

Depth interval (feet) and description	Depth interval (feet) and description
	<p>0–20: Slightly gravelly clayey sand ((g)mS); fine to very coarse sand with clay, and granules to medium pebbles; very poorly sorted; subrounded; very dark grayish brown (10YR 3/2); <i>slightly calcareous</i>.</p>
	<p>20–40: Sandy gravel (sG); granules to large pebbles with medium to very coarse sand; poorly sorted; angular to subangular; light olive brown (2.5Y 5/3); <i>slightly calcareous</i>.</p>
	<p>40–60: Sandy gravel (sG); granules to cobbles with very fine to very coarse sand; very poorly sorted; angular to subrounded; olive brown (2.5Y 4/3); <i>slightly calcareous</i>.</p>
	<p>60–80: Sandy gravel (sG); granules to cobbles with very fine to very coarse sand and trace silt; very poorly sorted; angular to subangular; olive brown (2.5Y 4/3).</p>
	<p>80–100: Clayey sandy gravel (msG); granules to cobbles with very fine to very coarse sand, and clay; very poorly sorted; angular to subrounded; light brownish gray (2.5Y 6/2).</p>
	<p>100–120: Clayey sandy gravel (msG); granules to cobbles with fine to very coarse sand, and clay; very poorly sorted; subangular to subrounded; light olive brown (2.5Y 5/3); <i>calcareous</i>.</p>
	<p>120–140: Clayey sandy gravel (msG); granules to cobbles with very fine to very coarse sand, and clay; very poorly sorted; subangular to subrounded; light olive brown (2.5Y 5/3); <i>calcareous</i>.</p>
	<p>140–152: Clayey sandy gravel (msG); granules to cobbles with very fine to coarse sand, and clay; very poorly sorted; subangular to subrounded; olive brown (2.5Y 4/3); <i>calcareous</i>.</p>
	<p>152–157.75: No sieve sample collected; <i>cores 1 and 2</i>.</p>
	<p>157.75–160: <i>No sieve sample collected.</i></p>
	<p>160–180: Clayey sandy gravel (msG); granules to cobbles with very fine to very coarse sand, and clay; very poorly sorted; subangular to subrounded; light brownish gray (2.5Y 6/2); <i>calcareous</i>.</p>
	<p>180–200: Clayey sandy gravel (msG); granules to cobbles with very fine to very coarse sand, and clay; very poorly sorted; subangular; olive (5Y 5/3); <i>calcareous</i>.</p>
	<p>200–220: Clayey sandy gravel (msG); granules to cobbles with very fine to very coarse sand, and clay; very poorly sorted; subangular to subrounded; olive (5Y 5/3); <i>calcareous</i>.</p>
	<p>220–240: Clayey sandy gravel (msG); granules to cobbles with very fine to very coarse sand, and clay; very poorly sorted; subangular to subrounded; light olive brown (2.5Y 5/3).</p>

Figure 18E. Lithologic descriptions and photographs of **sieve** drill cuttings collected from the borehole at 16 USGS multiple-depth, monitoring-well sites in San Diego County, California, 1995, 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.



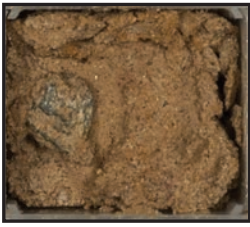



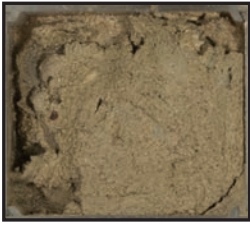





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	240–250: No sieve sample collected; <i>cores 3 and 4.</i>		360–380: Sand (S); very fine to coarse sand with minor clay; moderately sorted; subangular to subrounded; light olive brown (2.5Y 5/3); <i>slightly calcareous.</i>
	250–260: Slightly gravelly clayey sand ((g)mS); very fine to coarse sand with clay and granules to large pebbles; very poorly sorted; subangular to rounded; yellowish brown (10YR 5/4).		380–400: Slightly gravelly sand ((g)S); very fine to coarse sand with granules to small pebbles and minor clay; poorly sorted; subangular; grayish brown (2.5Y 5/2); <i>slightly micaceous.</i>
	260–280: Clayey sand (cS); very fine to coarse sand with clay and trace granules; poorly sorted; angular to subrounded; light olive brown (2.5Y 5/3).		400–410: Sandy clay (sC); clay with very fine to coarse sand; poorly sorted; dark gray (2.5Y 4/1); <i>minor chlorite.</i>
	280–300: Sandy clay (sC); clay with very fine to medium sand and trace granules to small pebbles; moderately sorted; gray (5Y 5/1); <i>calcareous.</i>		410–420: No sieve sample collected; <i>cores 5 and 6.</i>
	300–320: Sandy silty clay (sM); clay with silt and very fine to coarse sand; poorly sorted; light olive gray (5Y 6/2); <i>calcareous.</i>		420–440: Sandy gravel (sG); granules to medium pebbles with very fine to very coarse sand and minor clay; very poorly sorted; angular to subrounded; dark gray (5Y 4/1).
	320–340: Sand (S); very fine to coarse sand with trace granules to medium pebbles; moderately sorted; subangular to rounded; light olive brown (2.5Y 5/3).		440–460: Sandy gravel (sG); granules to medium pebbles with very fine to very coarse sand and minor clay; poorly sorted; very angular to subangular; olive (5Y 4/3); <i>slightly calcareous; micaceous.</i>
	340–360: Sand (S); very fine to medium sand; well sorted; subangular to subrounded; light olive brown (2.5Y 5/3).		460–480: Clayey sandy gravel (msG); granules to medium pebbles with fine to very coarse sand, and clay; very poorly sorted; angular to subrounded; dark grayish brown (2.5Y 4/2); <i>micaceous.</i>

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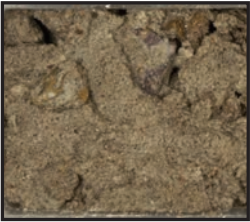
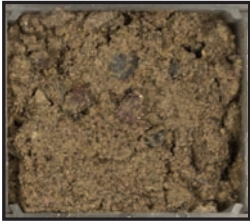
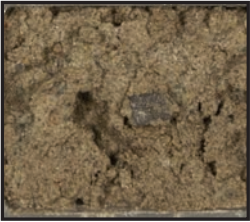
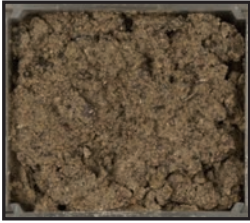
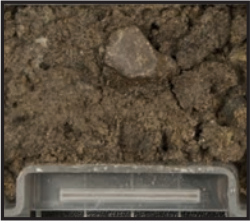




Depth interval (feet) and description	Depth interval (feet) and description		
	<p>480–500: Sandy gravel (sG); granules to medium pebbles with very fine to coarse sand and trace silt; poorly sorted; subangular to subrounded; light olive brown (2.5Y 5/3); <i>biotite with minor chlorite</i>.</p>		<p>600–620: Clayey sandy gravel (msG); granules to large pebbles with very fine to coarse sand, and clay; very poorly sorted; subrounded; olive (5Y 4/3); <i>calcareous; minor biotite</i>.</p>
	<p>500–520: Clayey sandy gravel (msG); granules to medium pebbles with very fine to very coarse sand, and clay; very poorly sorted; very angular to subrounded; olive brown (2.5Y 4/3).</p>		<p>620–640: Clayey sandy gravel (msG); granules to medium pebbles with very fine to very coarse sand, and clay; very poorly sorted; subrounded to rounded; olive (5Y 4/3); <i>calcareous</i>.</p>
	<p>520–540: Sandy gravel (sG); granules to large pebbles with very fine to very coarse sand and minor clay; very poorly sorted; very angular to subrounded; olive brown (2.5Y 4/3); <i>minor biotite</i>.</p>		<p>640–660: Sandy clayey gravel (msG); granules to large pebbles with clay and very fine to very coarse sand; very poorly sorted; subangular to rounded; dark grayish brown (2.5Y 4/2); <i>calcareous; minor chlorite</i>.</p>
	<p>540–560: Silty clayey sandy gravel (msG); granules to large pebbles with very fine to medium sand, clay, silt, and minor very coarse sand; very poorly sorted; angular to subrounded; dark grayish brown (2.5Y 4/2).</p>		<p>660–665: Sandy gravelly clay (gM); clay with granules to medium pebbles and very fine to medium sand; very poorly sorted; dark grayish brown (2.5Y 4/2); <i>calcareous; minor mica</i>.</p>
	<p>560–580: Sand (S); very fine to medium sand with minor clay; well sorted; subangular to rounded; light olive brown (2.5Y 5/3); <i>calcareous; minor mica</i>.</p>		<p>665–680: No sieve sample collected; <i>cores 9, 10, and 11</i>.</p>
	<p>580–590: No sieve sample collected; <i>cores 7 and 8</i>.</p>		<p>680–700: Slightly gravelly sandy clayey silt ((g)sM); silt with clay, very fine to medium sand, and granules to medium pebbles; very poorly sorted; dark greenish gray (10Y 4/1); <i>calcareous</i>.</p>
	<p>590–600: Clayey sandy gravel (msG); granules to medium pebbles with very fine to very coarse sand, and clay; very poorly sorted; very angular to subangular; dark grayish brown (2.5Y 4/2); <i>micaceous</i>.</p>		<p>700–720: Gravelly sand (gS); very fine to medium sand with granules to medium pebbles and minor clay; very poorly to poorly sorted; subangular to rounded; olive (5Y 4/3); <i>calcareous</i>.</p>

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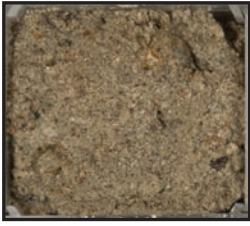



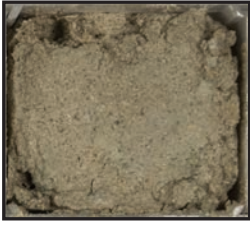


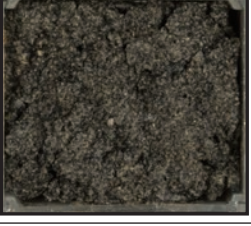



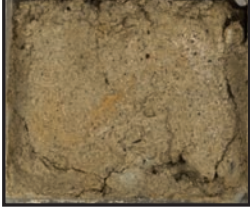

Depth interval (feet) and description	Depth interval (feet) and description
	
<p>720–740: Clayey silty sand (mS); very fine to coarse sand with silt, clay, and trace granules; poorly sorted; subangular to rounded; olive (5Y 4/3); <i>calcareous</i>; <i>minor mica</i>.</p>	<p>840–860: Slightly gravelly sandy clay ((g)sM); clay with very fine to very coarse sand and granules to small pebbles; very poorly sorted; olive gray (5Y 5/2).</p>
	
<p>740–760: Sandy silty clay (sM); clay with silt and very fine to coarse sand; poorly sorted; olive gray (5Y 5/2); <i>calcareous</i>; <i>minor biotite</i>; <i>minor greenish gray (10G 4/1) waxy clay</i>.</p>	<p>860–880: Sandy gravelly clay (gM); clay with granules to medium pebbles and very fine to coarse sand; very poorly sorted; olive gray (5Y 5/2); <i>calcareous</i>; <i>low-grade metavolcanic</i>.</p>
	
<p>760–780: Sandy clayey silt (sM); silt with clay, very fine to medium sand, and minor coarse sand; poorly to moderately sorted; gray (5Y 5/1); <i>calcareous</i>.</p>	<p>880–890: No sieve sample collected; <i>cores 14 and 15</i>.</p>
	
<p>780–800: Sandy silty clay (sM); clay and silt with very fine to very coarse sand; very poorly sorted; olive gray (5Y 5/2); <i>calcareous</i>.</p>	<p>890–900: Sandy gravel (sG); granules to small pebbles with medium to very coarse sand and minor clay; poorly to moderately sorted; very angular; greenish black (10Y 2.5/1); <i>low-grade metavolcanic</i>.</p>
	
<p>800–810: No sieve sample collected; <i>cores 12 and 13</i>.</p>	<p>900–920: Sandy gravel (sG); granules to medium pebbles with medium to very coarse sand and minor clay; poorly sorted; very angular; dark greenish gray (10Y 4/1); <i>low-grade metavolcanic</i>.</p>
	
<p>810–820: Sandy clayey silt (sM); silt and clay with very fine to very coarse sand; very poorly sorted; olive gray (5Y 5/2); <i>calcareous</i>; <i>trace wood fragments, ~14 mm</i>.</p>	<p>920–940: Clayey sandy gravel (msG); granules with fine to very coarse sand, and clay; very poorly sorted; very angular to subangular; dark greenish gray (10Y 4/1); <i>slightly calcareous</i>; <i>minor biotite</i>; <i>low-grade metavolcanic</i>.</p>
	
<p>820–840: Clayey silty sand (mS); very fine to coarse sand with silt, clay, and trace granules to small pebbles; poorly sorted; subangular to subrounded; olive (5Y 5/3).</p>	<p>940–960: Clayey sandy gravel (msG); granules to small pebbles with very fine to very coarse sand, and clay; very poorly sorted; very angular to subangular; greenish gray (10Y 5/1); <i>low-grade metavolcanic</i>.</p>

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Depth interval (feet) and description


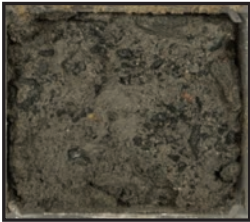
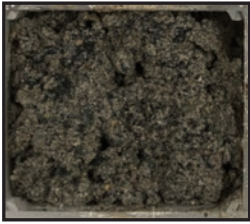


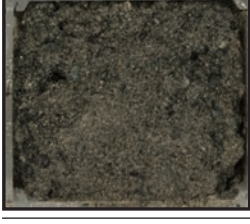

	960–980: Clayey sandy gravel (msG); granules with very fine to very coarse sand, and clay; very poorly sorted; very angular; dark greenish gray (10Y 4/1); <i>calcareous</i> ; <i>low-grade metavolcanic</i> .
	980–1,000: Sandy clayey gravel (msG); granules to medium pebbles with clay and fine to very coarse sand; very poorly sorted; very angular to subrounded; dark greenish gray (10Y 4/1); <i>calcareous</i> ; <i>low-grade metavolcanic</i> .
	1,000–1,020: Clayey sandy gravel (msG); granules to medium pebbles with fine to very coarse sand, and clay; very poorly sorted; very angular; dark greenish gray (10Y 4/1); <i>calcareous</i> ; <i>low-grade metavolcanic</i> .
	1,020–1,040: Gravelly sand (gS); fine to very coarse sand with granules to small pebbles and minor clay; poorly to moderately sorted; very angular; dark greenish gray (10Y 4/1); <i>calcareous</i> ; <i>low-grade metavolcanic</i> .
	1,040–1,060: Gravelly clayey sand (gmS); fine to very coarse sand with clay and granules to medium pebbles; very poorly sorted; very angular; dark greenish gray (10Y 4/1); <i>calcareous</i> ; <i>low-grade metavolcanic</i> .
	1,060–1,080: Gravelly sand (gS); very fine to very coarse sand with granules to small pebbles; poorly to moderately sorted; very angular; very dark greenish gray (10Y 3/1); <i>calcareous</i> ; <i>minor biotite and chlorite</i> ; <i>low-grade metavolcanic</i> .
	1,080–1,100: Gravelly sand (gS); very fine to very coarse sand with granules to small pebbles and minor clay; poorly to moderately sorted; very angular; dark greenish gray (10Y 4/1); <i>calcareous</i> ; <i>micaceous</i> ; <i>low-grade metavolcanic</i> .

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