

Prehistoric Hanging Canals of the Safford Basin III

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<http://www.tinaja.com>

The Gila Valley has a rich prehistory...

**Especially during the Late Classic period
around 1350 CE.**

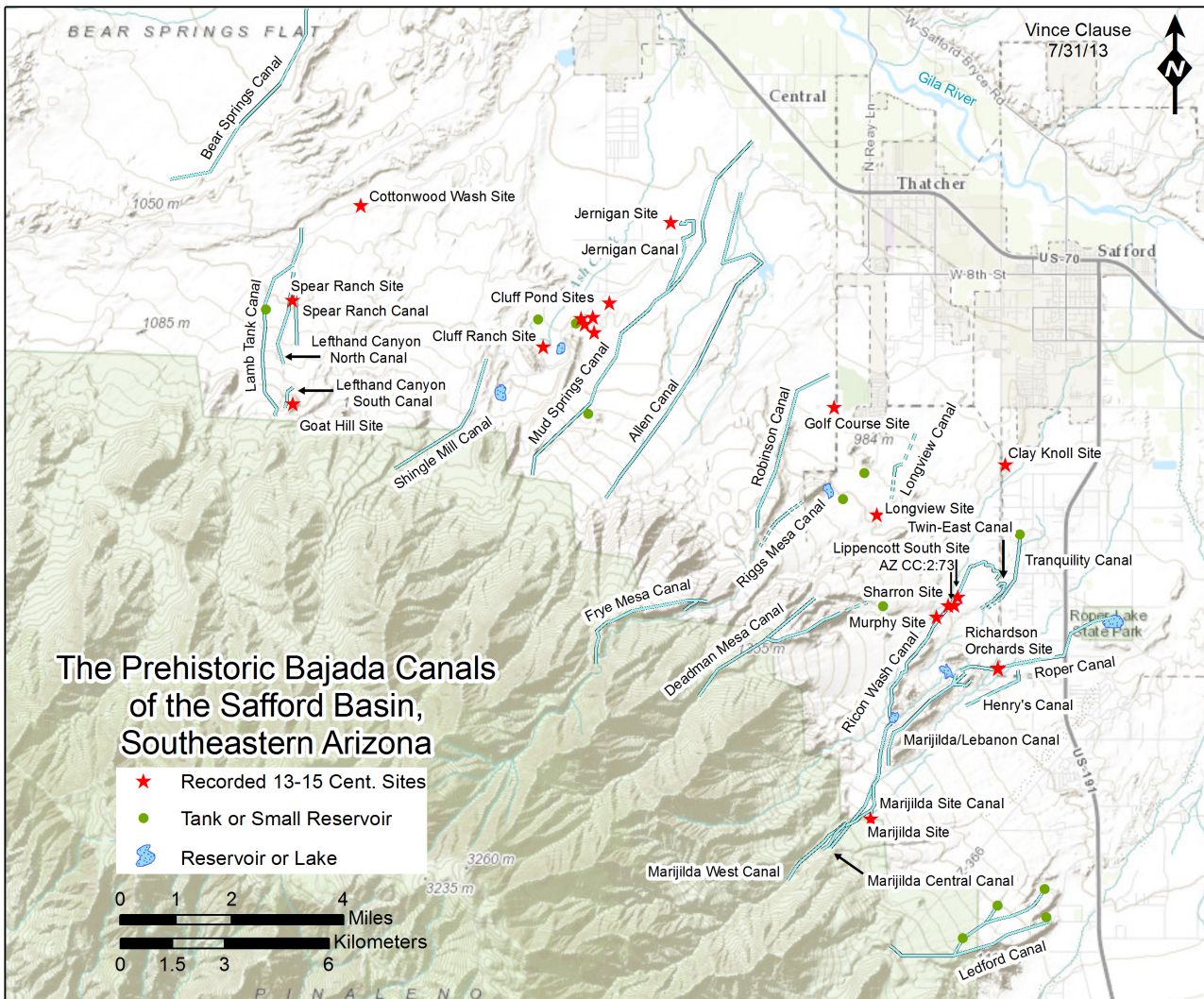
- Studied by **Neely** and others.
 - Population possibly as high as today.
 - Some ties to **Hohokam, Mimbres, Salado, Mongollon** and **Ancient Pueblo** cultures.
 - Gila River lowland canals as extensive as today and the basis for modern irrigation.
 - Thousands of world class agriculture **grids**, possibly used for **Agave** crops...
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Lesser known are the "hanging" canals...

- **Literally "hung" on steep sided mesa edges.**
 - **As high as 90 feet above base terrain!**
 - **Twenty six or more total at least 46 miles!**
 - **Create the illusion of "water flowing uphill".**
 - **May include above ground aqueducts, route switching, and flood breakaways.**
 - **Used for long range water delivery.**
 - **Nearly totally exploit Mt. Graham streams.**
 - **Typically a yard wide by a foot deep.**
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• Thatcher

• Safford

• Swift Trail Junction

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.**
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The hanging canals might be named...

- | | |
|----------------|-----------------|
| ■ P Ranch | ■ Frye Mesa* |
| ■ Ledford* | ■ Robinson* |
| ■ Henry's* | ■ Riggs |
| ■ Marijilda* | ■ Allen* |
| ■ Roper* | ■ Mud Springs* |
| ■ Tranquility* | ■ Jernigan* |
| ■ Twin East* | ■ Shingle Mill* |
| ■ Twin West* | ■ Lefthand* |
| ■ Rincon* | ■ Lamb Tank* |
| ■ Deadman* | ■ Bear Springs |
| ■ Longview | ■ Bandolier |

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.**
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Henry's Hanging Canal...

- **Possibly oldest of Marijilda sourced canals.**
 - **Portions still unresolved.**
 - **Apparently once fed Roper Canal.**
 - **Moderate hanging portion.**
 - **Somewhat wider than typical.**
 - **About one mile explored extent.**
 - **Exact takein remains enigmatic.**
 - **May have been replaced or updated by the Marijilda hanging canal.**
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Roper Canal...

- **Modern Canal, possibly prehistoric.**
 - **From Lebanon Reservoir #2 to Roper Lake.**
 - **May once have been Marijilda Canal sourced.**
 - **Possible early Henry's Canal destination.**
 - **Flat and easy route.**
 - **Two miles current length.**
 - **Prehistoric origins still needs proven.**
 - **Roper Lake may overlay prehistoric field end use area.**
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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 aqueduct.**
 - **Hangs on the western mesa face.**
 - **Apparent switching to several destinations.**
 - **Elaborate French Drains going off mesa.**
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Tranquility Hanging Canal...

- **Apparently artesian sourced.**
 - **One mile long.**
 - **Presently terminates in Cooks Reservoir.**
 - **Urban subdivision private property located.**
 - **Amazingly close to Twin East canal via cliff.**
 - **Moderate short hanging portion.**
 - **Curious mix of historic and prehistoric.**
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Twin East Hanging Canal...

- **Ponding area fed by TWO major canals.**
 - **East canal likely Marijilda sourced.**
 - **Runs under Lebanon Cemetery buildings.**
 - **Amazingly close to Tranquility Canal.**
 - **Sharp "U" and "S" turns to maintain grade.**
 - **Mystery alignments remain unexplored.**
 - **Ponding contours obvious on map images...**
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Rincon (Twin West) Hanging Canal...

- **Ponding area fed by TWO major canals.**
 - **Likely Rincon Canal fed.**
 - **Sweeping "S" portion to maintain grade.**
 - **Earlier habitations and artifacts in area.**
 - **Possible four mile total length.**
 - **Ponding area unusually single walled.**
 - **A section has been run over by the Safford water tank project.**
 - **Additional slope measurements still needed.**
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Deadman Hanging Canal...

- **Sources from Deadman creek and possibly routes to Porter Springs and Deadman tanks, but prehistoric purpose remains enigmatic.**
 - **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.**
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Longview Area...

- **Delivery canal conspicuous by its absence.**
 - **One possible short canal wall located.**
 - **Possibly Deadman or Frye fed.**
 - **Very strong tradeware evidence.**
 - **Numerous aproned check dams.**
 - **Rock alignments define one use area.**
 - **Confused by CCC overwork.**
 - **Further study still needed.**
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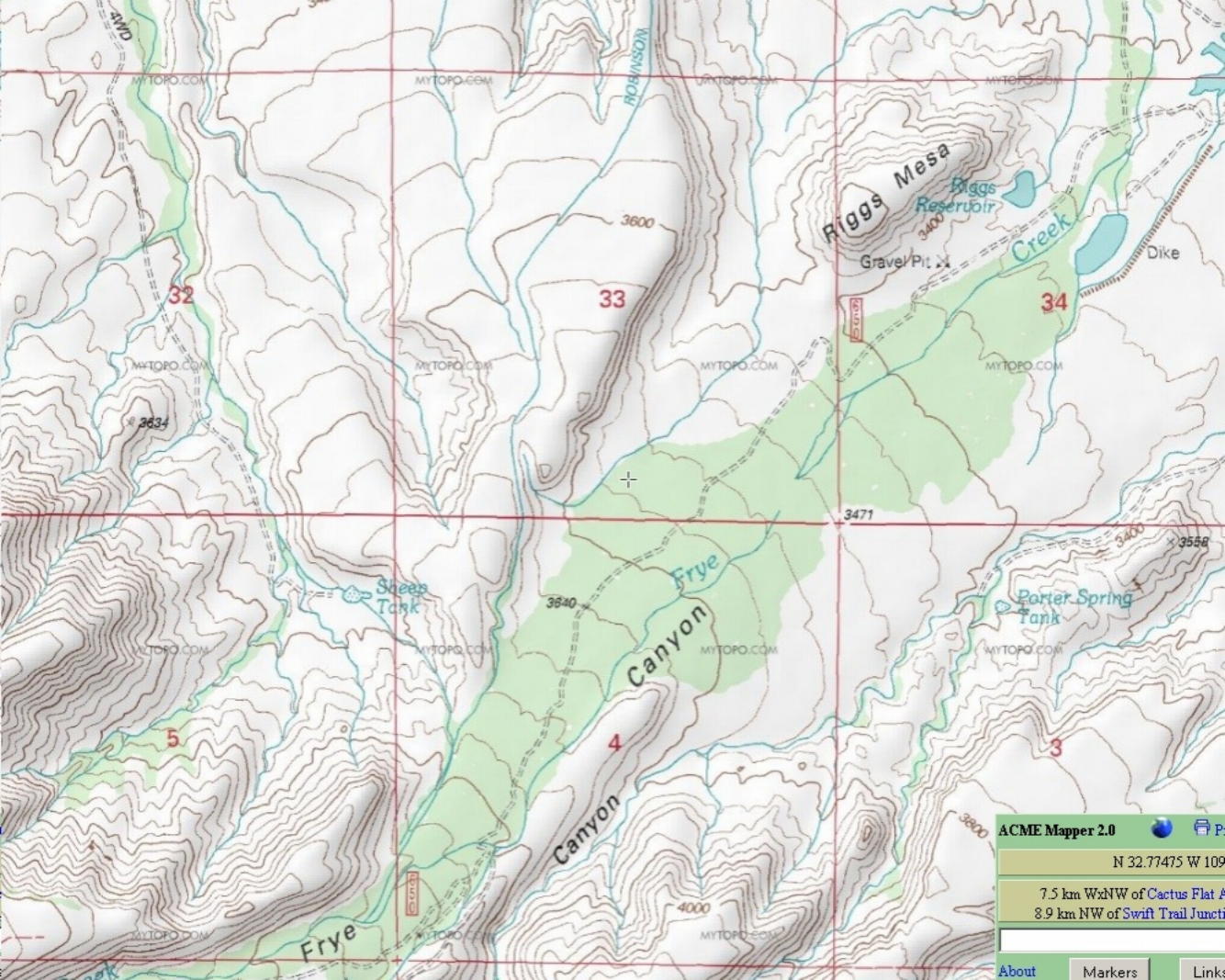
Frye Mesa Area...

- **Braided stream channels and ponding area.**
 - **Spectacular HS counterflow canal branch.**
 - **Primary canal is possible Robinson source.**
 - **Believed sourced from Spring Canyon.**
 - **Confused by CCC and dam construction.**
 - **Portions overrun by modern water project.**
 - **The crown jewels of the entire system.**
 - **Major further study required.**
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Robinson Hanging Canal...

- **Rebuilt by historic pioneer to serve cattle tanks in the Daley Estates area.**
 - **Likely sourced from Frye Mesa.**
 - **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



P

N 32.77475 W 109

7.5 km WxNW of Cactus Flat A

8.9 km NW of Swift Trail Junction

About

Markers

Links







Allen Hanging Canal...

- **Nearly SEVEN MILES long!**
 - **Source from Spring Canyon. May go as far as Central bottomlands.**
 - **Apparently overlain by CCC Hawk Hollow tank, Allen Dam, and Layton Dam.**
 - **Two distinct architectural styles.**
 - **Spectacular "Culebra" seven foot deep cut.**
 - **Portions obscured by sheet flooding.**
 - **Mesa to dam routing remains uncertain.**
 - **Many questions remain unanswered.**
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Mud Springs Hanging Canal...

- **Routes Ash Creek over Mud Springs Bajada.**
 - **Entire 6 mile route linear and viewable.**
 - **Possibly the earliest hanging canal.**
 - **Overrun without access by SCS dam.**
 - **Splits into Jernigan Canal.**
 - **Enigmatic associated rock structure.**
 - **Mid-canal cleanout and flood spur.**
 - **Key portions still missing or unexplored.**
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Jernigan Hanging Canal...

- **Part of a well studied and reported site.**
 - **"U" and "S" routings with counterflow.**
 - **Large Mesquite tree mid channel.**
 - **Moderate hanging portions.**
 - **One fairly impressive cut of three foot depth.**
 - **Well defined exit French Drain area.**
 - **Sources from Mud Springs Canal.**
 - **Three reaches remain ill defined.**
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Shingle Mill Area...

- **Home of historic Minor Webster Ditch.**
 - **Possible prehistoric original canal would be conspicuous by its absence.**
 - **Shingle Mill or Merrill Wash possible sources.**
 - **Includes obviously modern service track and deeper vee construction.**
 - **Half of presumed routing unknown.**
 - **Additional historic and site research needed.**
 - **Many questions remain unanswered.**
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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.
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Other possibilities yet unexplored...

- **Veech Canyon in the "P" Ranch area. A few rumors of historic and prehistoric canals.**
 - **Hints of a Frye Mesa to Blue Ponds route.**
 - **North and east of Deadman Canal show unvisited and enigmatic aerial images.**
 - **Carter and Nuttall canyons could possibly provide western extensions.**
 - **The North Taylor **UFO Fish Filets** remain a CCC or earlier largely undated artifact.**
 - **Possible mountain sources for Bandolier Lowland Canal not yet totally excluded.**
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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.**
 - **Much of the construction can be across rather than along the route.**
 - **Mesa top slopes often optimum.**
 - **Not much other use for mesa tops.**
 - **Conveys water long distances.**
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Arguments the canals are prehistoric...

- **Archaeologists say so.**
 - **Extreme purposefulness and highly directed energy efficiency.**
 - **Run over by roads, tanks, fences, dams and cemeteries. Without accommodation.**
 - **Consistent patina, caliche, and lichens.**
 - **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.**
 - **Mature cacti and Mesquite trees midstream.**
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Survey instruments are still unknown, but...

- **Pilot extensions of the canals themselves could have served as static water levels.**
 - **Such concepts remain highly speculative.**
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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 seems quite hostile to archaeological research.**
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What needs done now...

- **Map** and catalog all southern features.
 - **Videotape** all hanging canal routes.
 - **Locate** the still unknown canal portions.
 - **Resolve** Frye Mesa and Deadman mysteries.
 - **Involve** students and any others interested.
 - **Apply** "CSI" type forensics techniques.
 - **Publish** both traditionally and **new media**.
 - **Make** upcoming threats aware of the issues.
 - **Invite** "field mice" to thoroughly explore.
 - **Scam** a **Draganfly** grant...
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This has been an excerpt of...

<http://www.tinaja.com/canal/newhang3.pdf>

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More info on Gila Valley prehistory can be found at

<http://www.tinaja.com/tinsamp1.pdf>

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