EXPLANATION

QUATERNARY

Holocene

Qa, Qc, Qls
Surficial sediments
Qa, alluvium
Qc, playa clay
Qls, landslide rubble

UNCONFORMITY

Pleistocene

Qoa
Older alluvium

UNCONFORMITY

VALLEY DEPOSITS

TERTIARY(?) AND QUATERNARY

Pliocene(?) and Pleistocene

QTp
Paso Robles Formation

QTt
Tulare Formation

QTu
Unnamed valley sediment

UNCONFORMITY IN MOST AREAS

UPPER TERTIARY SEDIMENTARY SEQUENCE

TERTIARY

Pliocene

Tmo
Morales Formation Valley sediments

Tq
Quatal Formation Terrestrial claystone and sandstone

Tu
Unnamed marine sediments Sandstone and siltstone

Tsj
San Joaquin Formation Mostly mudstone

Teb, Te
Etchegoin Formation
Teb, blue sandstone
Te, gray sandstone and siltstone

LOCAL UNCONFORMITIES

MIDDLE TERTIARY SEDIMENTARY SEQUENCE

Miocene

Trr
Reef Ridge Shale

Tbw
Bitterwater Creek Shale (Mohnian Stage)

Tmb, Tm, Tms, Tmw, Tmu, Tmd, Tmi, Tmg, Tma, Tml
Montery Shale
Tmb, Belridge Diatomite Member (Mohnian Stage)
Tm, McLure Shale Member (mostly Mohnian Stage)
Tms, sandstone lenses
Tmd, Devilwater Shale Member (Luisian Stage)
Tmg, Gould Shale Member (mostly Relizian and Luisian Stages)
Tmi, shale and sandstone unit (Relizian and Luisian Stages)
Tmw, Whiterock Bluff Shale Member (Relizian and Luisian Stages)
Tma, Saltos Shale Member (Saucesian and Relizian Stages)
Tmu, upper part, siliceous shale (Mohnian Stage)
Tml, lower part, argilliceous and siliceous shald (Relizian and Luisian Stages)

Tsm, Tsg, gb, sb
Santa Margarita Formation
Tsm, sandstone
Tsg, conglomerate and breccia
gb, granitic breccia
sb, schist breccia

Tbs
Branch Canyon Sandstone

Tb
Basalt Extrusive and intrusive rocks

Oligocene and Miocene

Tvp, Tvs, Ttc, Ttb, Ttm, Ttg, Tts, Ttr, Tvl, Tvc, Tvq, Ttn, Ttu
Vaqueros and Temblor Formations
In areas southwest of San Andreas fault, mapped as Vaqueros Formation.
In areas northeast of San Andreas fault, mapped as Temblor Formation.

Vaqueros Formation
Tvs, sandstone
Tvc, clay shale
Tvp, Painted Rock Sandstone Member (Saucesian Stage)
Tvl, Soda Lake Shale Member (Saucesian and Zemorrian Stages)
Tvq,?Quail Canyon Sandstone Member (Zemorrian Stage)

Temblor Formation
Tts, sandstone
Ttc, clay shale
Ttg, basal conglomerate lens
Ttb, Buttonbed Sandstone Member (Relizian Stage)
Ttm, Media Shale Member (Relizian and Saucesian Stages)
Ttr, Carneros Sandstone Member (Saucesian Stage)
Ttn, upper part of Santos Shale Member (Saucesian Stage)
Ttu,?undivided lower members sandstone and claystone (Zemorrian Stage)

Oligocene(?)

Tsi, Tsc
Simmler Formation
Tsi, mostly sandstone
Tsc, mostly conglomerate

Tc
Caliente Formation
Terrestrial. (Hemintordian to Arikareean) Oligocene(?), Miocene, and Pliocene

CENOZOIC

UNCONFORMITY

LOWER TERTIARY MARINE SEDIMENTARY SEQUENCE

Oligocene

Tw, Tws
Wagonwheel Formation
Tw, clay shale unit (Refugian Stage)
Tws, sandstone unit (Refugian Stage)

Eocene

Tk, Tkw, Tkg
Kreyenhagen Shale
Tk, undifferentiated shale
Tkw, Welcome Shale Member
Tkg, Gredal Shale Member

Tpr
Point of Rocks Sandstone

Ta
Avenal Sandstone

Tus
Unnamed sandstone

Paleocene and Eocene

Tl
Lodo Formation

UNCONFORMITY

UPPER CRETACEOUS AND LOWER TERTIARY MARINE SEDIMENTARY SEQUENCE

Upper Cretaceous, Paleocene, and Eocene

Tss, Tcg, Kss, Kcg
Marine clastic sedimentary rocks
Tss, sandstone, clay shale and minor conglomerate. Eocene and Paleocene
Tcg, conglomerate. Paleocene(?)
Kss, sandstone, clay shale, and minor conglomerate. Late Cretaceous
Kcg, conglomerate. Late Cretaceous(?)

UNCONFORMITY

CRETACEOUS AND JURASSIC(?) MARINE SEDIMENTARY SEQUENCE

Upper Cretaceous

Kcr, Kco, Ks
Mostly marine sedimentary rocks
Ks, sandstone and clay shale, minor conglomerate
Kcr, red conglomerate and mudstone. Terrestrial
Kco, conglomerate

Kp, Kps, Kp, Kpg
Panoche Formation
Kp, clay shale and claystone
Kps, sandstone and clay shale
Kpg, conglomerage

Lower Cretaceous

Kh
Hex Claystone

Upper Jurassic(?) and Lower Cretaceous

jo
Jolla Formation of Hall and Corbato (1967)
Mostly shale

gf
Gravelly Flat Formation
Mostly shale

EUGEOSYNCLINAL SEDIMENTARY AND IGNEOUS ROCKS

sp
Serpentine and serpentinized peridotite

fg, f
Franciscan rocks of Bailey and others (1964)
f, mixed rocks, undifferentiated, pervasively sheared, mainly sandstone (graywacke) and claystone, includes local lenses of chert, limestone, and glaucophane schist
fg, greenstone

CRYSTALLINE PLUTONIC AND METAMORPHIC ROCKS

gr
Granitic rocks

hg
Hornblende quartz gabbro

gn
Gneissic rocks

CRETACEOUS AND TERTIARY

CRETACEOUS

JURASSIC(?) AND CRETACEOUS

JURASSIC AND (OR) CRETACEOUS

MESOZOIC AND CENOZOIC

MESOZOIC

MESOZOIC OR OLDER

SOURCES: Dibblee 1999.

REGIONAL GEOLOGIC MAP LEGEND
CARRIZO ENERGY SOLAR FARM (CESF)

URS

NO SCALE

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