



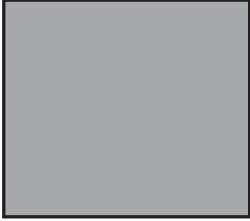









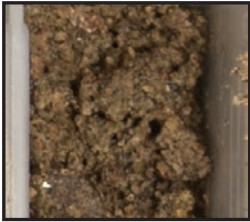
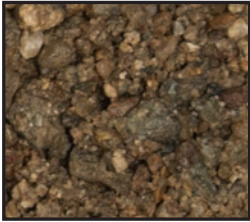
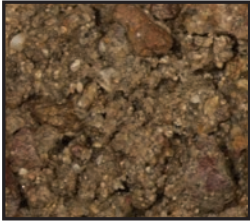







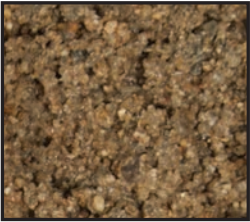


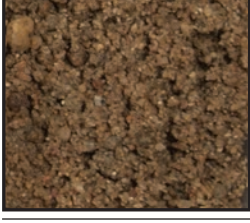









Depth (feet) and description	Depth (feet) and description
 <p>10: Sand (S); medium to coarse sand; well sorted; subangular; light olive brown (2.5Y 5/4).</p>	 <p>70: Silty sand (zS); very fine to fine sand with silt, and trace granules to medium pebbles; well sorted; subangular; reddish brown (5YR 4/4).</p>
 <p>23: No shaker sample collected; <i>core 1, no recovery.</i></p>	 <p>80: Silty sand (zS); very fine to fine sand with silt; well sorted; subangular; reddish brown (5YR 4/4).</p>
 <p>28: No shaker sample collected; <i>core 2, no recovery.</i></p>	 <p>90: Silty sand (zS); very fine to fine sand, silt, and minor very coarse sand with trace granules; moderately to well sorted; subangular; brown (7.5YR 4/4).</p>
 <p>30: Silty sand (zS); very fine to fine sand with silt, minor very coarse sand, and trace granules to small pebbles; well sorted; subangular; olive brown (2.5Y 4/3).</p>	 <p>100: Silty sand (zS); very fine to coarse sand with silt; poorly to moderately sorted; subangular; brown (7.5YR 5/3).</p>
 <p>40: Slightly gravelly sand ((g)S); coarse to very coarse sand with granules to medium pebbles; moderately sorted; subrounded; yellowish brown (10YR 5/6).</p>	 <p>113: Silty sand (zS); very fine to coarse sand and silt, with minor very coarse sand; moderately sorted; subangular; brown (10YR 5/3); <i>core 3.</i></p>
 <p>50: Slightly gravelly sand ((g)S); coarse to very coarse sand with granules to medium pebbles; moderately sorted; subangular; yellowish brown (10YR 5/6).</p>	 <p>118: Silty sand (zS); fine to coarse sand and silt, with minor very coarse sand and trace granules; poorly to moderately sorted; subangular; yellowish brown (10YR 5/4); <i>core 4.</i></p>
 <p>60: Silty sand (zS); very fine to fine sand, silt, and minor coarse to very coarse sand with trace granules to small pebbles; moderately sorted; subangular; brown (7.5YR 4/4).</p>	 <p>123: Slightly gravelly silty sand ((g)mS); very fine to fine sand and coarse to very coarse sand, with silt and granules; poorly sorted; subangular to subrounded; yellowish brown (10YR 5/4); <i>core 5.</i></p>

**Figure 17J.** 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) SDGD; (B) SDSY; (C) SDLH; (D) SDAQ; (E) SDGP; (F) SDBP; (G) SDHF; (H) SDEP; (I) SDNB; (**J**) **SDSW**; (K) SDMC; (L) SDLD; (M) SDCC; (N) SDOR; (O) SDOT; and (P) SDBW.

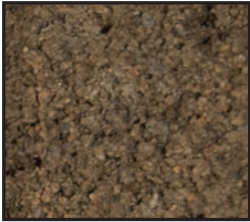
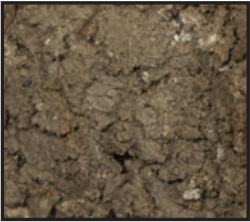
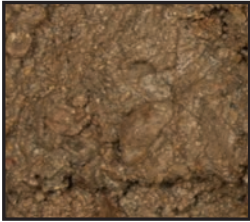

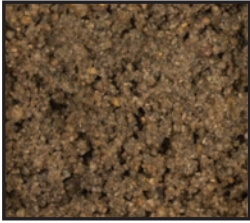
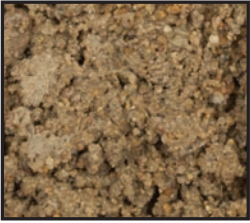








Depth (feet) and description	Depth (feet) and description
 <p>126: Slightly gravelly sand ((g)S); very fine to fine sand, and coarse sand with granules; poorly sorted; subangular to subrounded; brown (10YR 4/3); <i>core 6</i>.</p>	 <p>190: Gravelly sand (gS); medium to very coarse sand with granules to medium pebbles and minor very fine sand; poorly sorted; subangular; yellowish brown (10YR 5/4).</p>
 <p>130: Sand (S); medium to coarse sand with minor very coarse sand and trace granules to medium pebbles; poorly sorted; subangular to subrounded; strong brown (7.5YR 4/6).</p>	 <p>200: Gravelly sand (gS); medium to very coarse sand with granules to medium pebbles and minor very fine sand; poorly sorted; subangular; yellowish brown (10YR 5/4).</p>
 <p>140: Gravelly sand (gS); medium to very coarse sand with granules to medium pebbles and minor very fine sand; poorly sorted; subangular; dark yellowish brown (10YR 4/4).</p>	 <p>210: Gravelly sand (gS); very fine to very coarse sand with granules to medium pebbles; very poorly sorted; subangular; yellowish brown (10YR 5/4).</p>
 <p>150: Gravelly sand (gS); fine to very coarse sand with granules to medium pebbles; poorly sorted; subangular; yellowish brown (10YR 5/4); <i>minor oxidized sand grains</i>.</p>	 <p>220: Sand (S); very fine to fine sand with trace coarse sand and granules to medium pebbles; poorly to moderately sorted; subangular; dark brown (7.5YR 3/4).</p>
 <p>160: Clayey silty sand (mS); fine sand with silt, clay and minor medium to coarse sand; moderately to well sorted; subangular; brown (10YR 4/3).</p>	 <p>233: Sand (S); fine to coarse sand with minor very fine sand, and silt; moderately sorted; subangular; yellowish brown (10YR 5/4); <i>core 9</i>.</p>
 <p>172: Sand (S); medium to very coarse sand with minor very fine sand; moderately to well sorted; subangular; strong brown (7.5YR 5/6); <i>very micaceous; core 7</i>.</p>	 <p>238: Gravelly sand (gS); medium to very coarse sand, granules, minor very fine to fine sand, and trace small to medium pebbles; poorly sorted; subangular; light yellowish brown (10YR 6/4); <i>core 10</i>.</p>
 <p>183: Silty sandy gravel (msG); granules to very large pebbles, medium to very coarse sand, and silt; very poorly sorted; subangular; light yellowish brown (10YR 6/4); <i>core 8</i>.</p>	 <p>243: Gravelly sand (gS); medium to very coarse sand, granules, and minor very fine to fine sand with trace small to medium pebbles; poorly sorted; subangular; light yellowish brown (10YR 6/4); <i>core 11</i>.</p>

**Figure 17J.** 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) SDGD; (B) SDSY; (C) SDLH; (D) SDAQ; (E) SDGP; (F) SDBP; (G) SDHF; (H) SDEP; (I) SDNB; (**J**) **SDSW**; (K) SDMC; (L) SDLD; (M) SDCC; (N) SDOR; (O) SDOT; and (P) SDBW. —Continued.



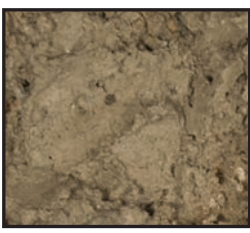
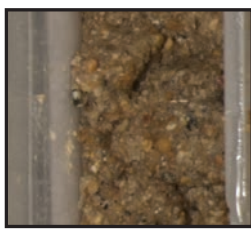


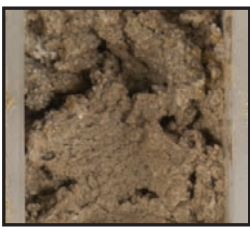
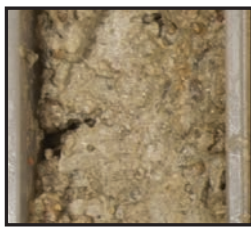
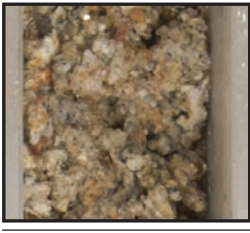
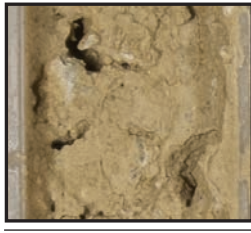






Depth (feet) and description	Depth (feet) and description
 <p>248: Sand (S); medium to very coarse sand with minor very fine to fine sand; moderately sorted; subangular; dark yellowish brown (10YR 4/4); <i>core 12</i>.</p>	 <p>310: Slightly gravelly sand ((g)S); medium to very coarse sand with granules; moderately sorted; subangular; brownish yellow (10YR 6/6).</p>
 <p>253: Gravelly sand (gS); medium to very coarse sand with granules, minor very fine to fine sand, and trace small to large pebbles; poorly sorted; subangular to subrounded; yellowish brown (10YR 5/4); <i>core 13</i>.</p>	 <p>320: Gravelly sand (gS); coarse to very coarse sand with granules to medium pebbles; moderately sorted; subangular; brownish yellow (10YR 6/6).</p>
 <p>260: Gravelly sand (gS); coarse to very coarse sand with granules and minor very fine sand; moderately sorted; subangular; dark yellowish brown (10YR 4/4).</p>	 <p>330: Gravelly clayey silty sand (gmS); very fine to very coarse sand with granules, silt, and clay; very poorly sorted; subangular; yellowish brown (10YR 5/4).</p>
 <p>270: Silty clayey sand (mS); very fine to fine sand, clay and silt with minor medium to very coarse sand; moderately sorted; angular to subangular; brown (10YR 5/3).</p>	 <p>340: Gravelly clayey silty sand (gmS); very fine to very coarse sand, silt and clay with granules; very poorly sorted; subangular; yellowish brown (10YR 5/4).</p>
 <p>280: Silty clayey sand (mS); very fine to fine sand, clay and silt with minor medium to very coarse sand; moderately sorted; subangular; brown (10YR 5/3); <i>micaceous</i>.</p>	 <p>350: Silty clayey sand (mS); very fine to fine sand, clay and silt with minor very coarse sand; moderately to well sorted; subangular; brown (10YR 4/3).</p>
 <p>290: Clayey silty sand (mS); very fine to fine sand, silt and clay with minor coarse sand; moderately sorted; subangular; brown (10YR 5/3).</p>	 <p>360: Sand (S); coarse to very coarse sand with minor silt and clay; well sorted; subangular; brown (10YR 4/3).</p>
 <p>300: Sand (S); medium to very coarse sand with trace granules; moderately sorted; subangular; brownish yellow (10YR 6/6).</p>	 <p>370: Slightly gravelly clayey silty sand ((g)mS); coarse to very coarse sand, fine sand, silt, clay, and granules; poorly to moderately sorted; subangular; yellowish brown (10YR 5/4).</p>

**Figure 17J.** 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) SDGD; (B) SDSY; (C) SDLH; (D) SDAQ; (E) SDGP; (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	Depth (feet) and description
 <p>380: Slightly gravelly clayey silty sand ((g)mS); coarse to very coarse sand, silt, clay, and granules; poorly to moderately sorted; subangular; brown (10YR 4/3).</p>	 <p>450: Silty sand (zS); very fine to fine sand and silt with minor very coarse to coarse sand; well sorted; subangular; light olive brown (2.5Y 5/3).</p>
 <p>390: Slightly gravelly silty clayey sand ((g)mS); coarse to very coarse sand, clay, silt, and granules to medium pebbles; poorly to moderately sorted; subangular; brown (10YR 4/3).</p>	 <p>460: Silty sand (zS); fine to coarse sand with silt and minor very coarse sand and trace granules to small pebbles; moderately to well sorted; subangular; light olive brown (2.5Y 5/3).</p>
 <p>400: Gravelly silty clayey sand (gmS); coarse to very coarse sand, clay, silt, and granules to medium pebbles; very poorly sorted; subangular; pale brown (10YR 6/3).</p>	 <p>470: Slightly gravelly sand ((g)S); coarse to very coarse sand, very fine to fine sand, and granules; poorly sorted; subangular; brown (10YR 5/3).</p>
 <p>410: Gravelly silty clayey sand (gmS); coarse to very coarse sand, clay, silt, and granules to medium pebbles; very poorly sorted; subangular; pale brown (10YR 6/3).</p>	 <p>480: Slightly gravelly silty sand ((g)mS); very fine to very coarse sand and silt with granules; poorly sorted; subangular; brown (10YR 5/3).</p>
 <p>420: Gravelly silty clayey sand (gmS); coarse to very coarse sand, clay, silt, and granules to medium pebbles; very poorly sorted; subangular; pale brown (10YR 6/3).</p>	 <p>490: Slightly gravelly sand ((g)S); coarse to very coarse sand, and very fine to fine sand with granules; poorly sorted; subangular; brown (10YR 5/3); <i>oxidized sand grains</i>.</p>
 <p>430: Sand (S); fine to medium sand with minor very coarse sand and silt; moderately to well sorted; subangular; grayish brown (10YR 5/2).</p>	 <p>500: Silty sand (zS); very fine to fine sand and silt with minor medium to coarse sand; moderately sorted; subangular; light brownish gray (2.5Y 6/2).</p>
 <p>440: Slightly gravelly clayey silty sand ((g)mS); medium to very coarse sand with silt, clay, and granules; poorly to moderately sorted; subangular; pale brown (10YR 6/3).</p>	 <p>510: Slightly gravelly sand ((g)S); very fine to very coarse sand, and granules to medium pebbles; very poorly sorted; subangular; light olive brown (2.5Y 5/3).</p>

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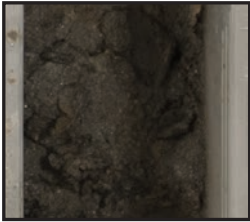
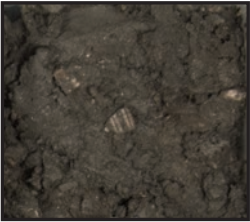
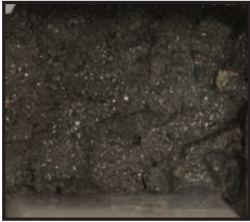


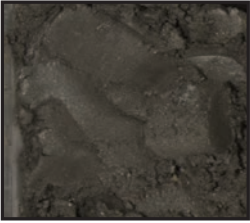


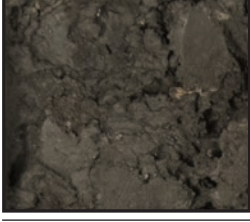

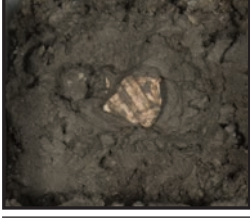


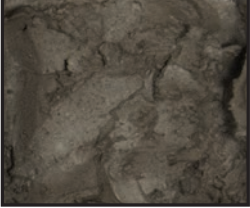
Depth (feet) and description	Depth (feet) and description
 <p>520: Silty sand (zS); very fine to fine sand, and silt with minor medium to coarse sand; moderately sorted; subangular; olive gray (5Y 5/2).</p>	 <p>566: Slightly gravelly sand ((g)S); coarse to very coarse sand, and granules; moderately to well sorted; subrounded; light olive brown (2.5Y 5/4); <i>core 17</i>.</p>
 <p>530: Slightly gravelly silty clayey sand ((g)mS); coarse to very coarse sand, very fine to fine sand, clay, silt, and granules; poorly sorted; subangular; light olive brown (2.5Y 5/3).</p>	 <p>570: Slightly gravelly sand ((g)S); coarse to very coarse sand, and granules to small pebbles; poorly to moderately sorted; subrounded; light olive brown (2.5Y 5/4).</p>
 <p>543: Sand (S); very fine to medium sand, and minor coarse to very coarse sand; poorly to moderately sorted; subangular; grayish brown (2.5Y 5/2); <i>core 14</i>.</p>	 <p>580: Slightly gravelly clayey sand ((g)mS); coarse to very coarse sand, fine sand, clay, and granules; poorly sorted; subrounded; light yellowish brown (2.5Y 6/3).</p>
 <p>547: Sand (S); very fine to medium sand, and minor coarse to very coarse sand; poorly to moderately sorted; subangular; grayish brown (2.5Y 5/2); <i>core 15</i>.</p>	 <p>585: Sandy clay (sC); clay and coarse to very coarse sand; moderately to well sorted; light yellowish brown (2.5Y 6/3).</p>
 <p>550: Sand (S); coarse sand and very fine sand with trace granules; poorly sorted; subangular; yellowish brown (10YR 5/4).</p>	 <p>590: Sandy clay (sC); clay, coarse to very coarse sand, and fine sand; poorly sorted; light yellowish brown (2.5Y 6/3).</p>
 <p>553.5: Sand (S); very fine to medium sand with minor coarse to very coarse sand; poorly to moderately sorted; subangular; light gray (2.5Y 7/1); <i>core 16</i>.</p>	 <p>600: Slightly gravelly clayey sand ((g)mS); coarse to very coarse sand, fine sand, clay, and granules to small pebbles; very poorly sorted; subrounded; olive (5Y 4/3).</p>
 <p>560: Sand (S); coarse to very coarse sand, and minor very fine sand; moderately to well sorted; subangular; light olive brown (2.5Y 5/3).</p>	 <p>610: Slightly gravelly clayey sand ((g)mS); coarse to very coarse sand, very fine to fine sand, clay, and granules; very poorly sorted; subrounded; olive gray (5Y 5/2).</p>

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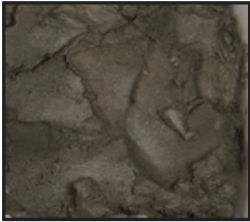

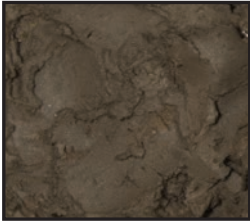




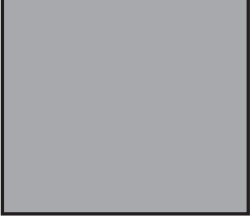




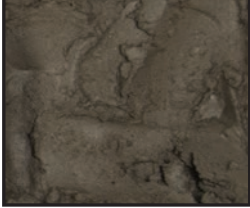
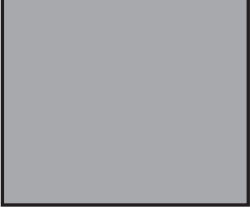
Depth (feet) and description	Depth (feet) and description
 <p>616: Sand (S); very fine sand; very well sorted; subangular; olive gray (5Y 4/2); <i>core 18</i>.</p>	 <p>670: Slightly gravelly clayey sand ((g)mS); coarse to very coarse sand, medium to fine sand, clay, and granules; very poorly sorted; subrounded; olive gray (5Y 4/2).</p>
 <p>621: Sand (S); very fine sand; very well sorted; subangular; gray (5Y 6/1); <i>core 19</i>.</p>	 <p>680: Silty sand (zS); coarse to very coarse sand and silt; poorly sorted; subrounded; dark olive gray (5Y 3/2).</p>
 <p>630: Gravelly clayey sand (gmS); coarse to very coarse sand, very fine to fine sand, clay, and granules to small pebbles; very poorly sorted; subangular; olive gray (5Y 4/2).</p>	 <p>690: Slightly gravelly sand ((g)S); coarse to very coarse sand, and granules; moderately sorted; rounded; dark olive gray (5Y 3/2).</p>
 <p>635: Sandy gravel (sG); granules to medium pebbles, and coarse to very coarse sand; poorly sorted; rounded; light olive brown (2.5Y 5/3).</p>	 <p>703: Sand (S); very fine to fine sand; very well sorted; subrounded; dark gray (5Y 4/1); <i>core 20</i>.</p>
 <p>640: Slightly gravelly clayey sand ((g)mS); coarse to very coarse sand, very fine to fine sand, clay, and granules to small pebbles; very poorly sorted; subangular; olive brown (2.5Y 4/3).</p>	 <p>708: Silty sand (zS); very fine sand and silt; very well sorted; subrounded; dark gray (5Y 4/1); <i>core 21</i>.</p>
 <p>650: Slightly gravelly sandy clay ((g)sM); clay, coarse to very coarse sand, and granules to small pebbles; poorly sorted; olive (5Y 5/3).</p>	 <p>713: No shaker sample collected; <i>core 22, no recovery</i>.</p>
 <p>660: Sand (S); coarse to very coarse and fine sand; poorly sorted; subangular to subrounded; light olive brown (2.5Y 5/3).</p>	 <p>718: Silty sand (zS); very fine sand and silt; very well sorted; subrounded; dark gray (5Y 4/1); <i>core 23</i>.</p>

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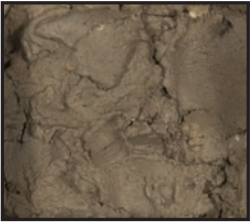
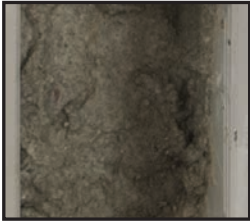

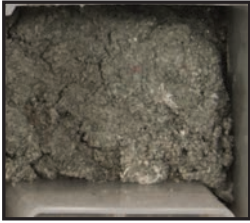
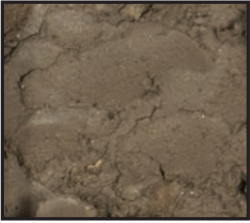



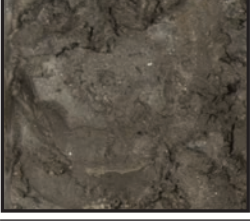




Depth (feet) and description	Depth (feet) and description
 <p>723: Silty sand (zS); very fine sand and silt; very well sorted; subrounded; dark gray (5Y 4/1); <i>core 24.</i></p>	 <p>780: Clayey silt (M); silt and clay; very well sorted; very dark gray (5Y 3/1); <i>&lt;4 mm shell fragments.</i></p>
 <p>728: Silty sand (zS); very fine sand and silt; very well sorted; subrounded; dark gray (5Y 4/1); <i>core 25.</i></p>	 <p>790: Clayey silt (M); silt and clay; very well sorted; very dark gray (5Y 3/1); <i>&lt;4 mm shell fragments.</i></p>
 <p>730: Silt (Z); silt; very well sorted; dark gray (5Y 4/1); <i>&lt;4 mm shell fragments.</i></p>	 <p>800: Clayey silt (M); silt and clay; very well sorted; very dark gray (5Y 3/1).</p>
 <p>740: Silt (Z); silt; very well sorted; dark gray (5Y 4/1); <i>&lt;3 mm shell fragments.</i></p>	 <p>810: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>
 <p>750: Clayey silt (M); silt and clay; very well sorted; very dark gray (5Y 3/1); <i>&lt;5 mm shell fragments.</i></p>	 <p>820: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>
 <p>760: Silty clay (M); clay and silt; very well sorted; very dark gray (5Y 3/1); <i>&lt;12 mm shell fragments.</i></p>	 <p>830: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>
 <p>770: Clayey silt (M); silt and clay; very well sorted; very dark gray (5Y 3/1); <i>&lt;3 mm shell fragments.</i></p>	 <p>840: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>

**Figure 17J.** 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) SDGD; (B) SDSY; (C) SDLH; (D) SDAQ; (E) SDGP; (F) SDBP; (G) SDHF; (H) SDEP; (I) SDNB; (**J**) **SDSW**; (K) SDMC; (L) SDLD; (M) SDCC; (N) SDOR; (O) SDOT; and (P) SDBW. —Continued.

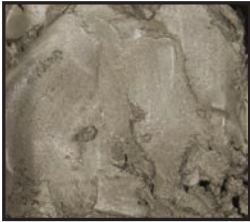
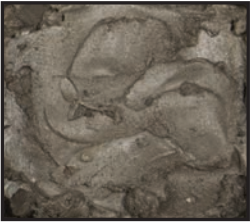
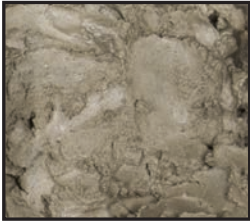
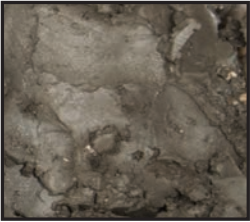
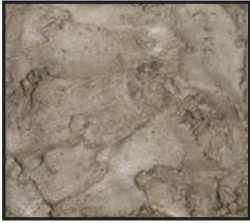
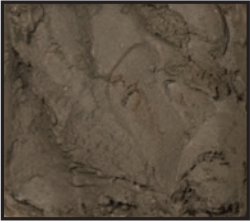


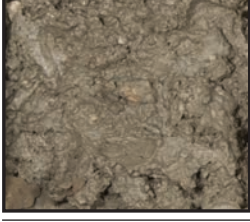





Depth (feet) and description	Depth (feet) and description
 <p>850: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>	 <p>920: Silty clay (M); clay and silt; very well sorted; very dark gray (5Y 3/1).</p>
 <p>860: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>	 <p>930: Clayey silt (M); silt and clay; very well sorted; dark gray (5Y 4/1).</p>
 <p>870: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>	 <p>940: Clayey silt (M); silt and clay; very well sorted; dark gray (5Y 4/1).</p>
 <p>880: Clay (C); clay; very well sorted; very dark gray (5Y 3/1); <i>trace &lt;2 mm shell fragments.</i></p>	 <p>945: No shaker sample collected; <i>core 26, no recovery.</i></p>
 <p>890: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>	 <p>950: No shaker sample collected; <i>core 27, no recovery.</i></p>
 <p>900: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>	 <p>955: No shaker sample collected; <i>core 28, no recovery.</i></p>
 <p>910: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>	 <p>960: No shaker sample collected; <i>core 29, no recovery.</i></p>

**Figure 17J.** 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) SDGD; (B) SDSY; (C) SDLH; (D) SDAQ; (E) SDGP; (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	Depth (feet) and description
 <p>965: Clayey sand (cS); fine sand and clay; well sorted; subrounded; dark gray (5Y 4/1); <i>core 30.</i></p>	 <p>1,010: Silty clay (M); clay and silt; very well sorted; dark gray (5Y 4/1).</p>
 <p>966: Sand (S); fine to medium sand; very well sorted; subrounded; dark gray (5Y 4/1); <i>core 31.</i></p>	 <p>1,020: Silty clay (M); clay and silt; very well sorted; very dark gray (5Y 3/1).</p>
 <p>971: Sand (S); medium sand; very well sorted; subrounded; dark gray (5Y 4/1); <i>core 32.</i></p>	 <p>1,030: Silty clay (M); clay and silt; very well sorted; dark gray (5Y 4/1).</p>
 <p>975: Sand (S); fine sand; very well sorted; subrounded; dark gray (5Y 4/1); <i>core 33.</i></p>	 <p>1,040: Silty clayey sand (mS); coarse to very coarse sand, clay, and silt; moderately sorted; subrounded; very dark gray (5Y 3/1); <i>abundant &lt;3 mm shell fragments.</i></p>
 <p>980: Sand (S); fine sand; very well sorted; subrounded; dark gray (5Y 4/1); <i>core 34.</i></p>	 <p>1,050: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>
 <p>990: Clayey sand (cS); very fine to fine sand, and clay; well sorted; subangular; very dark gray (5Y 3/1).</p>	 <p>1,060: Sandy clay (sC); clay and coarse to very coarse sand; poorly sorted; very dark gray (5Y 3/1); <i>minor &lt;2 mm shell fragments.</i></p>
 <p>1,000: Clayey sand (cS); very fine to fine sand, and clay; well sorted; subangular; very dark gray (5Y 3/1).</p>	 <p>1,070: Silty clay (M); clay and silt; very well sorted; very dark gray (5Y 3/1).</p>

**Figure 17J.** 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) SDGD; (B) SDSY; (C) SDLH; (D) SDAQ; (E) SDGP; (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	Depth (feet) and description
 <p>1,080: Clay (C); clay; very well sorted; dark gray (5Y 4/1).</p>	 <p>1,150: Clay (C); clay; very well sorted; very dark gray (5Y 3/1); <i>minor</i> &lt;2 mm shell fragments.</p>
 <p>1,090: Clay (C); clay; very well sorted; gray (5Y 5/1); <i>minor</i> &lt;3 mm shell fragments.</p>	 <p>1,160: Silty clay (M); clay and silt; very well sorted; very dark gray (5Y 3/1); <i>trace</i> &lt;2 mm shell fragments.</p>
 <p>1,100: Clay (C); clay; very well sorted; gray (5Y 5/1).</p>	 <p>1,170: Silty clay (M); clay and silt; very well sorted; very dark gray (5Y 3/1); <i>trace</i> &lt;2 mm shell fragments.</p>
 <p>1,110: Clay (C); clay; very well sorted; gray (5Y 5/1); &lt;2 mm shell fragments.</p>	 <p>1,180: Clayey silt (M); silt and clay; very well sorted; very dark gray (5Y 3/1); <i>trace</i> &lt;2 mm shell fragments.</p>
 <p>1,120: Clay (C); clay; very well sorted; dark gray (5Y 4/1); <i>abundant</i> &lt;6 mm shell fragments.</p>	 <p>1,190: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>
 <p>1,130: Clay (C); clay; very well sorted; very dark gray (5Y 3/1); <i>minor</i> &lt;2 mm shell fragments.</p>	 <p>1,200: Silty clay (M); clay and silt; very well sorted; very dark gray (5Y 3/1).</p>
 <p>1,140: Clay (C); clay; very well sorted; very dark gray (5Y 3/1); <i>minor</i> &lt;2 mm shell fragments.</p>	 <p>1,210: Sandy silty clay (sM); clay, silt, and coarse to very coarse sand; poorly sorted; very dark gray (5Y 3/1).</p>

**Figure 17J.** 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) SDGD; (B) SDSY; (C) SDLH; (D) SDAQ; (E) SDGP; (F) SDBP; (G) SDHF; (H) SDEP; (I) SDNB; (**J**) **SDSW**; (K) SDMC; (L) SDLD; (M) SDCC; (N) SDOR; (O) SDOT; and (P) SDBW. —Continued.






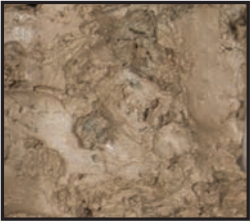










Depth (feet) and description	Depth (feet) and description
 <p>1,220: Sandy silty clay (sM); clay, silt, and coarse to very coarse sand; poorly sorted; very dark gray (5Y 3/1).</p>	 <p>1,290: Silty clay (M); clay and silt; very well sorted; very dark gray (5Y 3/1).</p>
 <p>1,230: Silty clay (M); clay and silt; very well sorted; very dark gray (2.5Y 3/1); <i>trace &lt;2 mm shell fragments</i>.</p>	 <p>1,300: Silty clay (M); clay and silt; very well sorted; very dark gray (5Y 3/1).</p>
 <p>1,240: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>	 <p>1,310: Sandy silty clay (sM); clay, silt, and coarse to very coarse sand; poorly sorted; very dark gray (5Y 3/1).</p>
 <p>1,250: Silty clay (M); clay and silt; very well sorted; very dark gray (5Y 3/1).</p>	 <p>1,320: Clayey sand (cS); medium to very coarse sand and clay; poorly to moderately sorted; subrounded to rounded; dark gray (5Y 4/1); <i>abundant &lt;4 mm shell fragments</i>.</p>
 <p>1,260: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>	 <p>1,330: Slightly gravelly clayey sand ((g)mS); medium to very coarse sand, clay, and granules; poorly sorted; subrounded to rounded; dark gray (5Y 4/1); <i>&lt;3 mm shell fragments</i>.</p>
 <p>1,270: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>	 <p>1,340: Sandy gravel (sG); granules to medium pebbles, and very coarse sand; moderately sorted; subangular to subrounded; dark olive gray (5Y 3/2).</p>
 <p>1,280: Clay (C); clay; very well sorted; very dark gray (5Y 3/1).</p>	 <p>1,344.5: Clayey silty sand (mS); medium to very fine sand, silt, and clay; moderately sorted; subangular; dark olive gray (5Y 3/2); <i>core 35</i>.</p>

**Figure 17J.** 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	Depth (feet) and description
 <p>1,347: Clay (C); clay; very well sorted; greenish gray (5GY 5/1); <i>core 36</i>.</p>	 <p>1,410: Sandy silty clay (sM); clay, silt, and very fine to fine sand; moderately sorted; grayish brown (2.5Y 5/2).</p>
 <p>1,350: Clay (C); clay; very well sorted; olive gray (5Y 5/2).</p>	 <p>1,420: Sandy silty clay (sM); clay, silt, and very fine to fine sand; moderately sorted; grayish brown (2.5Y 5/2).</p>
 <p>1,360: Sandy clay (sC); clay and medium sand; poorly to moderately sorted; olive gray (5Y 5/2).</p>	 <p>1,430: Sandy silty clay (sM); clay, silt, and very fine to fine sand; moderately sorted; grayish brown (2.5Y 5/2).</p>
 <p>1,370: Sandy clay (sC); clay and fine to coarse sand; poorly sorted; gray (5Y 5/1).</p>	 <p>1,440: Sandy silty clay (sM); clay, silt, and very fine to fine sand; moderately sorted; grayish brown (2.5Y 5/2).</p>
 <p>1,380: Sandy silty clay (sM); clay, silt, and fine to medium sand; poorly to moderately sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,450: Sandy silty clay (sM); clay, silt, and very fine to fine sand; moderately sorted; grayish brown (2.5Y 5/2).</p>
 <p>1,390: Silty clay (M); clay and silt; very well sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,460: Sandy silty clay (sM); clay, silt, and very fine to coarse sand; poorly sorted; grayish brown (2.5Y 5/2).</p>
 <p>1,400: Sandy silty clay (sM); clay, silt, and very fine to fine sand; moderately sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,470: Sandy silty clay (sM); clay, silt, and very fine to medium sand; poorly to moderately sorted; grayish brown (2.5Y 5/2).</p>

**Figure 17J.** 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) SDGD; (B) SDSY; (C) SDLH; (D) SDAQ; (E) SDGP; (F) SDBP; (G) SDHF; (H) SDEP; (I) SDNB; (**J**) **SDSW**; (K) SDMC; (L) SDLD; (M) SDCC; (N) SDOR; (O) SDOT; and (P) SDBW. —Continued.



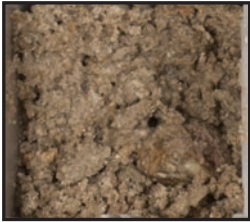
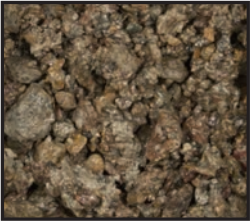





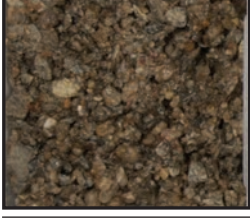


Depth (feet) and description	Depth (feet) and description
 <p>1,480: Sandy silty clay (sM); clay, silt, and very fine to fine sand; moderately sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,550: Sandy silty clay (sM); clay, silt, and very fine to medium sand; poorly to moderately sorted; grayish brown (10YR 5/2).</p>
 <p>1,490: Sandy silty clay (sM); clay, silt, and very fine to fine sand; moderately sorted; dark grayish brown (2.5Y 4/2); <i>abundant organic-rich silt</i>.</p>	 <p>1,560: Sandy silty clay (sM); clay, silt, and coarse to very coarse sand; poorly sorted; grayish brown (10YR 5/2).</p>
 <p>1,500: Sandy silty clay (sM); clay, silt, and very fine to medium sand; poorly to moderately sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,570: Sandy silty clay (sM); clay, silt, and very fine to coarse sand; poorly sorted; grayish brown (10YR 5/2).</p>
 <p>1,510: Sandy silty clay (sM); clay, silt, and very fine to medium sand; poorly to moderately sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,580: Clayey sand (cS); medium to very coarse sand and clay; poorly to moderately sorted; subangular; grayish brown (2.5Y 5/2).</p>
 <p>1,520: Sandy silty clay (sM); clay, silt, and very fine to coarse sand; poorly sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,590: Clayey sand (cS); coarse to very coarse sand and clay; moderately to well sorted; subrounded; grayish brown (2.5Y 5/2).</p>
 <p>1,530: Silty clay (M); clay and silt with trace medium to coarse sand; moderately to well sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,600: Sandy silty clay (sM); clay, silt, and medium to very coarse sand; poorly sorted; grayish brown (10YR 5/2).</p>
 <p>1,540: Sandy silty clay (sM); clay, silt, and very fine to medium sand; poorly to moderately sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,610: Sandy silty clay (sM); clay, silt, and very fine to medium sand; poorly to moderately sorted; grayish brown (2.5Y 5/2).</p>

**Figure 17J.** 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) SDGD; (B) SDSY; (C) SDLH; (D) SDAQ; (E) SDGP; (F) SDBP; (G) SDHF; (H) SDEP; (I) SDNB; (**J**) **SDSW**; (K) SDMC; (L) SDLD; (M) SDCC; (N) SDOR; (O) SDOT; and (P) SDBW. —Continued.


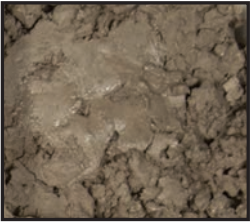





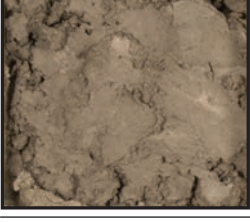





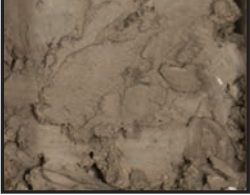
Depth (feet) and description	Depth (feet) and description
 <p>1,620: Sandy silty clay (sM); clay, silt, and coarse to very coarse sand; poorly sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,690: Clayey sand (cS); medium to coarse sand and clay; moderately sorted; subangular; grayish brown (2.5Y 5/2).</p>
 <p>1,630: Sandy silty clay (sM); clay, silt, and coarse to very coarse sand; poorly sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,700: Sand (S); coarse to very coarse sand; well sorted; subrounded; olive (5Y 5/3).</p>
 <p>1,640: Clayey silty sand (mS); coarse to very coarse sand, silt, and clay; poorly sorted; subangular to angular; grayish brown (2.5Y 5/2).</p>	 <p>1,710: Slightly gravelly sand ((g)S); coarse to very coarse sand, and granules; moderately to well sorted; subrounded; olive (5Y 5/3).</p>
 <p>1,650: Sand (S); coarse to very coarse sand; well sorted; subrounded; olive brown (2.5Y 4/3).</p>	 <p>1,720: Slightly gravelly sand ((g)S); coarse to very coarse sand, and granules to small pebbles; moderately sorted; subrounded to rounded; olive (5Y 5/3).</p>
 <p>1,660: Silty sand (zS); coarse to very coarse sand and silt; moderately to well sorted; subrounded; grayish brown (2.5Y 5/2).</p>	 <p>1,728: Slightly gravelly sand ((g)S); coarse to very coarse sand, and granules; moderately to well sorted; subrounded; olive (5Y 5/3).</p>
 <p>1,670: Sand (S); medium to very coarse sand; moderately sorted; subrounded to subangular; grayish brown (2.5Y 5/2).</p>	 <p>1,733: Slightly gravelly sandy clay ((g)sM); clay, coarse to very coarse sand, and granules to small pebbles; very poorly sorted; pale brown (10YR 6/3); <i>core 37</i>.</p>
 <p>1,680: Sand (S); medium to very coarse sand; moderately sorted; subrounded to subangular; grayish brown (2.5Y 5/2).</p>	 <p>1,740: Slightly gravelly sand ((g)S); fine to very coarse sand, and granules; poorly sorted; subangular to subrounded; light brownish gray (10YR 6/2); <i>core 38</i>.</p>

**Figure 17J.** 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) SDGD; (B) SDSY; (C) SDLH; (D) SDAQ; (E) SDGP; (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	Depth (feet) and description
 <p>1,745: Silty sand (zS); fine to very coarse sand, and silt; poorly sorted; subangular to subrounded; light olive brown (2.5Y 5/3); <i>core 39</i>.</p>	 <p>1,810: Sandy gravel (sG); granules to small pebbles, and medium to very coarse sand; poorly to moderately sorted; very angular to angular; dark grayish brown (2.5Y 4/2).</p>
 <p>1,750: Slightly gravelly sand ((g)S); coarse to very coarse sand, and granules to small pebbles; moderately to well sorted; subrounded; light olive brown (2.5Y 5/3).</p>	 <p>1,820: Sandy gravel (sG); granules to medium pebbles, and medium to very coarse sand; poorly sorted; very angular; dark grayish brown (2.5Y 4/2).</p>
 <p>1,760: Slightly gravelly sand ((g)S); coarse to very coarse sand, and granules; moderately to well sorted; subrounded; light olive brown (2.5Y 5/3).</p>	 <p>1,830: Sandy gravel (sG); granules to small pebbles, and medium to very coarse sand; poorly to moderately sorted; very angular; dark grayish brown (2.5Y 4/2).</p>
 <p>1,770: Slightly gravelly sand ((g)S); coarse to very coarse sand, and granules; moderately to well sorted; subrounded; light olive brown (2.5Y 5/3).</p>	 <p>1,840: Sandy gravel (sG); granules to medium pebbles, and medium to very coarse sand; poorly sorted; very angular; dark grayish brown (2.5Y 4/2).</p>
 <p>1,780: Slightly gravelly sandy clay ((g)sM); clay, fine to very coarse sand, and granules; very poorly sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,846: Gravel (G); very large pebbles to small cobbles (?); poorly sorted (?); well rounded; very dark gray (2.5Y 3/1); <i>core 40, minimal recovery</i>.</p>
 <p>1,790: Sandy gravel (sG); granules to small pebbles, and medium to very coarse sand; poorly to moderately sorted; very angular to angular; dark grayish brown (2.5Y 4/2).</p>	 <p>1,849: Gravel (G); very large pebbles to small cobbles (?); poorly sorted (?); well rounded; very dark gray (2.5Y 3/1); <i>core 41, minimal recovery</i>.</p>
 <p>1,800: Sandy gravel (sG); granules to medium pebbles, and medium to very coarse sand; poorly sorted; angular; dark grayish brown (2.5Y 4/2).</p>	 <p>1,850: Sandy gravel (sG); granules to large pebbles, and medium to very coarse sand; very poorly sorted; angular to subangular; dark grayish brown (2.5Y 4/2).</p>

**Figure 17J.** 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) SDGP; (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	Depth (feet) and description
 <p>1,860: Sandy gravel (sG); granules to medium pebbles, and medium to very coarse sand; very poorly sorted; angular; dark grayish brown (2.5Y 4/2).</p>	 <p>1,930: Sandy silty clay (sM); clay, silt, and fine to very fine sand; well sorted; dark gray (2.5Y 4/1).</p>
 <p>1,870: Slightly gravelly sandy silty clay ((g)sM); clay, silt, medium to very coarse sand, and granules; poorly sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,940: Clayey silty sand (mS); very fine to fine sand, silt, and clay; well sorted; angular to subangular; dark gray (2.5Y 4/1).</p>
 <p>1,880: Slightly gravelly sandy silty clay ((g)sM); clay, silt, medium to very coarse sand, and granules to small pebbles; very poorly sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,950: Clayey silty sand (mS); very fine to fine sand, silt, clay, and minor coarse sand; moderately sorted; angular; dark gray (2.5Y 4/1).</p>
 <p>1,890: Slightly gravelly clayey sand ((g)mS); medium to very coarse sand, clay, and granules; poorly sorted; angular; dark grayish brown (2.5Y 4/2).</p>	 <p>1,960: Sandy silty clay (sM); clay, silt, and fine to very fine sand with minor coarse sand; moderately sorted; dark gray (2.5Y 4/1).</p>
 <p>1,900: Slightly gravelly clayey sand ((g)mS); medium to very coarse sand, clay, and granules to small pebbles; poorly sorted; angular; grayish brown (2.5Y 5/2).</p>	 <p>1,970: Sandy silty clay (sM); clay, silt, and very fine to coarse sand; poorly sorted; dark gray (2.5Y 4/1).</p>
 <p>1,910: Sandy clay (sC); clay and fine to coarse sand; poorly sorted; grayish brown (2.5Y 5/2).</p>	 <p>1,980: Sandy silty clay (sM); clay, silt, and very fine to coarse sand; poorly sorted; dark gray (2.5Y 4/1).</p>
 <p>1,920: Sandy silty clay (sM); clay, silt, very fine to fine and coarse sand; poorly sorted; dark gray (2.5Y 4/1).</p>	 <p>1,990: Slightly gravelly silty clay ((g)M); clay, silt, and granules; poorly sorted; dark gray (2.5Y 4/1).</p>

**Figure 17J.** 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) SDGD; (B) SDSY; (C) SDLH; (D) SDAQ; (E) SDGP; (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	
	2,000: Silty clay (M); clay and silt; very well sorted; dark gray (2.5Y 4/1).
	2,002.5: Silty sand (zS); very fine to fine sand, and silt; well sorted; angular to subangular; dark gray (2.5Y 4/1); <i>core 42</i> .
	2,005.5: Clayey silty sand (mS); very fine sand, silt, and clay; very well sorted; angular to subangular; dark gray (2.5Y 4/1); <i>core 43</i> .  2005.5–2006: No sieve sample collected.

**Figure 17J.** 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) SDGP; (F) SDBP; (G) SDHF; (H) SDEP; (I) SDNB; (**J**) **SDSW**; (K) SDMC; (L) SDLD; (M) SDCC; (N) SDOR; (O) SDOT; and (P) SDBW. —Continued.