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Revised General Arrangement Refinement 2 – Preliminary Figures

Submitted to
California Energy Commission

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Black Rock Geothermal LLC

With assistance from
Jacobs

Black Rock Geothermal Project
(23-AFC-03)
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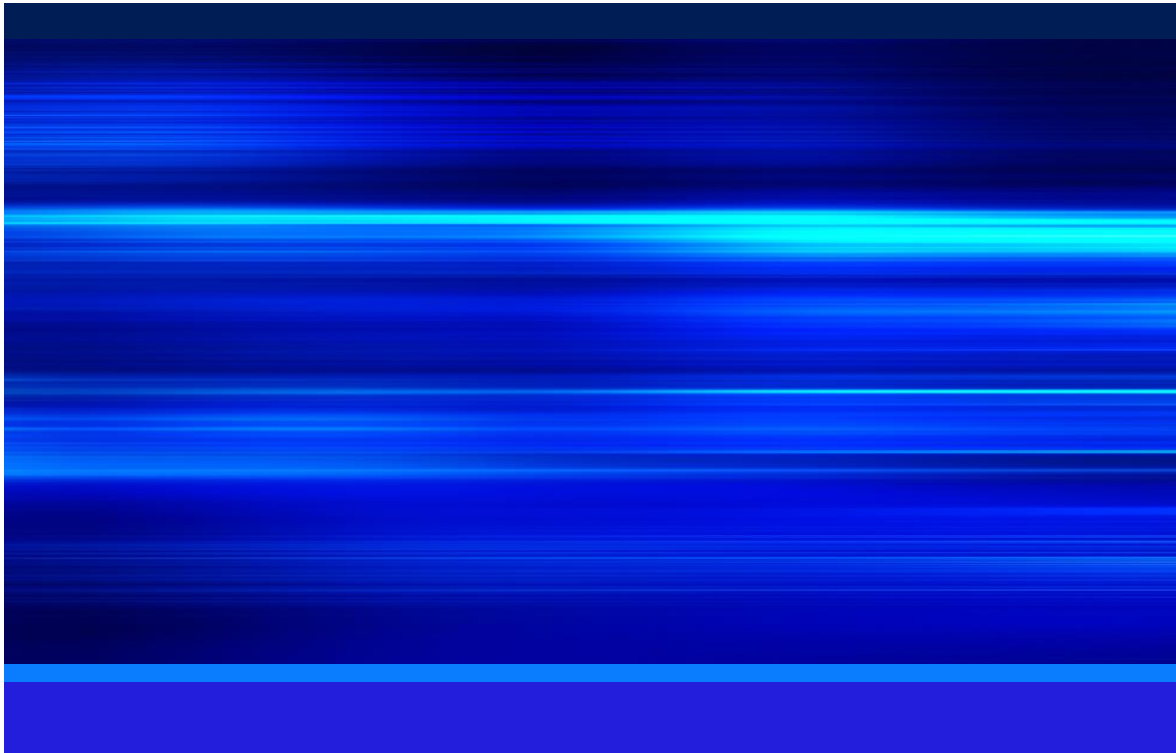




Figure 1-3R2
Architectural Rendering,
Black Rock Geothermal Project
Imperial County, California

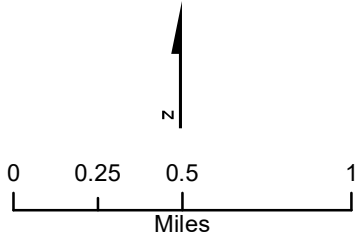
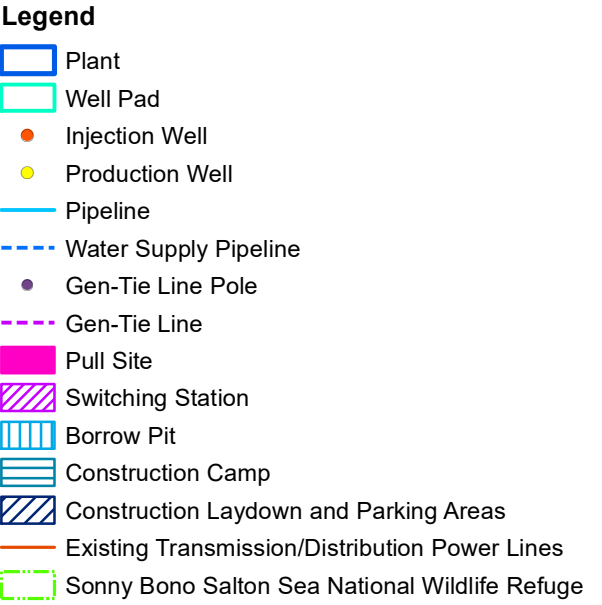
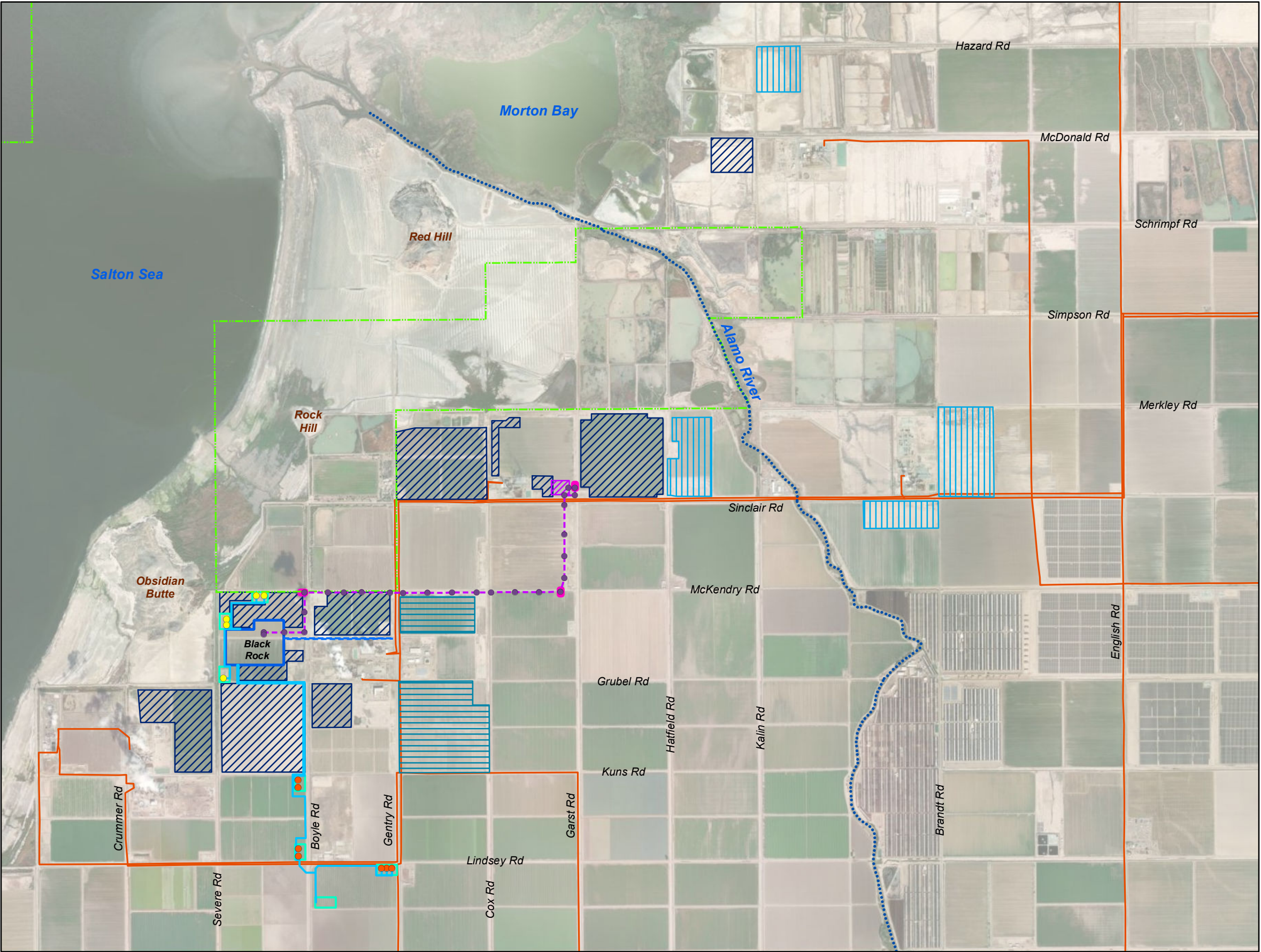
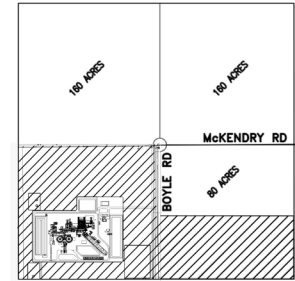
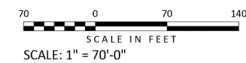
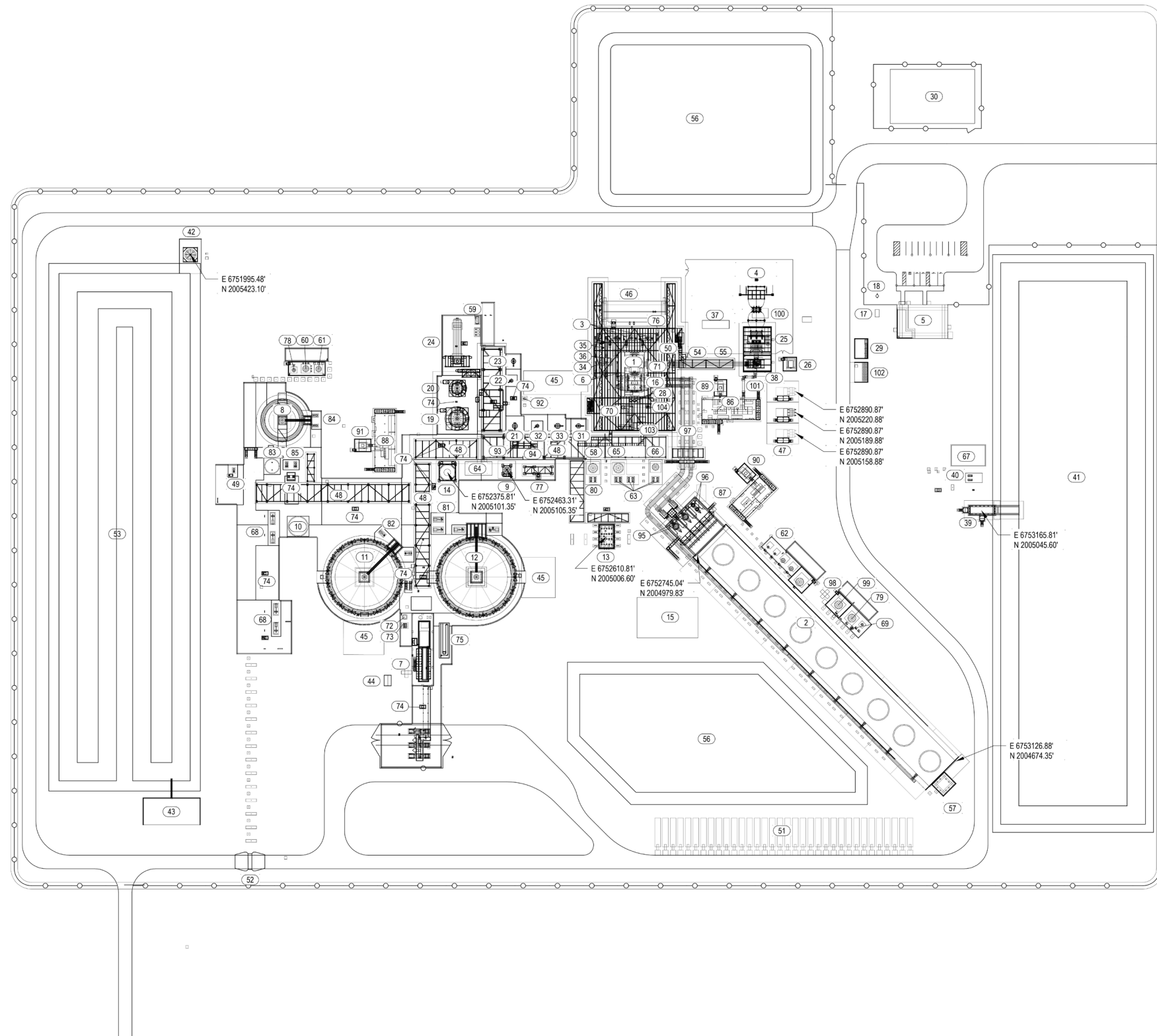


Figure 1-4R2
Project Location
Black Rock Geothermal Project
Imperial County, California



- LEGEND:
1. STEAM TURBINE
 2. COOLING TOWER
 3. VACUUM PUMP SKIDS A/B/C
 4. SUBSTATION
 5. CONTROL / MAINTENANCE BUILDING
 6. EJECTORS A/B/C
 7. HORIZONTAL BELT FILTER
 8. THICKENER
 9. SCRUBBER / DEMISTER DRAIN AFT
 10. PROCESS BRINE HEAD TANK
 11. SECONDARY CLARIFIER
 12. PRIMARY CLARIFIER
 13. ROCK MUFFLER
 14. PROCESS AFT
 15. RTO (FUTURE)
 16. CONDENSER
 17. CONTROL / MAINTENANCE BUILDING SEPTIC TANK
 18. CONTROL / MAINTENANCE BUILDING SANITARY LIFT STATION
 19. LP CRYSTALLIZER
 20. SP CRYSTALLIZER
 21. LP SCRUBBER
 22. SP SCRUBBER
 23. HP SCRUBBER
 24. HP SEPARATOR
 25. GENERATOR STEP-UP TRANSFORMER
 26. ALTERNATE FEED TRANSFORMER
 27. NOT USED
 28. CONDENSATE PUMPS
 29. USED OIL STORAGE AREA
 30. EVAPOTRANSPIRATION (E-T) BED
 31. HP DEMISTER
 32. SP DEMISTER
 33. LP DEMISTER
 34. INSTRUMENT / SERVICE AIR COMPRESSOR
 35. INSTRUMENT / SERVICE AIR RECEIVERS
 36. AIR COMPRESSOR CHILLER UNIT
 37. SUBSTATION CONTROL ENCLOSURE
 38. UNIT AUXILIARY TRANSFORMER
 39. FIRE WATER PUMP ENCLOSURE
 40. SERVICE WATER PUMPS
 41. FRESH WATER POND
 42. WARM-UP AFT
 43. HYDRO BLAST PAD
 44. COOLING HUT
 45. CRANE ACCESS
 46. GANTRY CRANE
 47. DIESEL GENERATOR
 48. PIPE RACK
 49. EMERGENCY BRINE POND PUMPS
 50. VT-SURGE CUBICLE
 51. TRAILER PARKING
 52. CULVERT
 53. BRINE POND
 54. GENERATOR CIRCUIT BREAKER
 55. ISOLATED PHASE BUS DUCT
 56. STORM WATER RETENTION BASIN
 57. OX BOX
 58. BLOWDOWN STORAGE TANK
 59. ANTI-FOAM STORAGE AND DOSING SYSTEM
 60. NORMS STORAGE AND DOSING SYSTEM
 61. FLOCCULANT STORAGE AND DOSING SYSTEM
 62. COOLING TOWER CHEMICAL FEED SYSTEM
 63. HP/SP/LP CONDENSATE STORAGE PUMPS
 64. DILUTION WATER PUMPS (FUTURE)
 65. SP/LP CONDENSATE STORAGE TANK
 66. HP CONDENSATE STORAGE TANK
 67. POTABLE WATER SYSTEM
 68. BRINE INJECTION / BOOSTER PUMPS
 69. ACID FUME SCRUBBER
 70. STG LUBE OIL MODULE
 71. NEUTRAL GROUND ENCLOSURE
 72. SERVICE WATER HOLDING TANK
 73. SERVICE WATER BOOSTER PUMP A/B
 74. AREA SUMP / PUMP
 75. HORIZONTAL BELT FILTER COOLER
 76. SEAL WATER COOLER
 77. SCRUBBER AND DEMISTER DRAINS SETTLING TANK
 78. ANTI-SCALANT REAGENT
 79. HYDROCHLORIC ACID DOSING
 80. CONDENSATE INJECTION WELL PUMPS
 81. PRIMARY CLARIFIER SEED RECYCLE/TRANSFER PUMPS
 82. SECONDARY CLARIFIER SEED RECYCLE/TRANSFER PUMPS
 83. AERATED BRINE STORAGE TANK
 84. THICKENER SEED RECYCLE/TRANSFER PUMPS
 85. AERATED BRINE BOOSTER / INJECTION PUMPS
 86. MEDIUM VOLTAGE ELECTRICAL ENCLOSURE
 87. COOLING TOWER ELECTRICAL ENCLOSURE
 88. BRINE INJECTION ELECTRICAL ENCLOSURE
 89. MEDIUM VOLTAGE ELECTRICAL ENCLOSURE SUS TRANSFORMERS
 90. COOLING TOWER ELECTRICAL ENCLOSURE SUS TRANSFORMERS
 91. BRINE INJECTION ELECTRICAL ENCLOSURE SUS TRANSFORMERS
 92. VESSEL DRAIN AFT
 93. SCRUBBER DRAIN PUMP
 94. DEMISTER DRAIN PUMP
 95. COOLING WATER PUMPS
 96. AUXILIARY COOLING WATER PUMPS
 97. CIRCULATING WATER PIPING
 98. 2.5% HCl TANK AND PUMPS
 99. LIQUID LIME STORAGE TANK AND PUMPS
 100. 230KV BREAKER
 101. NON-SEGREGATED PHASE BUS DUCT
 102. NEW OIL STORAGE AREA
 103. LUBE OIL COOLER
 104. OIL PURIFIER

Figure 2-1R2
General Arrangement,
Black Rock Geothermal Project
Imperial County, California



Figure 5.13-2bR2
Visual Simulation from Rock Hill (KOP1),
Black Rock Geothermal Project
Imperial County, California



Figure 5.13-2dR2
Visual Simulation from Red Hill (KOP2),
Black Rock Geothermal Project
Imperial County, California



Figure 5.13-2fR2
 Visual Simulation from Sonny Bono Salton Sea
 National Wildlife Refuge (KOP3),
 Black Rock Geothermal Project
 Imperial County, California