# Appendices (part 1)

- <u>Appendix A</u>, Underground AC Power Line Segment for Southeastern San Diego County (22 miles), <u>pages 23-24</u>.
- Low Cost Underground DC Power Line County Highway Route, 114 miles from El Centro's Imperial Valley Substation (IVS) to San Diego's Sycamore Canyon Substation (SCS), pages 25-26.
- 3. Lower Cost Direct Underground DC Power Line, 101 miles from El Centro's Imperial Valley Substation (IVS) to San Diego's Sycamore Canyon Substation (SCS), <u>pages 27-28</u>.
- 4. <u>Appendix B</u>, C.B.H. Site Survey Photographs, <u>page 29-44</u>.
- <u>Appendix C</u>, SDG&E's Past and Continuing Environmental and Property Damage Photographs, <u>pages 45-60</u>.
- 6. <u>Appendix D</u>, High power lines and fire ignition through: wind, <u>smoke</u> and grounding problems, <u>pages 61-64</u>.
- 7. <u>Appendix E</u>, SDG&E Access Agreement, <u>pages 65-66</u>.

Part 2, pages 67-119

For additional information: <u>www.undergroundpower.us</u>

Southern route alternatives and underground options

G0014-24

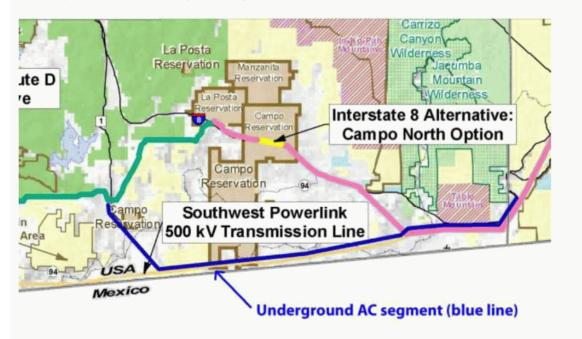


Southern route alternatives and underground options

#### Appendix A, 22 mile AC segment from Jacumba to west of Campo

G0014-24 cont.

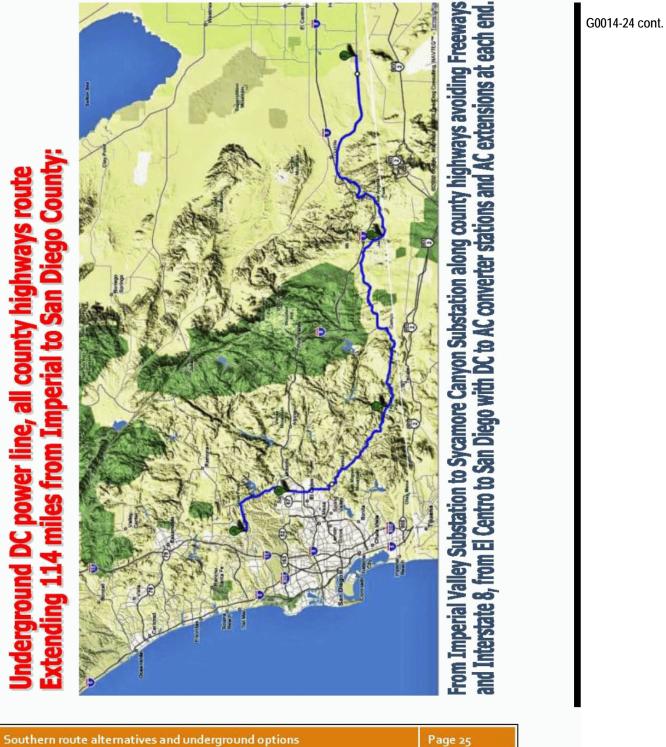
The image on the previous page is an aerial photo (rotated 90 degrees, north is left). The proposed underground AC power line route is shown in red, which extends from a point east of the San Diego County line, westerly past Campo California to connect to the Modified Route D overhead AC power lines, naturally allowing for route variants to avoid private property and keep excavation primarily under existing unpaved roadways and within existing utility right of ways.



## Southeast San Diego County 22 mile Underground AC power line Route

This route could minimize alternating current EMF exposures to regular highway traffic by avoiding excavation under or along any highways, as well as provide a completely fireproof underground route that eliminates wildfire risks, along with minimizing other categories of threat, and almost all security requirements over a significant portion of eastern San Diego County. Although such an underground route would be greatly preferable to overhead AC power lines, there are considerably greater economic and environmental advantages to underground DC for the full 150 mile or a 101 mile route.

Southern route alternatives and underground options



Fully underground 114 mile DC route, El Centro to San Diego north

# Underground DC power line, 114 miles from El Centro's Imperial Valley Substation to San Diego's Sycamore Canyon Substation

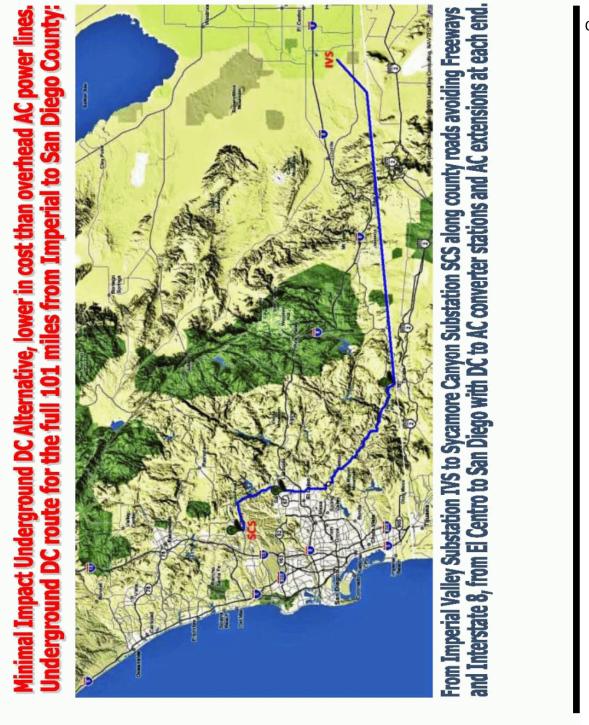
Directions from West to East, avoiding Freeways and Interstate 8, using only county roads, based on low EMF highway travel (less than 2 milligauss, mG):

- 1. Starting at the San Diego Sycamore Canyon Substation, head northeast to
- 2. Scripps Poway Parkway, then east to
- 3. Highway 67 south, then to
- 4. Highway 54 south, then to
- 5. Highway 94 southeast, through Campo then into Imperial County east of Interstate 8, to
- 6. Highway 98 (Yuha Cutoff) east, through Coyote Wells, toward El Centro, then
- 7. Diagonal at a 45 degree angle across desert on existing unpaved road, north of river bed, (which is not illustrated) directly to the Imperial Valley Substation, which is east of El Centro.

#### Security Note:

Since the rural areas east of San Diego do not have high-speed internet service, clearly the trench could carry fiber optic cables to monitor the performance, moisture and temperature of the DC power line, as well as provide an internet backbone for the region (installed in PVC conduit), which would also serve as an early monitoring system with video surveillance for the security of the power line which would be available for public viewing, monitoring of fires, crime and the environment.

Southern route alternatives and underground options



G0014-24 cont.

Southern route alternatives and underground options

Fully underground 101 mile DC route, El Centro to San Diego north

Underground DC power line, 101 miles from El Centro's Imperial Valley Substation (IVS) to San Diego's Sycamore Canyon Substation (SCS)

<u>The lowest impact and lowest cost southern route reviewed:</u> Directions from West to East, avoiding Freeways and Interstate 8, using only county roads, based on low EMF highway travel (less than 2 milligauss, mG):

- 1. Starting at the San Diego Sycamore Canyon Substation, head northeast to
- 2. Scripps Poway Parkway, then east to
- 3. Highway 67 south, then to
- 4. Highway 54 south, then to
- 5. Highway 94 southeast, to
- 6. Highway 188 south to the border north of Tecate, (46 miles to this point)
- 7. Then east along unpaved power line roads and right-of-ways, continuing past Jacumba into Imperial County
- 8. Diagonal at a 45 degree angle across the desert on existing unpaved road (north of river bed) directly to the Imperial Valley Substation, which is west of El Centro, for an additional 55 miles, totaling 101 miles underground.

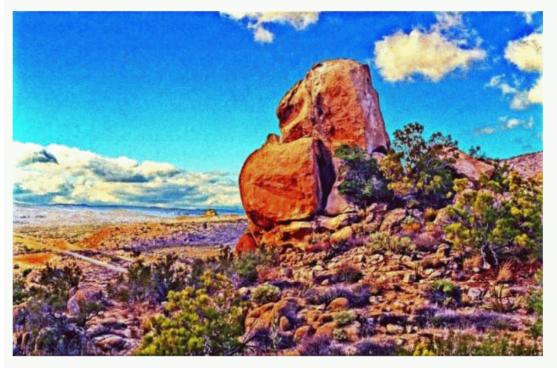
#### Security Note:

Since the rural areas east of San Diego do not have high-speed internet service, clearly the trench could carry fiber optic cables to monitor the performance, moisture and temperature of the DC power line, as well as provide an internet backbone for the region (installed in PVC conduit), which would also serve as an early monitoring system with video surveillance for the security of the power line which would be available for public viewing, monitoring of fires, crime and the environment.

Southern route alternatives and underground options

Page 28

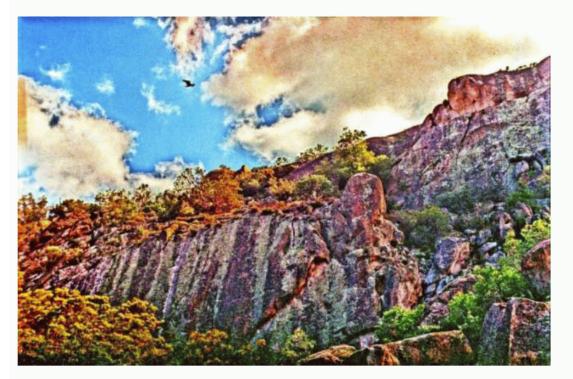
## Appendix B, Site Survey Photographs Areas to be destroyed on the Southern Route



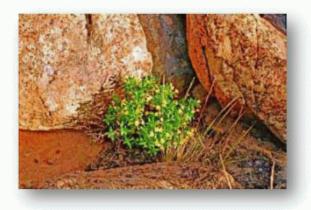
Bankhead Springs Monument above Interstate 18 and McCain Valley (BLM)



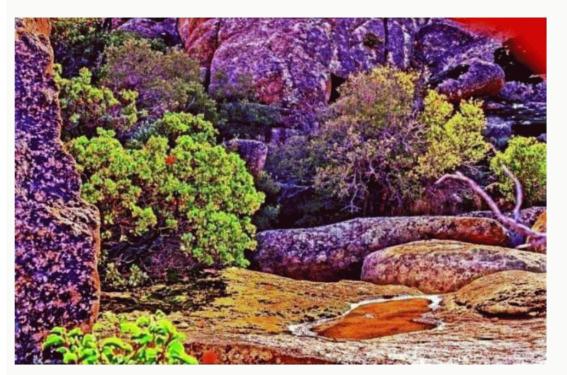
Southern route alternatives and underground options



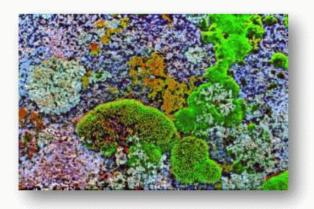
Bird above cliff garden, Bankhead Springs California, 2/21/93



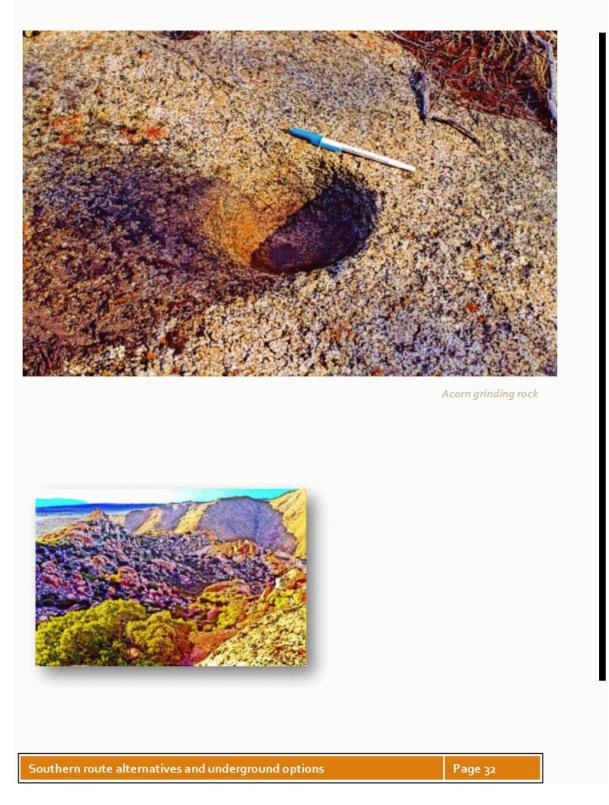
Southern route alternatives and underground options

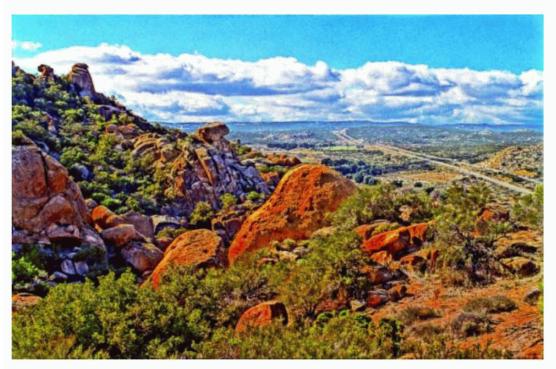


Water in rock garden, Bankhead Springs California



Southern route alternatives and underground options





Western view of Anthropological Reserve, Interstate 8 and McCain Valley, February 21, 1993



Southern route alternatives and underground options



Manzanita tree and flat granite

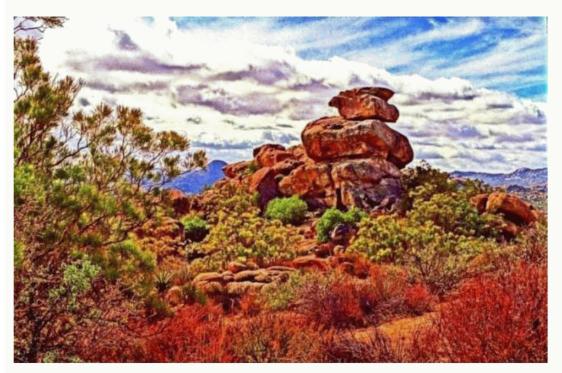


Southern route alternatives and underground options

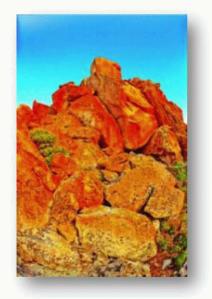
Page 34

G0014-24 cont.

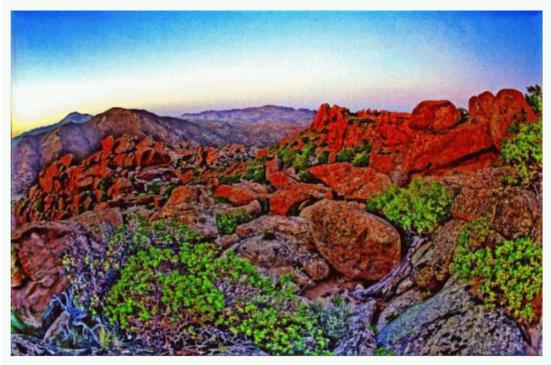
#### Comment Set G0014, cont. California Botanical Habitat



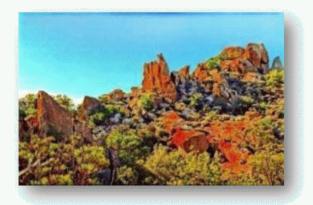
Southern stone monument and cave



Southern route alternatives and underground options



Northeast ridgeline view of adjacent Anza Borrego Desert State Park in the background



Southern route alternatives and underground options

Page 36

G0014-24 cont.

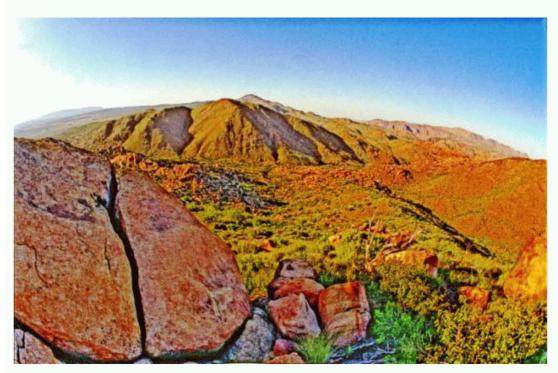
#### Comment Set G0014, cont. California Botanical Habitat



Northern rock head at sunset



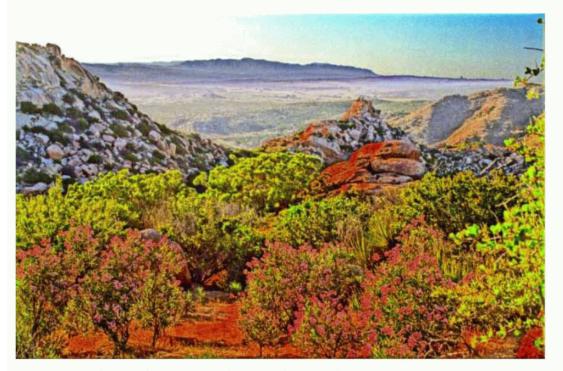
Southern route alternatives and underground options



Looking north into Anza Borrego Desert State Park in the background



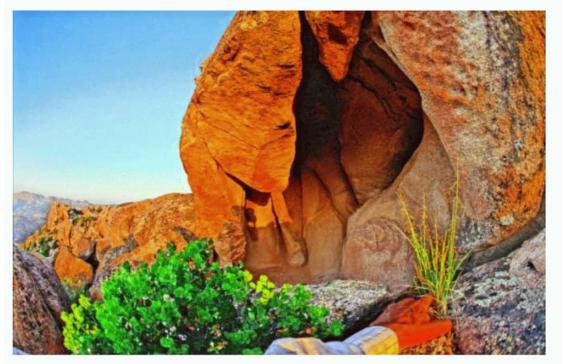
Southern route alternatives and underground options



Evening beyond the northwest valley, above the McCain Valley extending to distant mountains in the background, all targeted for the destructive impacts of 500,000 volt high-power lines on almost seven hundred 170 foot tall pylons, with hundreds of roads and clearings leading to the huge pylons. The damages to this pristine wilderness could never be restored.



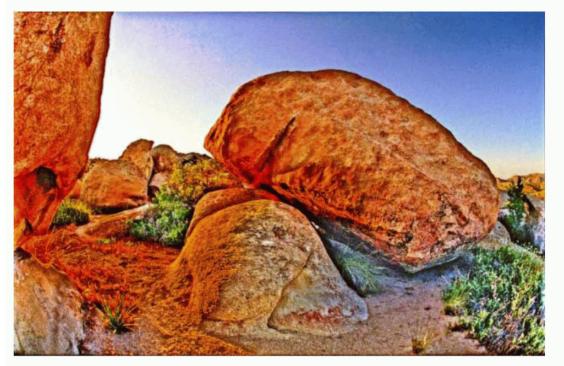
Southern route alternatives and underground options



Mountain top cavity with ABDSP to the left



Southern route alternatives and underground options

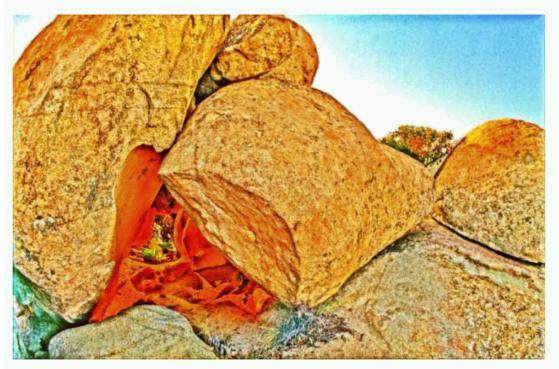


Leaning rock at sunset



Southern route alternatives and underground options

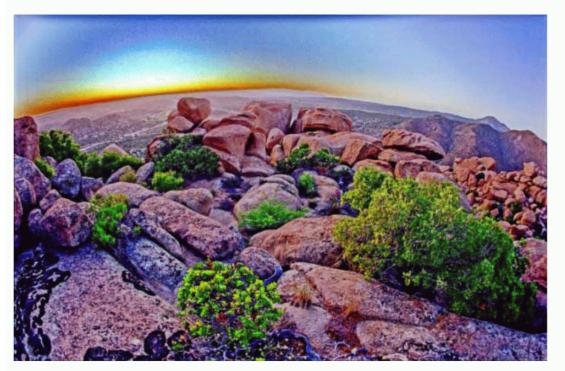
Page 41



Light entering rock at sunset, 50mm lens on 35mm Kodacolor 100, Nikon V scan



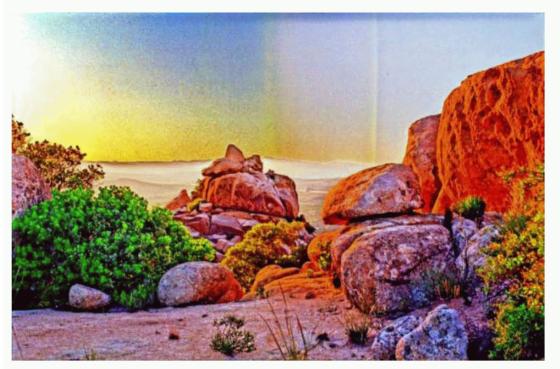
Southern route alternatives and underground options



Mountain top garden after sunset, looking west toward Boulevard California, 180 degree diagonal



Southern route alternatives and underground options



Western point illuminated at sunset, above the McCain Valley in the background



Southern route alternatives and underground options

## Appendix C, Prior SDG&E Environmental and Property Damage Photographs

Environmental Damages caused by SDG&E remain as permanent scars on thousands of acres of San Diego County's wilderness regions, created by bulldozing roads, turnarounds, pylons and work areas, all of which are exasperated by years of rain water runoff, which carved permanent ravines into the earth along hundreds of high-power line access roads, which remain substantially unmaintained, without restoration of habitat in spite of repeated requests from local residents, who have had their homes and landscape degraded and permanently damaged. The following photographs were obtained from CPUC letters which were, without any exception we could locate, overwhelmingly in opposition to the Sunrise Powerlink, and in some cases based on their prior experience as a result of serious environmental damages to their own land and that of their neighbors. The following excerpts document some of their observations.

I am writing to you to express my opposition to the proposed Sunrise Powerlink Project as a whole... I do not believe SDG&E will properly maintain these poles (pylons) and roads since they have not done so to the poles and roads that already exist on my property, my neighbors, and the surrounding areas. Please look at the enclosed photos as proof. We have contacted Keith Richards, from SDG&E, many times in an attempt to get them to properly maintain these roads and poles with no proven success while he writes, "These areas outside our access road are the responsibility of property owners. However, SDG&E is responsible for its access roads and the management of water that flows across, along, and under them." How will they possibly maintain new ones in more remote areas? Would you allow your property to be destroyed by SDG&E like the photos show? I am

Southern route alternatives and underground options

Page 45

requesting that an Environmental Impact Study and Report be done specifically addressing my concerns if this area is chosen as a route.

My property value has already been negatively impacted because of the possibility of these larger power lines coming through my property. By law I will now have to disclose anything associated with power lines that will affect my property. Will I and everyone else affected by these power lines be guaranteed unbiased appraisals and compensation for new and expanding ROW or purchase of properties? Property values will not only dramatically decrease for homeowners that SDG&E will be dealing with, but also anyone that has a view of these lines. The varied terrain allows for people to see these power poles (160 foot tall pylons) for miles. Increased cost or cancellation of homeowner's insurance is a huge financial burden. Will SDG&E compensate us for these costs year after year?! Would you want to lose \$200,000 - \$300,000 (on house values) right now because SDG&E could be allowed to do this? If you are going to allow SDG&E to do this Proposed Project then I would want other visible alternatives looked at and researched as well.

Use of the Non-Wire alternatives in the proposed project including the options that already exist make more sense. Reliable wind and solar options that are currently being used successfully elsewhere and the use of the existing Encina and South Bay power plants could address San Diego's need for more power. It would allow San Diego to act responsibly toward getting power that is environmentally friendly as opposed to allowing Sempra Energy to continue to rely on and produce dirty power in Mexico where there are few regulations. Pollution from power plants in Mexico can drift back into California, Arizona, and beyond. Would you allow your family to breath this toxic air? ...None of us could come in and do the same thing. Please do the right thing and say NO to the Sunrise Powerlink.