Bill O'Hara Land Surveyor

Professional Surveying Services in Texas

November 8, 2017

Mark Neugebauer
Director, Surveying Division
Texas General Land Office
1700 Congress Ave.
Austin, Texas 78701

Re: Blanco Creek in Uvalde County.

Dear Mark:

Earlier this year, I was engaged to provide my professional opinion as a Licensed State Land Surveyor with expertise in gradient boundary and riparian boundary surveying whether Blanco Creek in Uvalde County should be considered navigable specifically as it flows through property owned by Dr. Frank Dehnisch in Survey Nos. 872 and 875, Texas Central Railway Company surveys, Survey Nos. 873 and 874, Denison and Pacific Railway Company surveys, and Survey No. 877, Corpus Christi, San Diego and Rio Grande Narrow Guage Railroad Company surveys, Uvalde County. The headwaters of Blanco Creek rise in the canyons about a mile north of the Dehnisch property; the creek continues flowing southeasterly more than forty miles on its course to the Frio River.

In my time at the General Land Office we in the Surveying Division were frequently asked to provide a "determination" of navigability on certain streams, often without an opportunity to physically witness that stream in the field. Many times our response was that they needed to hire a competent, qualified land surveyor to make the appropriate measurements and render a professional opinion. My client, Dr. Frank Dehnisch has done just that.

Last week I visited with you at your office and provided you with an original copy of the report I prepared for Dr. Dehnisch. I hereby request that you file the report in the Uvalde County Sketch Files for informational purposes.

Respectfully submitted,

Bill O'Hara

William D. "Bill" O'Hara
Licensed State Land Surveyor
Bastrop County, Texas

File No. SKETCH FILE 33

UVALDE County

Navigability determination of Blanco Creek

Date Filed: 10/19/2018

George P. Bush, Commissioner

By K. Schreiber

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Bill O'Hara Land Surveyor

Professional Surveying Services in Texas

August 12, 2017

Gerry Miller
Attorney at Law
609 Carmel Dr.
Sandia, Texas 78883

Re: Blanco Creek, Uvalde County, Texas

Dear Miller:

I was engaged to provide a professional opinion whether Blanco Creek in Uvalde County should be considered navigable specifically as it flows through property owned by Dr. Frank Dehnisch in Survey Nos. 872 and 875, Texas Central Railway Company surveys, Survey Nos. 873 and 874, Denison and Pacific Railway Company surveys, and Survey No. 877, Corpus Christi, San Diego and Rio Grande Narrow Guage Railroad Company surveys, Uvalde County. The headwaters of Blanco Creek rise in the canyons about a mile north of the Dehnisch property; the creek continues flowing southeasterly more than forty miles on its course to the Frio River.

On April 26, 2017, I met you and Dr. Dehnisch near his property in Uvalde County and set out to visit several locations along Blanco Creek. Below are geographic coordinates of the seven (7) locations we visited that day along with my observations as noted in a field book and in a mobile application, in the order the observations were made.

1. Lat. 29° 25' 06" N, Lon. 99° 36' 20" W.

Our first stop was at the Highway 127 crossing over Blanco creek. At this location the stream bed is narrow, less than 30-ft in width. It was over grown with upland grasses, there are no visible rocks and gravel, and no water was visible. Below is an image of a Google Earth .kmz file at this location and a photograph taken at the location.

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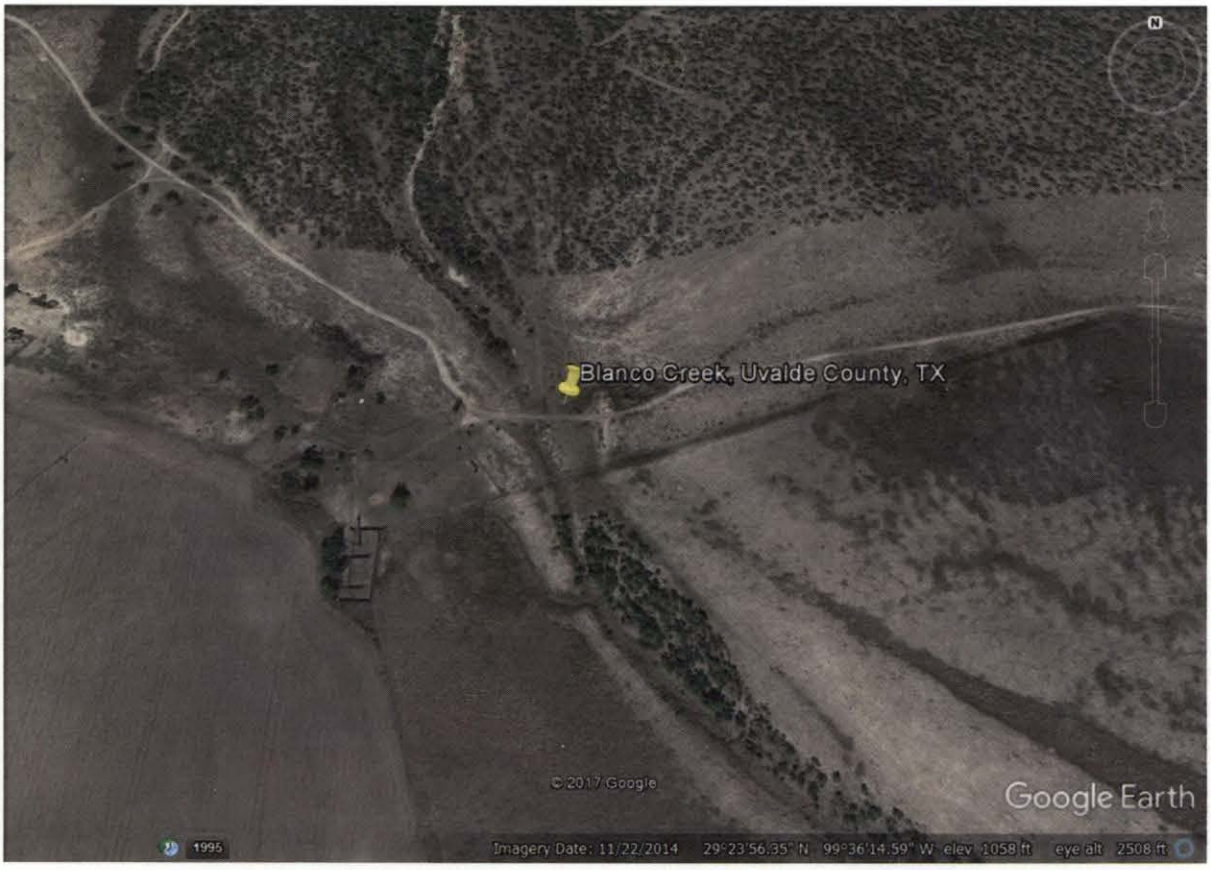
Caption: Image of Google Earth .kmz file for location of observations on Blanco Creek.

Caption: view upstream from Hwy 127 bridge crossing Blanco Creek.

95253

2. Lat. 29° 23' 57" N, Lon. 99° 36' 16" W.
Streambed is narrow, less that 30-feet wide, not well defined and covered in upland grasses. No water in stream. Below is an image of a Google Earth .kmz file at this location and a photograph taken at the location.



Caption: Image of Google Earth .kmz file for location of observations on Blanco Creek.

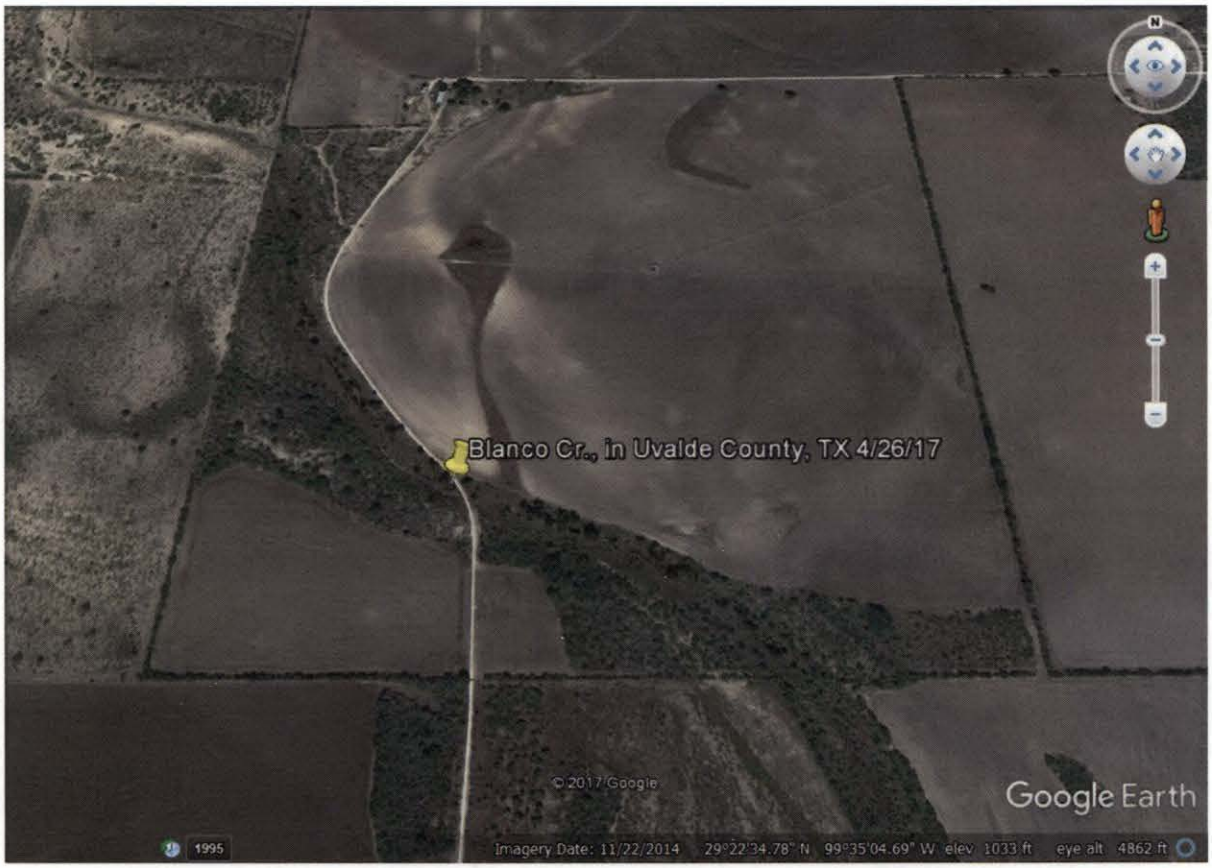
95254

Caption: view north from observation point on Blanco Creek.

95255

3. Lat. 29° 23' 37.74" N, Lon. 99° 35' 56.84" W.
Streambed is narrow, less that 30-feet wide, not well defined and covered in upland grasses. No water was visible in the stream. No images are provided in this report for this location.

4. Lat. 29° 22' 32.14" N, Lon. 99° 35' 12.31" W.
Streambed is narrow with better definition than previous observation points; less that 30-feet wide; covered in upland grasses. No water was visible in the stream. Below is an image of a Google Earth .kmz file at this location and a photograph taken at the location.



Caption: Image of Google Earth .kmz file for location of observations on Blanco Creek.

95256

5. Lat. 29° 21' 04.33" N, Lon. 99° 34' 01.89" W.
This location is at a county road crossing with Blanco Creek. Streambed here is narrow, less that 30-feet wide, but with gravel and sand and some upland grasses. Upland trees and grasses along banks; banks and bed not well defined. No images are provided in this report for this location.

95257

6. Lat. 29° 20' 39.45" N, Lon. 99° 33' 55.55" W.

This location is at a county road crossing with Blanco Creek. Streambed here is narrow but with better definition looking upstream; downstream the creek flattens out with less definition. Less than 30-ft wide. Below is an image of a Google Earth kmz file at this location and a photograph taken at the location.

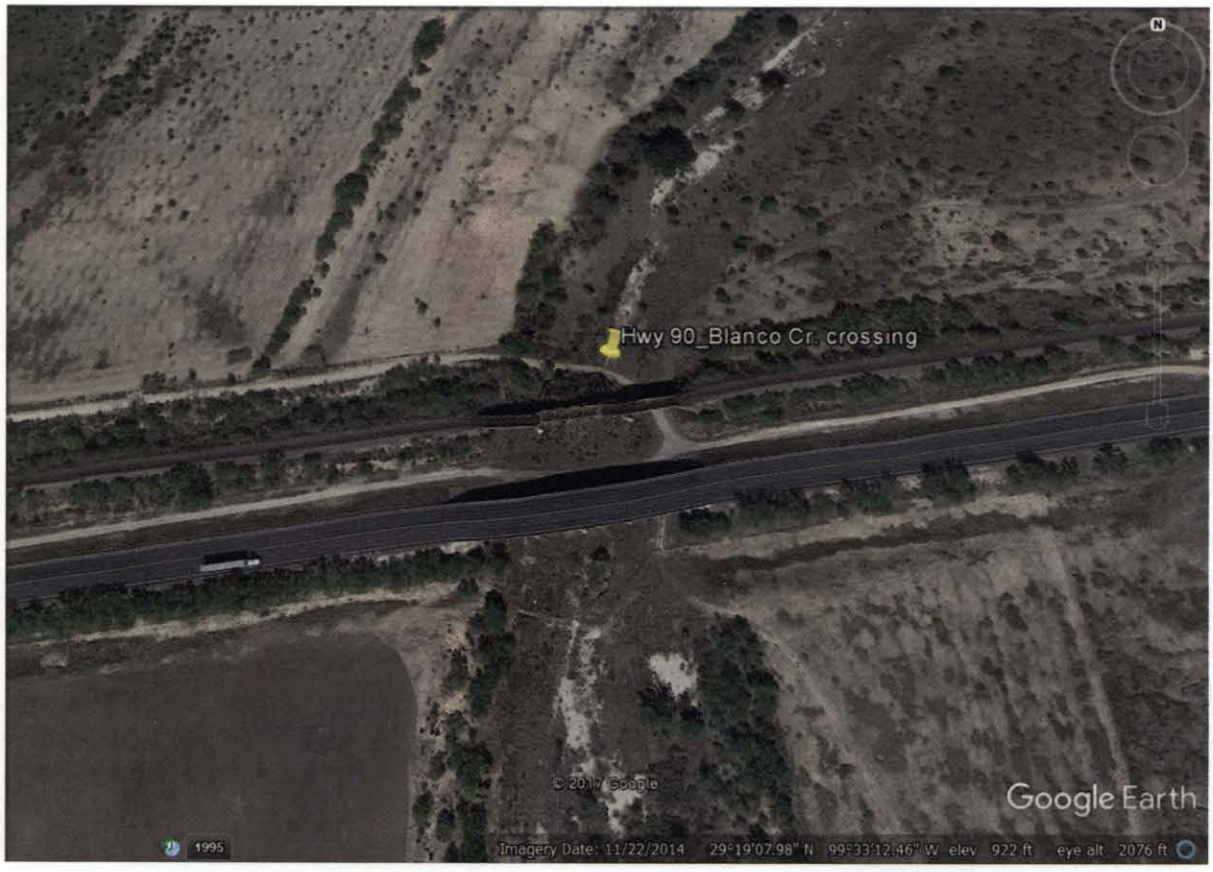
Caption: Image of Google Earth .kmz file for location of observations on Blanco Creek.

95258

Caption: view looking upstream of Blanco Creek from County Road.

95259

7. Lat. 29° 19' 09.13" N, Lon. 99° 33' 12.51" W.
This location is at the creek crossings of the railroad tracks and Highway 90. There is a puddle of water in the road, perhaps from a recent rain, but no other water. Streambed is not well defined and vegetated with upland grasses; less that 30-feet wide. Final observation point for the day. Below is an image of a Google Earth .kmz file at this location and a photograph taken at the location.



Caption: Image of Google Earth .kmz file for location of observations on Blanco Creek.

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Caption: view looking downstream from railroad crossing toward Hwy 90.

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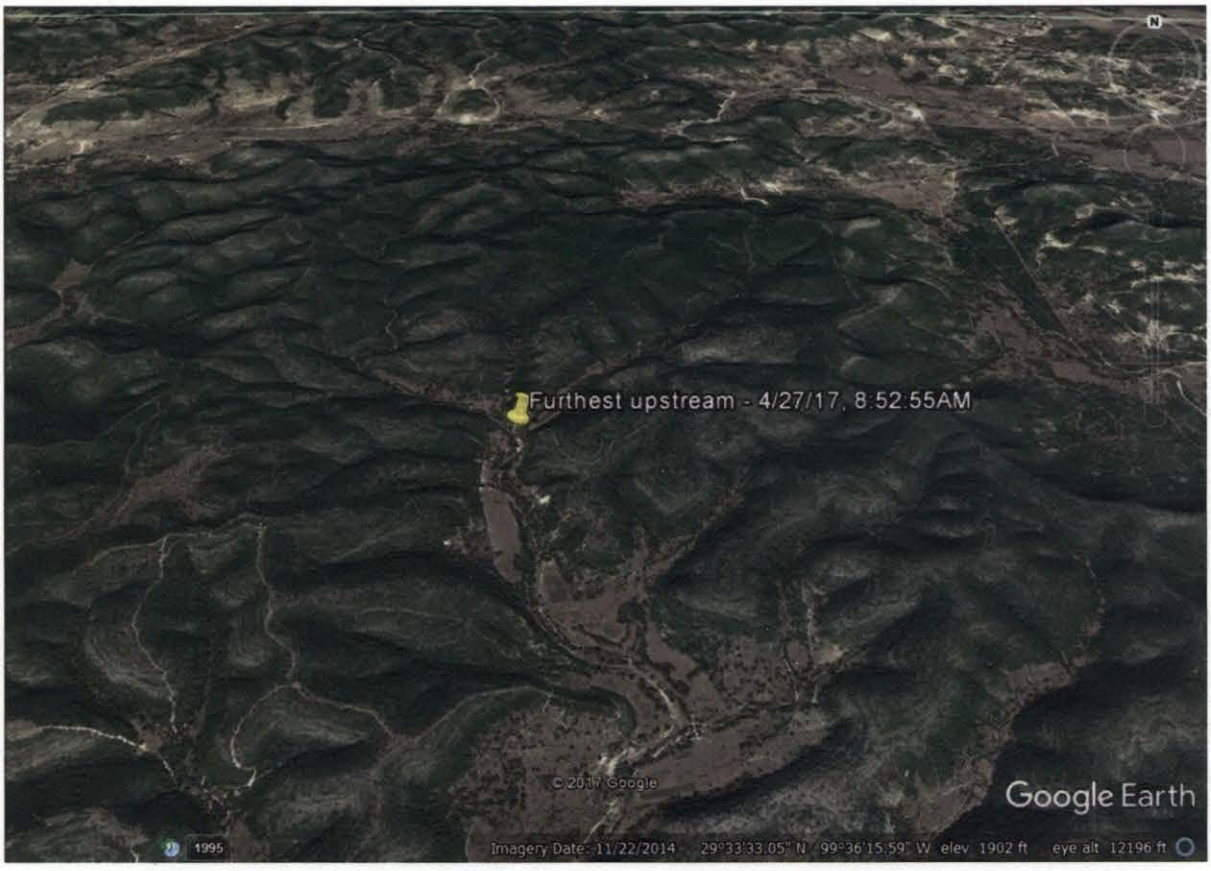
We began the second day of observations on Blanco Creek near its headwaters. We went downstream from that point and recorded observations at 23 additional locations along the creek. Following is a sampling of the observations made on April 27, 2017, in the order they were made.

8. Lat. 29° 33' 36.02" N, Lon. 99° 36' 32.98" W.
This is the furthest upstream location we visited on the creek; it is at the confluence of two tributaries near the headwaters of Blanco Creek. The banks and bed of the stream are well defined. The bottom is solid rock and water was running in the stream. I measured a distance of 16 feet across, bank to bank. Below is an image of a Google Earth .kmz file at this location and a photograph taken at the location.



Caption: Image of Google Earth .kmz file for location of observations on Blanco Creek.

95262

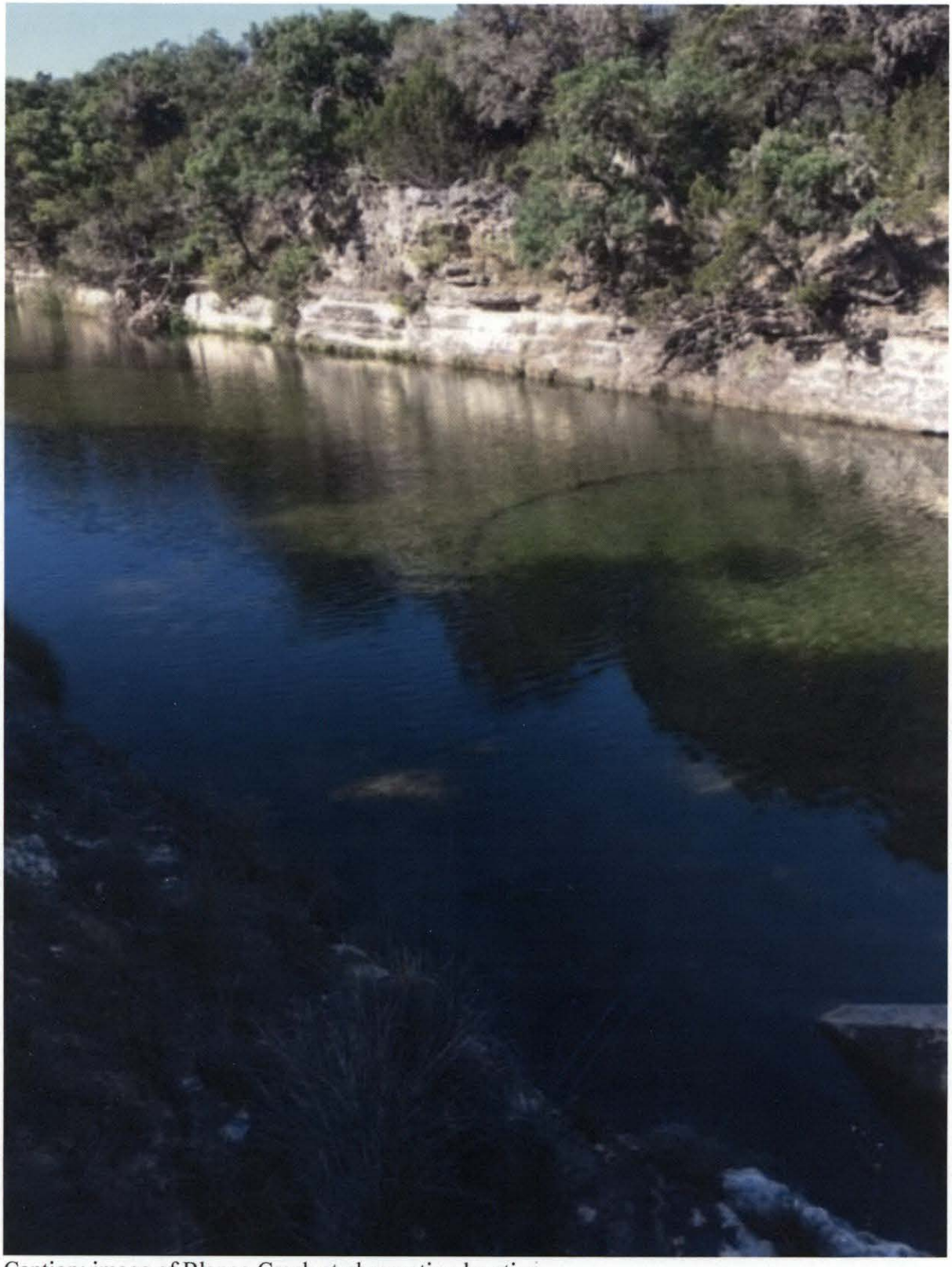
Caption: Blanco Creek at observation location.

95263

9. Lat. 29° 33' 10.97" N, Lon. 99° 36' 28.12" W.
This location is at an impoundment structure on Blanco Creek. Below is an image of a Google Earth .kmz file for this location and a photograph of the impounded water. The stream bed and banks at this location are not natural; a measurement across the formed body of water was not useful.

Caption: Image of Google Earth .kmz file for location of observations on Blanco Creek.

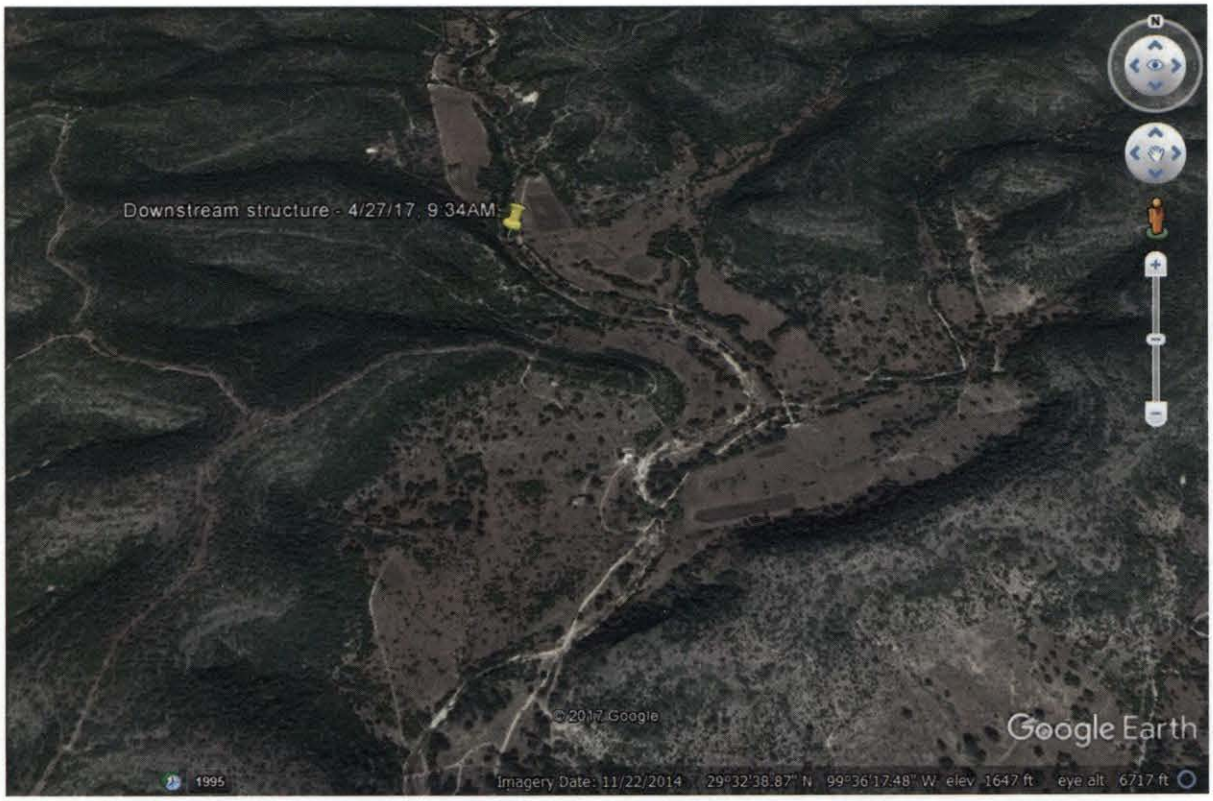
95264



Caption: image of Blanco Creek at observation location.

95265

10. Lat. 29° 32' 57.97" N, Lon. 99° 36' 26.75" W.
This observation was made on a concrete dam, approximately 70 feet long, and the furthest downstream impoundment structure on Dr. Dehnisch's property. Creek appears to be in a natural state flowing below the dam; bed is narrow and far less than 30 feet in width. Below is an image of a Google Earth .kmz file at this location and two photographs taken at the location.



Caption: Image of Google Earth .kmz file for location of observations on Blanco Creek.

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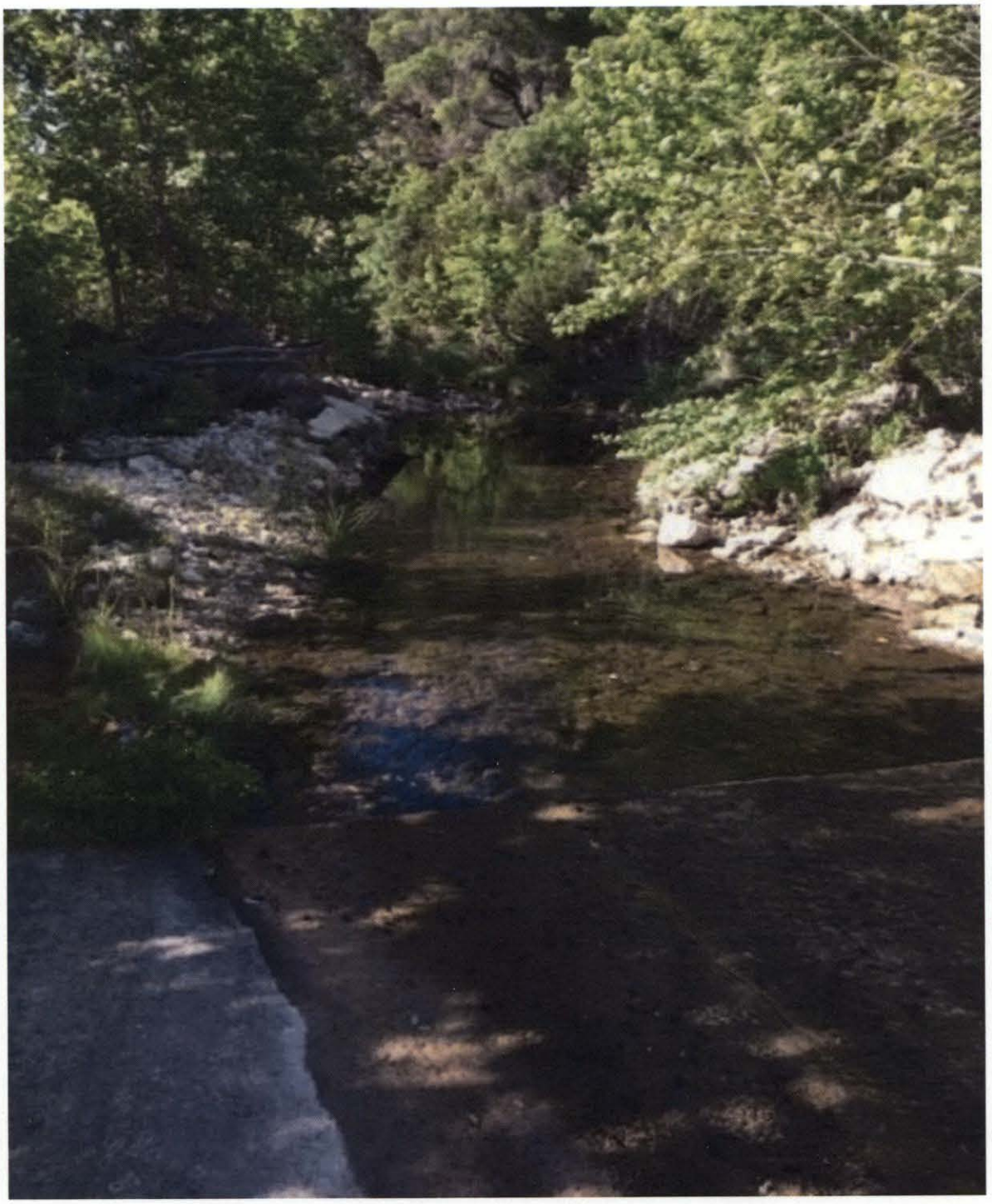


Caption: image of Blanco Creek looking downstream of concrete dam.

95267

Caption: image of Blanco Creek looking upstream of concrete dam.

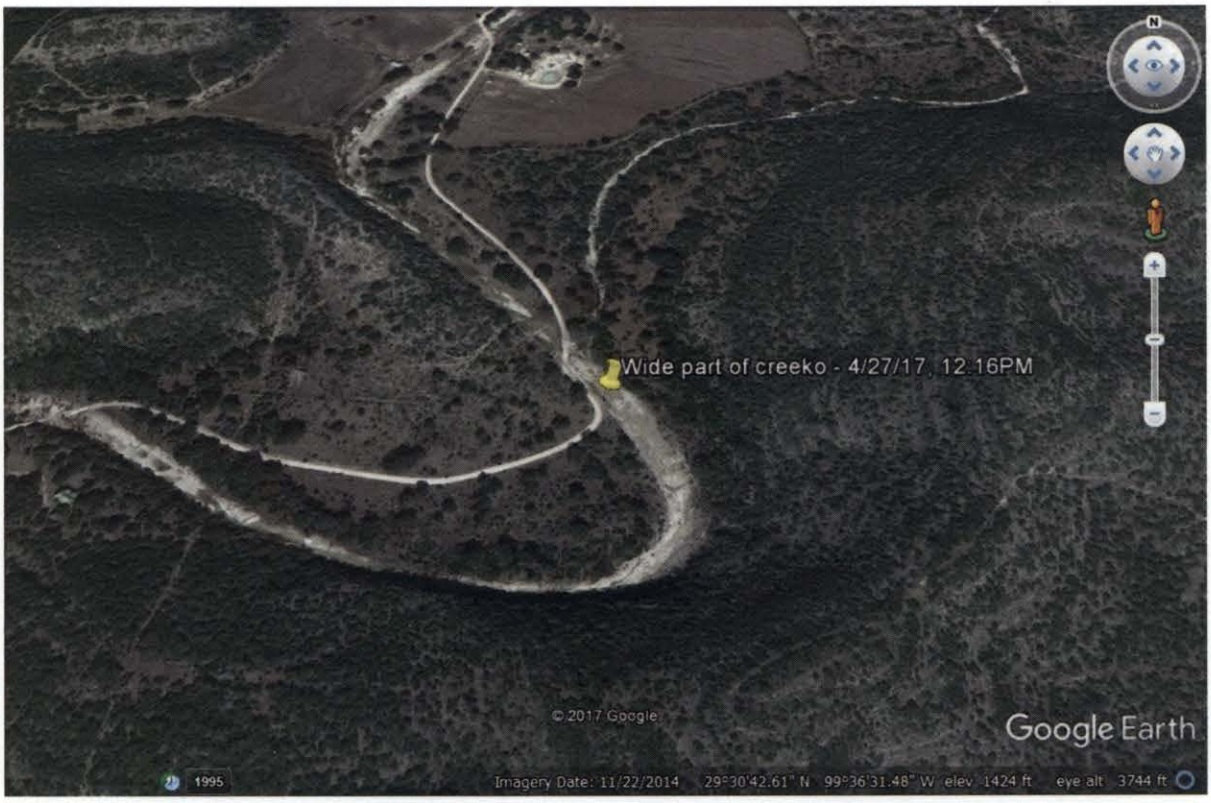
11. Lat. 29° 32' 56.79" N, Lon. 99° 36' 26.88" W.
At this observation point within the Dehnisch property the creek has well defined bed and banks; measured 10 feet between the banks.

12. Lat. 29° 33' 28.73" N, Lon. 99° 36' 13.32" W.
Creek is less than 10 feet wide in this location. There has been some disturbance in the streambed, mainly a fence built across the creek causing gravel to build up and water to pool.

13. Lat. 29° 31' 22.04" N, Lon. 99° 36' 42.21" W.
Observations made near a low water crossing. Rocky bottom creek with good flow of water, well defined banks and bed. Measured 14 feet across, bank to bank.

95268

14. Lat. 29° 30' 42.61" N, 99° 36' 31.47" W.
Blanco Creek is shallow and wide at this location; measured 81 feet wide. Below is an image of a Google Earth .kmz file at this location and a photograph taken at the location.



Caption: Image of Google Earth .kmz file for location of observations on Blanco Creek.

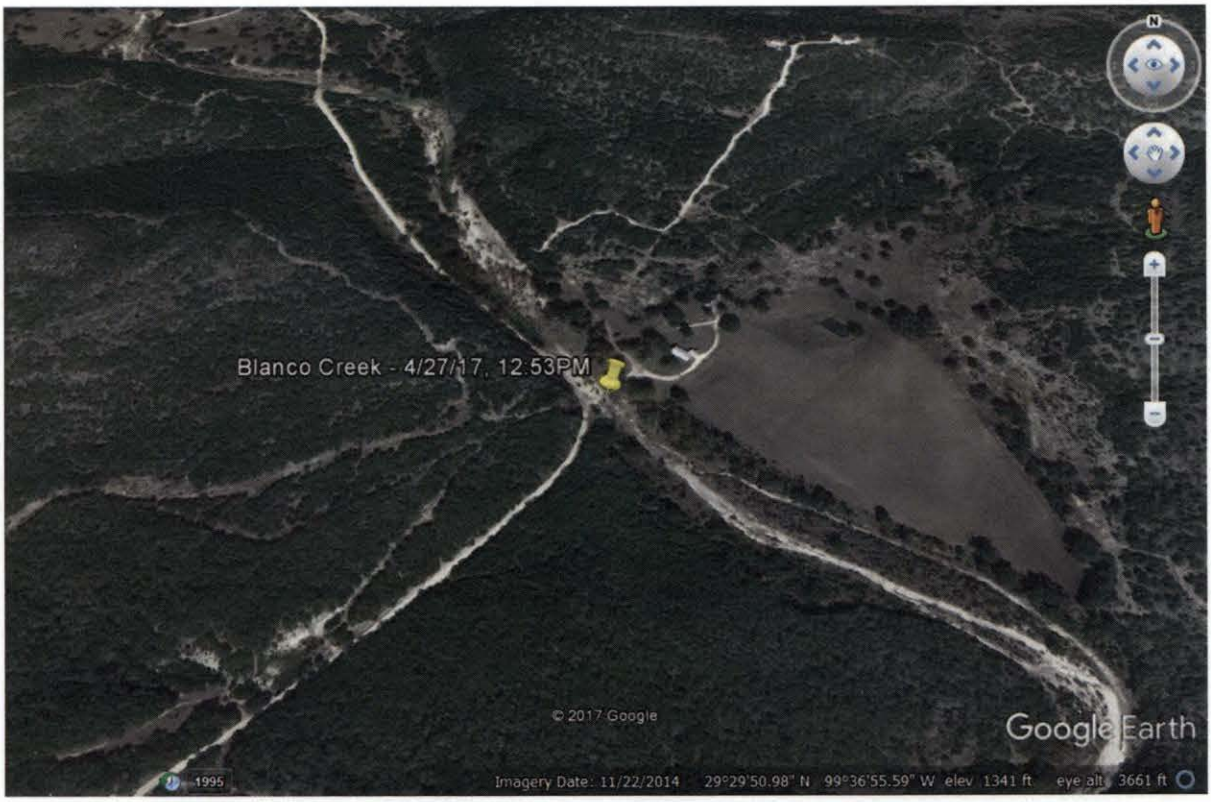
95269

Caption: image of Blanco Creek at observation location.

15. Lat. 29° 30' 36.08" N, Lon. 99° 36' 30.04" W.
Creek in this location has a rock bottom; water is shallow. Measured 30 feet across.

95270

16. Lat. 29° 29' 50.98" N, Lon. 99° 36' 55.59" W.
The creek is shallow in this location with rocky bottom and low banks. Upland vegetation grows along the banks. Measured 16 feet across the stream. Below is an image of a Google Earth .kmz file at this location and a photograph taken at the location.



Caption: Image of Google Earth .kmz file for location of observations on Blanco Creek.

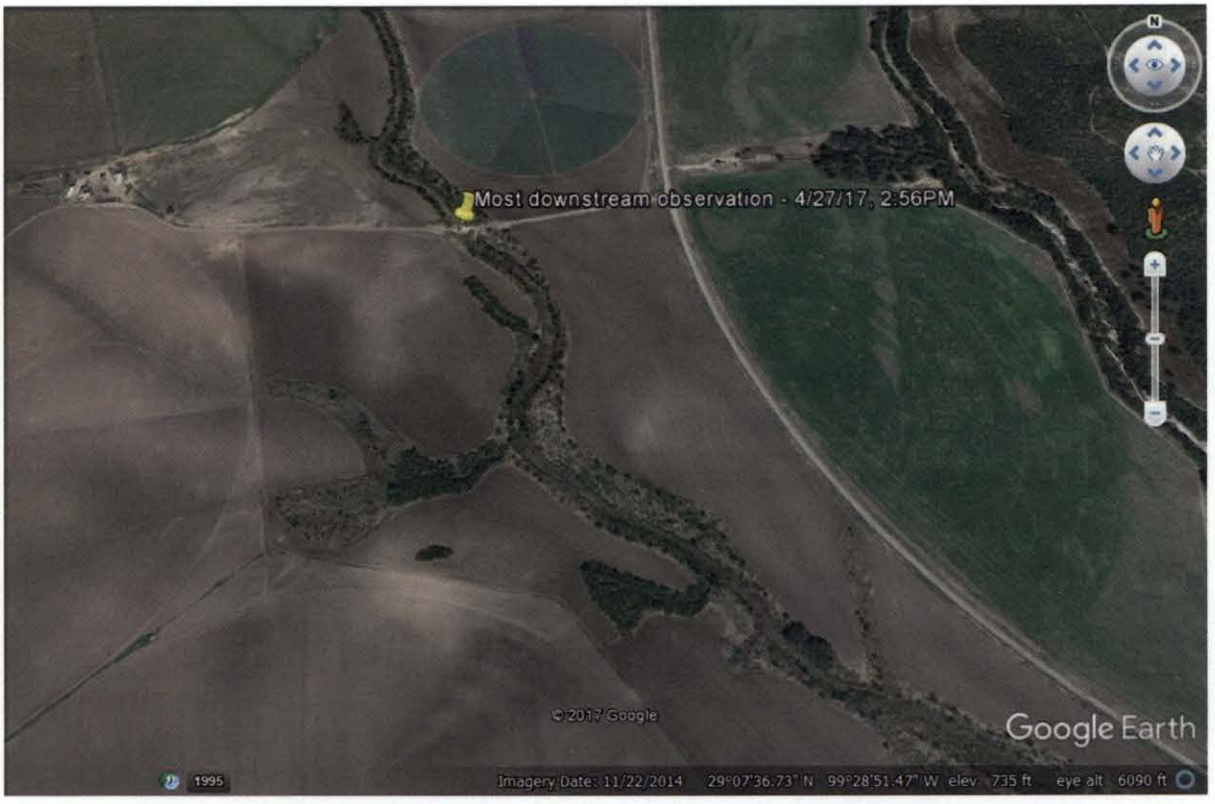
95271

Caption: image of Blanco Creek looking upstream at observation location.

17. Lat. 29° 16' 44.34" N, Lon. 99° 36' 01.96" W.
This location, downstream of Highway 90, is at a creek crossing with a county road near Wish Cemetery and just above an impoundment known as Blanco Lake. The streambed in this area is fully vegetated with upland vegetation with no discernible banks, no water in the stream, and no culvert pipe running under the road. I could not measure a width in this area.

95272

18. Lat. 29° 07' 50.81" N, Lon. 99° 29' 02.87" W.
This location is at a private road crossing of the creek and is the most southern, downstream location observed being approximately 2.5 miles upstream from the Blanco Creek confluence with the Frio River. There was no water running over or under the crossing. Streambed is not well defined in this area and I was not able to make a measurement of the creek width. Below is an image of a Google Earth .kmz file at this location and a photograph taken at the location.



Caption: Image of Google Earth .kmz file for location of observations on Blanco Creek.

95273

Caption: image of Blanco Creek looking upstream from concrete road structure spanning creek.

As is true for most of the State of Texas, Uvalde County has enjoyed significant rainfall the past couple of years following a period of severe drought leading to replenished water flow in area streams. My observations at points along the upper 8.5 miles of Blanco Creek indicate substantial flows but 7 miles further downstream at the Highway 127 crossing surface water flow is nonexistent. At a location along the creek (Lat. 29° 29' 21.29" N, 99° 37' 04.21" W) approximately seven miles upstream of Highway 127 there was good flow of water. Between that location and Highway 127 it appears the water goes under ground. There is no evidence of an impoundment along Blanco Creek in this area which would curtail the flow of water in the stream. At observation points further downstream I observed no flowing water in the creek.

In 1837 the Congress of the Republic of Texas passed the Act of December 14, 1837. Section 42 of the Act stated: "Be it further enacted, That all streams of the average width of thirty feet shall be considered navigable streams within the meaning of this act, so far us as they retain that average width, and that they shall not be crossed by the lines of a survey." This is often referred to as the 30-ft rule. Revised statutes in 1879, 1893, 1895 and 1911, state: "All streams, so far as they retain an average width of thirty feet, shall be considered navigable streams within the meaning hereof…" The current statute found in Section 21.001 of the Texas Natural Resources

95274

Code defines Navigable Stream as "a stream which retains an average width of 30 feet from the mouth up." [1]

Civil Law grants in Texas made under Spanish and Mexican rule retained ownership of perennial streams in the sovereign. The Republic of Texas operated under civil law until adopting Common Law in 1840. However, the civil laws applicable to ownership of stream beds ended with the adoption of the 30-foot statute in the Act of December 14, 1837. State v. Grubstake[2], Heard v. Town of Refugio[3] and Manry v. Robison[4] are principal cases dealing with title to stream beds within civil law grants made prior to 1837.[5]

According to Section 21 of the Act of December 14, 1837 "Be it further enacted, That all lands surveyed for individuals lying on navigable water courses, shall front one half of the square on the water course, and the line running at right angles with the general course of the stream, if circumstances of lines previously surveyed under the laws will permit, and all others not on navigable water courses shall be square if previous lines will permit; and under no circumstances shall any one grant be located in more than two surveys." This section of the Act was an instruction to the surveyors to not cross navigable streams as defined in the Act with the lines of surveys being made upon the public domain for transfer into private ownership.

There are two tests for navigability in Texas. First, is the stream navigable in fact?; second, is the stream navigable in accordance with the so called 30-foot statute? Streams are navigable in fact when they are susceptible of being used in their normal and ordinary conditions as highways of commerce.[6] Blanco Creek does not meet the "navigable in fact" test.

Application of the 30-foot statue is problematic in that several important questions have not been addressed by the Texas courts. These questions are: What is measured?; What is averaged: and, How is the average computed?.

What is measured? Based upon my years of experience and research on the subject I find it is generally agreed upon that in making a determination of whether a stream meets the 30-foot statute navigability test, the measurement must be from the gradient boundary on one bank to the gradient boundary on the opposite bank of the stream. Location of the gradient boundary along the bank(s) of a stream is specialized surveying function with an applicable science, however, in my opinion, a knowledgeable surveyor can identify the approximate location of the gradient boundary by making visual observations along a subject stream for the purpose of measuring a stream width.

What is averaged? Section 21.001 of the Texas Natural Resources Code says a navigable stream is "a stream which retains an average width of 30 feet from the mouth up." Three methods are

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[1] Kenneth G. Gold, *Selected Texas Statutes and Boundary Decisions for Land Surveyors, Land Title Agents and Title Attorneys*, 2d Edition
[2] 117 Tex. 53, 297 S.W. 202 (1927)
[3] 129 Tex. 349, 103 S.W. 2d 728 (1937)
[4] 56 S.W. 2d 438 (1932)
[5] Kenneth Roberts, *Title and Boundary Problems Relating to Riverbeds*, white paper
[6] Gold, *Decisions*, 429

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generally considered to answer this question. First, average the width of the stream from the mouth to the headwaters. Streams can be very long and present obstacles such as topography, access and cost making it impractical to attempt making measurements along its entire length. Second, average the width of the stream from the mouth through the surveys in question. This method has some support in Diversion Lake Club v. Heath[7] although this method could also prove to be impractical for the reasons cited above. Third, average the segment of the stream bed that is adjacent to or within the particular survey or property in question. This is the method most often used when endeavoring to determine if a particular stream, or perhaps a segment of a stream, is navigable by statute. The Texas Supreme Court apparently recognizes the third method in State v. Bradford[8], and in Chicago R.I. & G. Ry. Tarrant County Water Control Improvement Dist. No. 1[9].

How is the average computed? The courts have not addressed this question nor provided requirements for computing the average width. In my opinion, it is the surveyor's responsibility and professional judgement to make sufficient measurements, depending on the circumstances, and apply the appropriate mathematical formula necessary to determine an average width.

Beds of navigable streams in Texas not crossed by the lines of original surveys belong to the State. Beds of navigable streams that are crossed by the survey lines are subject to the Small Bill.[10] The Small Bill validated the patents of surveys which crossed the beds of navigable streams and relinquished title of the stream bed to the grantee/patentee up to the amount needed to make the patent whole. If the survey, including the area in the stream bed, is found to be excessive the State will have a claim of ownership of the stream bed in the amount of the excess acreage. In addition, the Small Bill retained ownership of the sand, gravel and marl in the stream bed to the State under the jurisdiction of the Texas Parks and Wildlife Department.

My conclusion, as a Registered Professional Land Surveyor and Licensed State Land Surveyor with nearly 30 years' experience in riparian boundary surveying, having made multiple observations along nearly the entire reach of Blanco Creek in Uvalde County, and having made bank to bank measurements where feasible, is that Blanco Creek does not meet either test for navigability and should not be considered navigable. Furthermore, the bed of Blanco Creek should be considered privately owned and not subject to the Small Bill.

Respectfully submitted,

William D. O'Hara

William D. "Bill" O'Hara
Licensed State Land Surveyor
Bastrop County, Texas

[7] 126 Tex. 129, 86 S.W. 2d 441 (1935)
[8] 121 Tex. 515, 50 S.W. 2d 1065 (1932)
[9] 123 Tex. 432, 444, 73 S.W. 2d 55, 60 (1934)
[10] Sec. 21.012 Natural Resources Code

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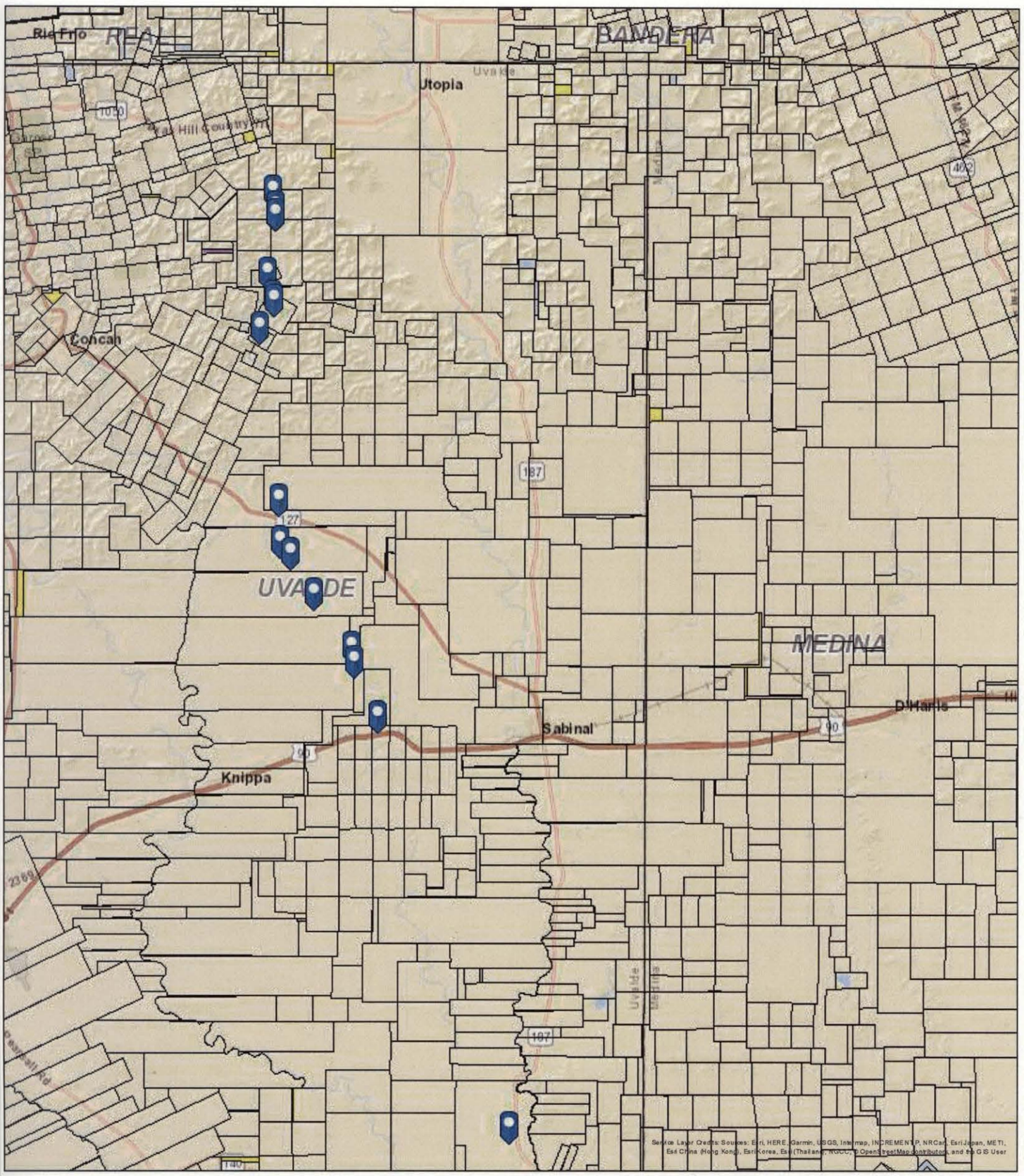

GLO Land/Lease Mapping Viewer

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Print Date: 10/19/2018

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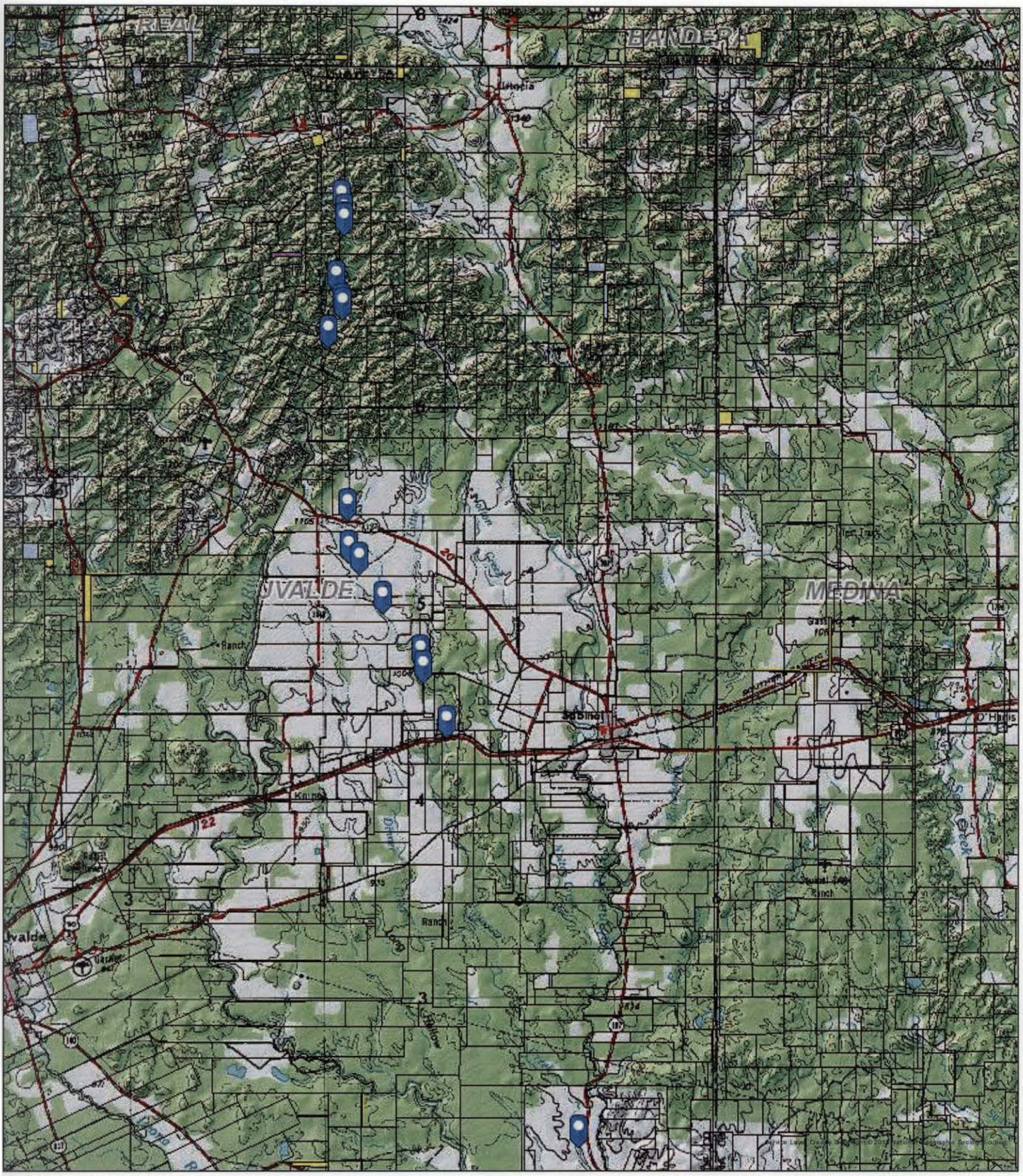

GLO Land/Lease Mapping Viewer

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Print Date: 10/19/2018

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