

Some Sand Canal Field Notes

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Sand Canal appears to be one of the shorter bajada hanging canals, whose field verified portion presently ranges from **N 32.83093 W 109.92610** to **N 32.83517 W 109.92272**, a distance just over one kilometer...



The canal is quite easy to visit, both on foot and with 4WD access off the Nuttall Canyon Road. It appears nearly pristine, except for two rather enigmatic terra-cotta pipes. It seems complete over this range. There is fairly minor interaction with a 4WD track over the northern portion.

This is an interesting "sampler" canal in that it has deep cuts, hanging portions, "water flows uphill" illusions, and older mid channel trees and cacti.

Ownership is state land to the south and BLM land to the north, vanishing under developed private land further north. The destination remains unknown. All construction is low energy with zero evidence of historic rework except for the two noted pipes.

The canal begins in a wide, sandy, and usually dry wash, works its way "up" the edge of a flat mesa, and then continues a distance along the mesa top. Elevations vary from 3300 down to 3270 feet.

The immediate source would appear to be presently dry Sand Wash and its rather limited watershed. This suggests the possibilities of a much wetter climate during canal use times, or a highly sophisticated but still unproven diversion of Nuttall Canyon water into a tributary of Sand Wash at **N 32.77643 W 109.95570**. There is a modern **CNF** diversion into a tank at this point. One such watershed diversion is proven from Ash Creek to Mud Springs at **N 32.79151 W 109.85378** and a second watershed diversion might appear likely at **N 32.74526 W 109.83916**.

The northern half of the canal is quite small. Small enough that significant water delivery would appear difficult. While no survey artifacts have yet been discovered, a possible alternate would be the use of pilot channels as water levels. It would seem possible that the northern portion of this canal had yet to be developed into its full size potential.

Some observed features of the sand canal include...

- N 32.83082 W 109.92616** Southern observed limit of canal in Sand Wash.
- N 32.83082 W 109.92616** Terra-Cota modern pipe, possibly placed for flood control, otherwise use unknown.
- N 32.83097 W 109.92608** Terra-Cota modern pipe, possibly placed for flood control, otherwise use unknown.
- N 32.83123 W 109.92561** Significant hanging portion where canal works its way "up" to the mesa edge.
- N 32.83132 W 109.92509** Very large Mesquite tree midchannel.
- N 32.83145 W 109.92476** Fairly large cut where canal crosses mesa edge.
- N 32.83186 W 109.92415** EW fence between State and BLM lands.
- N 32.83186 W 109.92415** Unusual bend and curves in canal routing.
- N 32.83356 W 109.92379** Canal size becomes quite small.
- N 32.83356 W 109.92379** Large barrel cactus mid channel.
- N 32.83460 W 109.92304** Encroachment by modern 4WD track.
- N 32.83521 W 109.92271** North study area ends at private residence.

Further Sand Canal work might include...

- 1** — Verifying the Nuttal Canyon weathershed crossing diversion.
- 2** — Establishing whether the smaller routing reach is in fact a pilot.
- 3** — Using the canal for tours due to completeness and easy access.
- 4** — Droning, videotaping, and more photos of the known explored portion.
- 5** — Interviewing private land owners and local historians.
- 6** — Establishing and exploring one or more end use destinations.
- 7** — Resolving climate issues over a presently dry delivery wash.
- 8** — Explaining the Terra-Cota pipe enigmas.



SAND7 – Someone has placed a pair of Terra-Cota pipes near the known start of the Sand Canal, perhaps in an attempt at preventing flood damage. Otherwise, the canal is largely pristine and appears totally free from historic redevelopment. The view is to the east at **N 32.83093 W 109.92610**



SAND4 – Hanging portion of Sand Canal rises a meter or two above the local topography and is typically under a meter wide. There is a strong illusion of "water flows uphill" here. View is to the East at **N 32.83137 W 109.92474**.



SAND5 – Another image of the hanging portion of the Sand Canal showing a typical cross section. View is to the east at **N 32.83149 W 109.92465**



SAND_TREE – One of the largest mid channel Mesquite trees in the entire bajada canal system. Besides the age of the tree itself, a very long germination time was also likely involved. Both of which strongly suggest prehistoric canal origins. View is to the North at **N 32.83137 W 109.92480**.



SAND6 – A rather deep cut seemed to be required when the canal breached the mesa edge. While uncommon, some of the other bajada canal cuts are rather spectacularly large. The view is to the east at **N 32.83154 W 109.92477**



SAND1 – The size and scope of the Sand Canal seems to diminish dramatically at the EW fence line separating the southward AZ state land from northward BLM land. This suggests a possible incomplete pilot used as a water level. The view is to the North at **N 32.83186 W 109.92435**.



SAND8 – Mesa top Sand Canal near the fence looking to the south. When traversing flat terrain, low energy constructs independent of hanging or deep cuts can be used. The view is near **N 32.83217 W 109.92418**.



SAND9 – There is some damage to the canal here where it interacts with a 4WD track. The canal has not yet been explored further north where it enters private developed land near **N 32.83517 W 109.92272**.