Depth (feet) and description		Depth (feet) and description
10: Sand (S); coarse sand; very well sorted; subrounded; olive brown (2.5Y 4/3); <i>charred wood fragments</i> .		80: Sand (S); coarse to very coarse sand; well sorted; subrounded; dark yellowish brown (10YR 4/4).
20: Sand (S); coarse sand; very well sorted; subrounded; olive gray (5Y 5/3); <i>high mica content</i> .		90: Slightly sandy silty clay (M); clay and silt with very fine to coarse sand; well sorted; subrounded; olive gray (5Y 4/2).
30: Gravelly sand (gS); coarse to very coarse sand with granules; well sorted; subrounded; light yellowish brown (2.5Y 6/4); <i>trace shell fragments</i> .		100: Silty sand (zS); very fine to coarse sand with silt; poorly sorted; subround- ed; olive brown (2.5Y 4/3).
40: Gravelly sand (gS); coarse to very coarse sand with granules; well sorted; subrounded; light yellowish brown (2.5Y 6/4); <i>trace shell fragments; single</i> <i>charred wood fragment &lt;20 mm.</i>		110: Clayey sandy silt (sM); silt with very fine to coarse sand and clay; moderately sorted; subrounded; dark grayish brown (2.5Y 4/2).
50: Sand (S); medium to very coarse sand; well sorted; subrounded; light yellowish brown (2.5Y 6/4).	A.	120: Clayey sandy silt (sM); silt with very fine sand and clay; well sorted; subrounded; dark grayish brown (2.5Y 4/2).
60: Sand (S); medium to very coarse sand; well sorted; subrounded; light yellowish brown (2.5Y 6/4).		130: Clayey sandy silt (sM); silt with very fine sand to coarse sand and clay; poorly sorted; subrounded; dark olive gray (5Y 3/2).
70: Gravelly sand (gS); medium to very coarse sand with granules; moderately sorted; subrounded to rounded; olive brown (2.5Y 4/3); <i>trace organic matter</i> .		140: Silty sand (zS); very fine to coarse sand to silt; poorly sorted; subrounded; olive gray (5Y 4/2); <i>trace organic</i> <i>material</i> .

#### Depth (feet) and description Depth (feet) and description 150: Silty sand (zS); coarse to very 220: Gravelly sand (gS); coarse to very coarse sand with very fine sand to silt; coarse sand with granules; well sorted; poorly sorted; subrounded; dark olive subrounded to rounded; dark yellowish gray (5Y 3/2). brown (10YR 4/4). 160: Sand (S); coarse to very coarse 230: Silty sand (zS); coarse to medium sand; well sorted; subrounded; olive sand with very fine sand to silt; brown (2.5Y 4/3). moderately sorted; subrounded; dark yellowish brown (10YR 4/4). 170: Gravelly sand (gS); coarse to very 240: Sand (S); coarse to medium sand; coarse sand with granules; well sorted; very well sorted; subrounded; olive subrounded to rounded; olive brown brown (2.5Y 4/3). (2.5Y 4/3). 180: Gravelly silty sand (gmS); coarse 250: Sandy silt (sZ); silt and very fine to very coarse sand with very fine sand sand to medium sand; well sorted; subrounded; olive brown (2.5Y 4/3). to silt, granules to pebbles <12 mm; very poorly sorted; subrounded; olive brown (2.5Y 4/3). 190: Gravelly silty sand (gmS); very 260: Sand (S); coarse to very coarse fine sand to silt with medium to coarse sand; very well sorted; subrounded to sand and pebbles <8 mm; very poorly rounded; olive brown (2.5Y 4/3). sorted; subrounded; olive brown (2.5Y 4/3). 270: Sand (S); coarse to very coarse 200: Silty sand (zS); coarse to medium sand with very fine sand to silt; sand; very well sorted; subrounded to moderately sorted; subrounded; dark rounded; olive brown (2.5Y 4/3). yellowish brown (10YR 4/4). 210: Gravelly sand (gS); coarse to very 280: Silty gravelly sand (gmS); coarse coarse sand with granules; well sorted; to very coarse sand with granules with very fine sand to silt and minor pebbles

subrounded to rounded; dark yellowish brown (10YR 4/4).

**SDMC Shaker** 

Figure 17K. 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.

<8 mm; very poorly sorted; subrounded to rounded; dark yellowish brown

(10YR 4/4).

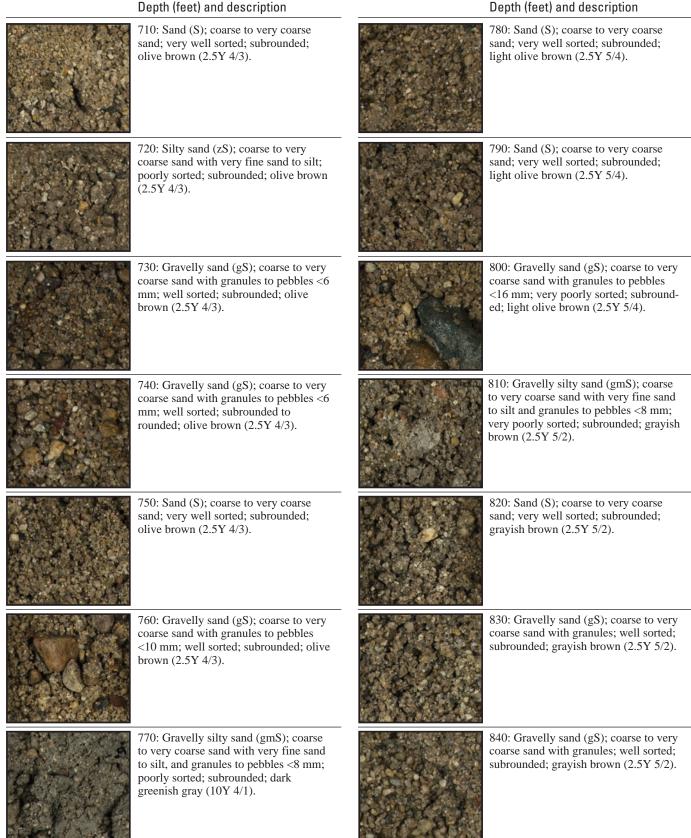
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#### Depth (feet) and description Depth (feet) and description 290: Gravelly silty sand (gmS); coarse 360: Gravelly sand (gS); coarse to very to very coarse sand with very fine sand coarse sand with granules; well sorted; to silt, granules to pebbles <8 mm; very subrounded to rounded; olive brown poorly sorted; subrounded to rounded; (2.5Y 4/3). dark yellowish brown (10YR 4/4). 300: Silty sand (zS); very fine sand to 370: Gravelly sand (gS); coarse to very silt with medium to very coarse sand; coarse sand with granules; well sorted; subrounded to rounded; dark yellowish poorly sorted; subrounded; olive brown (2.5Y 4/3). brown (10YR 4/4). 310: Sand (S); coarse to very coarse 380: Gravelly sand (gS); coarse to very sand; well sorted; subrounded; olive coarse sand with granules to pebbles <8 brown (2.5Y 4/3). mm; moderately sorted; subrounded to rounded; dark yellowish brown (10YR 4/4). 320: Gravelly sand (gS); coarse to very 390: Gravelly sand (gS); coarse to very coarse sand with granules; well sorted; coarse sand with granules; well sorted; subrounded to rounded; dark yellowish subrounded; olive brown (2.5Y 4/3). brown (10YR 4/4). 330: Silty gravelly sand (gmS); coarse 400: Sand (S); coarse to very coarse to very coarse sand with granules to sand; very well sorted; subrounded to pebbles <10 mm and very fine sand to rounded; dark yellowish brown (10YR silt; very poorly sorted; subrounded; 4/4). olive brown (2.5Y 4/3). 340: Slightly gravelly sandy silt 410: Sand (S); coarse to very coarse ((g)sM); silt with very fine to coarse sand; very well sorted; subrounded to sand and pebbles <10 mm; very poorly rounded; dark yellowish brown (10YR sorted; subrounded; olive (5Y 4/3). 4/4). 350: Slightly gravelly silty sand 420: Gravelly sand (gS); coarse to very ((g)mS); very fine to coarse sand with coarse sand with granules; well sorted; subrounded to rounded; dark yellowish silt and pebbles <8 mm; very poorly sorted; subrounded; olive (5Y 4/3). brown (10YR 4/4).

 Depth (feet) and description	 Depth (feet) and description
430: Gravelly sand (gS); coarse to very coarse sand with granules; well sorted; subrounded to rounded; dark yellowish brown (10YR 4/4).	500: Sand (S); coarse to very coarse sand; very well sorted; subrounded; light olive brown (2.5Y 5/3).
440: Gravelly sand (gS); coarse to very coarse sand with granules; well sorted; subrounded to rounded; dark yellowish brown (10YR 4/4).	510: Sand (S); coarse to very coarse sand; very well sorted; subrounded; light olive brown (2.5Y 5/3).
450: Gravelly sand (gS); coarse to very coarse sand with granules; well sorted; subrounded to rounded; brown (10YR 4/3).	520: Sand (S); coarse to very coarse sand; very well sorted; subrounded; light olive brown (2.5Y 5/3).
460: Gravelly sand (gS); coarse to very coarse sand with granules to pebbles <6 mm; moderately sorted; subrounded to rounded; brown (10YR 4/3).	530: Sand (S); coarse to very coarse sand with minor fine sand to silt; poorly sorted; subrounded; light olive brown (2.5Y 5/3).
470: Sand (S); coarse to very coarse sand; very well sorted; subrounded; brown (10YR 4/3).	540: Sand (S); coarse to very coarse sand; very well sorted; subrounded; light olive brown (2.5Y 5/3).
480: Silty sand (zS); very fine to coarse sand to silt; poorly sorted; subrounded; brown (10YR 4/3).	550: Sand (S); coarse to very coarse sand; very well sorted; subrounded; light olive brown (2.5Y 5/3).
490: Silty sand (zS); very fine to coarse sand with silt; poorly sorted; subround- ed; olive brown (2.5Y 4/3).	560: Slightly gravelly sand ((g)S); coarse to very coarse sand with granules; well sorted; subrounded; yellowish brown (10YR 5/6).

## Depth (feet) and description Depth (feet) and description 570: Silty sand (zS); coarse to very 640: Gravelly sand (gS); coarse to very coarse sand with granules; well sorted; coarse sand with very fine sand to silt; poorly sorted; subrounded; brown subrounded; olive brown (2.5Y 4/3). (10YR 4/3). 580: Silty sand (zS); coarse to very 650: Gravelly sand (gS); coarse to very coarse sand with very fine sand to silt; coarse sand with granules; well sorted; subrounded; olive brown (2.5Y 4/3). poorly sorted; subrounded; brown (10YR 4/3). 590: Silty sand (zS); very fine sand to 660: Gravelly sand (gS); coarse to very silt with coarse to very coarse sand; coarse sand with granules; well sorted; poorly sorted; subrounded; olive brown subrounded; olive brown (2.5Y 4/3). (2.5¥ 4/3). 600: Silty sand (zS); very fine sand to 670: Gravelly sand (gS); coarse to very coarse sand with granules; well sorted; silt with coarse to very coarse sand; subrounded; olive brown (2.5Y 4/3). poorly sorted; subrounded; olive brown (2.5Y 4/3). 680: Gravelly sand (gS); coarse to very 610: Sand (S); coarse to very coarse sand; very well sorted; subrounded; coarse sand with granules; well sorted; olive brown (2.5Y 4/3). subrounded; olive brown (2.5Y 4/3). 690: Gravelly sand (gS); coarse to very 620: Slightly gravelly sand ((g)S); coarse to very coarse sand with trace coarse sand with granules; well sorted; subrounded; olive brown (2.5Y 4/3). granules; very well sorted; subrounded; olive brown (2.5Y 4/3); shell fragments. 630: Sand (S); coarse to very coarse 700: Gravelly sand (gS); coarse to very sand; very well sorted; subrounded; coarse sand with granules; well sorted; olive brown (2.5Y 4/3). subrounded; olive brown (2.5Y 4/3).

## Depth (feet) and description



Depth (feet) and description	Depth (feet) and description
850: Sand (S); coarse to very coarse sand; very well sorted; subrounded; grayish brown (2.5Y 5/2); <i>trace shell</i> <i>fragments</i> .	919: Silty sand (zS); very fine sand with silt; very well sorted; subrounded; dark greenish gray (10Y 4/1); <i>shell</i> <i>fragments; cores 3 and 4.</i>
860: Sand (S); coarse to very coarse sand; very well sorted; subrounded; grayish brown (2.5Y 5/2); <i>minor shell</i> <i>fragments</i> .	929: Silty sand (zS); very fine sand with silt and medium to coarse sand; well sorted; subrounded; dark greenish gray (10Y 4/1) <i>shell fragments; cores 5 and</i> 6.
870: Sand (S); coarse to very coarse sand; very well sorted; subrounded; grayish brown (2.5Y 5/2); <i>minor shell</i> <i>fragments</i> .	939: Silty sand (zS); very fine sand to silt; very well sorted; subrounded; dark greenish gray (10Y 4/1); <i>shell fragments; cores 7 and 8.</i>
880: No shaker sample collected.	950: Silty sand (zS); very fine sand to silt with medium to coarse sand; poorly sorted; subrounded; dark grayish brown (2.5Y 4/2); <i>shell fragments and minor</i> <i>organic matter; core 9.</i>
890: Silty sand (zS); coarse to very coarse sand with silt; moderately sorted; subrounded; light olive brown (2.5Y 5/2); <i>caliche</i> .	960: Silty sand (zS); very fine sand to silt with medium to coarse sand; poorly sorted; subrounded; very dark grayish brown (2.5Y 3/2); <i>shell fragments</i> .
900: Sand (S); coarse sand; very well sorted; subrounded; grayish brown (2.5Y 5/2); <i>shell fragments</i> .	970: Sandy silt (sZ); silt with very fine to coarse sand; well sorted; subrounded; dark olive gray (5Y 3/2); <i>shell</i> <i>fragments</i> .
904: Core 1, no recovery. 909: Silty sand (zS); very fine sand to silt; very well sorted; subrounded; dark greenish gray (10Y 4/1); core 2.	980: Sandy silt (sZ); silt with very fine to coarse sand; well sorted; subrounded; very dark grayish brown (2.5Y 3/2).

## Depth (feet) and description Depth (feet) and description 990: Silty sand (zS); very fine sand to 1,060: Silty sand (zS); fine sand to silt; silt with coarse to very coarse sand; very well sorted; subrounded; olive (5Y poorly sorted; subrounded; dark olive 4/3). gray (5Y 3/2). 1,000: Silty sand (zS); very fine sand to 1,070: Silty sand (zS); medium to silt; very well sorted; subrounded; dark coarse sand with very fine sand to silt; olive gray (5Y 3/2); trace shell moderately sorted; subrounded; olive fragments. brown (2.5Y 4/3). 1,010: Silty sand (zS); very fine sand to 1,080: Sand (S); coarse to very coarse silt with coarse to very coarse sand; sand with trace very fine sand to silt; moderately sorted; subrounded; dark well sorted; subrounded; dark grayish olive gray (5Y 3/2). brown (2.5Y 4/2). 1,020: Silty sand (zS); coarse to very 1,090: Sand (S); coarse to very coarse sand; very well sorted; subrounded; coarse sand with very fine sand to silt; olive brown (2.5Y 4/3). poorly sorted; subrounded; dark olive gray (5Y 3/2); minor shell fragments. 1,030: Silty sand (zS); coarse to very 1,100: Sand (S); coarse to very coarse coarse sand with very fine sand to silt; sand; very well sorted; subrounded; poorly sorted; subrounded; dark olive olive brown (2.5Y 4/3). gray (5Y 3/2); minor shell fragments. 1,040: Sand (S); coarse to very coarse 1,110: Sand (S); coarse to very coarse sand with trace very fine sand to silt; sand; very well sorted; subrounded; dark grayish brown (2.5Y 4/2). well sorted; subrounded; dark grayish brown (2.5Y 4/2). 1,050: Silty sand (zS); coarse to very 1,120: Sand (S); coarse to very coarse coarse sand with fine sand to silt; sand; very well sorted; subrounded; moderately sorted; subrounded; olive dark grayish brown (2.5Y 4/2). gray (5Y 4/2).

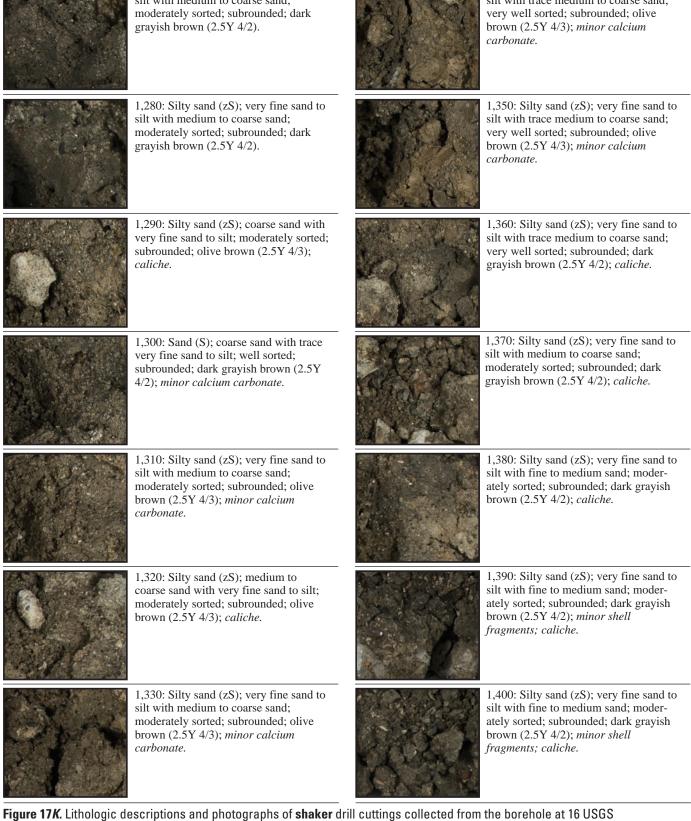
Depth (feet) and description	Depth (feet) and description
1,130: Sand (S); coarse to very coarse sand; very well sorted; subrounded; olive brown (2.5Y 4/3).	1,200: Sand (S); coarse to very coarse sand; very well sorted; subrounded; olive brown (2.5Y 4/3); <i>minor shell</i> <i>fragments</i> .
1,140: Sand (S); coarse to very coarse sand; very well sorted; subrounded; olive brown (2.5Y 4/3).	1,210: Sand (S); coarse to very coarse sand; very well sorted; subrounded; dark grayish brown (2.5Y 4/2); <i>minor</i> <i>shell fragments</i> .
1,150: Sand (S); coarse sand; very well sorted; subrounded; olive brown (2.5Y 4/3).	1,220: Silty sand (zS); coarse to very coarse sand with very fine sand to silt; poorly sorted; subrounded; dark grayish brown (2.5Y 4/2).
1,160: Sand (S); coarse sand; very well sorted; subrounded; olive brown (2.5Y 4/3).	1,230: Silty sand (zS); very coarse to coarse sand with very fine sand to silt; poorly sorted; subrounded; dark grayish brown (2.5Y 4/2).
1,170: Sand (S); coarse to very coarse sand; very well sorted; subrounded; dark grayish brown (2.5Y 4/2).	1,240: Silty sand (zS); very fine sand to silt with coarse to very coarse sand; poorly sorted; subrounded; dark grayish brown (2.5Y 4/2).
1,180: Sand (S); coarse sand; very well sorted; subrounded; dark grayish brown (2.5Y 4/2).	1,250: Silty sand (zS); very fine sand and silt with coarse to very coarse sand; poorly sorted; subrounded; olive brown (2.5Y 4/3).
1,190: Sand (S); coarse sand; very well sorted; subrounded; olive brown (2.5Y 4/3).	1,260: Silty sand (zS); very fine sand to silt with medium to coarse sand; moderately sorted; subrounded; dark grayish brown (2.5Y 4/2); <i>shell</i> <i>fragments</i> .

Figure 17K. 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. IP011386\_fig17K **SDMC Shaker** 

# 1,270: Silty sand (zS); very fine sand to 1,340: Silty sand (zS); very fine sand to silt with medium to coarse sand: silt with trace medium to coarse sand: moderately sorted; subrounded; dark grayish brown (2.5Y 4/2). carbonate. 1,280: Silty sand (zS); very fine sand to silt with medium to coarse sand; moderately sorted; subrounded; dark grayish brown (2.5Y 4/2). carbonate. 1,290: Silty sand (zS); coarse sand with very fine sand to silt; moderately sorted;

Depth (feet) and description

#### Depth (feet) and description



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. IP011386\_fig17K **SDMC Shaker** 

## Depth (feet) and description

Depth (feet) and description	Depth (feet) and description
1,410: Silty sand (zS); very fine sand to silt with fine to medium sand; moderately sorted; subrounded; dark grayish brown (2.5Y 4/2); <i>minor calcium carbonate</i> .	1,479: Sandstone to siltstone; indurated; very fine sand to silt; very well sorted; dark olive gray (5Y 3/2); <i>core 11, minimal recovery.</i>
1,420: Silty sand (zS); very fine sand to silt with trace fine to medium sand; well sorted; subrounded; dark olive gray (5Y 3/2); <i>minor calcium carbonate</i> .	1,484: Sandstone to siltstone; weakly indurated; very fine sand to silt; very well sorted; subrounded; dark greenish gray (10Y 3/1); <i>core 12</i> .
1,430: Silty sand (zS); very fine sand to silt with medium to coarse sand; moderately sorted; subrounded; dark olive gray (5Y 3/2); <i>shell fragments</i> .	1,489: Sandstone to siltstone; weakly indurated; very fine sand; very well sorted subrounded; dark greenish gray (10Y 3/1); <i>core 13</i> .
1,440: Silty sand (zS); very fine sand to silt with medium to coarse sand; moderately sorted; subrounded; dark grayish brown (2.5Y 4/2); <i>minor</i> <i>calcium carbonate.</i>	1,494: Sandstone; weakly indurated; very fine sand; very well sorted; subangular; dark greenish gray (10Y 4/1); <i>core 14</i> .
1,450: Silty sand (zS); very fine sand to silt with trace fine to medium sand; well sorted; subrounded; olive gray (5Y 4/2).	1,499: Sandstone to siltstone; weakly indurated; very fine sand to silt; very well sorted; dark greenish gray (10Y 3/1); core 15.1,502: No shaker sample collected.
1,460: Silty sand (zS); very fine sand to silt with medium to coarse sand; moderately sorted; subrounded; olive (5Y 4/3).	



1,474: Sandstone to siltstone; indurated; very fine sand to silt; very well sorted; dark olive gray (5Y 3/2); core 10.