

Depth interval (feet) and description	Depth interval (feet) and description		
	<p>0–18: Sand (S); fine to medium sand; subrounded to rounded; well sorted; olive brown (2.5Y 4/3).</p>		<p>140–160: Clayey sand (cS); very fine to medium sand with clay; subangular; moderately sorted; yellowish brown (10YR 5/4).</p>
	<p>18–40: Sand (S); fine to coarse sand; subrounded to rounded; moderately sorted; olive brown (2.5Y 4/3).</p>		<p>160–180: Gravelly sand (gS); fine sand to granules; subangular to subrounded; moderately to poorly sorted; dark yellowish brown (10YR 4/4).</p>
	<p>40–60: Clayey sand (cS); fine to medium sand with clay; subrounded; moderately sorted; olive brown (2.5Y 4/3).</p>		<p>180–200: Gravelly sand (gS); medium sand to granules; subrounded; moderately sorted; dark yellowish brown (10YR 4/4).</p>
	<p>60–80: Gravelly sand (gS); fine sand to granules; subrounded; moderately sorted; yellowish brown (10YR 5/4).</p>		<p>200–220: Sand (S); fine to coarse sand; subrounded to rounded; moderately sorted; olive brown (2.5Y 4/3).</p>
	<p>80–100: Clayey sand (cS); fine to medium sand with clay; subrounded to rounded; moderately sorted; yellowish brown (10YR 5/4).</p>		<p>220–240: Silty clayey sand (mS); fine to medium sand with silt and clay; subrounded; moderately sorted; olive gray (5Y 4/2); <i>shell fragments</i>.</p>
	<p>100–120: Sand (S); fine to coarse sand; angular to subangular; moderately sorted; light olive brown (2.5Y 5/4).</p>		<p>240–260: Gravelly silty sand (gmS); fine sand to granules with silt; subrounded; poorly sorted; olive brown (2.5Y 4/3); <i>shell fragments</i>.</p>
	<p>120–140: Sandy silty clay (sM); clay and silt with fine to medium sand; moderately sorted; yellowish brown (10YR 5/4).</p>		<p>260–280: Gravelly silty sand (gmS); fine sand to granules with silt; subangular to subrounded; poorly sorted; dark yellowish brown (10YR 4/4).</p>

Figure 18I. 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) SDPC; (F) SDBP; (G) SDHF; (H) SDEP; (I) **SDNB**; (J) SDSW; (K) SDMC; (L) SDLD; (M) SDCC; (N) SDOR; (O) SDOT; and (P) SDBW.

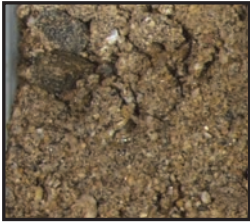
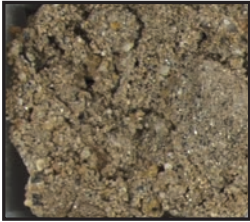
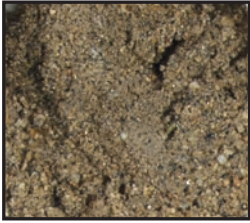




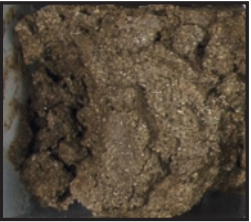
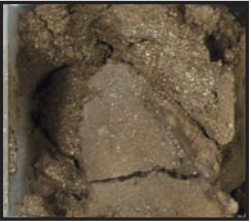
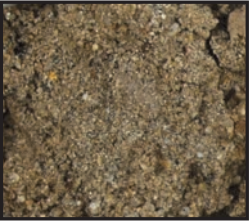

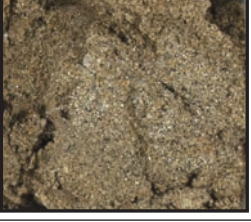


Depth interval (feet) and description	Depth interval (feet) and description
	<p>280–300: Gravelly sand (gS); fine sand to granules; subangular to subrounded; poorly sorted; yellowish brown (10YR 5/4).</p>
	<p>300–320: Gravelly sand (gS); medium sand to granules; subrounded to rounded; moderately sorted; olive brown (2.5Y 4/3).</p>
	<p>320–340: Silty sand (zS); medium to very coarse sand with silt; subangular to subrounded; moderately sorted; olive brown (2.5Y 4/3).</p>
	<p>340–360: Sand (S); fine to coarse sand; subangular to subrounded; moderately sorted; brown (10YR 4/3).</p>
	<p>360–380: Sand (S); fine to coarse sand; subangular to subrounded; moderately sorted; brown (10YR 4/3).</p>
	<p>380–400: Clayey silty sand (mS); fine to very coarse sand with silt and clay; subrounded; poorly sorted; olive brown (2.5Y 4/3).</p>
	<p>400–420: Silty sand (zS); very fine to medium sand with silt; subangular; moderately sorted; olive brown (2.5Y 4/3).</p>
	<p>420–440: Clayey silty sand (mS); very fine to very coarse sand with clay and silt; subangular to subrounded; poorly sorted; dark yellowish brown (10YR 4/4).</p>
	<p>440–460: Sandy silty clay (sM); clay and silt with fine to medium sand; moderately sorted; olive brown (2.5Y 4/4).</p>
	<p>460–480: Sand (S); fine to very coarse sand; subangular to subrounded; moderately to poorly sorted; olive brown (2.5Y 4/4).</p>
	<p>480–500: Sand (S); very fine to medium sand; subangular to subrounded; moderately sorted; olive (5Y 4/3).</p>
	<p>500–520: Sand (S); very fine to medium sand; subangular to subrounded; moderately sorted; olive brown (2.5Y 4/4).</p>
	<p>520–540: Silty sand (zS); very fine to medium sand with silt; subrounded; moderately sorted; olive brown (2.5Y 4/4).</p>
	<p>540–560: Sand (S); fine to medium sand; subangular to subrounded; well sorted; olive brown (2.5Y 4/4).</p>

Figure 18I. 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) SDPC; (F) SDBP; (G) SDHF; (H) SDEP; (I) **SDNB**; (J) SDSW; (K) SDMC; (L) SDLD; (M) SDCC; (N) SDOR; (O) SDOT; and (P) SDBW. —Continued.

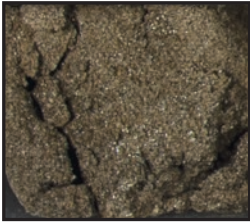
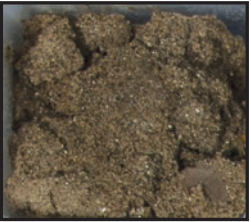
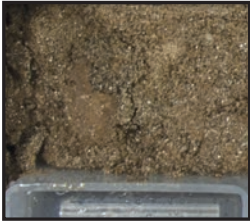
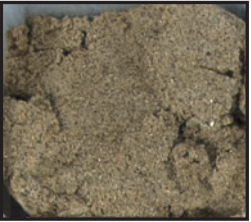








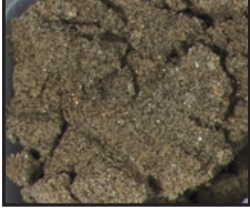

Depth interval (feet) and description	Depth interval (feet) and description		
	<p>560–580: Sand (S); fine to medium sand; subangular to subrounded; well sorted; olive brown (2.5Y 4/4).</p>		<p>700–720: Clayey sand (cS); fine to medium sand with clay; subangular; moderately sorted; olive brown (2.5Y 4/4).</p>
	<p>580–600: Silty clayey sand (mS); fine to medium sand with clay and silt; subangular; moderately sorted; olive brown (2.5Y 4/4).</p>		<p>720–740: Sand (S); fine to medium sand; subangular; well sorted; light olive brown (2.5Y 5/3).</p>
	<p>600–620: Silty clayey sand (mS); fine to medium sand with clay and silt; subangular; moderately sorted; olive brown (2.5Y 4/4).</p>		<p>740–760: Sand (S); fine to medium sand; subangular; well sorted; light olive brown (2.5Y 5/3).</p>
	<p>620–640: Sand (S); fine to medium sand; subangular; well sorted; olive brown (2.5Y 4/4).</p>		<p>760–780: Sand (S); fine to coarse sand; subangular; moderately sorted; olive brown (2.5Y 4/4).</p>
	<p>640–660: Silty sand (zS); very fine to medium sand with silt; subangular; moderately sorted; olive brown (2.5Y 4/4).</p>		<p>780–800: Sand (S); fine to medium sand; subangular; well sorted; olive brown (2.5Y 4/4).</p>
	<p>660–680: Sand (S); very fine to medium sand; subangular; moderately sorted; olive brown (2.5Y 4/4).</p>		<p>800–820: Sand (S); fine to coarse sand; subangular; well sorted; light olive brown (2.5Y 5/4).</p>
	<p>680–700: Sand (S); fine to medium sand; subangular; well sorted; light olive brown (2.5Y 5/4).</p>		<p>820–839: Sand (S); fine to medium sand; subangular to subrounded; well sorted; olive brown (2.5Y 4/4).</p>

Figure 18. 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) SDPC; (F) SDBP; (G) SDHF; (H) SDEP; (I) **SDNB**; (J) SDSW; (K) SDMC; (L) SDLD; (M) SDCC; (N) SDOR; (O) SDOT; and (P) SDBW. —Continued.


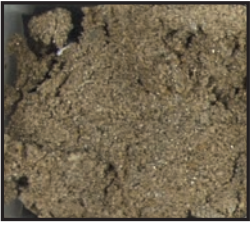
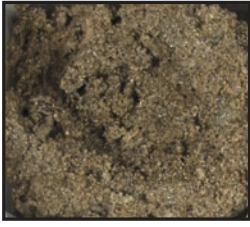

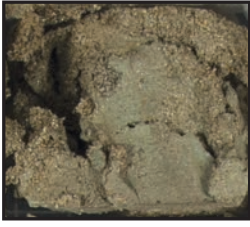









Depth interval (feet) and description	Depth interval (feet) and description		
	<p>839–859: Silty clayey sand (mS); very fine to medium sand with clay and silt; angular to subangular; moderately sorted; olive (5Y 4/3).</p>		<p>979–999: Silty sand (zS); fine to coarse sand with silt; subangular to subrounded; moderately sorted; olive brown (2.5Y 4/4).</p>
	<p>859–879: Silty sand (zS); fine to very coarse sand with silt; angular to subangular; moderately sorted; olive brown (2.5Y 4/4).</p>		<p>999–1,019: Silty clayey sand (mS); fine to medium sand with silt and clay; subrounded; moderately sorted; olive (5Y 4/3).</p>
	<p>879–899: Sandy silty clay (sM); clay and silt with fine to coarse sand; moderately sorted; olive (5Y 5/3).</p>		<p>1,019–1,039: Sand (S); fine to medium sand; subrounded; well sorted; olive (5Y 4/3).</p>
	<p>899–919: Sand (S); fine to medium sand; subangular; well sorted; olive brown (2.5Y 4/4).</p>		<p>1,039–1,059: Sand (S); fine to medium sand; subangular to subrounded; well sorted; olive (5Y 4/3); <i>shell fragments</i>.</p>
	<p>919–939: Clayey sand (cS); fine to medium sand with clay; subangular to subrounded; moderately sorted; olive brown (2.5Y 4/4).</p>		<p>1,059–1,079: Sand (S); fine to medium sand; subangular to subrounded; well sorted; olive (5Y 4/3); <i>shell fragments</i>.</p>
	<p>939–959: Sand (S); fine to coarse sand; subangular; moderately sorted; olive brown (2.5Y 4/4).</p>		<p>1,079–1,099: Sand (S); fine to medium sand; subrounded; well sorted; olive (5Y 4/3); <i>shell fragments</i>.</p>
	<p>959–979: Sand (S); fine to coarse sand; subangular; moderately sorted; olive brown (2.5Y 4/4).</p>		<p>1,099–1,119: Sand (S); fine to medium sand; subrounded to rounded; well sorted; olive (5Y 4/3).</p>

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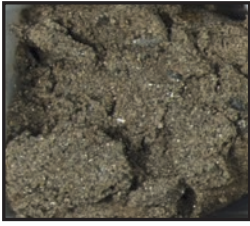
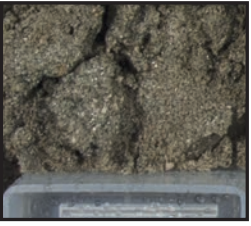
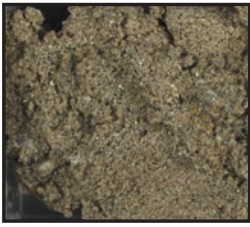
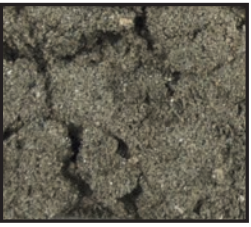

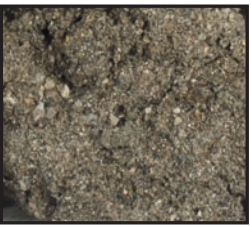

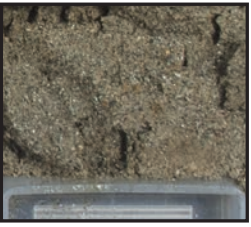
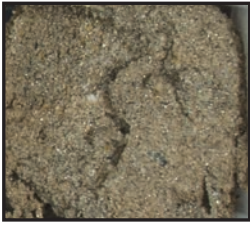
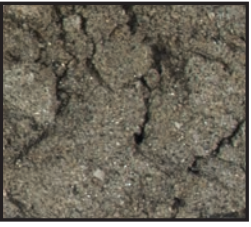
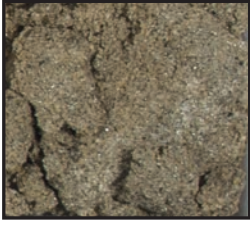

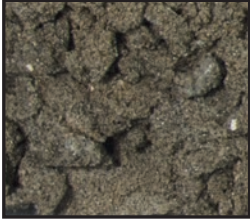
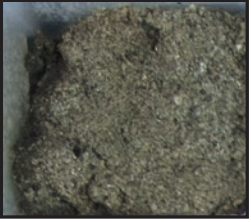
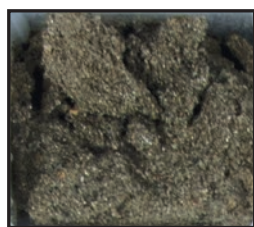
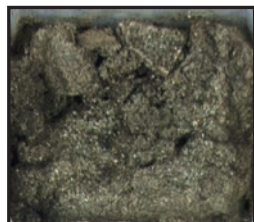
Depth interval (feet) and description	Depth interval (feet) and description	Depth interval (feet) and description	Depth interval (feet) and description
	<p>1,119–1,139: Sand (S); fine to coarse sand; subrounded to rounded; moderately sorted; olive gray (5Y 4/2); <i>shell fragments</i>.</p>		<p>1,259–1,279: Sand (S); fine to coarse sand; subrounded to rounded; moderately sorted; olive gray (5Y 4/2); <i>shell fragments</i>.</p>
	<p>1,139–1,159: Sand (S); fine to coarse sand; subrounded to rounded; moderately sorted; olive (5Y 4/3); <i>shell fragments</i>.</p>		<p>1,279–1,299: Sand (S); fine to medium sand; subrounded to rounded; well sorted; olive gray (5Y 4/2); <i>shell fragments</i>.</p>
	<p>1,159–1,179: Sand (S); fine to coarse sand; subrounded to rounded; moderately sorted; olive (5Y 4/3).</p>		<p>1,299–1,319: Sand (S); fine to medium sand; subrounded to rounded; well sorted; olive gray (5Y 4/2); <i>shell fragments</i>.</p>
	<p>1,179–1,199: Silty sand (zS); fine to medium sand with silt; subrounded to rounded; moderately sorted; olive gray (5Y 4/2).</p>		<p>1,319–1,339: Sand (S); fine to medium sand; subrounded to rounded; well sorted; olive gray (5Y 4/2); <i>shell fragments</i>.</p>
	<p>1,199–1,219: Sand (S); fine to coarse sand; subrounded to rounded; moderately sorted; olive gray (5Y 4/2); <i>shell fragments</i>.</p>		<p>1,339–1,359: Sand (S); fine to medium sand; subangular to subrounded; well sorted; olive gray (5Y 5/2).</p>
	<p>1,219–1,239: Sand (S); fine to coarse sand; subrounded to rounded; moderately sorted; olive (5Y 4/3).</p>		<p>1,359–1,379: Sand (S); fine to coarse sand; subangular to subrounded; moderately sorted; olive gray (5Y 5/2); <i>shell fragments</i>.</p>
	<p>1,239–1,259: Sand (S); fine to coarse sand; subrounded to rounded; moderately sorted; olive (5Y 4/3).</p>		<p>1,379–1,399: Sand (S); fine to medium sand; subangular to subrounded; well sorted; olive gray (5Y 4/2).</p>

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Depth interval (feet) and description



1,399–1,419: Silty sand (zS); fine to coarse sand with silt; subangular to subrounded; moderately sorted; dark olive gray (5Y 3/2); *minor shell fragments*.



1,419–1,439: Silty sand (zS); fine to coarse sand with silt; subangular to subrounded; moderately sorted; dark olive gray (5Y 3/2); *minor shell fragments*.



1,439–1,459: Sand (S); fine to coarse sand; subangular; moderately sorted; olive (5Y 4/3); *shell fragments*.



1,459–1,479: Sand (S); fine to very coarse sand; subangular to subrounded; moderately sorted; olive gray (5Y 5/2); *minor shell fragments*.

1,479–1,501: *Cores 1, 2, 3, 4, and 5.*

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