

Silver Lake playa near Baker, CA

Core ID: SLPC11-1

Acquired June 2011 by M.E. Kirby and W.T. Anderson

Coordinates: N 35° 22.014, W 116° 08.100

See figures in QR (Kirby et al., 2015) paper for textural grain size changes.

Drive 1: unopened

Drive 2: 61 – 94 cm below playa surface (bps)

*61 – 93 cm: brown sediment, highly fractured, no obvious structure.

*93 – 94 cm: fell out during core extraction.

Drive 3: 96 – 129 cm bps

*brown sediment, highly indurated, less fracturing than Drive 2, no obvious structures.

-99 – 100 cm, 114 – 115 cm, 120 – 121 cm: white specks (<2mm), CaCO₃?

Drive 4: 129 – 162 cm bps

*brown sediment, some fracturing, indurated, white specks (CaCO₃?) throughout.

Drive 5: 162 – 195 cm

*162 – 167 cm: not sampled, reworked.

*167 – 182.5 cm: dark brown, white specks throughout (CaCO₃?), no obvious structures.

*182.5 – 191 cm: brown sediment.

191 – 195 cm: dark brown sediment, some white specks (CaCO₃?), no obvious structures.

Drive 6: 195 – 228 cm

*195 – 201 cm: not recovered.

*201 – 206 cm: not sampled, reworked.

*206 – 228 cm: dark brown sediment, very indurated, no obvious structures.

Drive 7: 228 – 261 cm

*228 – 229 cm: not recovered.

*229 – 233 cm : not sampled, reworked.

*233 – 261 cm: dark brown sediment.

-255 – 261 cm: white specks (CaCO₃?).

-235 – 251 cm: vertical mudcrack

Drive 8: 261 – 294 cm.

*261 – 264 cm: not sampled, reworked.

*264 – 294 cm: brown sediment.

-268-271 cm, mudcracks?

-271 – 275 cm, white specks (CaCO₃?).

-280 – 288 cm, mudcracks?

-280 – 281 cm: white specks (CaCO₃?).

Drive 9: 294 – 327 cm.

*294 – 327 cm: brown sediment.

-305 – 313 cm: mudcracks.

-314 – 315 cm: white specks (CaCO₃?).

-324 – 326 cm: white specks (CaCO₃?).

Drive 10: 327 – 360 cm.

*327 – 330.5 cm: not sampled, reworked.

*330.5 – 360 cm: brown sediment with coarser sediment “pockets” throughout, occasional white specks (CaCO₃?) present.

Drive 11: 360 – 393 cm.

*360 – 364 cm: not sampled, reworked.

*364 – 393 cm: brown sediment with occasional small white flecks (CaCO₃?).

-380 – 384.5 cm: slight increase in coarser sediment.

Drive 12: 393 – 426 cm.

*393 – 396 cm: not sampled, reworked.

*396 – 426 cm: brown sediment

-396 – 408 cm: occasional small white flecks (CaCO₃?).

-396 – 402 cm: some dark brown mottling.

-396 – 414 cm: occasional mud crack 3 – 4 cm in length.

Drive 13: 426 – 459 cm.

*426 – 429 cm: not sampled, reworked.

*429 – 432 cm: dark brown sediment

*432 – 459 cm: reddish-brown sediment.

-432 – 436 cm: < 2 cm thick, < 3 cm long mudcracks.

Drive 14: 459 – 492 cm.

*462 – 483 cm: not sampled, reworked.

*462 – 480 cm: reddish-brown sediment with *very faint* cm scale laminations.

-472 – 480 cm: occasional small white flecks (CaCO₃?).

*485 – 492 cm: same as 462 – 483 but without white flecks.

Drive 15: 492 – 525 cm.

*492 – 497 cm: not sampled, reworked.

*497 – 515 cm: reddish-brown sediment with abundant small (~4 mm) vertical brown smears.

-502 – 505 cm: occasional small white flecks (CaCO₃?).

*515 – 525 cm: transition from reddish-brown sediment with abundant small (~4 mm) vertical brown smears to top of Drive 16.

Drive 16: 525 – 558 cm.

*525 – 529 cm: not sampled, reworked.

*529 – 547 cm: light olive sediment with < 1 mm small vertical brown smears and mottling throughout.

-529 – 532 cm: some reddish-brown inclusions from the transitional bottom of Drive 15.

*547 cm: sharp change with large mudcrack from 547 – 558 cm.

*547 – 558 cm: olive grey sediment with a few small white flecks (CaCO₃?).

Drive 17: 558 – 591 cm.

*558 – 561 cm: not sampled, reworked.

*561 – 577 cm: olive grey sediment with < 1 mm small vertical brown smears.

-574 cm: small white flecks (CaCO₃?).

*577- 582 cm: light olive sediment with small mudcracks (?).

*582 – 591 cm: olive grey sediment.

-possible mudcrack from 582 – 586 cm.

Drive 18: 591 – 624 cm.

*591 – 593 cm: not sampled, reworked.

*593 – 610 cm: olive grey sediment with slight mottling.

*610 – 613 cm: transition with slight mudcracks (?).

*613 – 624 cm: light olive sediment with occasional black smears.

-613 – 622 cm: 2 mm wide reddish-brown vertical features.

Drive 19: 624 – 657 cm.

*624 – 625 cm: not sampled, reworked.

*625 – 657 cm: light olive sediment.

-625 – 641 cm: faint reddish vertical streaks (small root casts or mudcracks?).

Drive 20: 657 – 690 cm:

*657 – 661 cm: not sampled, reworked.

*661 – 690 cm: light olive grey sediment.

-661 – 664 cm: light brown mudcracks.

-664 – 665 cm: small white flecks (CaCO₃?).

-increasing black smears below 676 cm

-666 – 675 cm: brown mudcrack along core edge.

Drive 21: 690 – 723 cm.

*690 – 723 cm: light olive grey sediment with small brown black smeared blebs throughout.

-692 – 723 cm: reddish-brown mudcrack(?) along edge.

Drive 22: 723 – 756 cm.

*723 – 756 cm: light olive grey sediment with brown-black smeared blebs throughout.

-some *very faint* laminations throughout.

Drive 23: 756 – 784 cm.

*784 – 789 cm: fell out upon recovery.

*756 – 784 cm: light olive grey sediment with various brown and black sub-cm scale smeared blebs throughout.

-763 – 769 cm: root cast or mudcrack?

-770 – 773 cm: faint laminae.

Drive 24: 789 – 822 cm.

789 – 801 cm: light olive grey sediment.

-789 – 793 cm: small vertical mudcracks (< 0.5 cm).

-792 – 794 cm: faint laminae.

-797 – 801 cm: various blackish blebs.

*801 cm: sharp change.

*801 – 809 cm: light brown-grey-green sediment with gradual lower boundary and various blackish smeared blebs.

-801 – 802 cm: slightly coarser layer.

*809 – 822 cm: light olive grey sediment.

-811 – 812 cm: white vertical mineral streak (CaCO₃?).

-increasing blackish smeared blebs near the bottom.