

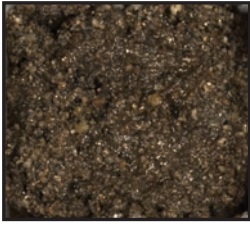

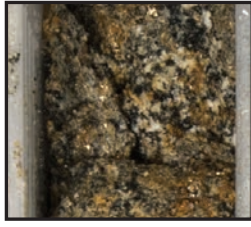

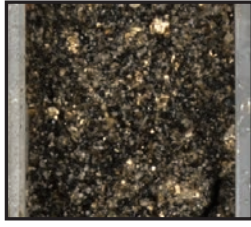
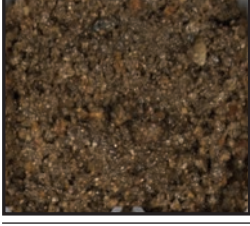
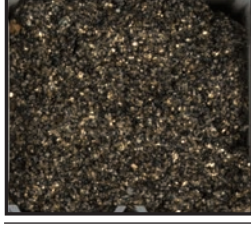
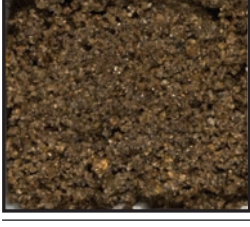





Depth (feet) and description	Depth (feet) and description
 <p>10: Gravelly clayey silty sand (gmS); fine to very coarse sand with silt, clay, and granules to medium pebbles; very poorly sorted; subangular to rounded; dark grayish brown (2.5Y 4/2); <i>calcareous; micaceous; felsics; moderate mafics; trace unweathered diorite clasts (5–8 mm).</i></p>	 <p>80: Gravelly sand (gS); fine to very coarse sand with granules to medium pebbles; very poorly sorted; subangular to rounded; black (5Y 2.5/1); <i>micaceous; minor felsics; abundant mafics (hornblende, biotite); trace hematite; weathered diorite.</i></p>
 <p>20: Silty clayey sand (mS); very fine to very coarse sand with clay, silt, and trace granules to medium pebbles; very poorly sorted; subangular to rounded; dark olive brown (2.5Y 3/3); <i>calcareous; micaceous; felsics; trace unweathered diorite clasts (12–14 mm).</i></p>	 <p>85: Granodiorite saprolite; salt and pepper; <i>minor iron-bearing clay coating and trace clay (kaolinite/chlorite?) filled fractures (~2 mm wide); abundant biotite; core 1.</i></p>
 <p>30: Sand (S); fine to very coarse sand; moderately sorted; subangular; olive brown (2.5Y 4/3); <i>micaceous; felsics; trace mafics (hornblende); quartz dominated.</i></p>	 <p>90: Sand (S); fine to coarse sand with trace granules to small pebbles and clay; well sorted; subangular to subrounded; black (5Y 2.5/1); <i>micaceous; minor felsics; abundant mafics (hornblende, biotite, trace garnet); weathered diorite.</i></p>
 <p>40: Sandy gravel (sG); granules with fine to very coarse sand and trace silt; very poorly sorted; subangular to subrounded; olive brown (2.5Y 4/4); <i>minor mica; felsics; trace mafics.</i></p>	 <p>100: Sand (S); medium to very coarse sand with trace granules to small pebbles and clay; well sorted; angular to subrounded; black (5Y 2.5/1); <i>micaceous; minor felsics; abundant mafics (hornblende, biotite); weathered diorite.</i></p>
 <p>50: Gravelly sand (gS); medium to very coarse sand with granules to small pebbles and trace silt; very poorly sorted; subangular to subrounded; light olive brown (2.5Y 5/3); <i>minor mica; felsics; trace mafics (hornblende); quartz dominated; minor charcoal fragments (3–6 mm).</i></p>	 <p>110: Sand (S); fine to very coarse sand with trace granules and clay; moderately sorted; subangular to rounded; salt and pepper; <i>micaceous; felsics; mafics (hornblende, biotite); weathered diorite.</i></p>
 <p>60: Sand (S); medium to very coarse sand with trace granules to small pebbles; well sorted; subrounded to rounded; olive (5Y 4/3); <i>trace mica; felsic; trace mafics (hornblende); quartz dominated.</i></p>	 <p>120: Sandy gravel (sG); granules to small pebbles with fine to very coarse sand and minor clay; very poorly sorted; subangular to rounded; salt and pepper; <i>micaceous; felsics; mafics (hornblende, biotite); weathered diorite.</i></p>
 <p>70: Sandy gravel (sG); granules to small pebbles with fine to very coarse sand; very poorly sorted; subangular to subrounded; olive brown (2.5Y 4/3); <i>trace mica; felsic; minor mafics (hornblende, biotite, and 0.1–0.5 mm euhedral to subhedral garnet).</i></p>	 <p>130: Slightly gravelly sand ((g)S); fine to very coarse sand with granules; moderately sorted; angular to subangular; salt and pepper; <i>micaceous; felsics; mafics (hornblende, biotite, chlorite); diorite.</i></p>

Figure 17A. Lithologic descriptions and photographs of **shaker** drill cuttings collected from the borehole at 16 USGS multiple-depth, monitoring-well sites in San Diego County, California, 2003–2017: (A) **SDCD**; (B) SDSY; (C) SDLH; (D) SDAQ; (E) SDCP; (F) SDBP; (G) SDHF; (H) SDEP; (I) SDNB; (J) SDSW; (K) SDMC; (L) SDLD; (M) SDCC; (N) SDOR; (O) SDOT; and (P) SDBW.

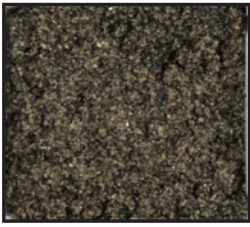
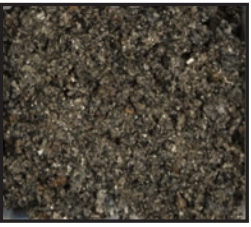
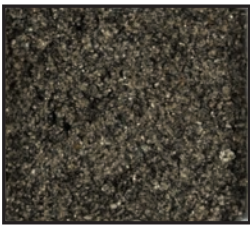
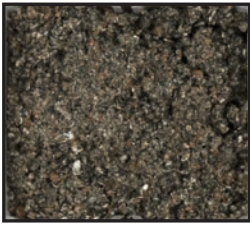



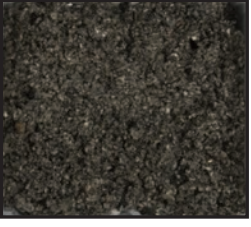
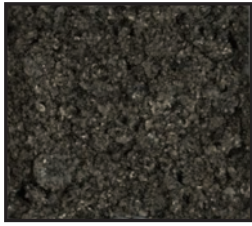
Depth (feet) and description	Depth (feet) and description	Depth (feet) and description	Depth (feet) and description
	<p>140: Clayey sand (cS); very fine to very coarse sand with clay and trace granules to small pebbles; very poorly sorted; subangular to subrounded; olive gray (5Y 4/2); <i>micaceous; felsics; mafics (hornblende, biotite, chlorite); fractured diorite.</i></p>		<p>210: Sand (S); fine to very coarse sand with trace granules to small pebbles and silt; moderately sorted; very angular to subrounded; dark greenish gray (10Y 4/1); <i>micaceous; felsic; mafics (biotite, hornblende); diorite.</i></p>
	<p>150: Clayey gravelly sand (gmS); fine to very coarse sand with granules to small pebbles and clay; very poorly sorted; subangular to subrounded; very dark gray (5Y 3/1); <i>micaceous; felsics; mafics (hornblende, biotite); diorite.</i></p>		<p>220: Gravelly clayey sand (gmS); fine to very coarse sand with clay and granules to medium pebbles; very poorly sorted; very angular to subangular; salt and pepper; <i>micaceous; felsics; mafics (biotite, hornblende); diorite.</i></p>
	<p>160: Slightly gravelly sand ((g)S); fine to very coarse sand with granules to small pebbles and trace silt; poorly to moderately sorted; angular to subrounded; salt and pepper; <i>micaceous; felsics; mafics (hornblende, biotite, trace chlorite); diorite.</i></p>		<p>230: Sand (S); fine to very coarse sand with trace granules to small pebbles and clay; moderately sorted; very angular to angular; salt and pepper; <i>micaceous; felsics; mafics (hornblende, biotite); diorite.</i></p>
	<p>170: Silty sand (zS); fine to very coarse sand with silt and trace granules to small pebbles; poorly to moderately sorted; angular to subrounded; greenish black (10Y 2.5/1); <i>micaceous; felsics; mafic rich (hornblende, biotite); diorite.</i></p>		<p>240: Sand (S); fine to very coarse sand with trace granules and clay; moderately sorted; very angular to subangular; salt and pepper; <i>micaceous; felsics; mafics (hornblende, biotite); diorite.</i></p>
	<p>180: Slightly gravelly sand ((g)S); fine to very coarse sand with granules to small pebbles and trace silt; poorly to moderately sorted; very angular to subangular; salt and pepper; <i>micaceous; felsics; mafics (chlorite, biotite, hornblende); diorite.</i></p>		<p>250: Slightly gravelly sand ((g)S); fine to very coarse sand with granules to small pebbles and trace clay; poorly to moderately sorted; very angular to angular; salt and pepper; <i>micaceous; felsics; mafics (biotite, hornblende); diorite.</i></p>
	<p>190: Sand (S); fine to very coarse sand with trace granules; moderately sorted; very angular to subrounded; salt and pepper; <i>micaceous; felsics; mafics (hornblende, biotite, trace chlorite); diorite.</i></p>		<p>260: Slightly gravelly sand ((g)S); fine to very coarse sand with granules to small pebbles and trace clay; poorly to moderately sorted; very angular to angular; salt and pepper; <i>micaceous; felsics; mafics (biotite, hornblende); diorite.</i></p>
	<p>200: Slightly gravelly sand ((g)S); fine to very coarse sand with granules to small pebbles and trace silt; poorly to moderately sorted; very angular to subangular; salt and pepper; <i>micaceous; felsics; mafics (hornblende, biotite); diorite.</i></p>		<p>270: Slightly gravelly sand ((g)S); fine to very coarse sand with granules to medium pebbles and trace clay; very poorly to poorly sorted; very angular to angular; salt and pepper; <i>micaceous; felsics; mafics (biotite, hornblende); diorite.</i></p>

Figure 17A. Lithologic descriptions and photographs of **shaker** drill cuttings collected from the borehole at 16 USGS multiple-depth, monitoring-well sites in San Diego County, California, 2003–2017: (A) **SDCD**; (B) **SDSY**; (C) **SDLH**; (D) **SDAQ**; (E) **SDCP**; (F) **SDBP**; (G) **SDHF**; (H) **SDEP**; (I) **SDNB**; (J) **SDSW**; (K) **SDMC**; (L) **SDLD**; (M) **SDCC**; (N) **SDOR**; (O) **SDOT**; and (P) **SDBW**. —Continued.

Depth (feet) and description



280: Sandy gravel (sG); granules to medium pebbles with fine to very coarse sand and trace clay; very poorly sorted; very angular to angular; salt and pepper; *micaceous; felsics; mafics (biotite, hornblende); diorite.*



287.5: Melanocratic diorite; phaneritic inequigranular, allotriomorphic; salt and pepper; *hornblende, muscovite, biotite, feldspar (plagioclase dominated), quartz, minor interstitial subhedral pyrite; solid rock; core 2.*

287.5–288: No shaker sample collected.

Figure 17A. Lithologic descriptions and photographs of **shaker** drill cuttings collected from the borehole at 16 USGS multiple-depth, monitoring-well sites in San Diego County, California, 2003–2017: **(A) SDCD**; (B) SDSY; (C) SDLH; (D) SDAQ; (E) SDCP; (F) SDBP; (G) SDHF; (H) SDEP; (I) SDNB; (J) SDSW; (K) SDMC; (L) SDL D; (M) SDCC; (N) SDOR; (O) SDOT; and (P) SDBW. —Continued.