

Prehistoric Hanging Canals of the Safford Basin

By Don Lancaster
and Synergetics

<http://www.tinaja.com>

The Gila Valley has a rich prehistory...

Especially during the Late Classic period around 1350 CE.

- Studied by Neely and others.
 - Population likely as high as today.
 - Some ties to Hohokam, Mimbres, Salado, Sinagua and Anasazi cultures.
 - Gila River lowland canals as extensive as today and the basis for modern irrigation.
 - Thousands of world class agriculture grids, possibly used for Agave crops...
-



Lesser known are the "hanging" canals...

- Literally "hung" on steep sided mesa edges.
 - As high as 90 feet above base terrain!
 - Twelve or more total at least 30 miles!
 - Create the illusion of "water flowing uphill".
 - May include above ground aquaducts, route switching, and flood breakaways.
 - Used mostly for long range water delivery.
 - Nearly totally exploit Mt Graham streams.
 - Typically a yard wide by a foot deep.
-



Three terms you need to know...

BAJADA —

A coalescing alluvial fan.

QUATERNARY —

The latest geological period.

MESA —

A remnant Quaternary bajada.

Some properties of local southern mesas...

- Typically narrow and long.
 - Steep sided.
 - Gently sloped.
 - Limited rainfall.
 - Largely infertile.
 - Pretty much water impermeable.
 - Not too useful to pioneers or present.
 - Easily conveys water long distances.
-

The hanging canals might be named...

- Ledford
 - Marijilda
 - Rincon
 - Deadman
 - Robinson
 - Allen
 - Jernigan
 - Mud Springs
 - Lefthand
-

Ledford Hanging Canal...

- Southernmost of the known hanging canals.
 - Sources near Jacobson Canyon dam.
 - Rather difficult to access and explore.
 - Switches between several drainages.
 - Sees current use for cattle tanks.
 - About three miles total extent.
 - Associated with prehistoric fields.
 - Parasitic vegetation makes reach obvious when viewed from highway US 191.
-

Marijilda Hanging Canal...

- Earliest to be studied and researched.
 - Runs from Marijilda Creek to fields found in the Lebanon area.
 - Initial reach rebuilt by historic pioneers and sees active irrigation use to this day.
 - Easiest access of the known hanging canals. but western 4WD track is extremely rough.
 - Includes impressive above ground aquaduct.
 - Hangs on the western mesa face.
 - Apparent switching to several destinations.
 - Elaborate French Drains going off mesa.
-



Rincon Hanging Canal...

- Related to the Marijilda hanging canal.
 - Makes a distinct "U" turn and actually heads back UP canyon.
 - Portions are single walled and quite wide.
 - Directly associated with grids, mulch rings, fields, and field houses.
 - A section has been run over by the Safford water tank project.
 - Eventually drops off mesa to serve more northern fields.
 - Contours obvious on satellite images...
-





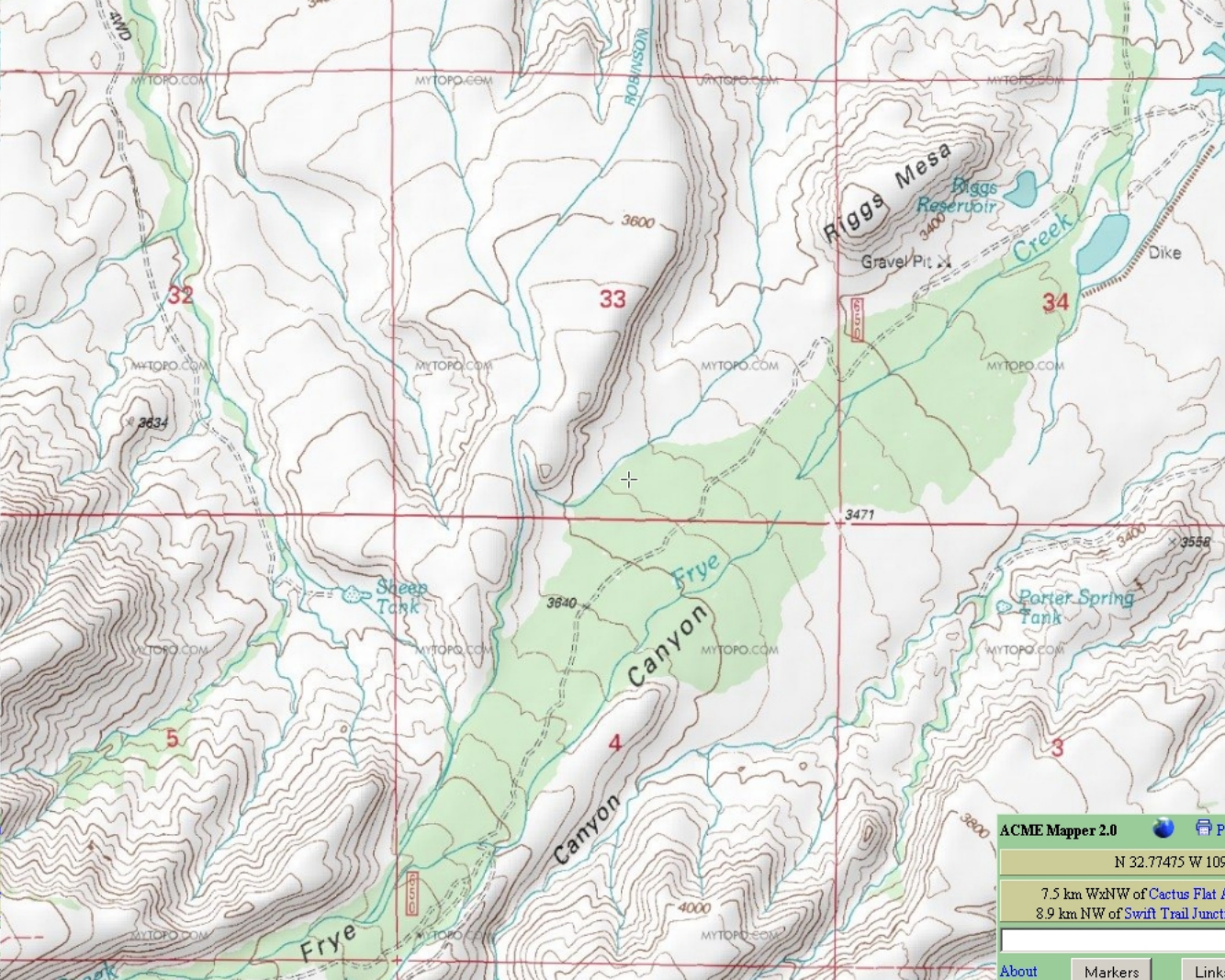
Deadman Hanging Canal...

- Sources from Deadman creek and delivers to Porter Springs and Deadman tanks.
 - Initial hanging portion believed overlain by historic and modern pipeline.
 - Prehistoric portion flows to this day.
 - Consistently routes along HIGHEST portion of Deadman Mesa.
 - Possible elaborate three way switching at the narrowest point of mesa.
 - Could approach five miles in length if the presumed extensions are verified.
-



Robinson Hanging Canal...

- Rebuilt by historic pioneer to serve cattle tanks in the Daley Estates area.
 - Three-way switching in Frey creek selects original route, Sheep Tank, or mesa top.
 - Short section spectacularly failed by falling off the mesa edge.
 - Prehistoric fields overlain by sheet flooding.
 - Very strong "water flows uphill" illusion.
 - Mesa top used for water transport only.
 - Accessible only by ill defined cattle trail.
-



ACME Mapper 2.0



N 32.77475 W 109.5

7.5 km WxNW of Cactus Flat

8.9 km NW of Swift Trail Junction

About

Markers

Link







Allen Hanging Canal...

- Nearly SEVEN MILES long!
 - Source believed Spring Canyon. May go as far as Central bottomlands.
 - Apparently overlain by CCC Hawk Hollow tank, Allen Dam, and West Layton Road.
 - Two distinct architectural styles.
 - Deepest long known cut of seven feet.
 - Portions obscured by sheet flooding.
 - Comes within 800 feet of Jernigan Canal, but relationship remains uncertain.
 - Many questions remain unanswered.
-





Jernigan Hanging Canal...

- Part of a well studied and reported site.
 - "U" shaped canal a quarter mile in length.
 - A "local" that routed water between fields.
 - Maximum hanging height "only" twenty feet.
 - One fairly impressive cut of three foot depth.
 - Well defined exit French Drain area.
 - Original water source not yet clear. Possibly obscured by sheet flooding.
-



Mud Springs Hanging Canal...

- Routes Ash Creek over Mud Springs Bajada.
 - Entire 6 mile route linear and viewable.
 - Possibly the earliest hanging canal.
 - A credible source for Jernigan water.
 - Route vetted with PVC pipe by rancher.
 - Mid-canal cleanout and flood spur.
 - Key portions still missing or unexplored.
-





Lefthand Hanging Canal...

- Extensively studied and reported by [Neely](#).
 - Directly associated with plant nursery areas.
 - Elaborate switching and control structures.
 - Short "local" and direct agricultural uses.
 - No "hanging" evidence but similarities to the other area prehistoric canals are remarkable.
 - Small gates divert controlled water amounts.
 - Both earthen and rock bordered examples present. Possible instances of clay lining.
-

Other possibilities yet unexplored...

- Veech Canyon in the "P" Ranch area. A few rumors of historic and prehistoric canals.
 - Ash Creek. Some prehistory may lie beneath the Cluff Ranch Wildlife area.
 - Shingle Mill Canyon is largely unverified. Home of the historic [Tramway](#) .
 - Carter and Nuttall canyons could possibly provide western extensions.
 - Unchecked but known prehistoric areas near junction of Marijilda and Stockman washes.
-

Why the obsession with mesa hanging?

- Slope is INDEPENDENT of terrain!
 - Minimum cuts and fills.
 - One canal side is often "free".
 - Superbly energy and effort efficient.
 - Easy repairs from flood damage.
 - Mesa top slopes often optimum.
 - Not much other use for mesa tops.
 - Conveys water long distances.
-

Arguments the canals are prehistoric...

- Archaeologists say so.
 - Run over by newer roads, tanks, fences, and even dams. Without accomodation.
 - Consistent "desert varnish" patina.
 - Lack of any apparent use of pioneer tools.
 - Prehistoric population very much higher.
 - Easier to "dig out an old ditch".
 - Far more attuned to prehistoric needs.
 - Lack of characteristic CCC signatures.
 - Large cacti growing midstream.
-

Hanging canals ARE endangered...

There are typically zero to very few canal artifacts, so pothunting issues are by no means severe. BUT...

- An utter lack of public awareness clearly causes damage through neglect.
 - Water projects by the Town of Safford totally trashed a number of canal crossings, mulch rings, grids, and even a CCC dam. All these could have been cheaply avoided.
 - New proposed [realignment of US70](#) to the south may threaten many of the canals.
 - The state lands bureaucracy is exceptionally hostile to archaeological research.
-

What needs done now...

- [Map](#) and catalog all southern features.
 - Videotape all hanging canal routes.
 - Resolve the Allen Canal enigmas.
 - Find a credible Jernigan canal source.
 - Involve students and interested others.
 - Explore other candidate water sources.
 - Publish both traditionally and [new media](#).
 - Make upcoming threats aware of the issues.
 - Use "field mice" to thoroughly explore.
 - Scam a [Draganfly](#) grant...
-



This has been an excerpt of...

<http://www.tinaja.com/glib/hangcan1.pdf>

Presented by Don Lancaster and Synergetics, 3860
West First Street, Box 809, Thatcher, Arizona, 85552.
(928) 428-4073.

<mailto:don@tinaja.com>

More info on Gila Valley prehistory can be found at

<http://www.tinaja.com/glib/neely1.pdf>

Copyright c 2010 and earlier by Don Lancaster and Synergetics.
Linking usually welcome. All media, web, and ALL other rights
fully reserved. Mirroring or reposting is expressly forbidden.
