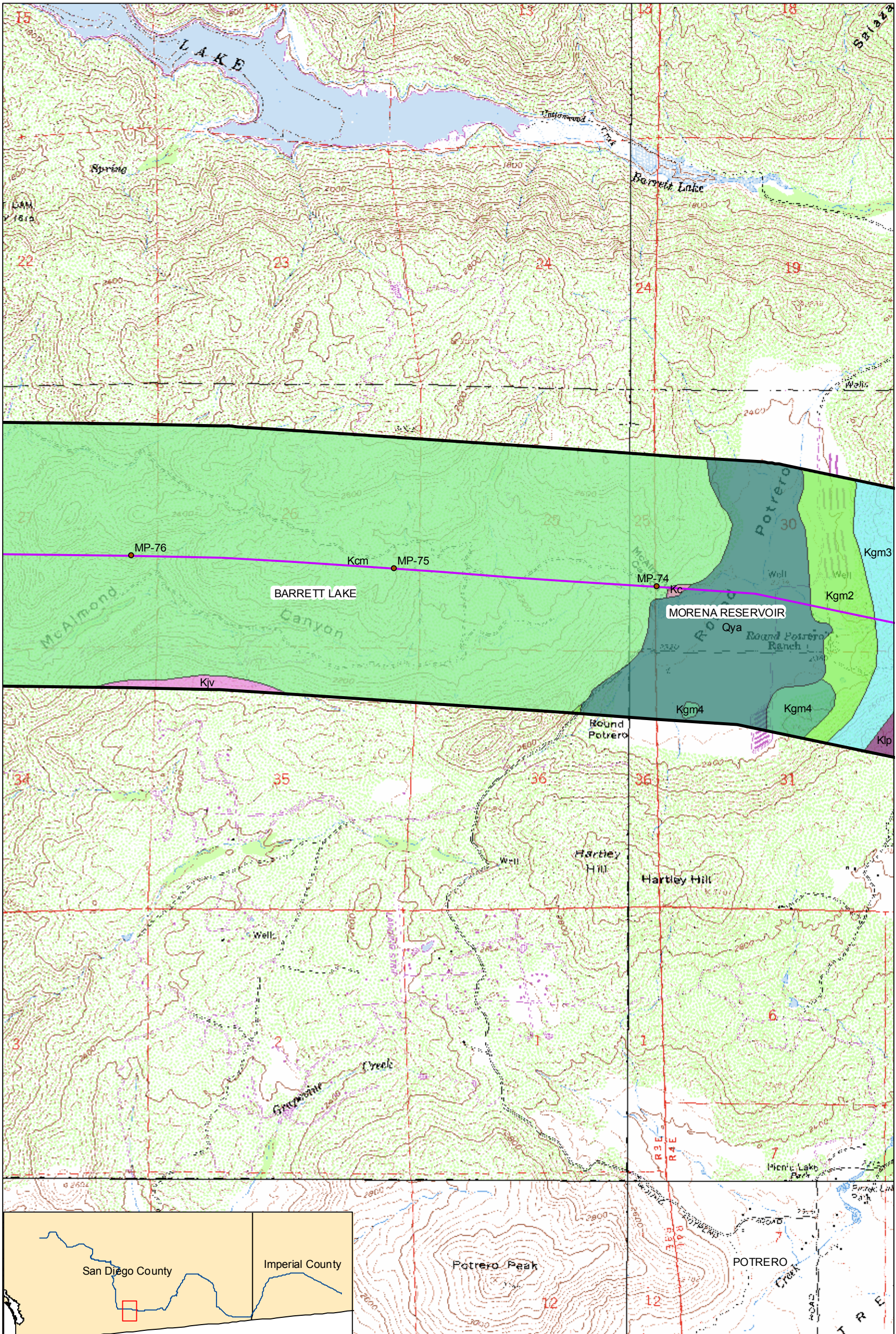
Sunrise Powerlink

N



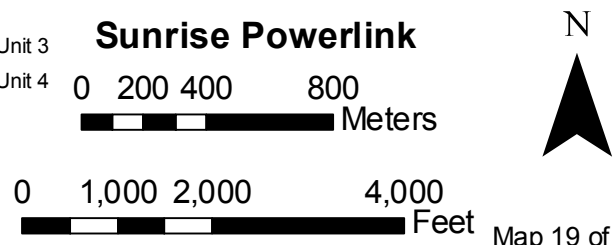
- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Qoa, Pleistocene Older Alluvium
- Kc, Cuyamaca Gabbro
- Kcm, Corte Madera Monzogranite
- Kjv, Japatul Valley Tonalite

Geology from Todd, 2004

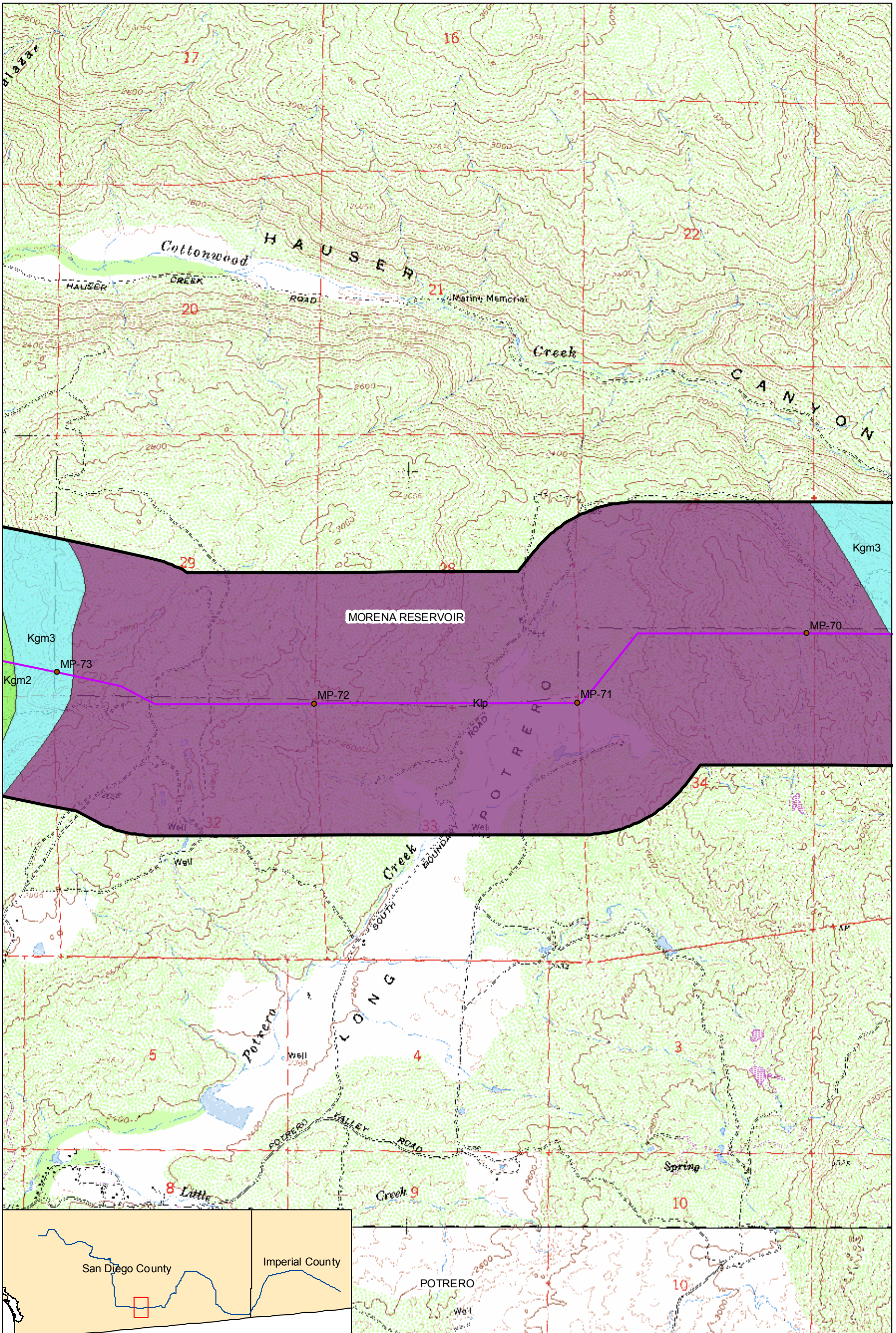


San Diego Gas & Electric 1:24,000

- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Kc, Cuyamaca Gabbro
- Kcm, Corte Madera Monzogranite
- Kgm2, Tonalite of Granite Mountain, Unit 2
- Kgm3, Tonalite of Granite Mountain, Unit 3
- Kgm4, Tonalite of Granite Mountain, Unit 4
- Kqv, Japatul Valley Tonalite
- Klp, Tonalite of La Posta



Geology from Todd, 2004



San Diego Gas & Electric

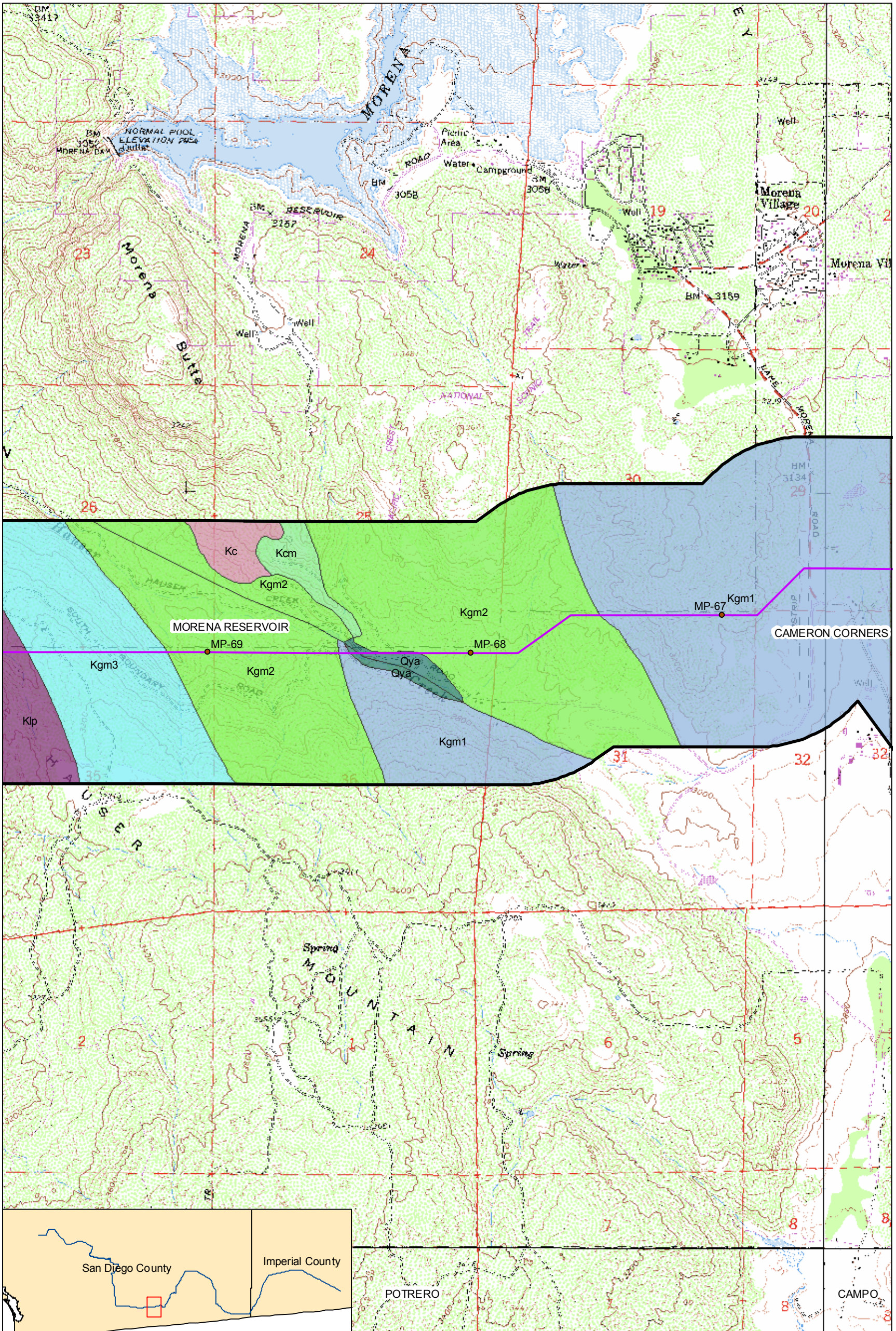
1:24,000

Sunrise Powerlink



- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Kgm2, Tonalite of Granite Mountain, Unit 2
- Kgm3, Tonalite of Granite Mountain, Unit 3
- Klp, Tonalite of La Posta

Geology from Todd, 2004



- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Kc, Cuyamaca Gabbro
- Kcm, Corte Madera Monzogranite
- Kgm1, Tonalite of Granite Mountain, Unit 1
- Kgm2, Tonalite of Granite Mountain, Unit 2
- Kgm3, Tonalite of Granite Mountain, Unit 3
- Klp, Tonalite of La Posta

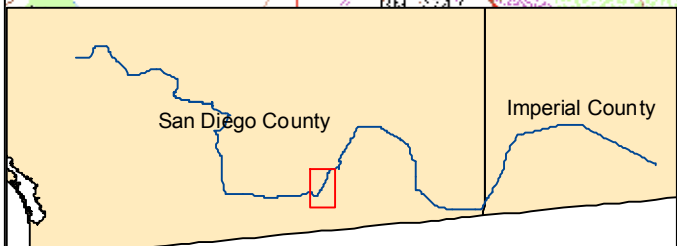
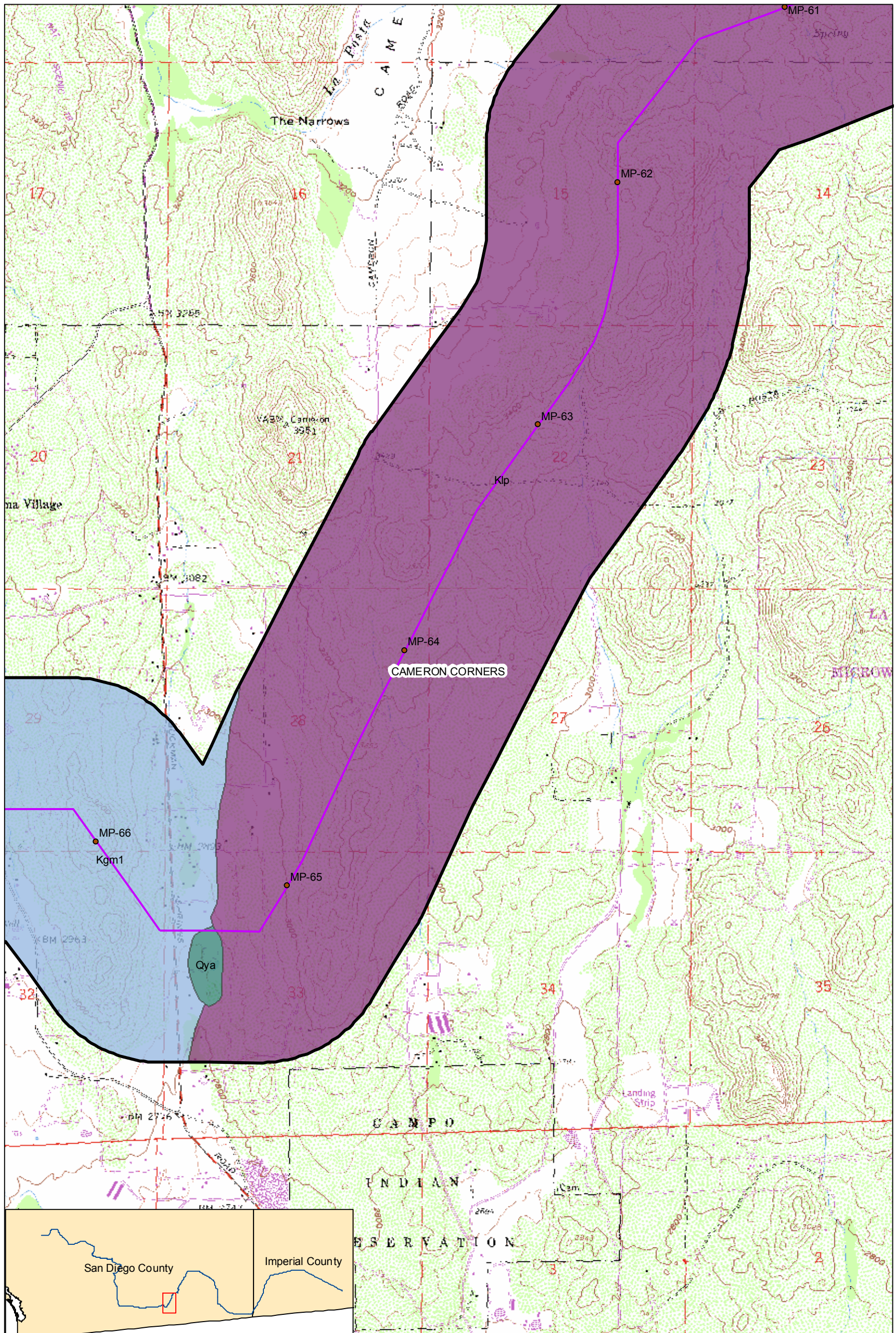
Geology from Todd, 2004

San Diego Gas & Electric

1:24,000

Sunrise Powerlink





- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Kgm1, Tonalite of Granite Mountain, Unit 1
- Klp, Tonalite of La Posta

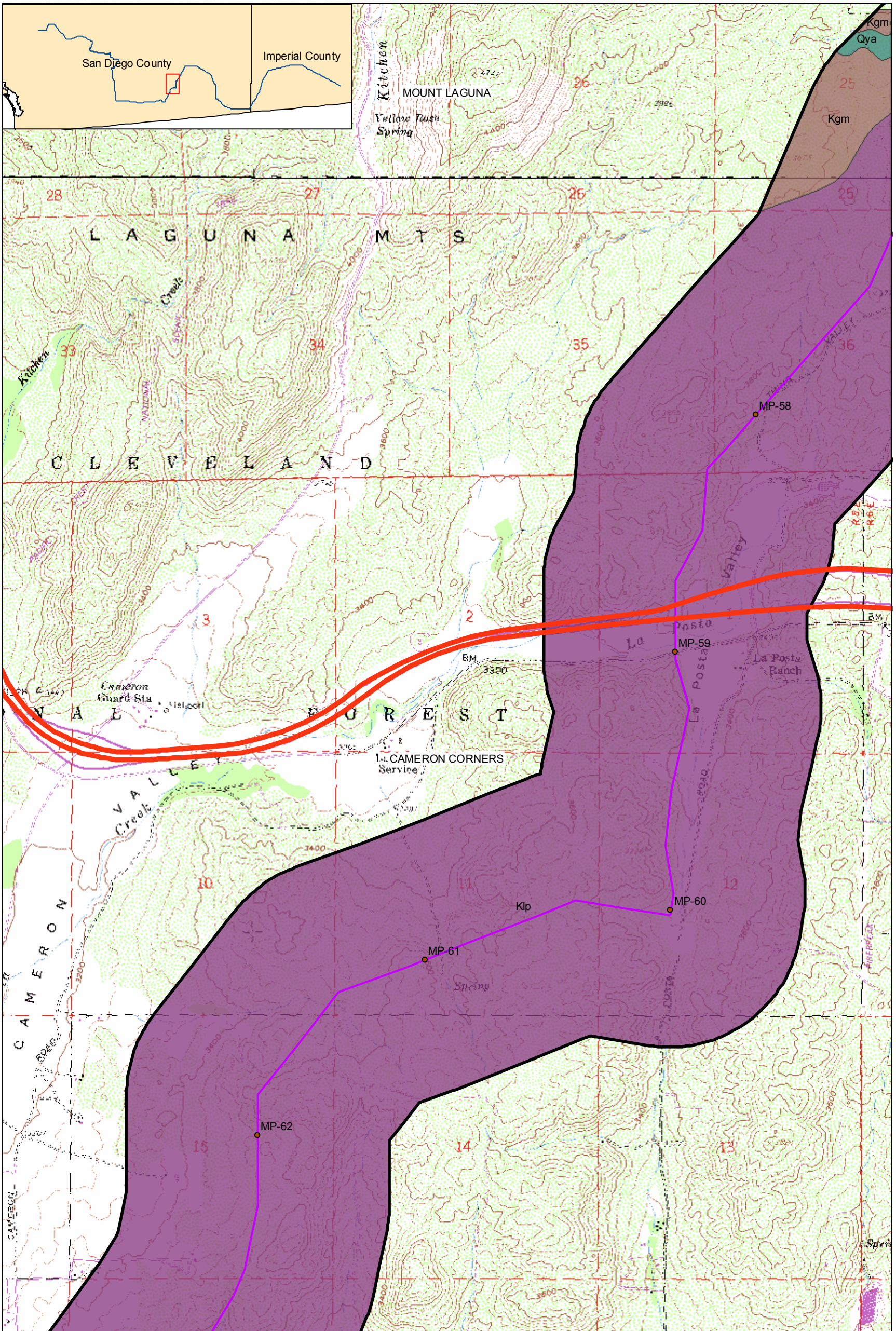
San Diego Gas & Electric

1:24,000

Sunrise Powerlink



Geology from Todd, 2004



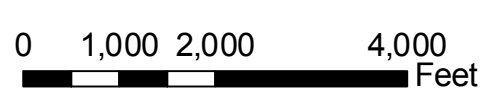
- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Kgm, Tonalite of Granite Mountain
- Klp, Tonalite of La Posta

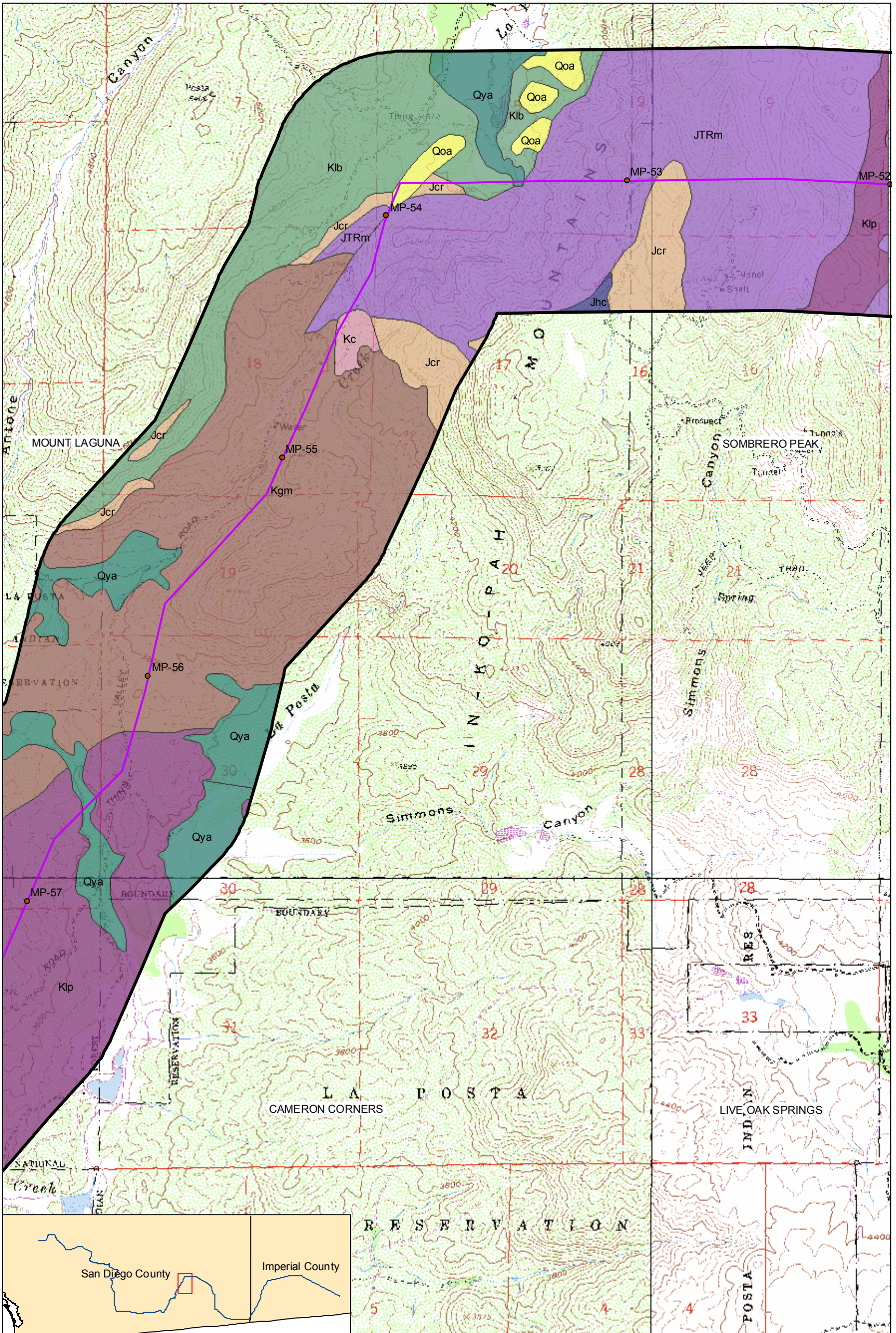
Geology from Todd, 2004

San Diego Gas & Electric

1:24,000

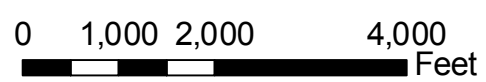
Sunrise Powerlink





San Diego Gas & Electric 1:24,000

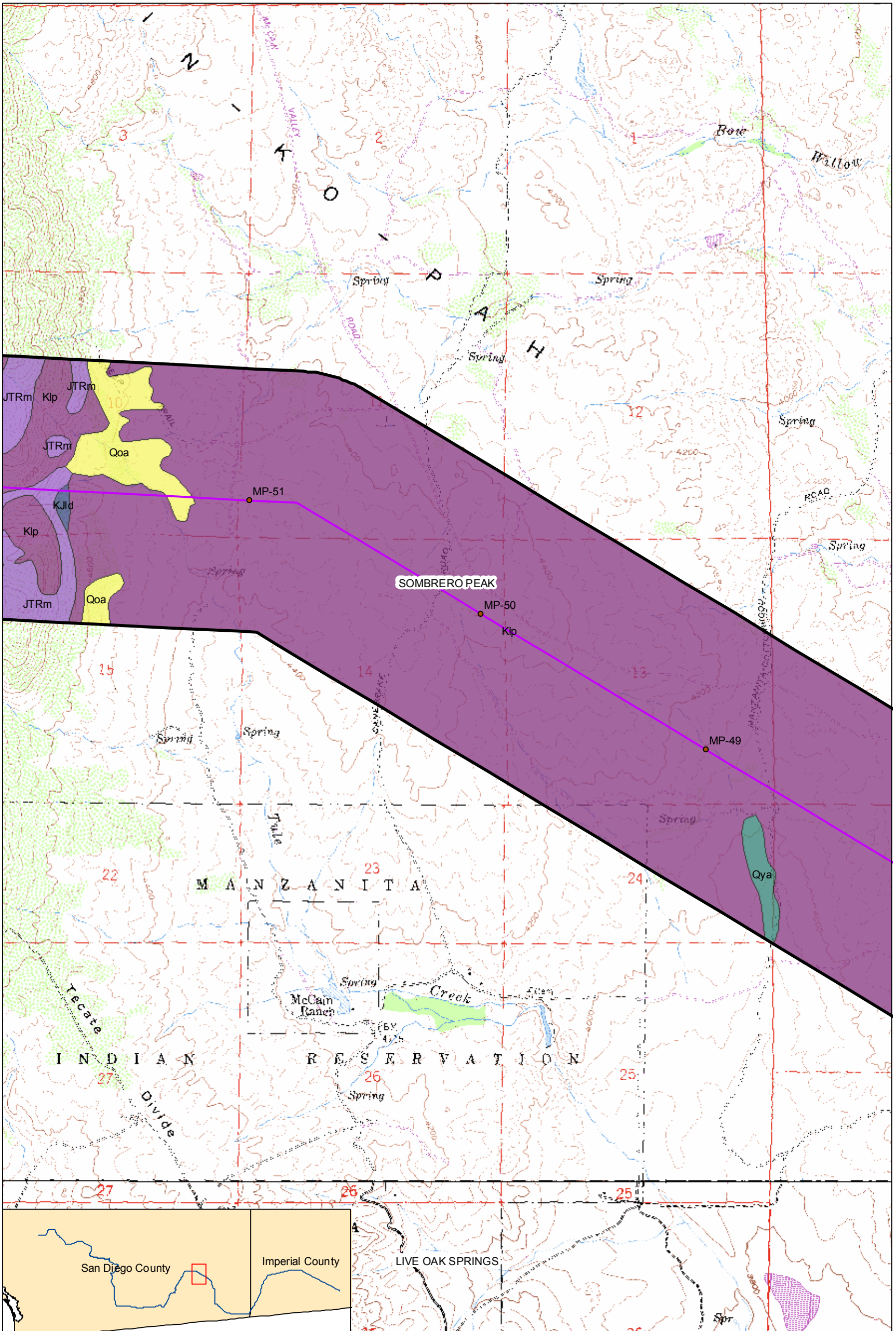
Sunrise Powerlink



Map 14 of 28

- Fossil Localities
- Sunrise Powerlink
- ▭ 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Qoa, Pleistocene Older Alluvium
- Kc, Cuyamaca Gabbro
- Kgm, Tonalite of Granite Mountain
- Klb, Tonalite of Las Bancas
- Klp, Tonalite of La Posta
- Jhc, Gneiss of Harper Creek
- Jcr, Granodiorite of Cuyamaca Reservoir
- JTRm, Metasedimentary and metavolcanic rocks

Geology from Todd, 2004



- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Qoa, Pleistocene Older Alluvium
- KJld, Leucocratic dikes
- Klp, Tonalite of La Posta
- JTRm, Metasedimentary and metavolcanic rocks

Geology from Todd, 2004

San Diego Gas & Electric 1:24,000

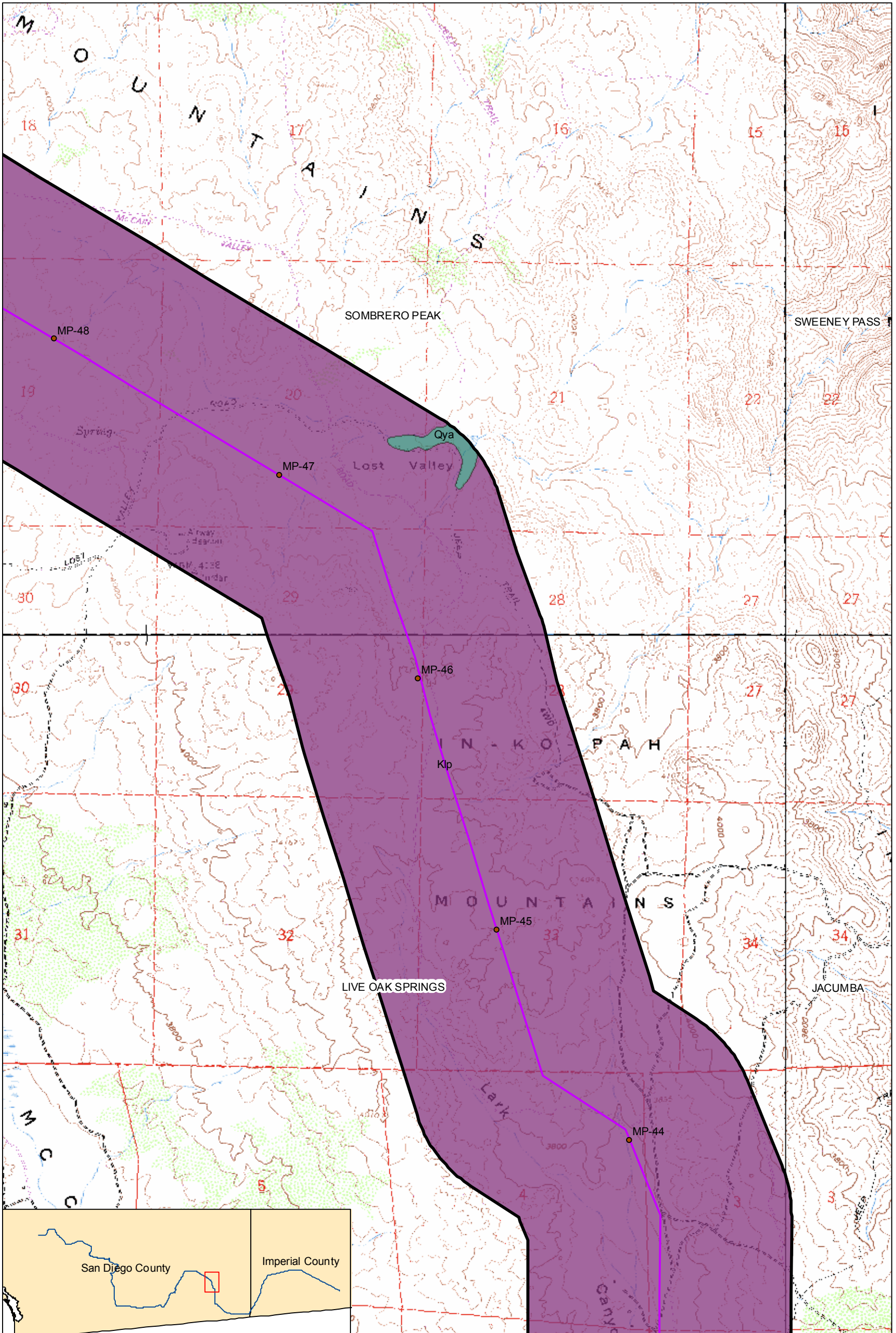
Sunrise Powerlink

0 200 400 800
Meters

0 1,000 2,000 4,000
Feet

N



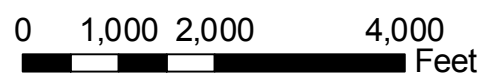


- Fossil Localities
- Qya, Holocene Young Alluvium
- Sunrise Powerlink
- Klp, Tonalite of La Posta
- 1 Mile Buffer

Geology from Todd, 2004

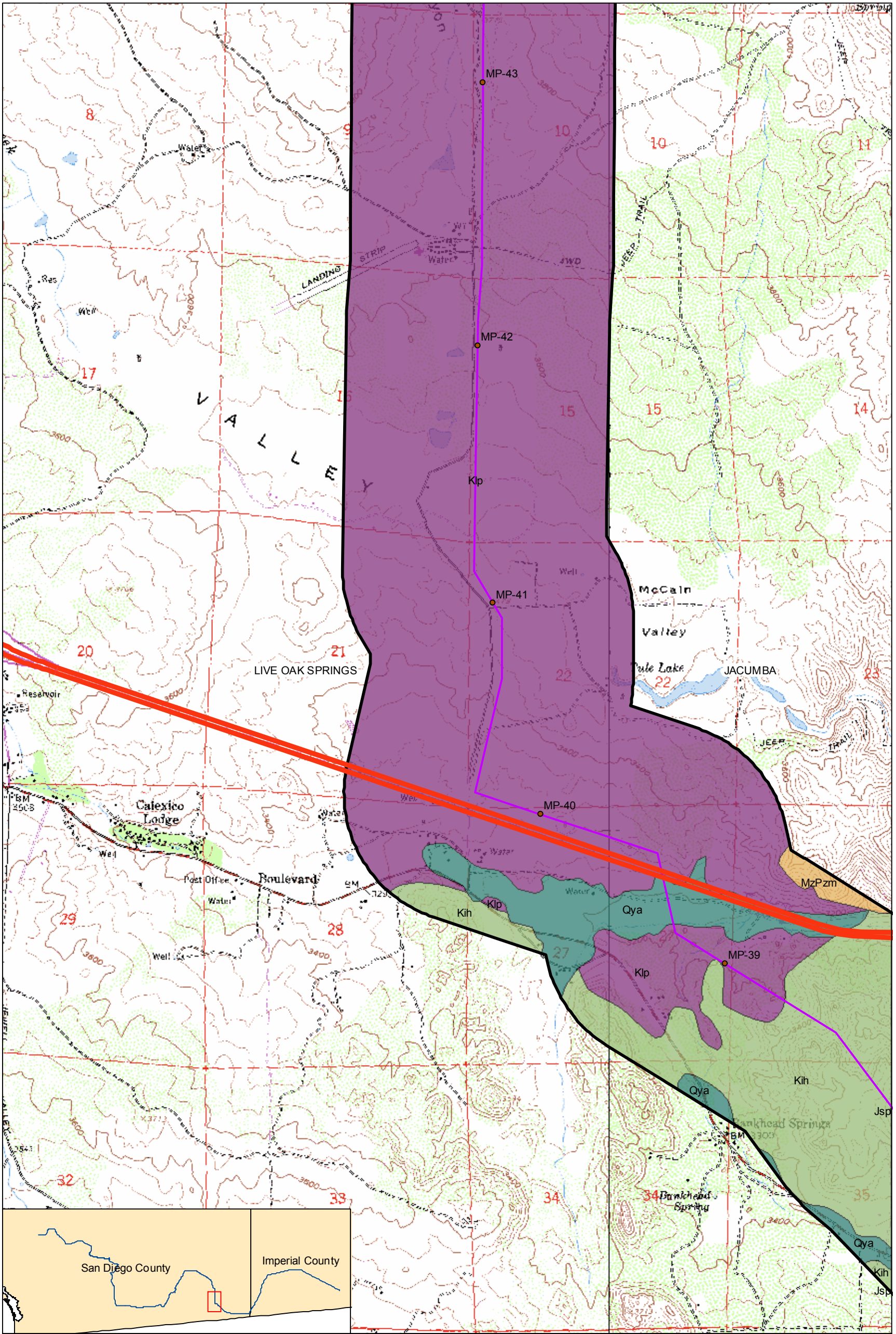
San Diego Gas & Electric

Sunrise Powerlink



1:24,000





- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Kih, Indian Hill granodiorite of Parrish and others (19)
- Klp, Tonalite of La Posta
- Jsp, Migmatitic schist and gneiss of Stephenson Peak
- MzPzm, Rocks of Jacumba Mountains

Geology from Todd, 2004

San Diego Gas & Electric

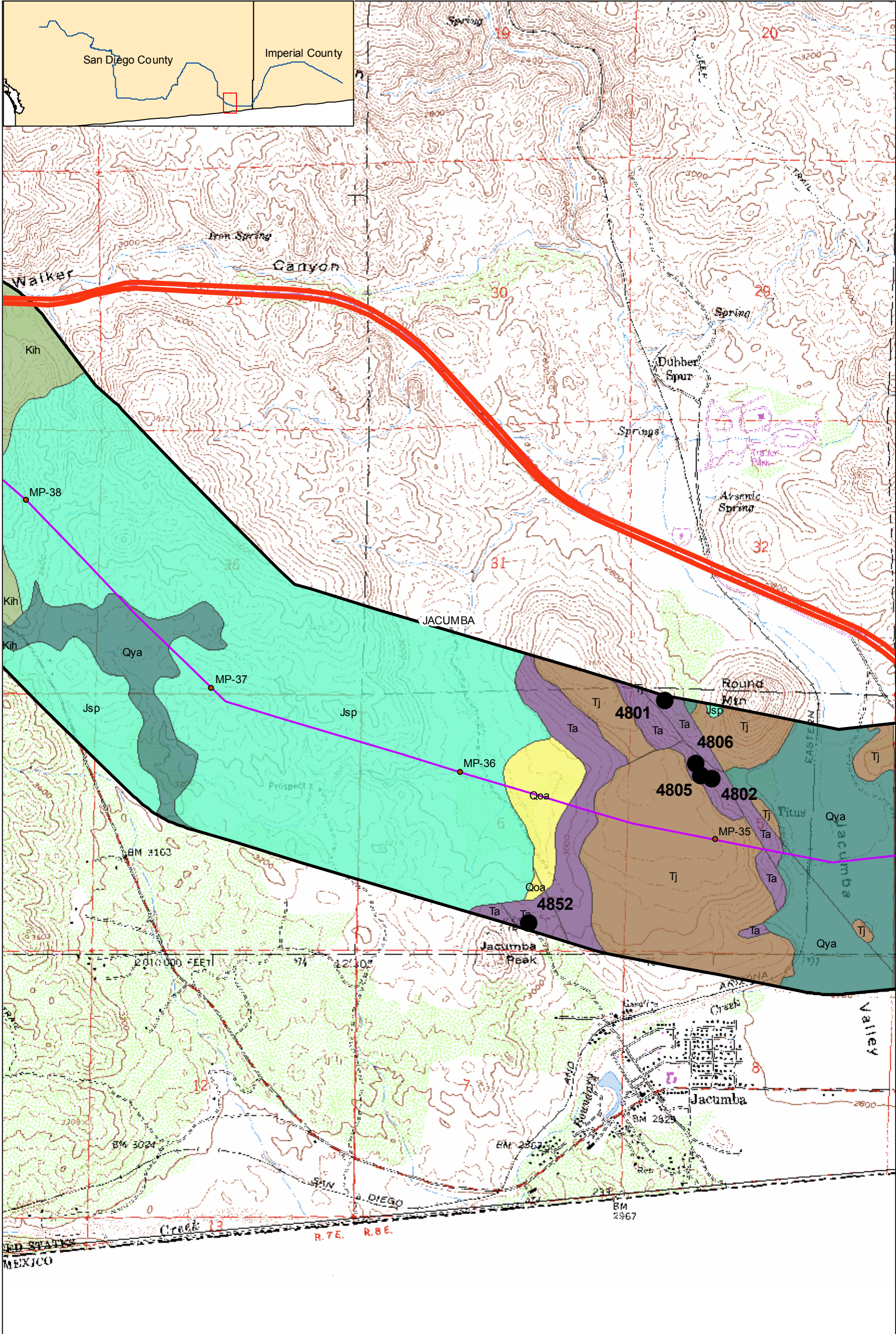
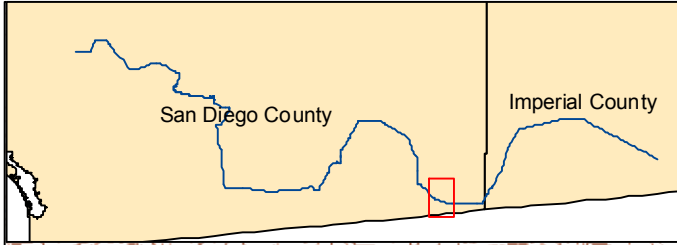
1:24,000

Sunrise Powerlink

0 212.5425 850
Meters

0 1,050 2,100 4,200
Feet





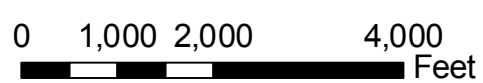
- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Qoa, Pleistocene Older Alluvium
- Ta, Anza Formation
- Tj, Jacumba Volcanics
- Kih, Indian Hill granodiorite of Parrish and others (19)
- Jsp, Migmatitic schist and gneiss of Stephenson Peak
- MzPzm, Rocks of Jacumba Mountains

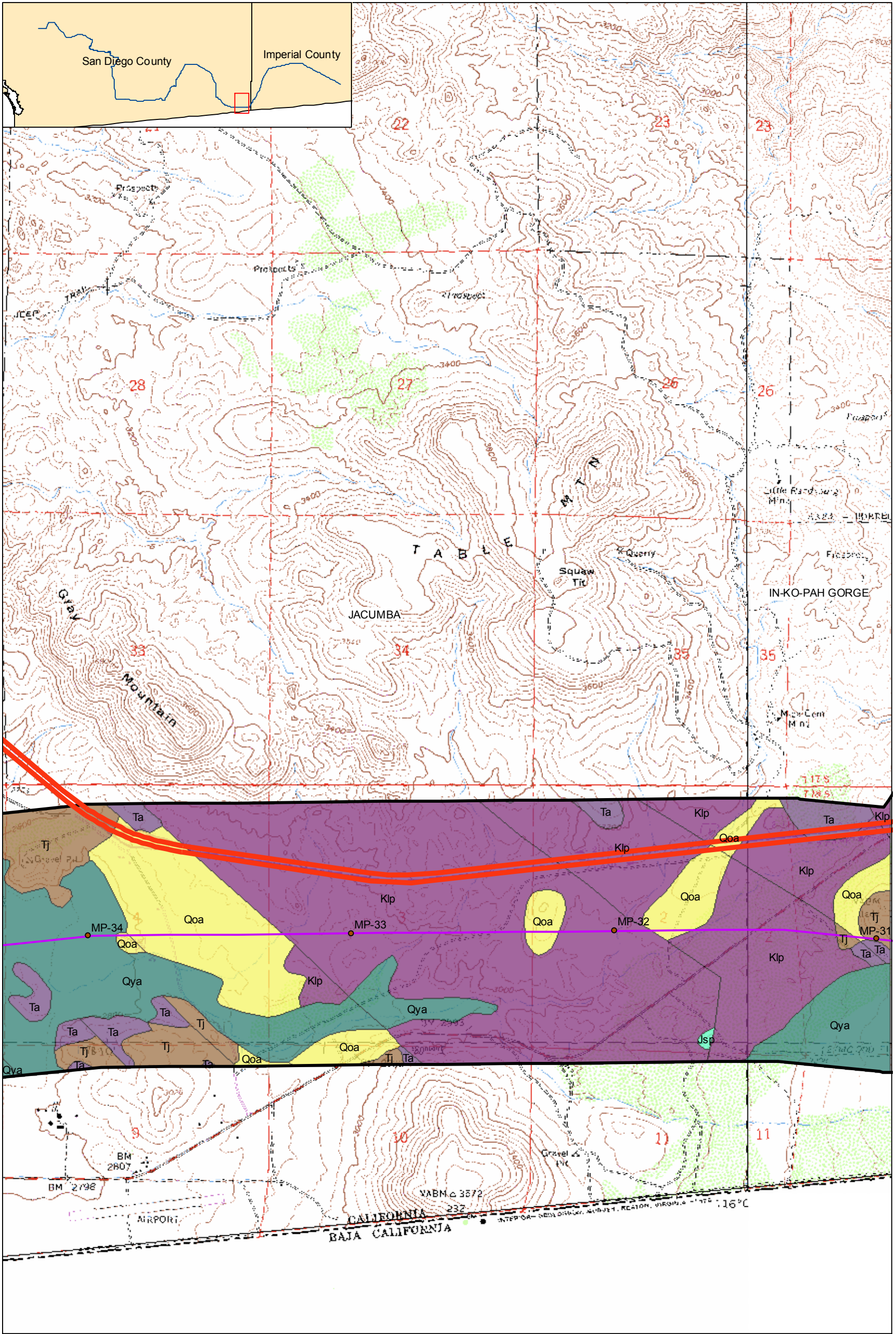
Geology from Todd, 2004

San Diego Gas & Electric

1:24,000

Sunrise Powerlink





- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Qoa, Pleistocene Older Alluvium
- Ta, Anza Formation
- Tj, Jacumba Volcanics
- Klp, Tonalite of La Posta
- Jsp, Migmatitic schist and gneiss of Stephenson Peak

San Diego Gas & Electric 1:24,000

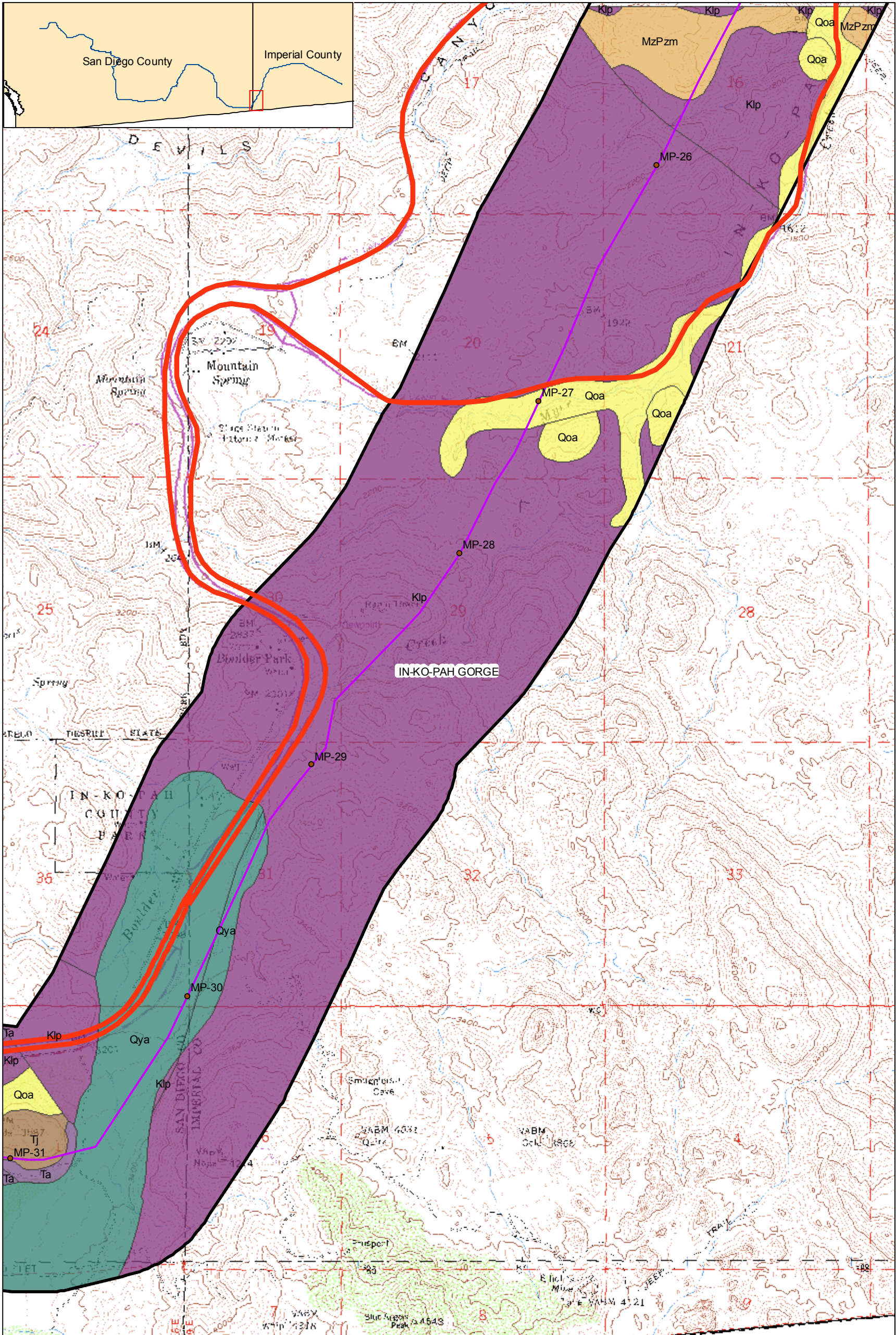
Sunrise Powerlink

0 200 400 800 Meters

0 1,000 2,000 4,000 Feet

Map 9 of 28

Geology from Todd, 2004



- Fossil Localities
- Sunrise Powerlink
- ▭ 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Qoa, Pleistocene Older Alluvium
- Ta, Anza Formation
- Tj, Jacumba Volcanics
- Klp, Tonalite of La Posta
- MzPzm, Rocks of Jacumba Mountains

Geology from Todd, 2004

San Diego Gas & Electric

1:24,000

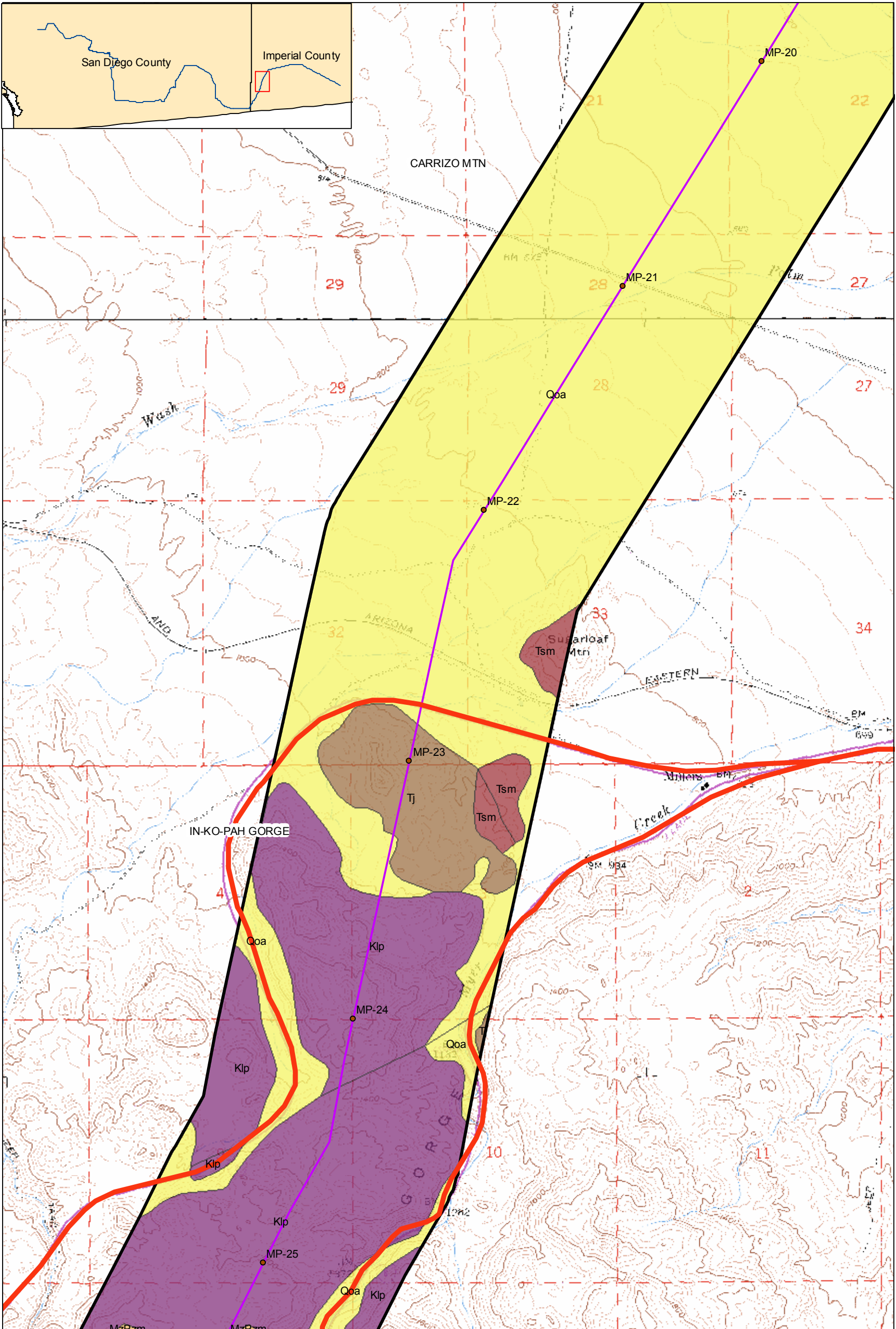
Sunrise Powerlink

0 200 400 800
Meters

0 1,000 2,000 4,000
Feet



Map 8 of 28



- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qoa, Pleistocene Older Alluvium
- Tsm, Split Mountain Formation
- Tj, Jacumba Volcanics
- Klp, Tonalite of La Posta
- MzPzm, Rocks of Jacumba Mountains

Geology from Todd, 2004

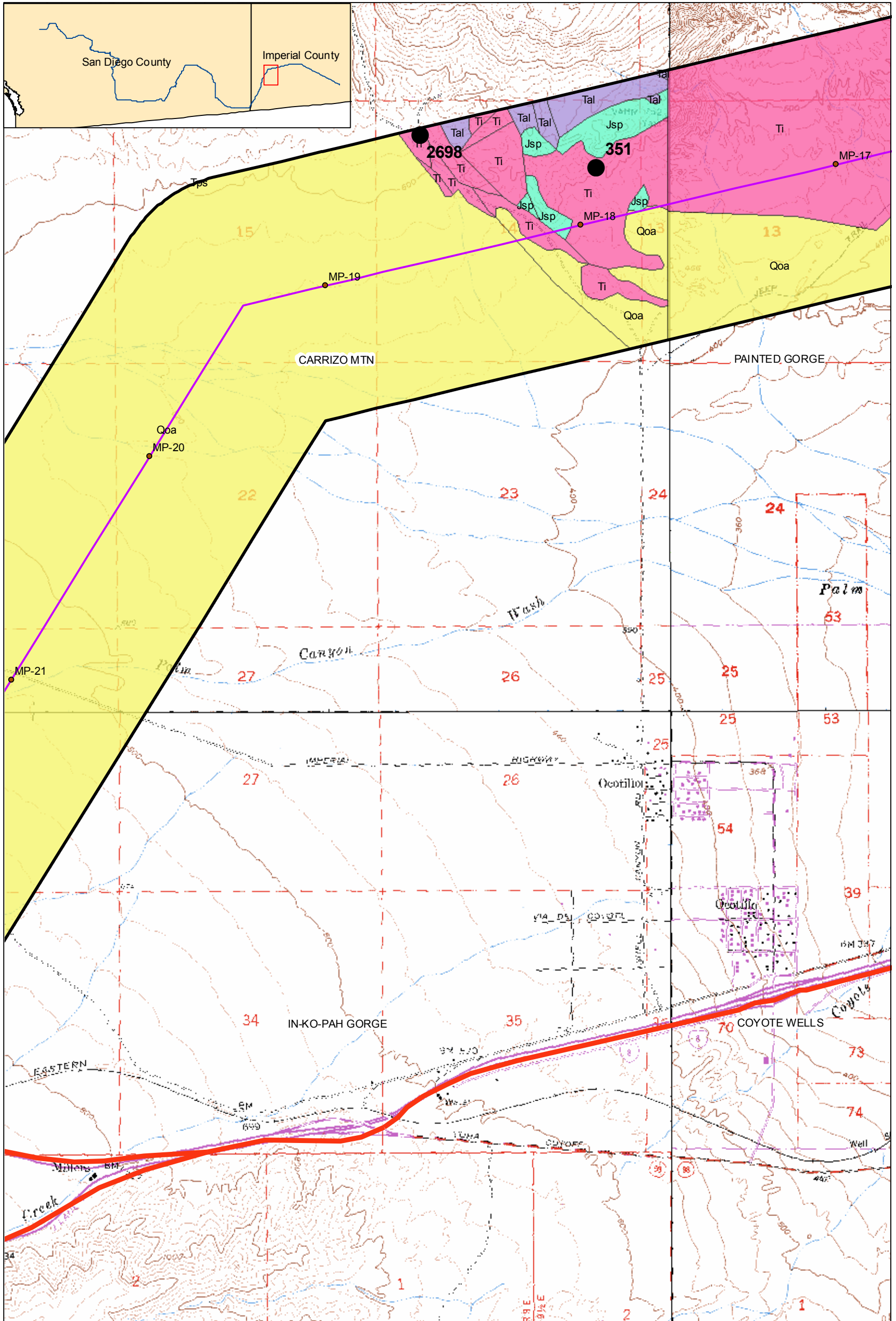
San Diego Gas & Electric

Sunrise Powerlink



1:24,000

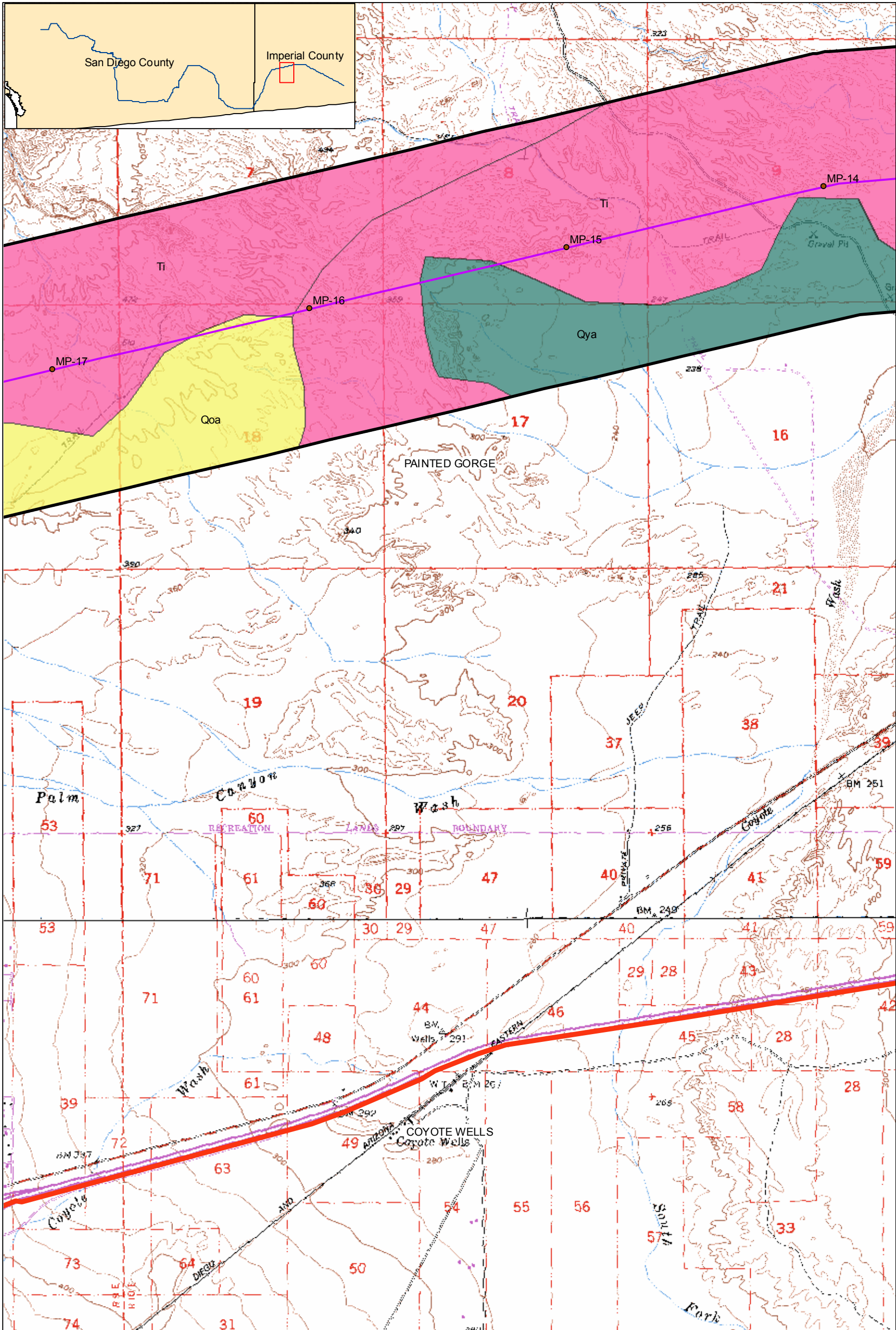




● Fossil Localities	Qoa, Pleistocene Older Alluvium	San Diego Gas & Electric Sunrise Powerlink 1:24,000 N 0 200 400 800 Meters 0 1,000 2,000 4,000 Feet
— Sunrise Powerlink	Tps, Palm Spring Group	
□ 1 Mile Buffer	Ti, Imperial Formation	
	Tal, Alverson Andesite	
	Jsp, Migmatitic schist and gneiss of Stephenson Peak	

Geology from Todd, 2004 and Ludington et al., 2005

Map 6 of 28



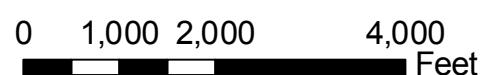
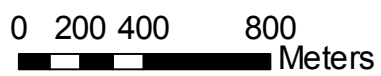
- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Qoa, Pleistocene Older Alluvium
- Tps, Palm Spring Group
- Ti, Imperial Formation

Geology from Ludington et al., 2005

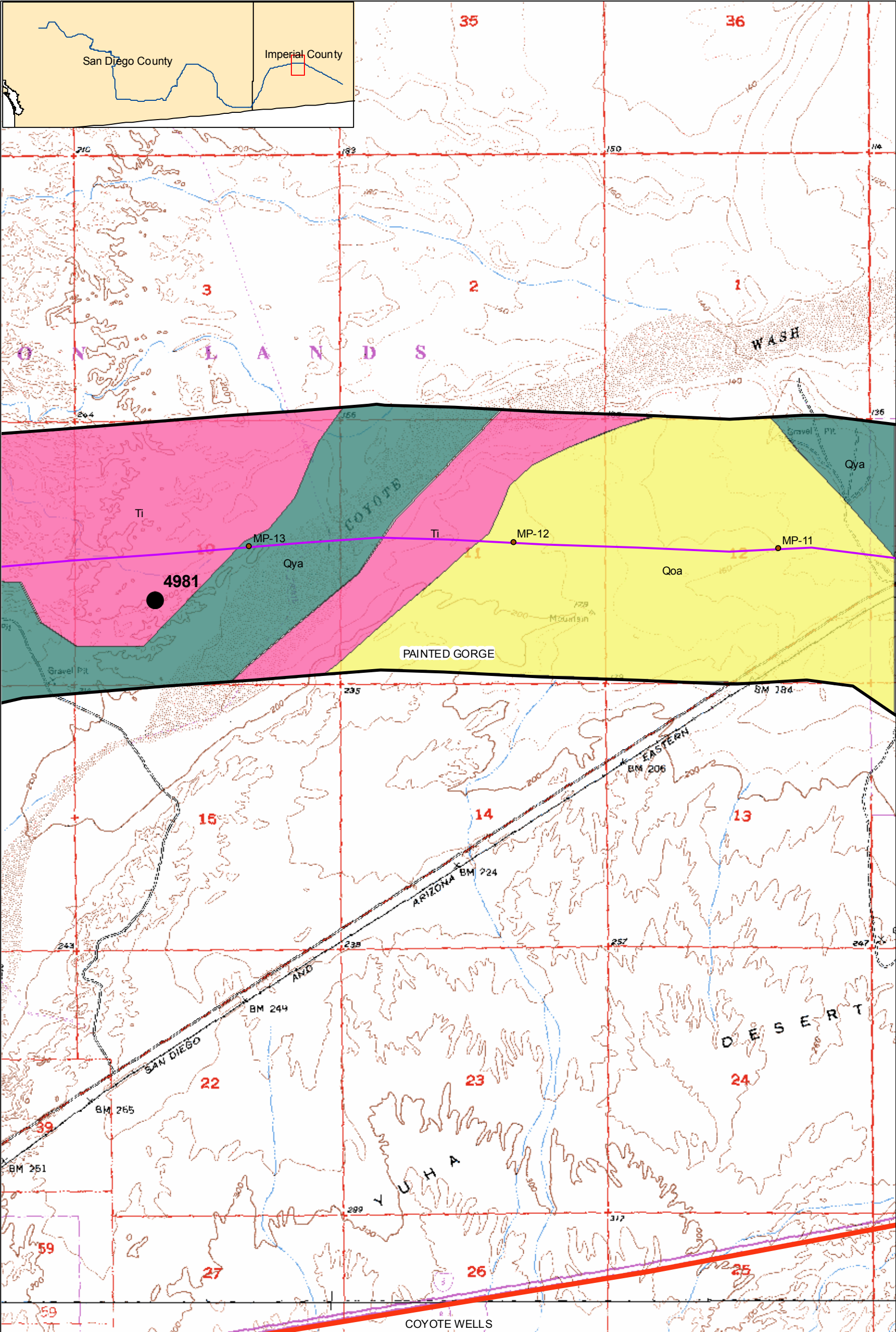
San Diego Gas & Electric

1:24,000

Sunrise Powerlink



Map 5 of 28



San Diego Gas & Electric 1:24,000

Sunrise Powerlink

- Fossil Localities
- Qya, Holocene Young Alluvium
- Sunrise Powerlink
- Qoa, Pleistocene Older Alluvium
- 1 Mile Buffer
- Ti, Imperial Formation

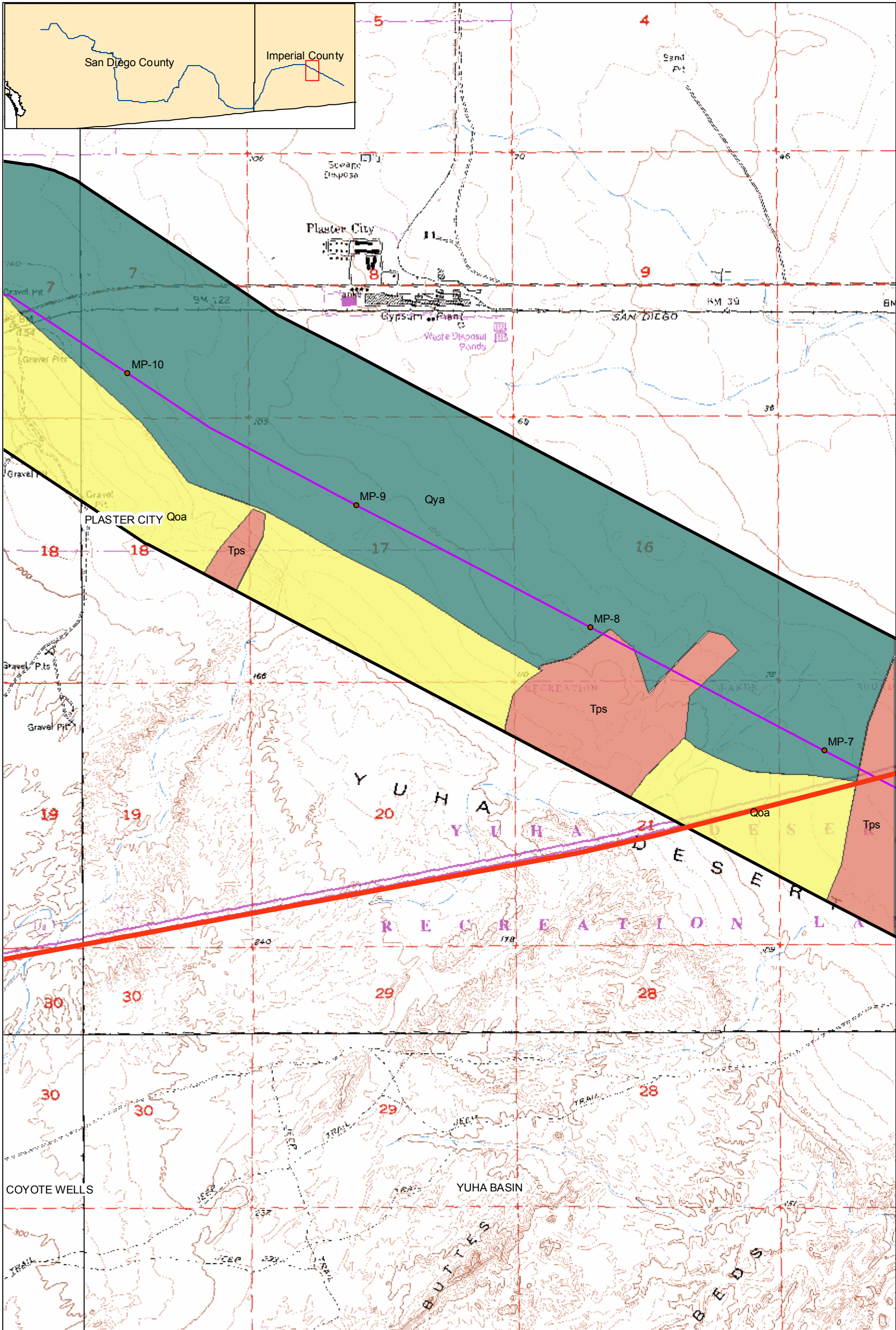
0 200 400 800
Meters

0 1,000 2,000 4,000
Feet

N

Geology from Ludington et al., 2005

Map 4 of 28



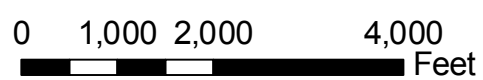
- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Qoa, Pleistocene Older Alluvium
- Tps, Palm Spring Group

Geology from Ludington et al., 2005

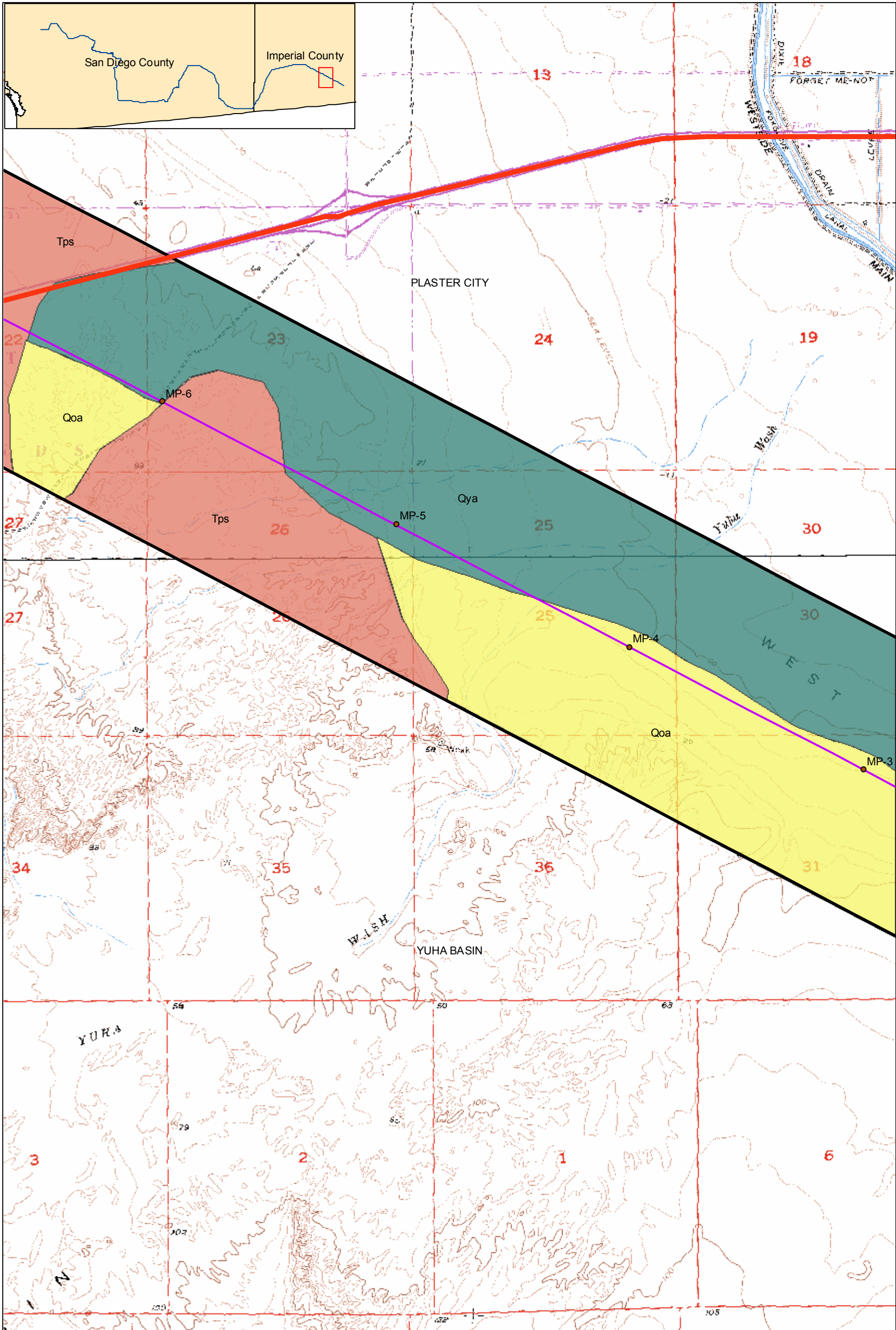
San Diego Gas & Electric

1:24,000

Sunrise Powerlink

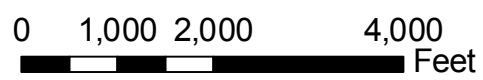
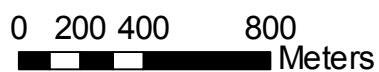


Map 3 of 28



San Diego Gas & Electric 1:24,000

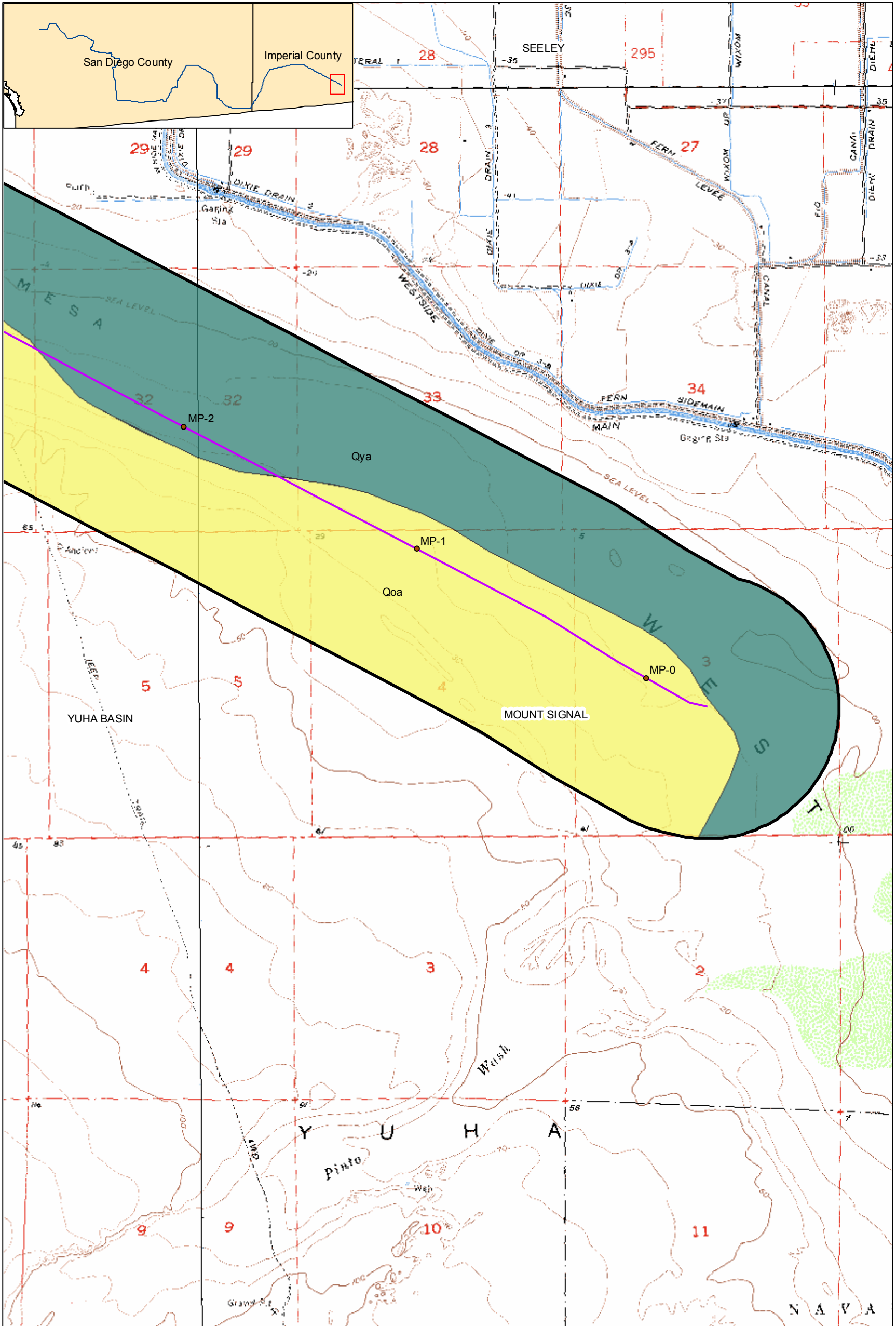
Sunrise Powerlink



- Fossil Localities
- Sunrise Powerlink
- ▭ 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Qoa, Pleistocene Older Alluvium
- Tps, Palm Spring Group

Geology from Ludington et al., 2005

Map 2 of 28



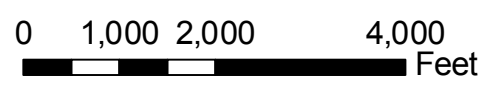
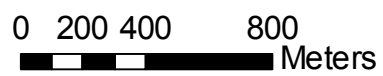
- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Holocene Young Alluvium
- Qoa, Pleistocene Older Alluvium

Geology from Ludington et al., 2005

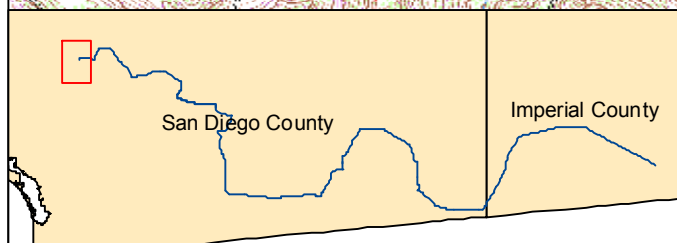
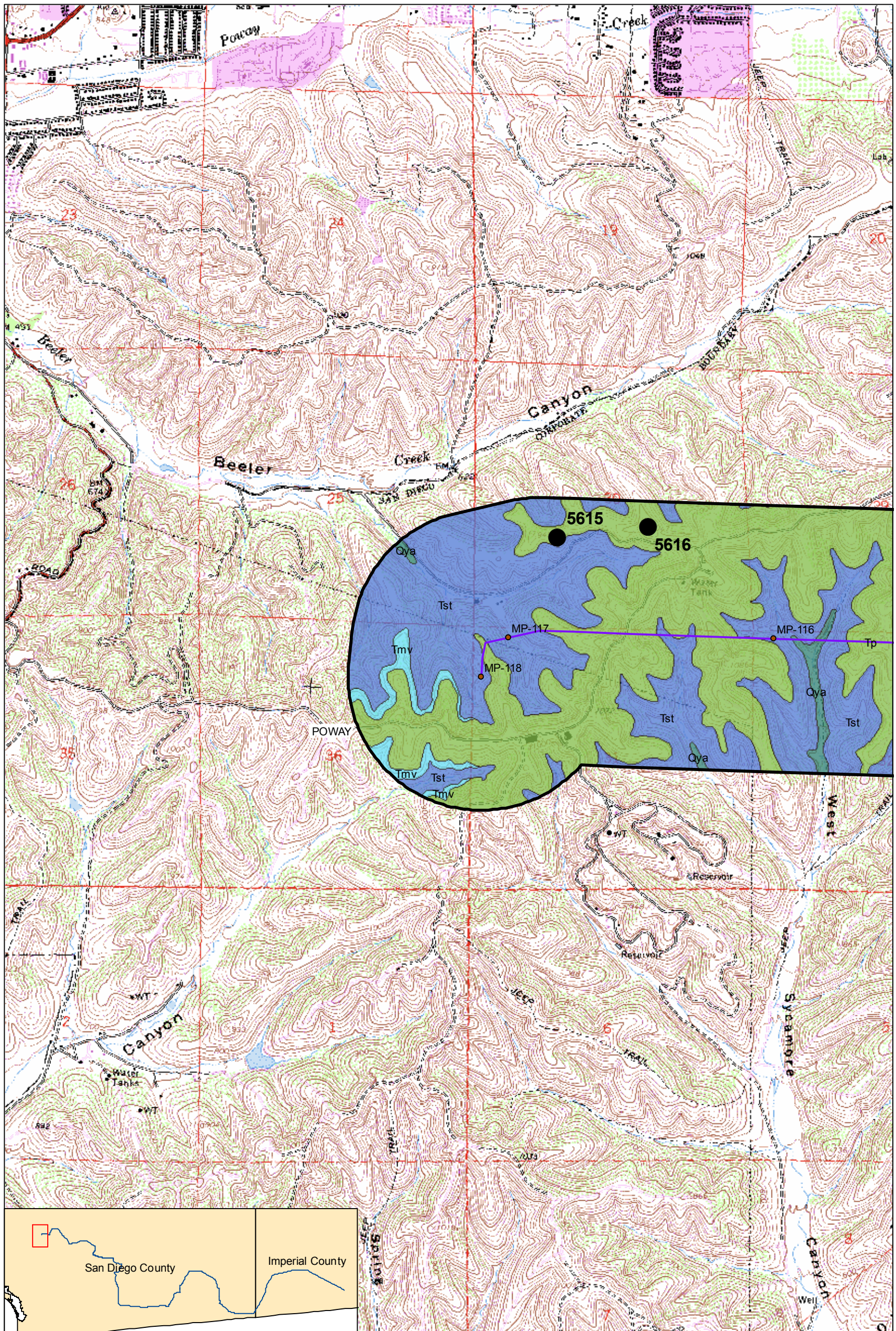
San Diego Gas & Electric

1:24,000

Sunrise Powerlink



Map 1 of 28



- Fossil Localities
- Sunrise Powerlink
- 1 Mile Buffer
- Qya, Young alluvial flood plain deposits
- Tmv, Mission Valley Formation
- Tp, Pomerado Conglomerate
- Tst, Stadium Conglomerate

Geology from Todd, 2004 and Kennedy and Tan, 2005

1:24,000

San Diego Gas & Electric

Sunrise Powerlink

0 200 400 800

Meters

0 1,050 2,100 4,200

Feet

N

Map 28 of 28

Appendix B
SDNHM Paleontological Localities

DATE 02/11/10
TIME 09:29:20

SAN DIEGO NATURAL HISTORY MUSEUM
DEPARTMENT OF PALEONTOLOGY
LOCALITY LIST

PAL120

NUMBER	---LOCALITY NAME AND GEOGRAPHIC LOCATION---	-----ROCK AND TIME UNITS-ROCK TYPE-FIELD NOTES-----	-----COLLECTORS-COMPILED BY-ENTERED BY-DONOR-----
351	Alverson Canyon Imperial Co. CA U.S.A. 0° 0' 0" -- 0° 0' 0" Carrizo Mountain, CA 1:24000 USGS 1957	Imperial Group Latrania Formation Cenozoic Neogene late Miocene sdst-	Frank Stephens 11 May 1930 Frank Stephens 0 H.P. Don Vito 8 Sep 1994 0
2698	Alverson Canyon (Shell Canyon) Imperial Co. CA U.S.A. 0° 0' 0" -- 0° 0' 0" Carrizo Mountain, CA 1:24000 USGS 1957	Imperial Group Latrania Formation Cenozoic Neogene late Miocene sdst-	J.W. Tobiska 0 Jan W. Tobiska 6 Jun 1975 H.P. Don Vito 31 Mar 1995 0
4981	Painted Gorge - Anomia bed Imperial Co. CA USA 32°47'19"N--115°55'40"W Painted Gorge, CA 1:24000 USGS 1957	Imperial Group Deguynos Formation Cenozoic Neogene early Pliocene - T.A. Demere NB#10-63-64, RAC #36, pg 16	R.A. Cerutti, T.A. Demere 4 Dec 2002 T.A. Demere 6 Aug 2004 T.A. Demere 6 Aug 2004 0
4852	Jacumba Valley - Jacumba Peak Jacumba San Diego Co. CA U.S.A. 32°37'36"N--116°11'49"W Jacumba, CA 1:24000 USGS 1959(1975)	Table Mountain Formation Cenozoic Neogene Miocene sdst-fluvial	R.A. Cerutti, P.J. Sena, C.A. Herrington 29 Oct 2000 K.A. Randall 12 Nov 2002 K.A. Randall 12 Nov 2002 0
4802	Jacumba Valley - South of Graciela's Canyon Jacumba San Diego Co. CA U.S.A. 32°38' 5"N--116°11' 6"W Jacumba, CA 1:24000 USGS 1959(1975)	Table Mountain Formation Cenozoic Neogene Miocene sdst-fluvial	R.A. Cerutti, K.A. Randall, S.L. Walsh, H. Wagner 15 Jan 2000 K.A. Randall 24 Oct 2002 K.A. Randall 24 Oct 2002 0
4805	Jacumba Valley - Graciela's Canyon Jacumba San Diego Co. CA U.S.A. 32°38' 6"N--116°11' 9"W Jacumba, CA 1:24000 USGS 1959(1975)	Table Mountain Formation Cenozoic Neogene Miocene mdst-fluvial	R.A. Cerutti, B.O. Riney, S.L. Walsh 5 Feb 1991 K.A. Randall 12 Sep 2002 K.A. Randall 24 Oct 2002 0
4806	Jacumba Valley - Cheater Canyon Jacumba San Diego Co. CA U.S.A. 32°38' 8"N--116°11'10"W Jacumba, CA 1:24000 USGS 1959(1975)	Table Mountain Formation Cenozoic Neogene Miocene sdst-fluvial	R.A. Cerutti, B.O. Riney, S.L. Walsh 5 Feb 1991 K.A. Randall 29 Oct 2002 K.A. Randall 29 Oct 2002 0
4801	Jacumba Valley - West of Round Mountain Jacumba San Diego Co. CA U.S.A. 32°38'20"N--116°11'18"W Jacumba, CA 1:24000 USGS 1959(1975)	Table Mountain Formation Cenozoic Neogene Miocene sdst-fluvial	R.A. Cerutti, K.A. Randall, S.L. Walsh, H. Wagner 15 Jan 2000 K.A. Randall 24 Oct 2002 K.A. Randall 24 Oct 2002 0
5615	McMillin Sycamore Estates Phase 1, site 1 San Diego San Diego Co. CA USA 32°55'30"N--117° 1'33"W Poway, CA 1:24000 USGS 1967(1975)	La Jolla Group Friars Formation conglomerate tongue Cenozoic Paleogene middle Eocene early Uintan slst-fluvial MHS book #3 pgs.23, 27-29, BOR book #29 pg 48, MKB	MHS, MKB, IDB, HMW, SLW, BOR, KAR 6 May 2004 M.H. Stevens 14 Feb 2005 M.K. Soetaert 11 May 2005 McMillin Land Development 6 May 2004
5616	McMillin Sycamore Estates Phase 1, site 2 San Diego San Diego Co. CA USA 32°55'32"N--117° 1'12"W Poway, CA 1:24000 USGS 1967(1975)	La Jolla Group Friars Formation conglomerate tongue Cenozoic Paleogene middle Eocene early Uintan slst-fluvial MHS book #3, MKB, BOR	M.H. Stevens 9 Jun 2004 M.H. Stevens 14 Feb 2005 M.K. Soetaert 11 May 2005 McMillin Land Development 9 Jun 2004

Appendix C
LACMIP Paleontological Localities

NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY
DEPARTMENT OF INVERTEBRATE PALEONTOLOGY

LACMIP Locality 17401
Acc. No.

Age: Aquitanian - Piacenzian
Locality: Imperial County, California, USA
Unit: Imperial Formation, Latrania Member
Collector: J.T. Smith; 88JS9
Alt. Loc. No.:
Map: USGS, 1979, Painted Gorge, CA 1:24000.
Lat./Long.:
Township/Range: Section 5, T16S, R10E

Locality is referred to as "stacks of Lyropectens." Southeast flank of Coyote Mountains. Latrania Member of Imperial Formation. Cross-listed as 88JS9. See map. (LACMIP Locality Card)

(Jennifer M. Wiggins, 2004-2-3)



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Appendix D

Inventory of Geologic Rock Units Along ROW

Segment	Mile From	Mile To	Paleontological Resource	Paleontological Sensitivity
1	0.0	0.0	Qoa - Pleistocene older alluvium	Unknown
2	0.0	0.1	Qoa - Pleistocene older alluvium	Unknown
2	0.1	0.2	Qoa - Pleistocene older alluvium	Unknown
2	0.2	0.3	Qoa - Pleistocene older alluvium	Unknown
2	0.3	0.4	Qoa - Pleistocene older alluvium	Unknown
2	0.4	0.5	Qoa - Pleistocene older alluvium	Unknown
2	0.5	0.6	Qoa - Pleistocene older alluvium	Unknown
2	0.6	0.7	Qoa - Pleistocene older alluvium	Unknown
2	0.7	0.8	Qoa - Pleistocene older alluvium	Unknown
2	0.8	0.9	Qoa - Pleistocene older alluvium	Unknown
2	0.9	1.0	Qoa - Pleistocene older alluvium	Unknown
2	1.0	1.1	Qoa - Pleistocene older alluvium	Unknown
2	1.1	1.2	Qoa - Pleistocene older alluvium	Unknown
2	1.2	1.3	Qoa - Pleistocene older alluvium	Unknown
2	1.3	1.4	Qoa - Pleistocene older alluvium	Unknown
2	1.4	1.5	Qoa - Pleistocene older alluvium	Unknown
2	1.5	1.6	Qya - Holocene young alluvium	Low
2	1.6	1.7	Qya - Holocene young alluvium	Low
2	1.7	1.8	Qya - Holocene young alluvium	Low
2	1.8	1.9	Qya - Holocene young alluvium	Low
2	1.9	2.0	Qya - Holocene young alluvium	Low
2	2.0	2.1	Qya - Holocene young alluvium	Low
2	2.1	2.2	Qya - Holocene young alluvium	Low
2	2.2	2.3	Qya - Holocene young alluvium	Low
2	2.3	2.4	Qya - Holocene young alluvium	Low
2	2.4	2.5	Qya - Holocene young alluvium	Low
2	2.5	2.6	Qya - Holocene young alluvium	Low
2	2.6	2.7	Qya - Holocene young alluvium	Low
2	2.7	2.8	Qoa - Pleistocene older alluvium	Unknown
2	2.8	2.9	Qoa - Pleistocene older alluvium	Unknown
2	2.9	3.0	Qoa - Pleistocene older alluvium	Unknown
2	3.0	3.1	Qoa - Pleistocene older alluvium	Unknown
2	3.1	3.2	Qoa - Pleistocene older alluvium	Unknown
2	3.2	3.3	Qoa - Pleistocene older alluvium	Unknown
2	3.3	3.4	Qoa - Pleistocene older alluvium	Unknown
2	3.4	3.5	Qoa - Pleistocene older alluvium	Unknown
2	3.5	3.6	Qoa - Pleistocene older alluvium	Unknown
2	3.6	3.7	Qoa - Pleistocene older alluvium	Unknown
2	3.7	3.8	Qoa - Pleistocene older alluvium	Unknown
2	3.8	3.9	Qoa - Pleistocene older alluvium	Unknown
2	3.9	4.0	Qoa - Pleistocene older alluvium	Unknown
2	4.0	4.1	Qoa - Pleistocene older alluvium	Unknown
2	4.1	4.2	Qoa - Pleistocene older alluvium	Unknown
2	4.2	4.3	Qoa - Pleistocene older alluvium	Unknown
2	4.3	4.4	Qya - Holocene young alluvium	Low
2	4.4	4.5	Qya - Holocene young alluvium	Low
2	4.5	4.6	Qya - Holocene young alluvium	Low
2	4.6	4.7	Qya - Holocene young alluvium	Low
2	4.7	4.8	Qya - Holocene young alluvium	Low
2	4.8	4.9	Qya - Holocene young alluvium	Low
2	4.9	5.0	Qya - Holocene young alluvium	Low
2	5.0	5.1	Qya - Holocene young alluvium	Low
2	5.1	5.2	Qya - Holocene young alluvium	Low
2	5.2	5.3	Qya - Holocene young alluvium	Low
2	5.3	5.4	Qya - Holocene young alluvium	Low
2	5.4	5.5	Qya - Holocene young alluvium	Low
2	5.5	5.6	Tps - Palm Spring Group	High
2	5.6	5.7	Tps - Palm Spring Group	High
2	5.7	5.8	Tps - Palm Spring Group	High
2	5.8	5.9	Tps - Palm Spring Group	High
2	5.9	6.0	Tps - Palm Spring Group	High
2	6.0	6.1	Qya - Holocene young alluvium	Low
2	6.1	6.2	Qya - Holocene young alluvium	Low

Paleo_Resources

2	6.2	6.3	Qya - Holocene young alluvium	Low
2	6.3	6.4	Qya - Holocene young alluvium	Low
2	6.4	6.5	Qya - Holocene young alluvium	Low
2	6.5	6.6	Qya - Holocene young alluvium	Low
2	6.6	6.7	Tps - Palm Spring Group	High
2	6.7	6.8	Tps - Palm Spring Group	High
2	6.8	6.9	Tps - Palm Spring Group	High
2	6.9	7.0	Qya - Holocene young alluvium	Low
2	7.0	7.1	Qya - Holocene young alluvium	Low
2	7.1	7.2	Qya - Holocene young alluvium	Low
2	7.2	7.3	Qya - Holocene young alluvium	Low
2	7.3	7.4	Qya - Holocene young alluvium	Low
2	7.4	7.5	Qya - Holocene young alluvium	Low
2	7.5	7.6	Qya - Holocene young alluvium	Low
2	7.6	7.7	Tps - Palm Spring Group	High
2	7.7	7.8	Qya - Holocene young alluvium	Low
2	7.8	7.9	Qya - Holocene young alluvium	Low
2	7.9	8.0	Tps - Palm Spring Group	High
2	8.0	8.1	Qya - Holocene young alluvium	Low
2	8.1	8.2	Qya - Holocene young alluvium	Low
2	8.2	8.3	Qya - Holocene young alluvium	Low
2	8.3	8.4	Qya - Holocene young alluvium	Low
2	8.4	8.5	Qya - Holocene young alluvium	Low
2	8.5	8.6	Qya - Holocene young alluvium	Low
2	8.6	8.7	Qya - Holocene young alluvium	Low
2	8.7	8.8	Qya - Holocene young alluvium	Low
2	8.8	8.9	Qya - Holocene young alluvium	Low
2	8.9	9.0	Qya - Holocene young alluvium	Low
2	9.0	9.1	Qya - Holocene young alluvium	Low
2	9.1	9.2	Qya - Holocene young alluvium	Low
2	9.2	9.3	Qya - Holocene young alluvium	Low
2	9.3	9.4	Qya - Holocene young alluvium	Low
2	9.4	9.5	Qya - Holocene young alluvium	Low
2	9.5	9.6	Qya - Holocene young alluvium	Low
2	9.6	9.7	Qya - Holocene young alluvium	Low
2	9.7	9.8	Qya - Holocene young alluvium	Low
2	9.8	9.9	Qya - Holocene young alluvium	Low
2	9.9	10.0	Qya - Holocene young alluvium	Low
2	10.0	10.1	Qya - Holocene young alluvium	Low
2	10.1	10.2	Qya - Holocene young alluvium	Low
2	10.2	10.3	Qya - Holocene young alluvium	Low
2	10.3	10.4	Qya - Holocene young alluvium	Low
2	10.4	10.5	Qya - Holocene young alluvium	Low
2	10.5	10.6	Qya - Holocene young alluvium	Low
2	10.6	10.7	Qoa - Pleistocene older alluvium	Unknown
2	10.7	10.8	Qoa - Pleistocene older alluvium	Unknown
2	10.8	10.9	Qoa - Pleistocene older alluvium	Unknown
2	10.9	11.0	Qoa - Pleistocene older alluvium	Unknown
2	11.0	11.1	Qoa - Pleistocene older alluvium	Unknown
2	11.1	11.2	Qoa - Pleistocene older alluvium	Unknown
2	11.2	11.3	Qoa - Pleistocene older alluvium	Unknown
2	11.3	11.4	Qoa - Pleistocene older alluvium	Unknown
2	11.4	11.5	Qoa - Pleistocene older alluvium	Unknown
2	11.5	11.6	Qoa - Pleistocene older alluvium	Unknown
2	11.6	11.7	Qoa - Pleistocene older alluvium	Unknown
2	11.7	11.8	Qoa - Pleistocene older alluvium	Unknown
2	11.8	11.9	Qoa - Pleistocene older alluvium	Unknown
2	11.9	12.0	Qoa - Pleistocene older alluvium	Unknown
2	12.0	12.1	Qoa - Pleistocene older alluvium	Unknown
2	12.1	12.2	Ti - Imperial Group	High
2	12.2	12.3	Ti - Imperial Group	High
2	12.3	12.4	Ti - Imperial Group	High
2	12.4	12.5	Ti - Imperial Group	High
2	12.5	12.6	Qya - Holocene young alluvium	Low

Paleo_Resources

2	12.6	12.7	Qya - Holocene young alluvium	Low
2	12.7	12.8	Qya - Holocene young alluvium	Low
2	12.8	12.9	Qya - Holocene young alluvium	Low
2	12.9	13.0	Qya - Holocene young alluvium	Low
2	13.0	13.1	Ti - Imperial Group	High
2	13.1	13.2	Ti - Imperial Group	High
2	13.2	13.3	Ti - Imperial Group	High
2	13.3	13.4	Ti - Imperial Group	High
2	13.4	13.5	Ti - Imperial Group	High
2	13.5	13.6	Ti - Imperial Group	High
2	13.6	13.7	Ti - Imperial Group	High
2	13.7	13.8	Ti - Imperial Group	High
2	13.8	13.9	Ti - Imperial Group	High
2	13.9	14.0	Ti - Imperial Group	High
2	14.0	14.1	Ti - Imperial Group	High
2	14.1	14.2	Ti - Imperial Group	High
2	14.2	14.3	Ti - Imperial Group	High
2	14.3	14.4	Ti - Imperial Group	High
2	14.4	14.5	Ti - Imperial Group	High
2	14.5	14.6	Ti - Imperial Group	High
2	14.6	14.7	Ti - Imperial Group	High
2	14.7	14.8	Ti - Imperial Group	High
2	14.8	14.9	Ti - Imperial Group	High
2	14.9	15.0	Ti - Imperial Group	High
2	15.0	15.1	Ti - Imperial Group	High
2	15.1	15.2	Ti - Imperial Group	High
2	15.2	15.3	Ti - Imperial Group	High
2	15.3	15.4	Qya - Holocene young alluvium	Low
2	15.4	15.5	Qya - Holocene young alluvium	Low
2	15.5	15.6	Qya - Holocene young alluvium	Low
2	15.6	15.7	Ti - Imperial Group	High
2	15.7	15.8	Ti - Imperial Group	High
2	15.8	15.9	Ti - Imperial Group	High
2	15.9	16.0	Ti - Imperial Group	High
2	16.0	16.1	Ti - Imperial Group	High
2	16.1	16.2	Qoa - Pleistocene older alluvium	Low
2	16.2	16.3	Qoa - Pleistocene older alluvium	Low
2	16.3	16.4	Qoa - Pleistocene older alluvium	Low
2	16.4	16.5	Qoa - Pleistocene older alluvium	Low
2	16.5	16.6	Ti - Imperial Group	High
2	16.6	16.7	Ti - Imperial Group	High
2	16.7	16.8	Ti - Imperial Group	High
2	16.8	16.9	Ti - Imperial Group	High
2	16.9	17.0	Ti - Imperial Group	High
2	17.0	17.1	Ti - Imperial Group	High
2	17.1	17.2	Ti - Imperial Group	High
2	17.2	17.3	Ti - Imperial Group	High
2	17.3	17.4	Ti - Imperial Group	High
2	17.4	17.5	Ti - Imperial Group	High
2	17.5	17.6	Ti - Imperial Group	High
2	17.6	17.7	Ti - Imperial Group	High
2	17.7	17.8	Qoa - Pleistocene older alluvium	Unknown
2	17.8	17.9	Ti - Imperial Group	High
2	17.9	18.0	Ti - Imperial Group	High
2	18.0	18.1	Jsp - Santiago Peak Volcanics	No
2	18.1	18.2	Ti - Imperial Group	High
2	18.2	18.3	Qoa - Pleistocene older alluvium	Unknown
2	18.3	18.4	Qoa - Pleistocene older alluvium	Unknown
2	18.4	18.5	Qoa - Pleistocene older alluvium	Unknown
2	18.5	18.6	Qoa - Pleistocene older alluvium	Unknown
2	18.6	18.7	Qoa - Pleistocene older alluvium	Unknown
2	18.7	18.8	Qoa - Pleistocene older alluvium	Unknown
2	18.8	18.9	Qoa - Pleistocene older alluvium	Unknown
2	18.9	19.0	Qoa - Pleistocene older alluvium	Unknown

Paleo_Resources

2	19.0	19.1	Qoa - Pleistocene older alluvium	Unknown
2	19.1	19.2	Qoa - Pleistocene older alluvium	Unknown
3	19.2	19.3	Qoa - Pleistocene older alluvium	Unknown
3	19.3	19.4	Qoa - Pleistocene older alluvium	Unknown
3	19.4	19.5	Qoa - Pleistocene older alluvium	Unknown
3	19.5	19.6	Qoa - Pleistocene older alluvium	Unknown
3	19.6	19.7	Qoa - Pleistocene older alluvium	Unknown
3	19.7	19.8	Qoa - Pleistocene older alluvium	Unknown
3	19.8	19.9	Qoa - Pleistocene older alluvium	Unknown
3	19.9	20.0	Qoa - Pleistocene older alluvium	Unknown
3	20.0	20.1	Qoa - Pleistocene older alluvium	Unknown
3	20.1	20.2	Qoa - Pleistocene older alluvium	Unknown
3	20.2	20.3	Qoa - Pleistocene older alluvium	Unknown
3	20.3	20.4	Qoa - Pleistocene older alluvium	Unknown
3	20.4	20.5	Qoa - Pleistocene older alluvium	Unknown
3	20.5	20.6	Qoa - Pleistocene older alluvium	Unknown
3	20.6	20.7	Qoa - Pleistocene older alluvium	Unknown
3	20.7	20.8	Qoa - Pleistocene older alluvium	Unknown
3	20.8	20.9	Qoa - Pleistocene older alluvium	Unknown
3	20.9	21.0	Qoa - Pleistocene older alluvium	Unknown
3	21.0	21.1	Qoa - Pleistocene older alluvium	Unknown
3	21.1	21.2	Qoa - Pleistocene older alluvium	Unknown
3	21.2	21.3	Qoa - Pleistocene older alluvium	Unknown
3	21.3	21.4	Qoa - Pleistocene older alluvium	Unknown
3	21.4	21.5	Qoa - Pleistocene older alluvium	Unknown
3	21.5	21.6	Qoa - Pleistocene older alluvium	Unknown
3	21.6	21.7	Qoa - Pleistocene older alluvium	Unknown
3	21.7	21.8	Qoa - Pleistocene older alluvium	Unknown
3	21.8	21.9	Qoa - Pleistocene older alluvium	Unknown
3	21.9	22.0	Qoa - Pleistocene older alluvium	Unknown
3	22.0	22.1	Qoa - Pleistocene older alluvium	Unknown
3	22.1	22.2	Qoa - Pleistocene older alluvium	Unknown
3	22.2	22.3	Qoa - Pleistocene older alluvium	Unknown
3	22.3	22.4	Qoa - Pleistocene older alluvium	Unknown
3	22.4	22.5	Qoa - Pleistocene older alluvium	Unknown
3	22.5	22.6	Qoa - Pleistocene older alluvium	Unknown
3	22.6	22.7	Qoa - Pleistocene older alluvium	Unknown
3	22.7	22.8	Qoa - Pleistocene older alluvium	Unknown
3	22.8	22.9	Tj - Jacumba Volcanics	No
3	22.9	23.0	Tj - Jacumba Volcanics	No
3	23.0	23.1	Tj - Jacumba Volcanics	No
3	23.1	23.2	Tj - Jacumba Volcanics	No
4	23.2	23.3	Tj - Jacumba Volcanics	No
4	23.3	23.4	Qoa - Pleistocene older alluvium	Unknown
4	23.4	23.5	Qoa - Pleistocene older alluvium	Unknown
4	23.5	23.6	Klp - tonalite of La Posta	No
4	23.6	23.7	Klp - tonalite of La Posta	No
4	23.7	23.8	Klp - tonalite of La Posta	No
4	23.8	23.9	Klp - tonalite of La Posta	No
4	23.9	24.0	Klp - tonalite of La Posta	No
4	24.0	24.1	Klp - tonalite of La Posta	No
4	24.1	24.2	Klp - tonalite of La Posta	No
4	24.2	24.3	Klp - tonalite of La Posta	No
4	24.3	24.4	Klp - tonalite of La Posta	No
4	24.4	24.5	Klp - tonalite of La Posta	No
4	24.5	24.6	Klp - tonalite of La Posta	No
4	24.6	24.7	Klp - tonalite of La Posta	No
4	24.7	24.8	Klp - tonalite of La Posta	No
4	24.8	24.9	Klp - tonalite of La Posta	No
4	24.9	25.0	Klp - tonalite of La Posta	No
4	25.0	25.1	Klp - tonalite of La Posta	No
4	25.1	25.2	Klp - tonalite of La Posta	No
4	25.2	25.3	Klp - tonalite of La Posta	No
4	25.3	25.4	MzPzm - Mesozoic metasediments	No

Paleo_Resources

4	25.4	25.5	MzPzm - Mesozoic metasediments	No
4	25.5	25.6	MzPzm - Mesozoic metasediments	No
4	25.6	25.7	MzPzm - Mesozoic metasediments	No
4	25.7	25.8	Klp - tonalite of La Posta	No
4	25.8	25.9	Klp - tonalite of La Posta	No
4	25.9	26.0	Klp - tonalite of La Posta	No
4	26.0	26.1	Klp - tonalite of La Posta	No
4	26.1	26.2	Klp - tonalite of La Posta	No
4	26.2	26.3	Klp - tonalite of La Posta	No
4	26.3	26.4	Klp - tonalite of La Posta	No
4	26.4	26.5	Klp - tonalite of La Posta	No
4	26.5	26.6	Klp - tonalite of La Posta	No
4	26.6	26.7	Klp - tonalite of La Posta	No
4	26.7	26.8	Klp - tonalite of La Posta	No
4	26.8	26.9	Klp - tonalite of La Posta	No
4	26.9	27.0	Qoa - Pleistocene older alluvium	Unknown
4	27.0	27.1	Qoa - Pleistocene older alluvium	Unknown
4	27.1	27.2	Klp - tonalite of La Posta	No
4	27.2	27.3	Klp - tonalite of La Posta	No
4	27.3	27.4	Klp - tonalite of La Posta	No
4	27.4	27.5	Klp - tonalite of La Posta	No
4	27.5	27.6	Klp - tonalite of La Posta	No
4	27.6	27.7	Klp - tonalite of La Posta	No
4	27.7	27.8	Klp - tonalite of La Posta	No
4	27.8	27.9	Klp - tonalite of La Posta	No
4	27.9	28.0	Klp - tonalite of La Posta	No
4	28.0	28.1	Klp - tonalite of La Posta	No
4	28.1	28.2	Klp - tonalite of La Posta	No
4	28.2	28.3	Klp - tonalite of La Posta	No
4	28.3	28.4	Klp - tonalite of La Posta	No
4	28.4	28.5	Klp - tonalite of La Posta	No
4	28.5	28.6	Klp - tonalite of La Posta	No
4	28.6	28.7	Klp - tonalite of La Posta	No
4	28.7	28.8	Klp - tonalite of La Posta	No
4	28.8	28.9	Klp - tonalite of La Posta	No
4	28.9	29.0	Klp - tonalite of La Posta	No
4	29.0	29.1	Klp - tonalite of La Posta	No
4	29.1	29.2	Klp - tonalite of La Posta	No
4	29.2	29.3	Klp - tonalite of La Posta	No
4	29.3	29.4	Qya - Holocene young alluvium	Low
4	29.4	29.5	Qya - Holocene young alluvium	Low
4	29.5	29.6	Qya - Holocene young alluvium	Low
4	29.6	29.7	Qya - Holocene young alluvium	Low
4	29.7	29.8	Qya - Holocene young alluvium	Low
4	29.8	29.9	Qya - Holocene young alluvium	Low
4	29.9	30.0	Qya - Holocene young alluvium	Low
4	30.0	30.1	Qya - Holocene young alluvium	Low
4	30.1	30.2	Qya - Holocene young alluvium	Low
4	30.2	30.3	Qya - Holocene young alluvium	Low
5	30.3	30.4	Qya - Holocene young alluvium	Low
5	30.4	30.5	Qya - Holocene young alluvium	Low
5	30.5	30.6	Qya - Holocene young alluvium	Low
5	30.6	30.7	Qya - Holocene young alluvium	Low
5	30.7	30.8	Ta - Anza Formation	High
5	30.8	30.9	Tj - Jacumba Volcanics	No
5	30.9	31.0	Tj - Jacumba Volcanics	No
5	31.0	31.1	Tj - Jacumba Volcanics	No
5	31.1	31.2	Ta - Anza Formation	High
5	31.2	31.3	Klp - tonalite of La Posta	No
5	31.3	31.4	Klp - tonalite of La Posta	No
5	31.4	31.5	Klp - tonalite of La Posta	No
5	31.5	31.6	Klp - tonalite of La Posta	No
5	31.6	31.7	Klp - tonalite of La Posta	No
5	31.7	31.8	Qoa - Pleistocene older alluvium	Unknown

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5	31.8	31.9	Qoa - Pleistocene older alluvium	Unknown
5	31.9	32.0	Klp - tonalite of La Posta	No
5	32.0	32.1	Klp - tonalite of La Posta	No
5	32.1	32.2	Klp - tonalite of La Posta	No
5	32.2	32.3	Qoa - Pleistocene older alluvium	Unknown
5	32.3	32.4	Klp - tonalite of La Posta	No
5	32.4	32.5	Klp - tonalite of La Posta	No
5	32.5	32.6	Klp - tonalite of La Posta	No
5	32.6	32.7	Klp - tonalite of La Posta	No
5	32.7	32.8	Klp - tonalite of La Posta	No
5	32.8	32.9	Klp - tonalite of La Posta	No
5	32.9	33.0	Klp - tonalite of La Posta	No
5	33.0	33.1	Klp - tonalite of La Posta	No
5	33.1	33.2	Klp - tonalite of La Posta	No
5	33.2	33.3	Klp - tonalite of La Posta	No
5	33.3	33.4	Qoa - Pleistocene older alluvium	Unknown
5	33.4	33.5	Qoa - Pleistocene older alluvium	Unknown
5	33.5	33.6	Qoa - Pleistocene older alluvium	Unknown
5	33.6	33.7	Qoa - Pleistocene older alluvium	Unknown
5	33.7	33.8	Qoa - Pleistocene older alluvium	Unknown
5	33.8	33.9	Qoa - Pleistocene older alluvium	Unknown
5	33.9	34.0	Klp - tonalite of La Posta	No
5	34.0	34.1	Klp - tonalite of La Posta	No
5	34.1	34.2	Klp - tonalite of La Posta	No
5	34.2	34.3	Klp - tonalite of La Posta	No
5	34.3	34.4	Klp - tonalite of La Posta	No
5	34.4	34.5	Klp - tonalite of La Posta	No
5	34.5	34.6	Klp - tonalite of La Posta	No
5	34.6	34.7	Klp - tonalite of La Posta	No
5	34.7	34.8	Ta - Anza Formation	High
5	34.8	34.9	Tj - Jacumba Volcanics	No
5	34.9	35.0	Tj - Jacumba Volcanics	No
5	35.0	35.1	Tj - Jacumba Volcanics	No
5	35.1	35.2	Tj - Jacumba Volcanics	No
5	35.2	35.3	Tj - Jacumba Volcanics	No
5	35.3	35.4	Tj - Jacumba Volcanics	No
5	35.4	35.5	Tj - Jacumba Volcanics	No
5	35.5	35.6	Ta - Anza Formation	High
5	35.6	35.7	Qoa - Pleistocene older alluvium	Unknown
5	35.7	35.8	Qoa - Pleistocene older alluvium	Unknown
5	35.8	35.9	Jsp - Santiago Peak Volcanics	No
5	35.9	36.0	Jsp - Santiago Peak Volcanics	No
5	36.0	36.1	Jsp - Santiago Peak Volcanics	No
5	36.1	36.2	Jsp - Santiago Peak Volcanics	No
5	36.2	36.3	Jsp - Santiago Peak Volcanics	No
5	36.3	36.4	Jsp - Santiago Peak Volcanics	No
5	36.4	36.5	Jsp - Santiago Peak Volcanics	No
5	36.5	36.6	Jsp - Santiago Peak Volcanics	No
5	36.6	36.7	Jsp - Santiago Peak Volcanics	No
5	36.7	36.8	Jsp - Santiago Peak Volcanics	No
5	36.8	36.9	Jsp - Santiago Peak Volcanics	No
5	36.9	37.0	Jsp - Santiago Peak Volcanics	No
5	37.0	37.1	Jsp - Santiago Peak Volcanics	No
5	37.1	37.2	Jsp - Santiago Peak Volcanics	No
5	37.2	37.3	Qya - Holocene young alluvium	Low
5	37.3	37.4	Qya - Holocene young alluvium	Low
5	37.4	37.5	Qya - Holocene young alluvium	Low
5	37.5	37.6	Jsp - Santiago Peak Volcanics	No
5	37.6	37.7	Jsp - Santiago Peak Volcanics	No
5	37.7	37.8	Jsp - Santiago Peak Volcanics	No
5	37.8	37.9	Jsp - Santiago Peak Volcanics	No
5	37.9	38.0	Jsp - Santiago Peak Volcanics	No
5	38.0	38.1	Jsp - Santiago Peak Volcanics	No
5	38.1	38.2	Jsp - Santiago Peak Volcanics	No

Paleo_Resources

5	38.2	38.3	Klh - Indian Hill granodiorite	No
5	38.3	38.4	Klh - Indian Hill granodiorite	No
5	38.4	38.5	Klh - Indian Hill granodiorite	No
5	38.5	38.6	Klh - Indian Hill granodiorite	No
5	38.6	38.7	Klh - Indian Hill granodiorite	No
5	38.7	38.8	Klp - tonalite of La Posta	No
5	38.8	38.9	Klp - tonalite of La Posta	No
5	38.9	39.0	Klp - tonalite of La Posta	No
5	39.0	39.1	Klp - tonalite of La Posta	No
5	39.1	39.2	Klp - tonalite of La Posta	No
5	39.2	39.3	Klp - tonalite of La Posta	No
5	39.3	39.4	Qya - Holocene young alluvium	Low
5	39.4	39.5	Qya - Holocene young alluvium	Low
5	39.5	39.6	Klp - tonalite of La Posta	No
5	39.6	39.7	Klp - tonalite of La Posta	No
6	39.7	39.8	Klp - tonalite of La Posta	No
6	39.8	39.9	Klp - tonalite of La Posta	No
6	39.9	40.0	Klp - tonalite of La Posta	No
6	40.0	40.1	Klp - tonalite of La Posta	No
6	40.1	40.2	Klp - tonalite of La Posta	No
6	40.2	40.3	Klp - tonalite of La Posta	No
6	40.3	40.4	Klp - tonalite of La Posta	No
6	40.4	40.5	Klp - tonalite of La Posta	No
6	40.5	40.6	Klp - tonalite of La Posta	No
6	40.6	40.7	Klp - tonalite of La Posta	No
6	40.7	40.8	Klp - tonalite of La Posta	No
6	40.8	40.9	Klp - tonalite of La Posta	No
6	40.9	41.0	Klp - tonalite of La Posta	No
6	41.0	41.1	Klp - tonalite of La Posta	No
6	41.1	41.2	Klp - tonalite of La Posta	No
6	41.2	41.3	Klp - tonalite of La Posta	No
6	41.3	41.4	Klp - tonalite of La Posta	No
6	41.4	41.5	Klp - tonalite of La Posta	No
6	41.5	41.6	Klp - tonalite of La Posta	No
6	41.6	41.7	Klp - tonalite of La Posta	No
6	41.7	41.8	Klp - tonalite of La Posta	No
6	41.8	41.9	Klp - tonalite of La Posta	No
6	41.9	42.0	Klp - tonalite of La Posta	No
6	42.0	42.1	Klp - tonalite of La Posta	No
6	42.1	42.2	Klp - tonalite of La Posta	No
6	42.2	42.3	Klp - tonalite of La Posta	No
6	42.3	42.4	Klp - tonalite of La Posta	No
6	42.4	42.5	Klp - tonalite of La Posta	No
6	42.5	42.6	Klp - tonalite of La Posta	No
6	42.6	42.7	Klp - tonalite of La Posta	No
6	42.7	42.8	Klp - tonalite of La Posta	No
6	42.8	42.9	Klp - tonalite of La Posta	No
6	42.9	43.0	Klp - tonalite of La Posta	No
6	43.0	43.1	Klp - tonalite of La Posta	No
6	43.1	43.2	Klp - tonalite of La Posta	No
6	43.2	43.3	Klp - tonalite of La Posta	No
6	43.3	43.4	Klp - tonalite of La Posta	No
6	43.4	43.5	Klp - tonalite of La Posta	No
6	43.5	43.6	Klp - tonalite of La Posta	No
6	43.6	43.7	Klp - tonalite of La Posta	No
6	43.7	43.8	Klp - tonalite of La Posta	No
6	43.8	43.9	Klp - tonalite of La Posta	No
6	43.9	44.0	Klp - tonalite of La Posta	No
6	44.0	44.1	Klp - tonalite of La Posta	No
6	44.1	44.2	Klp - tonalite of La Posta	No
6	44.2	44.3	Klp - tonalite of La Posta	No
6	44.3	44.4	Klp - tonalite of La Posta	No
6	44.4	44.5	Klp - tonalite of La Posta	No
6	44.5	44.6	Klp - tonalite of La Posta	No

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6	44.6	44.7	Klp - tonalite of La Posta	No
6	44.7	44.8	Klp - tonalite of La Posta	No
6	44.8	44.9	Klp - tonalite of La Posta	No
6	44.9	45.0	Klp - tonalite of La Posta	No
6	45.0	45.1	Klp - tonalite of La Posta	No
6	45.1	45.2	Klp - tonalite of La Posta	No
6	45.2	45.3	Klp - tonalite of La Posta	No
6	45.3	45.4	Klp - tonalite of La Posta	No
6	45.4	45.5	Klp - tonalite of La Posta	No
6	45.5	45.6	Klp - tonalite of La Posta	No
6	45.6	45.7	Klp - tonalite of La Posta	No
6	45.7	45.8	Klp - tonalite of La Posta	No
6	45.8	45.9	Klp - tonalite of La Posta	No
6	45.9	46.0	Klp - tonalite of La Posta	No
6	46.0	46.1	Klp - tonalite of La Posta	No
6	46.1	46.2	Klp - tonalite of La Posta	No
6	46.2	46.3	Klp - tonalite of La Posta	No
6	46.3	46.4	Klp - tonalite of La Posta	No
6	46.4	46.5	Klp - tonalite of La Posta	No
6	46.5	46.6	Klp - tonalite of La Posta	No
6	46.6	46.7	Klp - tonalite of La Posta	No
6	46.7	46.8	Klp - tonalite of La Posta	No
6	46.8	46.9	Klp - tonalite of La Posta	No
6	46.9	47.0	Klp - tonalite of La Posta	No
6	47.0	47.1	Klp - tonalite of La Posta	No
6	47.1	47.2	Klp - tonalite of La Posta	No
6	47.2	47.3	Klp - tonalite of La Posta	No
6	47.3	47.4	Klp - tonalite of La Posta	No
6	47.4	47.5	Klp - tonalite of La Posta	No
6	47.5	47.6	Klp - tonalite of La Posta	No
6	47.6	47.7	Klp - tonalite of La Posta	No
6	47.7	47.8	Klp - tonalite of La Posta	No
6	47.8	47.9	Klp - tonalite of La Posta	No
6	47.9	48.0	Klp - tonalite of La Posta	No
6	48.0	48.1	Klp - tonalite of La Posta	No
6	48.1	48.2	Klp - tonalite of La Posta	No
6	48.2	48.3	Klp - tonalite of La Posta	No
6	48.3	48.4	Klp - tonalite of La Posta	No
6	48.4	48.5	Klp - tonalite of La Posta	No
6	48.5	48.6	Klp - tonalite of La Posta	No
6	48.6	48.7	Klp - tonalite of La Posta	No
6	48.7	48.8	Klp - tonalite of La Posta	No
6	48.8	48.9	Klp - tonalite of La Posta	No
6	48.9	49.0	Klp - tonalite of La Posta	No
6	49.0	49.1	Klp - tonalite of La Posta	No
6	49.1	49.2	Klp - tonalite of La Posta	No
6	49.2	49.3	Klp - tonalite of La Posta	No
6	49.3	49.4	Klp - tonalite of La Posta	No
6	49.4	49.5	Klp - tonalite of La Posta	No
6	49.5	49.6	Klp - tonalite of La Posta	No
6	49.6	49.7	Klp - tonalite of La Posta	No
6	49.7	49.8	Klp - tonalite of La Posta	No
6	49.8	49.9	Klp - tonalite of La Posta	No
6	49.9	50.0	Klp - tonalite of La Posta	No
6	50.0	50.1	Klp - tonalite of La Posta	No
6	50.1	50.2	Klp - tonalite of La Posta	No
6	50.2	50.3	Klp - tonalite of La Posta	No
6	50.3	50.4	Klp - tonalite of La Posta	No
6	50.4	50.5	Klp - tonalite of La Posta	No
6	50.5	50.6	Klp - tonalite of La Posta	No
6	50.6	50.7	Klp - tonalite of La Posta	No
6	50.7	50.8	Klp - tonalite of La Posta	No
6	50.8	50.9	Klp - tonalite of La Posta	No
6	50.9	51.0	Klp - tonalite of La Posta	No

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6	51.0	51.1	Klp - tonalite of La Posta	No
6	51.1	51.2	Klp - tonalite of La Posta	No
6	51.2	51.3	Qoa - Pleistocene older alluvium	Unknown
6	51.3	51.4	Klp - tonalite of La Posta	No
6	51.4	51.5	Klp - tonalite of La Posta	No
6	51.5	51.6	Klp - tonalite of La Posta	No
6	51.6	51.7	Klp - tonalite of La Posta	No
6	51.7	51.8	JTRm - Julian Schist	Unknown
6	51.8	51.9	JTRm - Julian Schist	Unknown
6	51.9	52.0	Klp - tonalite of La Posta	No
6	52.0	52.1	Klp - tonalite of La Posta	No
6	52.1	52.2	JTRm - Julian Schist	Unknown
6	52.2	52.3	JTRm - Julian Schist	Unknown
6	52.3	52.4	JTRm - Julian Schist	Unknown
6	52.4	52.5	JTRm - Julian Schist	Unknown
6	52.5	52.6	JTRm - Julian Schist	Unknown
7	52.6	52.7	JTRm - Julian Schist	Unknown
7	52.7	52.8	JTRm - Julian Schist	Unknown
7	52.8	52.9	Jcr - granodiorite of Cuyamaca Reservoir	No
7	52.9	53.0	JTRm - Julian Schist	Unknown
7	53.0	53.1	JTRm - Julian Schist	Unknown
7	53.1	53.2	JTRm - Julian Schist	Unknown
7	53.2	53.3	JTRm - Julian Schist	Unknown
7	53.3	53.4	JTRm - Julian Schist	Unknown
7	53.4	53.5	Qya - Holocene young alluvium	Low
7	53.5	53.6	Klb - tonalite of Las Bancas	No
7	53.6	53.7	Klb - tonalite of Las Bancas	No
7	53.7	53.8	Jcr - granodiorite of Cuyamaca Reservoir	No
7	53.8	53.9	Qoa - Pleistocene older alluvium	Unknown
7	53.9	54.0	Qoa - Pleistocene older alluvium	Unknown
7	54.0	54.1	JTRm - Julian Schist	Unknown
7	54.1	54.2	JTRm - Julian Schist	Unknown
7	54.2	54.3	JTRm - Julian Schist	Unknown
7	54.3	54.4	JTRm - Julian Schist	Unknown
7	54.4	54.5	Kc - Cuyamaca gabbro	No
7	54.5	54.6	Kgm - tonalite of Granite Mountain	No
7	54.6	54.7	Kgm - tonalite of Granite Mountain	No
7	54.7	54.8	Kgm - tonalite of Granite Mountain	No
7	54.8	54.9	Kgm - tonalite of Granite Mountain	No
7	54.9	55.0	Kgm - tonalite of Granite Mountain	No
7	55.0	55.1	Kgm - tonalite of Granite Mountain	No
7	55.1	55.2	Kgm - tonalite of Granite Mountain	No
7	55.2	55.3	Kgm - tonalite of Granite Mountain	No
7	55.3	55.4	Kgm - tonalite of Granite Mountain	No
7	55.4	55.5	Kgm - tonalite of Granite Mountain	No
7	55.5	55.6	Kgm - tonalite of Granite Mountain	No
7	55.6	55.7	Kgm - tonalite of Granite Mountain	No
7	55.7	55.8	Kgm - tonalite of Granite Mountain	No
7	55.8	55.9	Kgm - tonalite of Granite Mountain	No
7	55.9	56.0	Kgm - tonalite of Granite Mountain	No
7	56.0	56.1	Kgm - tonalite of Granite Mountain	No
7	56.1	56.2	Kgm - tonalite of Granite Mountain	No
7	56.2	56.3	Klp - tonalite of La Posta	No
7	56.3	56.4	Klp - tonalite of La Posta	No
7	56.4	56.5	Klp - tonalite of La Posta	No
7	56.5	56.6	Qya - Holocene young alluvium	Low
7	56.6	55.7	Klp - tonalite of La Posta	No
7	55.7	55.8	Klp - tonalite of La Posta	No
7	55.8	55.9	Klp - tonalite of La Posta	No
7	55.9	56.0	Klp - tonalite of La Posta	No
7	56.0	56.1	Klp - tonalite of La Posta	No
7	56.1	56.2	Klp - tonalite of La Posta	No
7	56.2	56.3	Klp - tonalite of La Posta	No
7	56.3	56.4	Klp - tonalite of La Posta	No

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7	56.4	56.5	Klp - tonalite of La Posta	No
7	56.5	56.6	Klp - tonalite of La Posta	No
7	56.6	56.7	Klp - tonalite of La Posta	No
7	56.7	56.8	Klp - tonalite of La Posta	No
7	56.8	56.9	Klp - tonalite of La Posta	No
7	56.9	57.0	Klp - tonalite of La Posta	No
7	57.0	57.1	Klp - tonalite of La Posta	No
7	57.1	57.2	Klp - tonalite of La Posta	No
7	57.2	57.3	Klp - tonalite of La Posta	No
7	57.3	57.4	Klp - tonalite of La Posta	No
7	57.4	57.5	Klp - tonalite of La Posta	No
7	57.5	57.6	Klp - tonalite of La Posta	No
7	57.6	57.7	Klp - tonalite of La Posta	No
7	57.7	57.8	Klp - tonalite of La Posta	No
7	57.8	57.9	Klp - tonalite of La Posta	No
7	57.9	58.0	Klp - tonalite of La Posta	No
7	58.0	58.1	Klp - tonalite of La Posta	No
7	58.1	58.2	Klp - tonalite of La Posta	No
7	58.2	58.3	Klp - tonalite of La Posta	No
7	58.3	58.4	Klp - tonalite of La Posta	No
7	58.4	58.5	Klp - tonalite of La Posta	No
7	58.5	58.6	Klp - tonalite of La Posta	No
7	58.6	58.7	Klp - tonalite of La Posta	No
7	58.7	58.8	Klp - tonalite of La Posta	No
7	58.8	58.9	Klp - tonalite of La Posta	No
7	58.9	59.0	Klp - tonalite of La Posta	No
7	59.0	59.1	Klp - tonalite of La Posta	No
7	59.1	59.2	Klp - tonalite of La Posta	No
7	59.2	59.3	Klp - tonalite of La Posta	No
7	59.3	59.4	Klp - tonalite of La Posta	No
7	59.4	59.5	Klp - tonalite of La Posta	No
7	59.5	59.6	Klp - tonalite of La Posta	No
7	59.6	59.7	Klp - tonalite of La Posta	No
7	59.7	59.8	Klp - tonalite of La Posta	No
7	59.8	59.9	Klp - tonalite of La Posta	No
7	59.9	60.0	Klp - tonalite of La Posta	No
7	60.0	60.1	Klp - tonalite of La Posta	No
7	60.1	60.2	Klp - tonalite of La Posta	No
7	60.2	60.3	Klp - tonalite of La Posta	No
7	60.3	60.4	Klp - tonalite of La Posta	No
7	60.4	60.5	Klp - tonalite of La Posta	No
7	60.5	60.6	Klp - tonalite of La Posta	No
7	60.6	60.7	Klp - tonalite of La Posta	No
7	60.7	60.8	Klp - tonalite of La Posta	No
7	60.8	60.9	Klp - tonalite of La Posta	No
7	60.9	61.0	Klp - tonalite of La Posta	No
7	61.0	61.1	Klp - tonalite of La Posta	No
7	61.1	61.2	Klp - tonalite of La Posta	No
7	61.2	61.3	Klp - tonalite of La Posta	No
8	61.3	61.4	Klp - tonalite of La Posta	No
8	61.4	61.5	Klp - tonalite of La Posta	No
8	61.5	61.6	Klp - tonalite of La Posta	No
8	61.6	61.7	Klp - tonalite of La Posta	No
8	61.7	61.8	Klp - tonalite of La Posta	No
8	61.8	61.9	Klp - tonalite of La Posta	No
8	61.9	62.0	Klp - tonalite of La Posta	No
8	62.0	62.1	Klp - tonalite of La Posta	No
8	62.1	62.2	Klp - tonalite of La Posta	No
8	62.2	62.3	Klp - tonalite of La Posta	No
8	62.3	62.4	Klp - tonalite of La Posta	No
8	62.4	62.5	Klp - tonalite of La Posta	No
8	62.5	62.6	Klp - tonalite of La Posta	No
8	62.6	62.7	Klp - tonalite of La Posta	No
8	62.7	62.8	Klp - tonalite of La Posta	No

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8	62.8	62.9	Klp - tonalite of La Posta	No
8	62.9	63.0	Klp - tonalite of La Posta	No
8	63.0	63.1	Klp - tonalite of La Posta	No
8	63.1	63.2	Klp - tonalite of La Posta	No
8	63.2	63.3	Klp - tonalite of La Posta	No
8	63.3	63.4	Klp - tonalite of La Posta	No
8	63.4	63.5	Klp - tonalite of La Posta	No
8	63.5	63.6	Klp - tonalite of La Posta	No
8	63.6	63.7	Klp - tonalite of La Posta	No
8	63.7	63.8	Klp - tonalite of La Posta	No
8	63.8	63.9	Klp - tonalite of La Posta	No
8	63.9	64.0	Klp - tonalite of La Posta	No
8	64.0	64.1	Klp - tonalite of La Posta	No
8	64.1	64.2	Klp - tonalite of La Posta	No
8	64.2	64.3	Klp - tonalite of La Posta	No
8	64.3	64.4	Klp - tonalite of La Posta	No
8	64.4	64.5	Klp - tonalite of La Posta	No
8	64.5	64.6	Klp - tonalite of La Posta	No
8	64.6	64.7	Klp - tonalite of La Posta	No
8	64.7	64.8	Klp - tonalite of La Posta	No
8	64.8	64.9	Klp - tonalite of La Posta	No
8	64.9	65.0	Klp - tonalite of La Posta	No
8	65.0	65.1	Klp - tonalite of La Posta	No
8	65.1	65.2	Klp - tonalite of La Posta	No
8	65.2	65.3	Klp - tonalite of La Posta	No
8	65.3	65.4	Klp - tonalite of La Posta	No
9	65.4	65.5	Kgm - tonalite of Granite Mountain1	No
9	65.5	65.6	Kgm - tonalite of Granite Mountain1	No
9	65.6	65.7	Kgm - tonalite of Granite Mountain1	No
9	65.7	65.8	Kgm - tonalite of Granite Mountain1	No
9	65.8	65.9	Kgm - tonalite of Granite Mountain1	No
9	65.9	66.0	Kgm - tonalite of Granite Mountain1	No
9	66.0	66.1	Kgm - tonalite of Granite Mountain1	No
9	66.1	66.2	Kgm - tonalite of Granite Mountain1	No
9	66.2	66.3	Kgm - tonalite of Granite Mountain1	No
9	66.3	66.4	Kgm - tonalite of Granite Mountain1	No
9	66.4	66.5	Kgm - tonalite of Granite Mountain1	No
9	66.5	66.6	Kgm - tonalite of Granite Mountain1	No
9	66.6	66.7	Kgm - tonalite of Granite Mountain1	No
9	66.7	66.8	Kgm - tonalite of Granite Mountain1	No
9	66.8	66.9	Kgm - tonalite of Granite Mountain1	No
9	66.9	67.0	Kgm - tonalite of Granite Mountain1	No
9	67.0	67.1	Kgm - tonalite of Granite Mountain1	No
9	67.1	67.2	Kgm - tonalite of Granite Mountain1	No
9	67.2	67.3	Kgm - tonalite of Granite Mountain1	No
9	67.3	67.4	Kgm - tonalite of Granite Mountain1	No
9	67.4	67.5	Kgm - tonalite of Granite Mountain1	No
9	67.5	67.6	Kgm - tonalite of Granite Mountain2	No
9	67.6	67.7	Kgm - tonalite of Granite Mountain2	No
9	67.7	67.8	Kgm - tonalite of Granite Mountain2	No
9	67.8	67.9	Kgm - tonalite of Granite Mountain2	No
9	67.9	68.0	Kgm - tonalite of Granite Mountain2	No
9	68.0	68.1	Kgm - tonalite of Granite Mountain2	No
9	68.1	68.2	Kgm - tonalite of Granite Mountain2	No
9	68.2	68.3	Qya - Holocene young alluvium	Low
9	68.3	68.4	Qya - Holocene young alluvium	Low
9	68.4	68.5	Qya - Holocene young alluvium	Low
9	68.5	68.6	Kgm - tonalite of Granite Mountain2	No
9	68.6	68.7	Kgm - tonalite of Granite Mountain2	No
9	68.7	68.8	Kgm - tonalite of Granite Mountain2	No
9	68.8	68.9	Kgm - tonalite of Granite Mountain2	No
9	68.9	69.0	Kgm - tonalite of Granite Mountain2	No
9	69.0	69.1	Kgm - tonalite of Granite Mountain2	No
9	69.1	69.2	Kgm - tonalite of Granite Mountain2	No

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9	69.2	69.3	Kgm - tonalite of Granite Mountain3	No
9	69.3	69.4	Kgm - tonalite of Granite Mountain3	No
9	69.4	69.5	Kgm - tonalite of Granite Mountain3	No
9	69.5	69.6	Kgm - tonalite of Granite Mountain3	No
9	69.6	69.7	Kgm - tonalite of Granite Mountain3	No
9	69.7	69.8	Klp - tonalite of La Posta	No
9	69.8	69.9	Klp - tonalite of La Posta	No
9	69.9	70.0	Klp - tonalite of La Posta	No
9	70.0	70.1	Klp - tonalite of La Posta	No
9	70.1	70.2	Klp - tonalite of La Posta	No
9	70.2	70.3	Klp - tonalite of La Posta	No
9	70.3	70.4	Klp - tonalite of La Posta	No
9	70.4	70.5	Klp - tonalite of La Posta	No
9	70.5	70.6	Klp - tonalite of La Posta	No
9	70.6	70.7	Klp - tonalite of La Posta	No
9	70.7	70.8	Klp - tonalite of La Posta	No
9	70.8	70.9	Klp - tonalite of La Posta	No
10	70.9	71.0	Klp - tonalite of La Posta	No
10	71.0	71.1	Klp - tonalite of La Posta	No
10	71.1	71.2	Klp - tonalite of La Posta	No
10	71.2	71.3	Klp - tonalite of La Posta	No
10	71.3	71.4	Klp - tonalite of La Posta	No
10	71.4	71.5	Klp - tonalite of La Posta	No
10	71.5	71.6	Klp - tonalite of La Posta	No
10	71.6	71.7	Klp - tonalite of La Posta	No
10	71.7	71.8	Klp - tonalite of La Posta	No
10	71.8	71.9	Klp - tonalite of La Posta	No
10	71.9	72.0	Klp - tonalite of La Posta	No
10	72.0	72.1	Klp - tonalite of La Posta	No
10	72.1	72.2	Klp - tonalite of La Posta	No
10	72.2	72.3	Klp - tonalite of La Posta	No
10	72.3	72.4	Klp - tonalite of La Posta	No
10	72.4	72.5	Klp - tonalite of La Posta	No
10	72.5	72.6	Klp - tonalite of La Posta	No
10	72.6	72.7	Klp - tonalite of La Posta	No
10	72.7	72.8	Klp - tonalite of La Posta	No
10	72.8	72.9	Klp - tonalite of La Posta	No
10	72.9	73.0	Kgm - tonalite of Granite Mountain3	No
10	73.0	73.1	Kgm - tonalite of Granite Mountain3	No
10	73.1	73.2	Kgm - tonalite of Granite Mountain3	No
10	73.2	73.3	Kgm - tonalite of Granite Mountain2	No
10	73.3	73.4	Kgm - tonalite of Granite Mountain2	No
10	73.4	73.5	Qya - Holocene young alluvium	Low
10	73.5	73.6	Qya - Holocene young alluvium	Low
10	73.6	73.7	Qya - Holocene young alluvium	Low
10	73.7	73.8	Qya - Holocene young alluvium	Low
10	73.8	73.9	Qya - Holocene young alluvium	Low
10	73.9	74.0	Kc - Cuyamaca gabbro	No
10	74.0	74.1	Kc - Cuyamaca gabbro	No
10	74.1	74.2	Kc - Cuyamaca gabbro	No
10	74.2	74.3	Kc - Cuyamaca gabbro	No
10	74.3	74.4	Kc - Cuyamaca gabbro	No
10	74.4	74.5	Kc - Cuyamaca gabbro	No
10	74.5	74.6	Kc - Cuyamaca gabbro	No
10	74.6	74.7	Kc - Cuyamaca gabbro	No
10	74.7	74.8	Kc - Cuyamaca gabbro	No
11	74.8	74.9	Kc - Cuyamaca gabbro	No
11	74.9	75.0	Kc - Cuyamaca gabbro	No
11	75.0	75.1	Kc - Cuyamaca gabbro	No
11	75.1	75.2	Kc - Cuyamaca gabbro	No
11	75.2	75.3	Kc - Cuyamaca gabbro	No
11	75.3	75.4	Kc - Cuyamaca gabbro	No
11	75.4	75.5	Kc - Cuyamaca gabbro	No
11	75.5	75.6	Kc - Cuyamaca gabbro	No

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11	75.6	75.7	Kc - Cuyamaca gabbro	No
11	75.7	75.8	Kc - Cuyamaca gabbro	No
11	75.8	75.9	Kc - Cuyamaca gabbro	No
11	75.9	76.0	Kc - Cuyamaca gabbro	No
11	76.0	76.1	Kc - Cuyamaca gabbro	No
11	76.1	76.2	Kc - Cuyamaca gabbro	No
11	76.2	76.3	Kc - Cuyamaca gabbro	No
11	76.3	76.4	Kc - Cuyamaca gabbro	No
11	76.4	76.5	Kc - Cuyamaca gabbro	No
11	76.5	76.6	Kc - Cuyamaca gabbro	No
11	76.6	76.7	Kc - Cuyamaca gabbro	No
11	76.7	76.8	Kc - Cuyamaca gabbro	No
11	76.8	76.9	Kc - Cuyamaca gabbro	No
11	76.9	77.0	Kc - Cuyamaca gabbro	No
11	77.0	77.1	Kc - Cuyamaca gabbro	No
11	77.1	77.2	Kc - Cuyamaca gabbro	No
11	77.2	77.3	Kc - Cuyamaca gabbro	No
11	77.3	77.4	Kc - Cuyamaca gabbro	No
11	77.4	77.5	Kc - Cuyamaca gabbro	No
11	77.5	77.6	Kc - Cuyamaca gabbro	No
12	77.6	77.7	Kc - Cuyamaca gabbro	No
12	77.7	77.8	Kc - Cuyamaca gabbro	No
12	77.8	77.9	Kc - Cuyamaca gabbro	No
12	77.9	78.0	Kc - Cuyamaca gabbro	No
12	78.0	78.1	Kc - Cuyamaca gabbro	No
12	78.1	78.2	Kc - Cuyamaca gabbro	No
12	78.2	78.3	Kc - Cuyamaca gabbro	No
12	78.3	78.4	Kc - Cuyamaca gabbro	No
12	78.4	78.5	Kc - Cuyamaca gabbro	No
12	78.5	78.6	Kc - Cuyamaca gabbro	No
12	78.6	78.7	Kc - Cuyamaca gabbro	No
12	78.7	78.8	Kc - Cuyamaca gabbro	No
12	78.8	78.9	Kc - Cuyamaca gabbro	No
12	78.9	79.0	Kc - Cuyamaca gabbro	No
12	79.0	79.1	Kc - Cuyamaca gabbro	No
12	79.1	79.2	Kc - Cuyamaca gabbro	No
12	79.2	79.3	Kc - Cuyamaca gabbro	No
12	79.3	79.4	Kc - Cuyamaca gabbro	No
12	79.4	79.5	Kc - Cuyamaca gabbro	No
12	79.5	79.6	Kc - Cuyamaca gabbro	No
12	79.6	79.7	Kc - Cuyamaca gabbro	No
12	79.7	79.8	Kc - Cuyamaca gabbro	No
12	79.8	79.9	Kc - Cuyamaca gabbro	No
12	79.9	80.0	Kc - Cuyamaca gabbro	No
12	80.0	80.1	Kc - Cuyamaca gabbro	No
12	80.1	80.2	Kc - Cuyamaca gabbro	No
12	80.2	80.3	Qya - Holocene young alluvium	Low
12	80.3	80.4	Kjv - Japatul Valley tonalite	No
12	80.4	80.5	Kjv - Japatul Valley tonalite	No
12	80.5	80.6	Kjv - Japatul Valley tonalite	No
12	80.6	80.7	Kjv - Japatul Valley tonalite	No
12	80.7	80.8	Kjv - Japatul Valley tonalite	No
12	80.8	80.9	Kjv - Japatul Valley tonalite	No
12	80.9	81.0	Kjv - Japatul Valley tonalite	No
12	81.0	81.1	Kjv - Japatul Valley tonalite	No
12	81.1	81.2	Kjv - Japatul Valley tonalite	No
12	81.2	81.3	Kjv - Japatul Valley tonalite	No
12	81.3	81.4	Kc - Cuyamaca gabbro	No
12	81.4	81.5	Kc - Cuyamaca gabbro	No
12	81.5	81.6	Kc - Cuyamaca gabbro	No
12	81.6	81.7	Kjv - Japatul Valley tonalite	No
12	81.7	81.8	Kjv - Japatul Valley tonalite	No
12	81.8	81.9	Kjv - Japatul Valley tonalite	No
12	81.9	82.0	Qoa - Pleistocene older alluvium	Unknown

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12	82.0	82.1	Qoa - Pleistocene older alluvium	Unknown
12	82.1	82.2	Qoa - Pleistocene older alluvium	Unknown
12	82.2	82.3	Qoa - Pleistocene older alluvium	Unknown
12	82.3	82.4	Kjv - Japatul Valley tonalite	No
12	82.4	82.5	Kjv - Japatul Valley tonalite	No
12	82.5	82.6	Kjv - Japatul Valley tonalite	No
12	82.6	82.7	Kjv - Japatul Valley tonalite	No
12	82.7	82.8	Kmv - Metavolcanic rocks	No
12	82.8	82.9	Kjv - Japatul Valley tonalite	No
12	82.9	83.0	Kjv - Japatul Valley tonalite	No
12	83.0	83.1	Kc - Cuyamaca gabbro	No
12	83.1	83.2	Kc - Cuyamaca gabbro	No
12	83.2	83.3	Kc - Cuyamaca gabbro	No
12	83.3	83.4	Kc - Cuyamaca gabbro	No
12	83.4	83.5	Kc - Cuyamaca gabbro	No
12	83.5	83.6	Kc - Cuyamaca gabbro	No
12	83.6	83.7	Kc - Cuyamaca gabbro	No
12	83.7	83.8	Kc - Cuyamaca gabbro	No
12	83.8	83.9	Kc - Cuyamaca gabbro	No
12	83.9	84.0	Kc - Cuyamaca gabbro	No
12	84.0	84.1	Kc - Cuyamaca gabbro	No
12	84.1	84.2	Kc - Cuyamaca gabbro	No
12	84.2	84.3	Kc - Cuyamaca gabbro	No
12	84.3	84.4	Kc - Cuyamaca gabbro	No
12	84.4	84.5	Kc - Cuyamaca gabbro	No
12	84.5	84.6	Kc - Cuyamaca gabbro	No
12	84.6	84.7	Kc - Cuyamaca gabbro	No
12	84.7	84.8	Kc - Cuyamaca gabbro	No
12	84.8	84.9	Kc - Cuyamaca gabbro	No
12	84.9	85.0	Kc - Cuyamaca gabbro	No
12	85.0	85.1	Kc - Cuyamaca gabbro	No
12	85.1	85.2	Kc - Cuyamaca gabbro	No
12	85.2	85.3	Kc - Cuyamaca gabbro	No
12	85.3	85.4	Kc - Cuyamaca gabbro	No
12	85.4	85.5	Kjv - Japatul Valley tonalite	No
12	85.5	85.6	Kjv - Japatul Valley tonalite	No
12	85.6	85.7	Kjv - Japatul Valley tonalite	No
12	85.7	85.8	Kjv - Japatul Valley tonalite	No
12	85.8	85.9	Kjv - Japatul Valley tonalite	No
12	85.9	86.0	Kmv - Metavolcanic rocks	No
12	86.0	86.1	Kmv - Metavolcanic rocks	No
12	86.1	86.2	Kjv - Japatul Valley tonalite	No
12	86.2	86.3	Kjv - Japatul Valley tonalite	No
12	86.3	86.4	Kjv - Japatul Valley tonalite	No
12	86.4	86.5	Kjv - Japatul Valley tonalite	No
12	86.5	86.6	Kjv - Japatul Valley tonalite	No
12	86.6	86.7	Kjv - Japatul Valley tonalite	No
12	86.7	86.8	Kjv - Japatul Valley tonalite	No
12	86.8	86.9	Kjv - Japatul Valley tonalite	No
12	86.9	87.0	Kjv - Japatul Valley tonalite	No
12	87.0	87.1	Kjv - Japatul Valley tonalite	No
12	87.1	87.2	Kjv - Japatul Valley tonalite	No
12	87.2	87.3	Kjv - Japatul Valley tonalite	No
12	87.3	87.4	Kjv - Japatul Valley tonalite	No
12	87.4	87.5	Kjv - Japatul Valley tonalite	No
12	87.5	87.6	Kjv - Japatul Valley tonalite	No
12	87.6	87.7	Kjv - Japatul Valley tonalite	No
12	87.7	87.8	Kjv - Japatul Valley tonalite	No
12	87.8	87.9	Kjv - Japatul Valley tonalite	No
12	87.9	88.0	Kjv - Japatul Valley tonalite	No
12	88.0	88.1	Kjv - Japatul Valley tonalite	No
12	88.1	88.2	Kjv - Japatul Valley tonalite	No
12	88.2	88.3	Kjv - Japatul Valley tonalite	No
12	88.3	88.4	Kjv - Japatul Valley tonalite	No

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12	88.4	88.5	Kjv - Japatul Valley tonalite	No
12	88.5	88.6	Kjv - Japatul Valley tonalite	No
12	88.6	88.7	Kjv - Japatul Valley tonalite	No
12	88.7	88.8	KJvs - Metavolcanic & metasedimentary rocks	No
12	88.8	88.9	KJvs - Metavolcanic & metasedimentary rocks	No
12	88.9	89.0	KJvs - Metavolcanic & metasedimentary rocks	No
12	89.0	89.1	KJvs - Metavolcanic & metasedimentary rocks	No
12	89.1	89.2	KJvs - Metavolcanic & metasedimentary rocks	No
12	89.2	89.3	Kc - Cuyamaca gabbro	No
12	89.3	89.4	KJvs - Metavolcanic & metasedimentary rocks	No
12	89.4	89.5	Kc - Cuyamaca gabbro	No
12	89.5	89.6	JTRm - Julian Schist	Unknown
12	89.6	89.7	JTRm - Julian Schist	Unknown
12	89.7	89.8	Ka - tonalite of Alpine	No
12	89.8	89.9	Ka - tonalite of Alpine	No
12	89.9	90.0	Ka - tonalite of Alpine	No
14	90.0	90.1	Ka - tonalite of Alpine	No
14	90.1	90.2	Ka - tonalite of Alpine	No
14	90.2	90.3	Ka - tonalite of Alpine	No
14	90.3	90.4	Ka - tonalite of Alpine	No
14	90.4	90.5	Ka - tonalite of Alpine	No
14	90.5	90.6	Ka - tonalite of Alpine	No
14	90.6	90.7	Ka - tonalite of Alpine	No
14	90.7	90.8	Ka - tonalite of Alpine	No
14	90.8	90.9	Ka - tonalite of Alpine	No
14	90.9	91.0	Ka - tonalite of Alpine	No
14	91.0	91.1	Ka - tonalite of Alpine	No
14	91.1	91.2	Ka - tonalite of Alpine	No
14	91.2	91.3	Ka - tonalite of Alpine	No
14	91.3	91.4	Ka - tonalite of Alpine	No
14	91.4	91.5	Ka - tonalite of Alpine	No
14	91.5	91.6	Ka - tonalite of Alpine	No
14	91.6	91.7	Ka - tonalite of Alpine	No
14	91.7	91.8	Ka - tonalite of Alpine	No
14	91.8	91.9	Ka - tonalite of Alpine	No
14	91.9	92.0	Ka - tonalite of Alpine	No
14	92.0	92.1	Ka - tonalite of Alpine	No
14	92.1	92.2	Ka - tonalite of Alpine	No
14	92.2	92.3	Ka - tonalite of Alpine	No
14	92.3	92.4	Ka - tonalite of Alpine	No
14	92.4	92.5	Ka - tonalite of Alpine	No
14	92.5	92.6	Ka - tonalite of Alpine	No
14	92.6	92.7	Qya - Holocene young alluvium	Low
14	92.7	92.8	Qya - Holocene young alluvium	Low
15	92.8	92.9	Qya - Holocene young alluvium	Low
15	92.9	93.0	Ka - tonalite of Alpine	No
15	93.0	93.1	KJld - Leucocratic dikes	No
15	93.1	93.2	KJld - Leucocratic dikes	No
15	93.2	93.3	Ka - tonalite of Alpine	No
15	93.3	93.4	Ka - tonalite of Alpine	No
15	93.4	93.5	Ka - tonalite of Alpine	No
15	93.5	93.6	Ka - tonalite of Alpine	No
15	93.6	93.7	Ka - tonalite of Alpine	No
15	93.7	93.8	Ka - tonalite of Alpine	No
15	93.8	93.9	Ka - tonalite of Alpine	No
15	93.9	94.0	Ka - tonalite of Alpine	No
15	94.0	94.1	Ka - tonalite of Alpine	No
15	94.1	94.2	Ka - tonalite of Alpine	No
15	94.2	94.3	Ka - tonalite of Alpine	No
15	94.3	94.4	Ka - tonalite of Alpine	No
15	94.4	94.5	Ka - tonalite of Alpine	No
15	94.5	94.6	Ka - tonalite of Alpine	No
15	94.6	94.7	Ka - tonalite of Alpine	No
15	94.7	94.8	Ka - tonalite of Alpine	No

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15	94.8	94.9	Ka - tonalite of Alpine	No
15	94.9	95.0	Ka - tonalite of Alpine	No
15	95.0	95.1	Ka - tonalite of Alpine	No
15	95.1	95.2	Ka - tonalite of Alpine	No
15	95.2	95.3	Ka - tonalite of Alpine	No
15	95.3	95.4	Ka - tonalite of Alpine	No
15	95.4	95.5	Ka - tonalite of Alpine	No
15	95.5	95.6	Ka - tonalite of Alpine	No
15	95.6	95.7	Ka - tonalite of Alpine	No
15	95.7	95.8	Ka - tonalite of Alpine	No
15	95.8	95.9	Ka - tonalite of Alpine	No
15	95.9	96.0	Ka - tonalite of Alpine	No
15	96.0	96.1	Ka - tonalite of Alpine	No
15	96.1	96.2	Ka - tonalite of Alpine	No
15	96.2	96.3	Ka - tonalite of Alpine	No
15	96.3	96.4	Ka - tonalite of Alpine	No
15	96.4	96.5	Klb - tonalite of Las Bancas	No
15	96.5	96.6	Klb - tonalite of Las Bancas	No
15	96.6	96.7	Klb - tonalite of Las Bancas	No
15	96.7	96.8	Klb - tonalite of Las Bancas	No
15	96.8	96.9	Klb - tonalite of Las Bancas	No
15	96.9	97.0	Klb - tonalite of Las Bancas	No
15	97.0	97.1	Klb - tonalite of Las Bancas	No
15	97.1	97.2	Klb - tonalite of Las Bancas	No
15	97.2	97.3	Klb - tonalite of Las Bancas	No
15	97.3	97.4	Klb - tonalite of Las Bancas	No
15	97.4	97.5	Klb - tonalite of Las Bancas	No
15	97.5	97.6	Klb - tonalite of Las Bancas	No
15	97.6	97.7	Klb - tonalite of Las Bancas	No
15	97.7	97.8	Klb - tonalite of Las Bancas	No
15	97.8	97.9	Klb - tonalite of Las Bancas	No
15	97.9	98.0	Ka - tonalite of Alpine	No
15	98.0	98.1	Klb - tonalite of Las Bancas	No
15	98.1	98.2	Klb - tonalite of Las Bancas	No
15	98.2	98.3	Klb - tonalite of Las Bancas	No
15	98.3	98.4	Klb - tonalite of Las Bancas	No
15	98.4	98.5	Klb - tonalite of Las Bancas	No
15	98.5	98.6	Klb - tonalite of Las Bancas	No
15	98.6	98.7	Klb - tonalite of Las Bancas	No
15	98.7	98.8	Klb - tonalite of Las Bancas	No
15	98.8	98.9	Ka - tonalite of Alpine	No
15	98.9	99.0	Ka - tonalite of Alpine	No
16	99.0	99.1	Ka - tonalite of Alpine	No
16	99.1	99.2	Ka - tonalite of Alpine	No
16	99.2	99.3	Ka - tonalite of Alpine	No
16	99.3	99.4	Ka - tonalite of Alpine	No
16	99.4	99.5	Ka - tonalite of Alpine	No
16	99.5	99.6	Ka - tonalite of Alpine	No
16	99.6	99.7	Ka - tonalite of Alpine	No
16	99.7	99.8	Ka - tonalite of Alpine	No
16	99.8	99.9	Ka - tonalite of Alpine	No
16	99.9	100.0	Ka - tonalite of Alpine	No
16	100.0	100.1	Ka - tonalite of Alpine	No
16	100.1	100.2	Ka - tonalite of Alpine	No
16	100.2	100.3	Klb - tonalite of Las Bancas	No
16	100.3	100.4	Klb - tonalite of Las Bancas	No
16	100.4	100.5	Klb - tonalite of Las Bancas	No
16	100.5	100.6	Klb - tonalite of Las Bancas	No
16	100.6	100.7	Klb - tonalite of Las Bancas	No
16	100.7	100.8	Klb - tonalite of Las Bancas	No
16	100.8	100.9	Klb - tonalite of Las Bancas	No
16	100.9	101.0	Klb - tonalite of Las Bancas	No
16	101.0	101.1	Klb - tonalite of Las Bancas	No
16	101.1	101.2	Qya - Holocene young alluvium	Low

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16	101.2	101.3	Qya - Holocene young alluvium	Low
16	101.3	101.4	Qoa - Pleistocene older alluvium	Unknown
16	101.4	101.5	Qoa - Pleistocene older alluvium	Unknown
16	101.5	101.6	Qoa - Pleistocene older alluvium	Unknown
16	101.6	101.7	Qoa - Pleistocene older alluvium	Unknown
16	101.7	101.8	Qoa - Pleistocene older alluvium	Unknown
16	101.8	101.9	Qoa - Pleistocene older alluvium	Unknown
16	101.9	102.0	Qoa - Pleistocene older alluvium	Unknown
16	102.0	102.1	Kmv - Metavolcanic rocks	No
16	102.1	102.2	Kmv - Metavolcanic rocks	No
16	102.2	102.3	Kmv - Metavolcanic rocks	No
16	102.3	102.4	Qoa - Pleistocene older alluvium	No
16	102.4	102.5	Qoa - Pleistocene older alluvium	No
16	102.5	102.6	Kmv - Metavolcanic rocks	No
16	102.6	102.7	Qoa - Pleistocene older alluvium	Unknown
16	102.7	102.8	Qoa - Pleistocene older alluvium	Unknown
16	102.8	102.9	Qoa - Pleistocene older alluvium	Unknown
16	102.9	103.0	Qoa - Pleistocene older alluvium	Unknown
16	103.0	103.1	Qoa - Pleistocene older alluvium	Unknown
16	103.1	103.2	Qoa - Pleistocene older alluvium	Unknown
16	103.2	103.3	Qoa - Pleistocene older alluvium	Unknown
16	103.3	103.4	Qoa - Pleistocene older alluvium	Unknown
16	103.4	103.5	Qoa - Pleistocene older alluvium	Unknown
16	103.5	103.6	Kc - Cuyamaca gabbro	No
16	103.6	103.7	Kc - Cuyamaca gabbro	No
16	103.7	103.8	Kc - Cuyamaca gabbro	No
16	103.8	103.9	Kc - Cuyamaca gabbro	No
16	103.9	104.0	Klb - tonalite of Las Bancas	No
16	104.0	104.1	Klb - tonalite of Las Bancas	No
16	104.1	104.2	Klb - tonalite of Las Bancas	No
16	104.2	104.3	Klb - tonalite of Las Bancas	No
16	104.3	104.4	Klb - tonalite of Las Bancas	No
16	104.4	104.5	Ka - tonalite of Alpine	No
16	104.5	104.6	Ka - tonalite of Alpine	No
16	104.6	104.7	Kmv - Metavolcanic rocks	No
16	104.7	104.8	Kmv - Metavolcanic rocks	No
16	104.8	104.9	Kmv - Metavolcanic rocks	No
16	104.9	105.0	Kmv - Metavolcanic rocks	No
16	105.0	105.1	Kmv - Metavolcanic rocks	No
16	105.1	105.2	Kmv - Metavolcanic rocks	No
16	105.2	105.3	Kmv - Metavolcanic rocks	No
16	105.3	105.4	Kgr - Granitoid rocks	No
16	105.4	105.5	Kgr - Granitoid rocks	No
17	105.5	105.6	Kgr - Granitoid rocks	No
17	105.6	105.7	Kgr - Granitoid rocks	No
17	105.7	105.8	Kgr - Granitoid rocks	No
17	105.8	105.9	Kgr - Granitoid rocks	No
17	105.9	106.0	Kgr - Granitoid rocks	No
17	106.0	106.1	Kgr - Granitoid rocks	No
17	106.1	106.2	Kgr - Granitoid rocks	No
17	106.2	106.3	Kgr - Granitoid rocks	No
17	102.3	106.4	Kgr - Granitoid rocks	No
17	106.4	106.5	Kgr - Granitoid rocks	No
17	106.5	106.6	Kgr - Granitoid rocks	No
17	106.6	106.7	Kgr - Granitoid rocks	No
17	106.7	106.8	Kgr - Granitoid rocks	No
17	106.8	106.9	Kgr - Granitoid rocks	No
17	106.9	107.0	Kgr - Granitoid rocks	No
17	107.0	107.1	Kgr - Granitoid rocks	No
17	107.1	107.2	Kgr - Granitoid rocks	No
17	107.2	107.3	Kgr - Granitoid rocks	No
17	107.3	107.4	Kgr - Granitoid rocks	No
17	107.4	107.5	Kgr - Granitoid rocks	No
17	107.5	107.6	Kgr - Granitoid rocks	No

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17	107.6	107.8	Kgr - Granitoid rocks	No
17	107.8	107.9	Kgr - Granitoid rocks	No
17	107.9	108.0	Kgr - Granitoid rocks	No
17	108.0	108.1	Kgr - Granitoid rocks	No
17	108.1	108.2	Kgr - Granitoid rocks	No
17	108.2	108.3	Kgr - Granitoid rocks	No
17	108.3	108.4	Kgr - Granitoid rocks	No
17	108.4	108.5	Kgr - Granitoid rocks	No
17	108.5	108.6	Ksp - Santiago Peak Volcanics	No
17	108.6	108.7	Ksp - Santiago Peak Volcanics	No
17	108.7	108.8	Ksp - Santiago Peak Volcanics	No
17	108.8	108.9	Qya - Holocene young alluvium	Low
17	108.9	109.0	Qya - Holocene young alluvium	Low
17	109.0	109.1	Kgr - Granitoid rocks	No
17	109.1	109.2	Kgr - Granitoid rocks	No
17	109.2	109.3	Kgr - Granitoid rocks	No
17	109.3	109.4	Tst - Stadium Conglomerate	High
17	109.4	109.5	Tp - Pomerado Conglomerate	High
17	109.5	109.6	Tp - Pomerado Conglomerate	High
17	109.6	109.7	Tp - Pomerado Conglomerate	High
17	109.7	109.8	Tp - Pomerado Conglomerate	High
17	109.8	109.9	Tp - Pomerado Conglomerate	High
17	109.9	110.0	Tp - Pomerado Conglomerate	High
17	110.0	110.1	Tp - Pomerado Conglomerate	High
17	110.1	110.2	Tp - Pomerado Conglomerate	High
17	110.2	110.3	Tp - Pomerado Conglomerate	High
17	110.3	110.4	Ksp - Santiago Peak Volcanics	No
17	110.4	110.5	Tst - Stadium Conglomerate	High
17	110.5	110.6	Tst - Stadium Conglomerate	High
17	110.6	110.7	Tp - Pomerado Conglomerate	High
17	110.7	110.8	Tp - Pomerado Conglomerate	High
17	110.8	110.9	Tp - Pomerado Conglomerate	High
17	110.9	111.0	Tp - Pomerado Conglomerate	High
17	111.0	111.1	Ksp - Santiago Peak Volcanics	No
17	111.1	111.2	Ksp - Santiago Peak Volcanics	No
17	111.2	111.3	Ksp - Santiago Peak Volcanics	No
17	111.3	111.4	Ksp - Santiago Peak Volcanics	No
17	111.4	111.5	Ksp - Santiago Peak Volcanics	No
17	111.5	111.6	Ksp - Santiago Peak Volcanics	No
17	111.6	111.7	Ksp - Santiago Peak Volcanics	No
17	111.7	111.8	Ksp - Santiago Peak Volcanics	No
17	111.8	111.9	Ksp - Santiago Peak Volcanics	No
17	111.9	112.0	Ksp - Santiago Peak Volcanics	No
17	112.0	112.1	Ksp - Santiago Peak Volcanics	No
17	112.1	112.2	Ksp - Santiago Peak Volcanics	No
17	112.2	112.3	Ksp - Santiago Peak Volcanics	No
17	112.3	112.4	Ksp - Santiago Peak Volcanics	No
17	112.4	112.5	Ksp - Santiago Peak Volcanics	No
17	112.5	112.6	Kgr - Granitoid rocks	No
17	112.6	112.7	Kgr - Granitoid rocks	No
18	112.7	112.8	Kgr - Granitoid rocks	No
18	112.8	112.9	Kgr - Granitoid rocks	No
18	112.9	113.0	Kgr - Granitoid rocks	No
18	113.0	113.1	Kgr - Granitoid rocks	No
18	113.1	113.2	Tp - Pomerado Conglomerate	High
18	113.2	113.3	Tp - Pomerado Conglomerate	High
18	113.3	113.4	Tp - Pomerado Conglomerate	High
18	113.4	113.5	Tp - Pomerado Conglomerate	High
18	113.5	113.6	Tp - Pomerado Conglomerate	High
18	113.6	113.7	Tp - Pomerado Conglomerate	High
18	113.7	113.8	Tp - Pomerado Conglomerate	High
18	113.8	113.9	Tst - Stadium Conglomerate	High
18	113.9	114.0	Tst - Stadium Conglomerate	High
18	114.0	114.1	Tst - Stadium Conglomerate	High

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18	114.1	114.2	Tp - Pomerado Conglomerate	High
18	114.2	114.3	Tp - Pomerado Conglomerate	High
18	114.3	114.4	Tp - Pomerado Conglomerate	High
18	114.4	114.5	Tp - Pomerado Conglomerate	High
18	114.5	114.6	Tst - Stadium Conglomerate	High
18	114.6	114.7	Tst - Stadium Conglomerate	High
18	114.7	114.8	Tp - Pomerado Conglomerate	High
18	114.8	114.9	Tp - Pomerado Conglomerate	High
18	114.9	115.0	Tp - Pomerado Conglomerate	High
18	115.0	115.1	Tp - Pomerado Conglomerate	High
18	115.1	115.2	Tp - Pomerado Conglomerate	High
18	115.2	115.3	Tp - Pomerado Conglomerate	High
18	115.3	115.4	Tst - Stadium Conglomerate	High
18	115.4	115.5	Tp - Pomerado Conglomerate	High
18	115.5	115.6	Tp - Pomerado Conglomerate	High
18	115.6	115.7	Tp - Pomerado Conglomerate	High
18	115.7	115.8	Tst - Stadium Conglomerate	High
18	115.8	115.9	Tst - Stadium Conglomerate	High
18	115.9	116.0	Tst - Stadium Conglomerate	High
18	116.0	116.1	Tst - Stadium Conglomerate	High
18	116.1	116.2	Tp - Pomerado Conglomerate	High
18	116.2	116.3	Tst - Stadium Conglomerate	High
18	116.3	116.4	Tp - Pomerado Conglomerate	High
18	116.4	116.5	Tp - Pomerado Conglomerate	High
18	116.5	116.6	Tp - Pomerado Conglomerate	High
18	116.6	116.7	Tp - Pomerado Conglomerate	High
18	116.7	116.8	Tp - Pomerado Conglomerate	High
18	116.8	116.9	Tst - Stadium Conglomerate	High
18	116.9	117.0	Tst - Stadium Conglomerate	High
18	117.0	117.1	Tst - Stadium Conglomerate	High
18	117.1	117.2	Tst - Stadium Conglomerate	High
18	117.2	117.3	Tst - Stadium Conglomerate	High
18	117.3	117.4	Tst - Stadium Conglomerate	High
18	117.4	117.5	Tst - Stadium Conglomerate	High
18	117.5	117.6	Tst - Stadium Conglomerate	High
18	117.6	117.7	Tst - Stadium Conglomerate	High
18	117.7	117.8	Tst - Stadium Conglomerate	High
18	117.8	117.9	Tst - Stadium Conglomerate	High
18	117.9	118.0	Tst - Stadium Conglomerate	High