

0-17: No sieve sample collected.

17–37: Sand (S); fine to very fine sand; very well sorted; subangular to subrounded; dark grayish brown (2.5Y 4/2).



157–177: Gravelly sand (gS); fine to medium sand with minor coarse to very coarse sand and gravel <12 mm; poorly sorted; subangular to rounded; olive brown (2.5Y 4/3).

Depth interval (feet) and description



37–57: Sand (S); fine to very fine sand; well sorted; subangular to subrounded; olive brown (2.5Y 4/3).



177–197: Sand (S); fine to medium sand with minor silt and clay; well to moderately sorted; subangular to subrounded; olive brown (2.5Y 4/3).



57–67: Sand (S); fine to medium sand with minor very fine to very coarse sand and trace gravel <4 mm; poorly sorted; subangular to subrounded; olive brown (2.5Y 4/3).

67-77: No sieve sample collected.

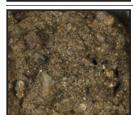


197–217: Sand (S); medium to coarse sand with minor fine to very coarse sand and trace gravel <4 mm; poorly sorted; subangular to rounded; brown (10YR 4/3).

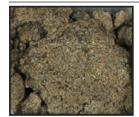


77–90: Sand (S); fine to medium sand with minor very fine sand; moderately sorted; subangular to subrounded; olive brown (2.5Y 4/3).

90-97: No sieve sample collected.



217–237: Gravelly sand (gS); very fine to very coarse sand, gravel <11 mm and minor silt; poorly sorted; subangular to rounded; brown (10YR 4/3).



97–117: Slightly gravelly silty sand ((g)mS); very fine to fine sand, silt, and minor gravel <11 mm; poorly sorted; subangular to rounded; olive brown (2.5Y 4/3).



237–257: Sand (S); fine to medium sand; well sorted; subangular to subrounded; olive brown (2.5Y 4/3).



117–137: Sand (S); fine to medium sand with minor very fine to very coarse sand and gravel <4 mm; poorly sorted; subangular to rounded; olive brown (2.5Y 4/3).



257–277: Slightly gravelly sand ((g)S); fine to medium sand with minor very fine to very coarse sand and gravel <12 mm; poorly sorted; subangular to rounded; olive brown (2.5Y 4/3).



137–157: Sand (S); fine to medium sand; well sorted; subangular to subrounded; dark grayish brown (2.5Y 4/2).

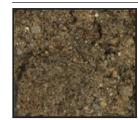


277–297: Slightly gravelly sand ((g)S); fine to medium sand with minor very fine to very coarse sand and gravel <14 mm; poorly sorted; subangular to rounded; brown (10YR 4/3).

Figure 18 K. 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.

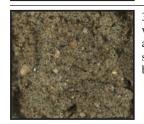


297–317: Sand (S); very fine to fine sand; well sorted; subangular to subrounded; light olive brown (2.5Y 5/3).

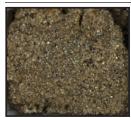


440–460: Sand (S); fine to medium sand with minor very fine to very coarse sand and trace gravel <6 mm; poorly sorted; subangular to rounded; dark yellowish brown (10YR 4/4).

Depth interval (feet) and description



317–337: Sand (S); fine to medium sand with minor very fine to very coarse sand and trace gravel <15 mm; poorly sorted; subangular to rounded; light olive brown (2.5Y 5/3).



460–480: Sand (S); fine to medium sand with minor very fine to very coarse sand and trace gravel <5 mm; poorly sorted; subangular to rounded; olive brown (2.5Y 4/3).



337–357: Sand (S); fine to coarse sand with minor very fine to very coarse sand; poorly sorted; subangular to subrounded; olive brown (2.5Y 4/3).

357-360: No sieve sample collected.



480–500: Sand (S); very fine to fine sand with minor medium to very coarse sand; moderately sorted; subangular to subrounded; olive brown (2.5Y 4/3).



360–380: Sand (S); fine to medium sand with minor very fine to very coarse sand and trace gravel <5 mm; poorly sorted; subangular to rounded; olive brown (2.5Y 4/3).



500–520: Sand (S); fine to medium sand with minor very fine to very coarse sand; moderately sorted; subangular to rounded; olive brown (2.5Y 4/3).



380–400: Sand (S); fine to medium with minor very fine to very coarse sand and trace gravel <6 mm; poorly sorted; subangular to rounded; dark yellowish brown (10YR 4/4).



520–540: Sand (S); fine to medium sand with minor coarse sand; well sorted; subangular to subrounded; olive brown (2.5Y 4/3).



400–420: Slightly gravelly sand ((g)S); fine to medium sand with minor very fine to very coarse sand and gravel <10 mm; poorly sorted; subangular to rounded; dark yellowish brown (10YR 4/4).



540–560: Sand (S); fine to medium sand with minor very fine sand; well sorted; subangular to subrounded; olive brown (2.5Y 4/3).



420–440: Sand (S); fine to medium sand with minor coarse to very coarse sand; moderately sorted; subangular to subrounded; dark yellowish brown (10YR 4/4).



560–580: Sand (S); fine to medium sand; well to very well sorted; subangular to subrounded; olive brown (2.5Y 4/3).

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580–600: Sand (S); fine to very fine sand; well sorted; subangular to subrounded; olive brown (2.5Y 4/3).



720–740: Sand (S); fine to medium sand with minor very fine to coarse sand and trace gravel <7 mm; moderately sorted; subangular to subrounded; light olive brown (2.5Y 5/3).

Depth interval (feet) and description



600–620: Sand (S); fine sand with minor very fine to very coarse sand and trace gravel <4 mm; moderately sorted; subangular to subrounded; olive brown (2.5Y 4/3).



740–760: Sand (S); fine to medium sand with minor very fine to very coarse sand; moderately sorted; subangular to subrounded; light olive brown (2.5Y 5/3).



620–640: Slightly gravelly sand ((g)S); fine to medium sand with minor very fine to very coarse sand and gravel <7 mm; poorly sorted; subangular to rounded; olive brown (2.5Y 4/3).



760–780: Sand (S); fine to medium sand with minor very fine to very coarse sand; moderately sorted; subangular to subrounded; light olive brown (2.5Y 5/3); *minor shell fragments*.



640–660: Sand (S); fine sand with minor very fine to very coarse sand with trace gravel <15 mm; moderately sorted; subangular to rounded; light olive brown (2.5Y 5/3).



780–800: Sand (S); fine to medium sand with minor very fine to very coarse sand; moderately sorted; subangular to subrounded; light olive brown (2.5Y 5/3); minor shell fragments.



660–680: Sand (S); fine to medium sand with minor very fine sand; well sorted; subangular to subrounded; light olive brown (2.5Y 5/3).



800–820: Sand (S); fine to medium sand with minor very fine to very coarse sand and trace gravel <12 mm; poorly sorted; subangular to rounded; light olive brown (2.5Y 5/3); *minor shell fragments*.



680–700: Sand (S); fine sand with minor very fine to coarse sand; well sorted; subangular to subrounded; olive brown (2.5Y 4/3).



820–840: Slightly gravelly sand ((g)S); fine to medium sand with minor very fine to very coarse sand and minor gravel <5 mm; poorly sorted; subangular to rounded gravel; light olive brown (2.5Y 5/3).



700–720: Sand (S); fine to medium sand with minor very fine to coarse sand; moderately sorted; subangular to subrounded; light olive brown (2.5Y 5/3).



840–860: Sand (S); fine to medium sand with minor very fine to very coarse sand and trace gravel <6 mm; poorly sorted; subangular to rounded; dark grayish brown (2.5Y 4/2).

Figure 18K. 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.—Continued.

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860–880: Sand (S); fine to medium sand; well sorted; subangular to subrounded; dark grayish brown (2.5Y 4/2); minor shell fragments.



1,029–1,049: Sand (S); very fine to fine sand with minor medium to very coarse sand; well sorted; subangular to subrounded; dark grayish brown (2.5Y 4/2).

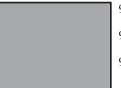
Depth interval (feet) and description



880–900: Sand (S); fine to medium sand; well sorted; subangular to subrounded; dark grayish brown (2.5Y 4/2); *minor shell fragments*.



1,049–1,069: Silty sand (zS); very fine sand with silt and minor fine to medium sand; well sorted; subangular to subrounded; dark grayish brown (2.5Y 4/2).



900–904: Core 1, no recovery.

904–944: Cores 2, 3, 4, 5, 6, 7, 8, and 9.

944-949: No sieve sample collected.



1,069–1,089: Sand (S); fine to medium sand with minor very fine to very coarse sand and clay; poorly sorted; subangular to subrounded; dark grayish brown (2.5Y 4/2); *trace shell fragments*.



949–969: Sand (S); fine to medium sand with minor coarse to very coarse sand and trace gravel <20 mm; moderately sorted; subangular to rounded; dark grayish brown (2.5Y 4/2); minor shell fragments.



1,089–1,109: Sand (S); fine to medium sand with minor coarse sand; well sorted; subangular to subrounded; dark grayish brown (2.5Y 4/2); *minor shell fragments*.



969–989: Sand (S); fine to medium sand; well sorted; subangular to subrounded; very dark gray (2.5Y 3/1); *minor shell fragments*.



1,109–1,129: Sand (S); fine to medium sand; well sorted; subangular to subrounded; dark grayish brown (2.5Y 4/2); *minor shell fragments*.



989–1,009: Clayey sand (cS); very fine to very coarse sand and clay and trace gravel <5 mm; poorly sorted; subangular to subrounded; very dark grayish brown (2.5Y 3/2).



1,129–1,149: Sand (S); fine to medium sand with minor coarse sand; well sorted; subangular to subrounded; dark grayish brown (2.5Y 4/2).



1,009–1,029: Silty sand (zS); very fine sand and silt with minor fine to very coarse sand and trace gravel <6 mm; poorly sorted; subangular to rounded; very dark grayish brown (2.5Y 3/2); trace shell fragments.



1,149–1,169: Sand (S); fine to medium sand with minor coarse sand; well sorted; subangular to subrounded; dark grayish brown (2.5Y 4/2).

Figure 18K. 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.—Continued.

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Depth interval (feet) and description 1,309–1,329: Sand (S); fine sand with

minor very fine to medium sand; well

gray (5Y 4/3).

sorted; subangular to subrounded; olive



1,169–1,189: Sand (S); fine to medium sand; well sorted; subangular to subrounded; dark grayish brown (2.5Y 4/2).

1,189-1,209: Sand (S); fine to medium

sorted; subangular to subrounded; dark

sand with minor coarse sand; well

grayish brown (2.5Y 4/2).



1,329–1,349: Sand (S); very fine to fine with minor medium sand and clay; moderately sorted; subangular to subrounded; olive gray (5Y 4/3).



1,209–1,229: Sand (S); fine to coarse sand with minor very fine to very coarse sand and trace gravel <4 mm; poorly sorted; subangular to rounded; dark grayish brown (2.5Y 4/2).



1,349–1,369: Sand (S); very fine to fine; well sorted; subangular to subrounded; olive gray (5Y 4/3).



1,229–1,249: Sand (S); fine sand with minor very coarse sand; well sorted; subangular to rounded; dark olive gray (5Y 3/2).



1,369–1,389: Sand (S); very fine sand with minor fine sand and silt; well sorted; subangular to subrounded; olive gray (5Y 4/3).



1,249–1,269: Sand (S); fine sand; very well sorted; subangular to subrounded; dark olive gray (5Y 3/2).



1,389–1,409: Silty sand (zS); very fine to fine sand with silt; well sorted; subangular to subrounded; dark olive gray (5Y 3/2).



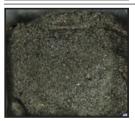
1,269–1,289: Sand (S); fine to very fine sand; well sorted; subangular to subrounded; olive gray (5Y 4/3).



1,409–1,429: Sand (S); very fine to fine sand; well sorted; subangular to subrounded; dark olive gray (5Y 3/2).



1,289–1,309: Sand (S); fine sand with minor very fine to medium sand; well sorted; subangular to subrounded; olive gray (5Y 4/3).



1,429–1,449: Sand (S); very fine to fine sand; well sorted; subangular to subrounded; olive gray (5Y 4/3).

Figure 18K. 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.—Continued.

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1,449–1,469: Sand (S); very fine to fine sand; well sorted; subangular to subrounded; olive gray (5Y 4/3).

1,469-1,474: Core 10.

1,474-1,479: Core 11, no recovery.

1,479-1,499: Cores 12, 13, 14, and 15.

1,499–1,502: No sieve sample collected.

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