



Plate 1: Stratigraphic columns for 24 deep wells at the Soda Lake geothermal field, and one southern Carson Sink basin well

Lost Circulation Zones (right column):

- minor losses
- significant losses
- total lost circulation (TLC)

Exit zones (left of column):

- Production well feed zone
- Slotted or perforated
- Injection well feed zone
- Slotted or perforated

Lithology (left column)

- clay
- sand
- conglomerate
- limestone
- stratiform felsic rocks, undivided
- upper epiclastic layer
- lithic crystal lapilli ash tuff
- 5.1 Ma trachyandesite
- Miocene basaltic andesite lavas, flow breccia, & tuff
- mafic/intermediate lavas, undivided
- 5.5 Ma pyroxene gabbro
- dacite, possible dike?
- Miocene laminated siltstone & sandstone
- Miocene basaltic andesite intrusive, plaghyric flow or sill
- stratiform felsic rocks, undivided
- clay
- sand
- K? 'salt & pepper' sandstone, immature, granite-derived
- Jr/K granite/granodiorite
- Tr/Jr phyllite, quartzose metasandstone

Stratigraphic Units:

- Qal and QTlac sediments categorized with horizontal bar charts that denote percentage of each component
- Toil unit
- Tseds unit
- Tlat unit
- Tta unit
- Tmb units
- Mz basement

Plate 1 is a record of wells logged by H. Mclachlan for this study, except for 84-33 above 1097 m depth. The upper half of the strip log for 84-33 was adapted from an in-house report by Benoit (1980). A log of the upper 305 m of well 77-29 is on file at the NBMG. The log data presented in Plate 1 represents the bulk of the lithologic dataset. Lithologic logs compiled by prior workers for well 63-33 and portions of wells 62-33, 77-29, and the Hoeng well were incorporated into the 3D model of the Soda Lake Geothermal Field. All depths are measured well depths (MWD) in meters. Wells 11A-33RD, 22-33RD, 25A-33ST, 41B-33, 45A-33, and 64-33RD are deviated, and MWD diverges from true vertical depth near the bottom of these wells. MWD = true vertical depth for all other wells.

3D Modeling Horizons