

## ATTACHMENT 1

### Figures

**Explanation**

**Proposed Well Field**

- Historic Irrigation Well (Red circle with dot)
- 2019 Permit Well (Blue triangle)
- Proposed New Well (Blue circle)
- TWDB Monitoring Well (Red circle with cross)

1 Mile Radius from Well Locations (Green circle)

5 Mile Radius from Well Locations (Red circle)

**Property Boundary**

- Barton Farm (Pink outline)
- Goodland Farm (Green outline)
- Harlan Farm (Blue outline)

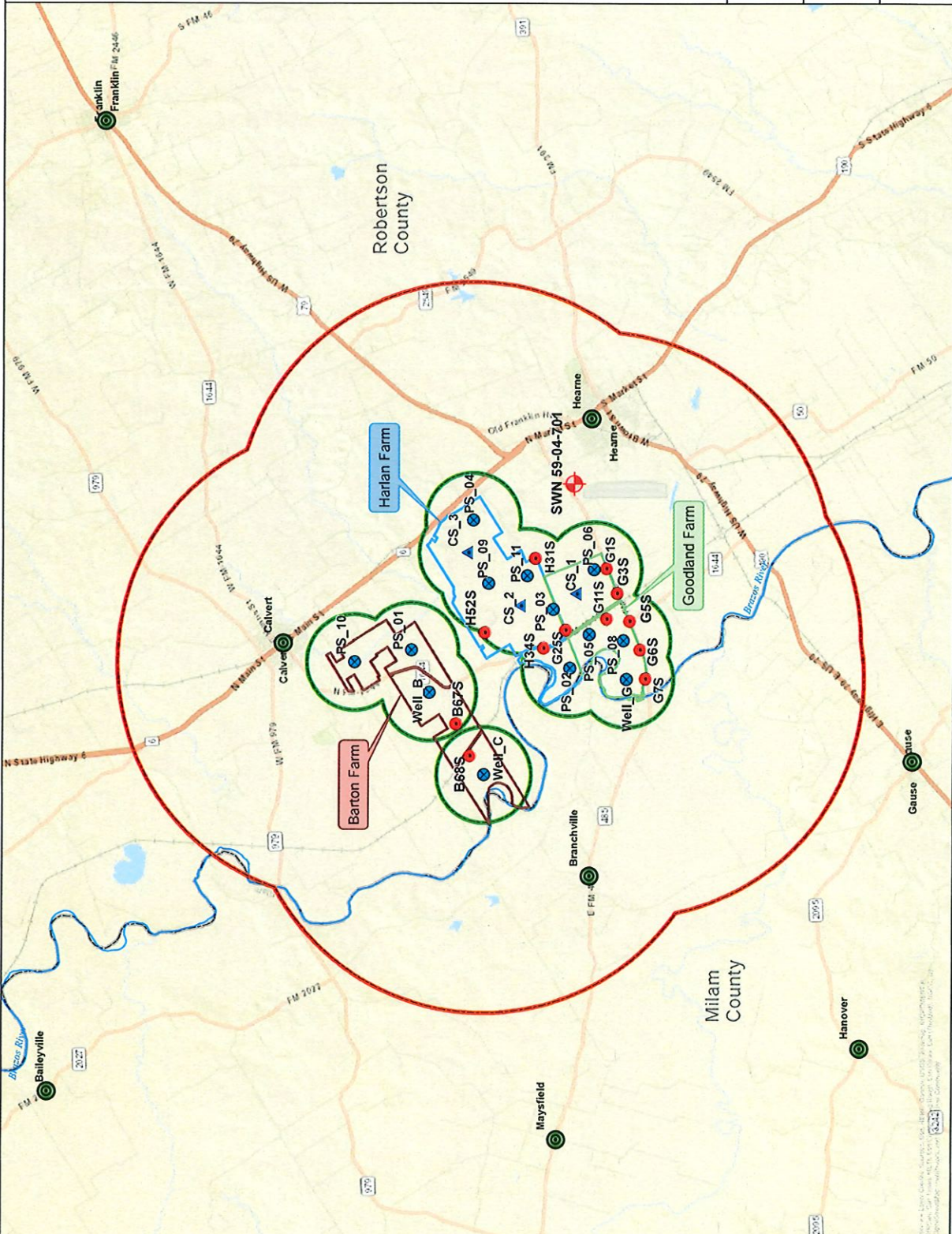
Municipality (Green circle with dot)

County Boundary (Black outline)

Property boundary as provided by Kerr Surveying.

0 2 4 Miles

N



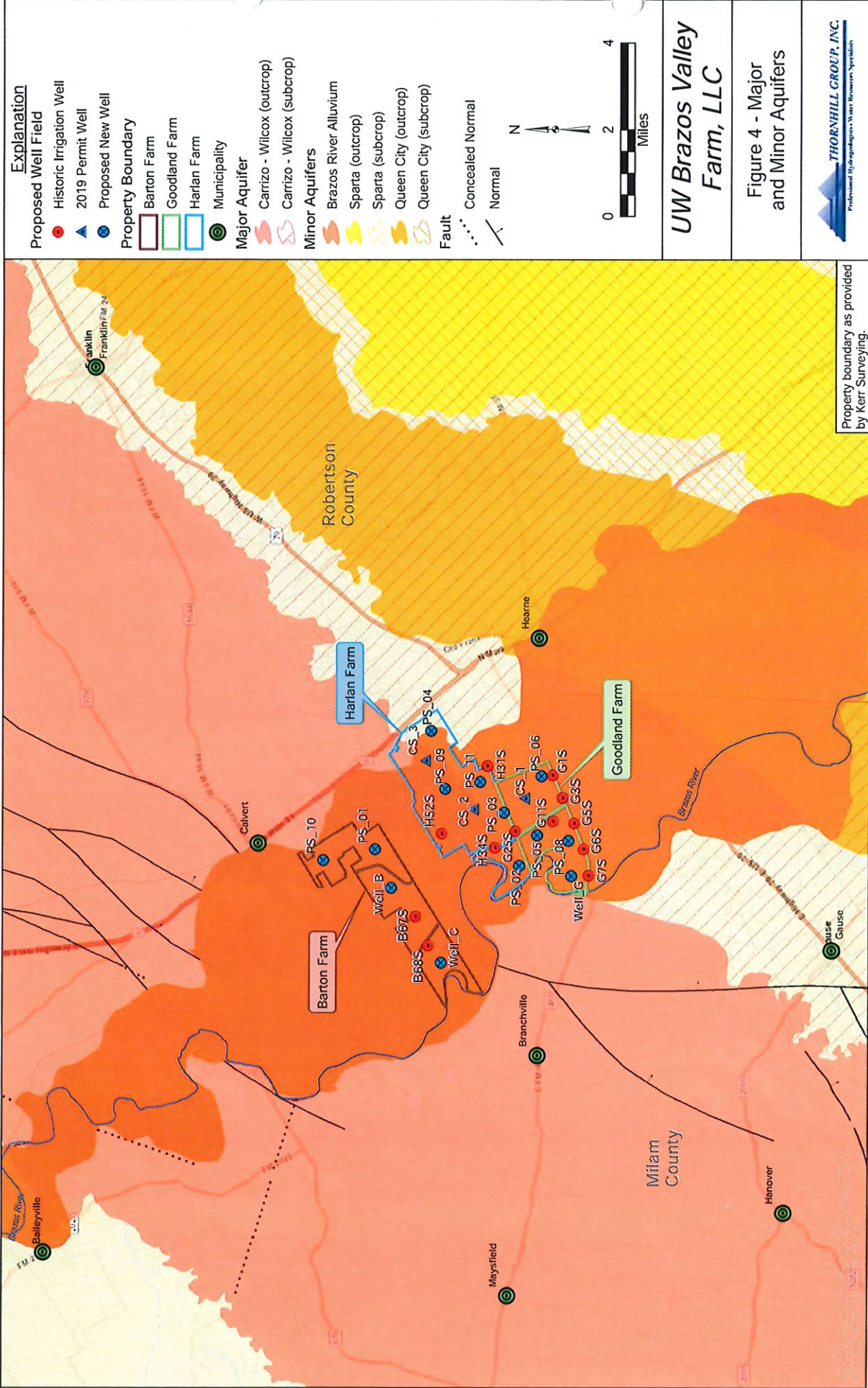
**UW Brazos Valley Farm, LLC**

Figure 1 - General Location









**Explanation**

- Proposed Well Field
- Historic Irrigation Well
- 2019 Permit Well
- Proposed New Well
- Property Boundary
- Barton Farm
- Goodland Farm
- Harlan Farm
- Municipality
- Major Aquifer
- Carrizo - Wilcox (outcrop)
- Carrizo - Wilcox (subcrop)
- Minor Aquifers
- Brazos River Alluvium
- Sparta (outcrop)
- Sparta (subcrop)
- Queen City (outcrop)
- Queen City (subcrop)
- Fault
- Concealed Normal
- Normal



**UW Brazos Valley Farm, LLC**

Figure 4 - Major and Minor Aquifers



Property boundary as provided by Kerr Surveying.

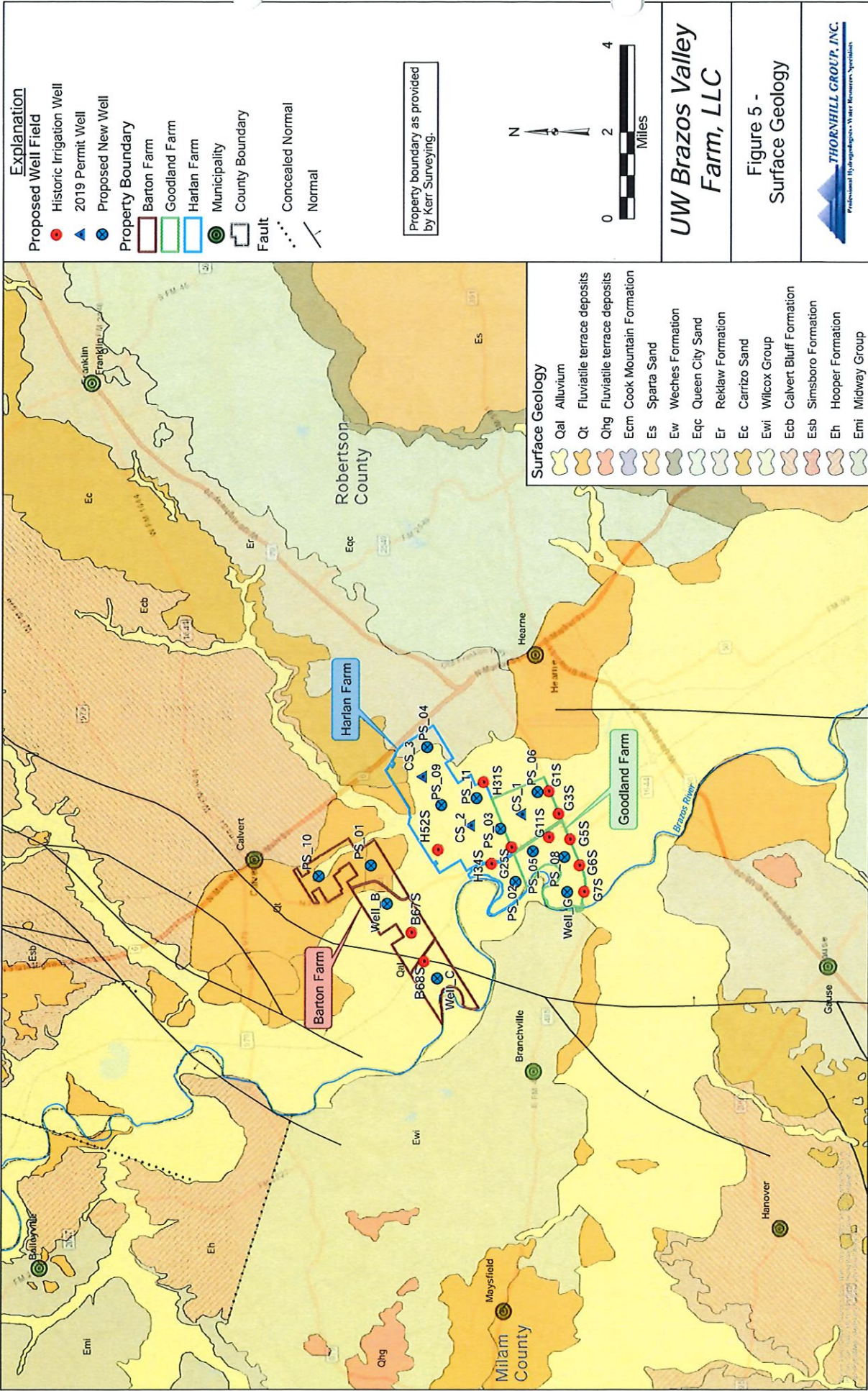


Figure 5 - Surface Geology

**Explanation**

- Proposed Well Field: Red circle
- Historic Irrigation Well: Blue triangle
- 2019 Permit Well: Blue circle
- Proposed New Well: Blue circle with dot
- 1 Mile Radius from Well Locations: Green circle
- 5 Mile Radius from Well Locations: Red circle
- Property Boundary: Pink outline
- Barton Farm: Pink box
- Goodland Farm: Green box
- Harlan Farm: Blue box
- Municipality: Green circle with dot
- County Boundary: Dashed line
- BVGCD Reported Wells Within 5 Miles: Brown circle
- Aquifer:
  - Brazos River Alluvium: Brown circle
  - Carrizo: Red circle
  - Calvert Bluff: Green circle
  - Simsboro: Yellow circle
  - Other: Blue circle

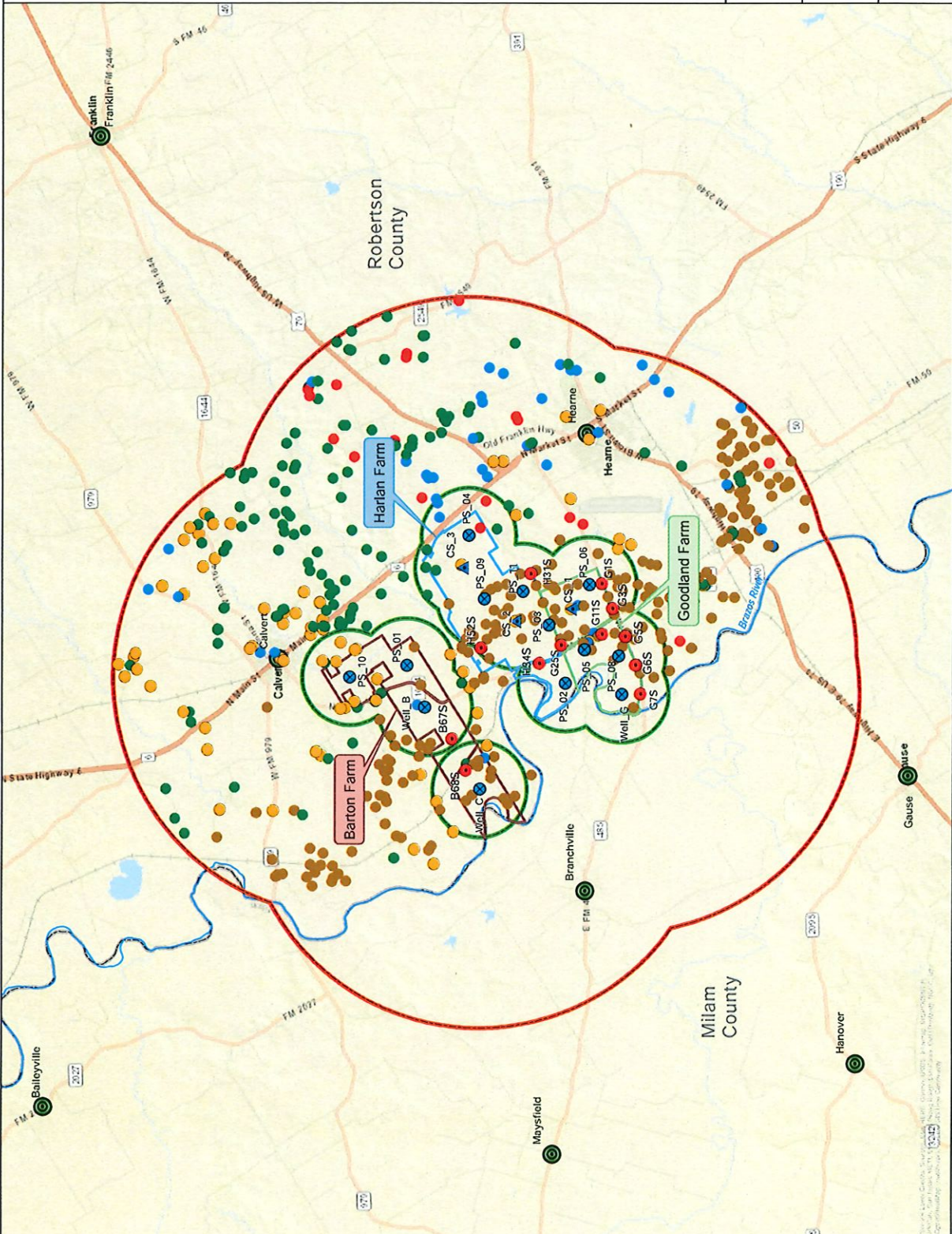
Property boundary as provided by Kerr Surveying.

Scale: 0, 2, 4 Miles

**UW Brazos Valley Farm, LLC**

**Figure 6 - Wells within 5 Miles**

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Professional Hydrogeologic Water Resources Specialists



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**Explanation**

- Proposed Well Field
- Historic Irrigation Well
- 2019 Permit Well
- Proposed New Well
- 1 Mile Radius from Well Locations
- 5 Mile Radius from Well Locations
- Property Boundary
- Barton Farm
- Goodland Farm
- Harlan Farm
- Municipality
- County Boundary
- BVGCD Reported Wells W/in 1 Mile Aquifer
- Brazos River Alluvium
- Carrizo
- Calvert Bluff
- Simsboro
- Other

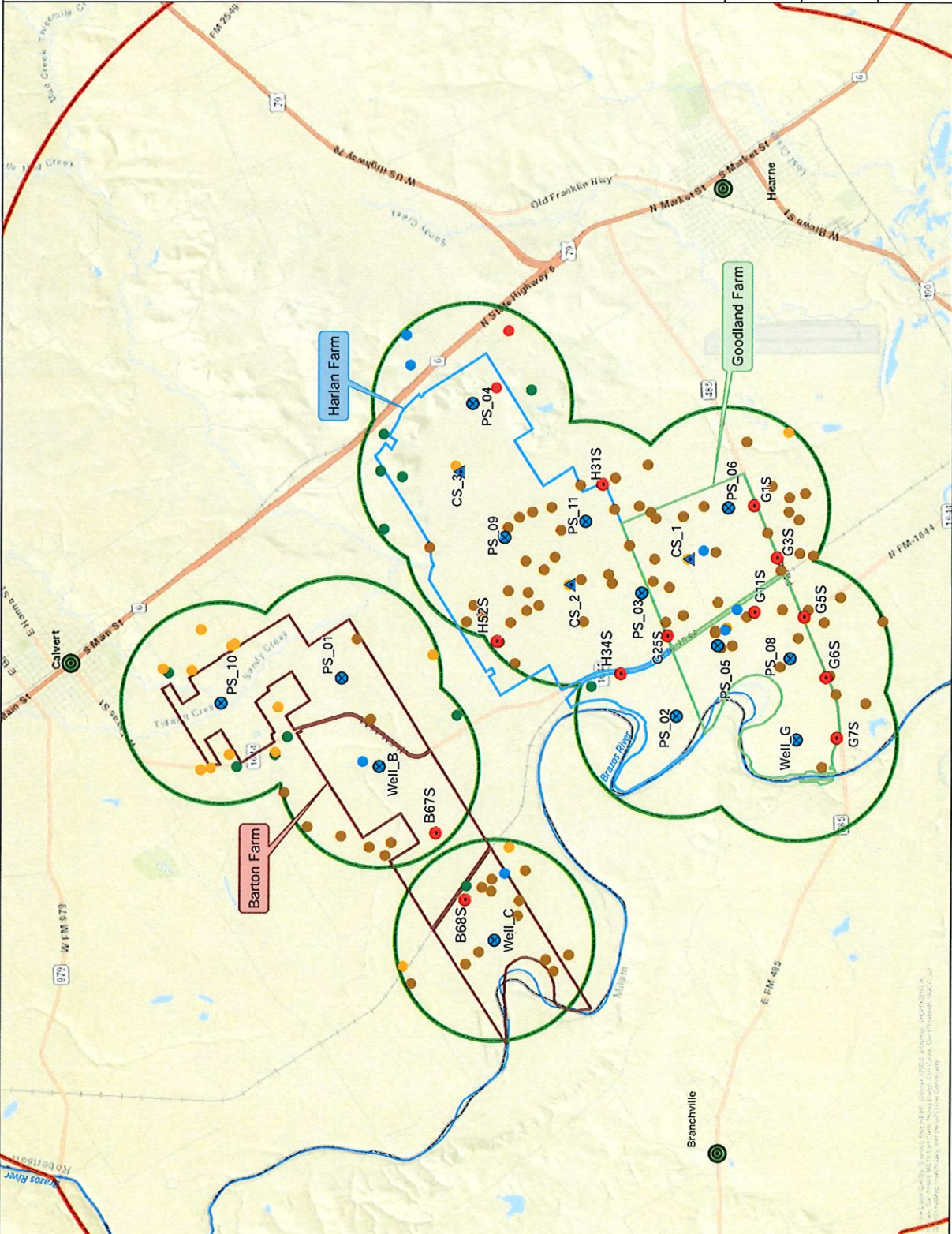
Property boundary as provided by Kerr Surveying.

0 5,000 10,000 Feet

N

# UW Brazos Valley Farm, LLC

Figure 7 - Wells within 1 Mile



Prepared by: [Name], Date: [Date]  
 Project: [Project Name]  
 Scale: [Scale]  
 Contour Interval: [Contour Interval]  
 Elevation: [Elevation]





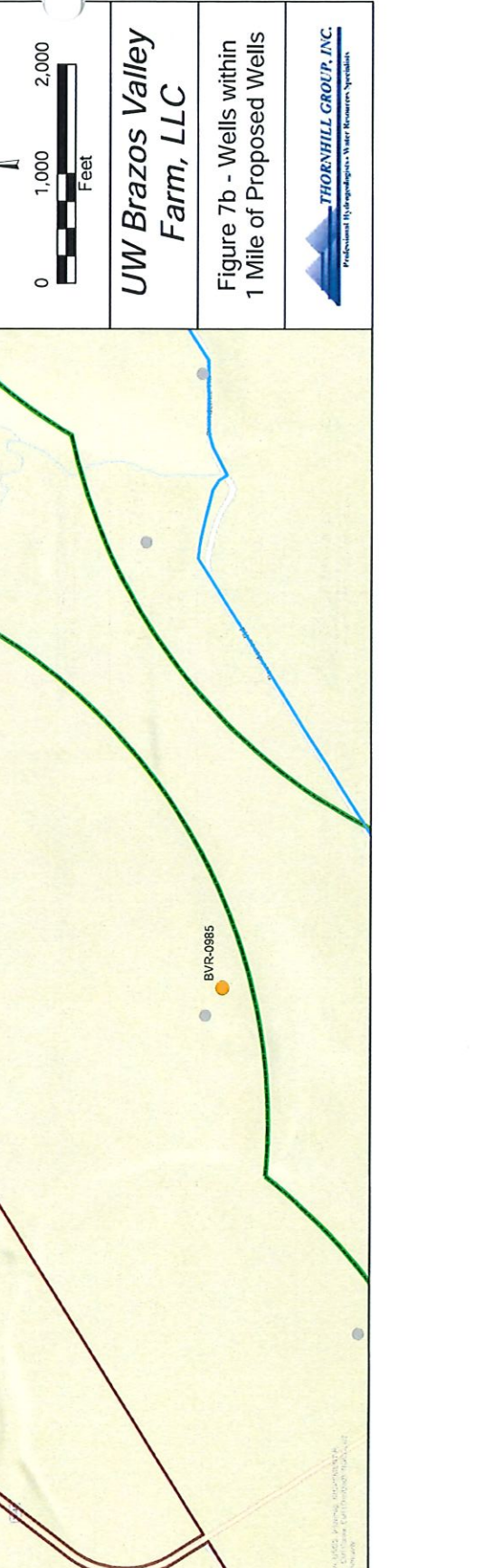
- Explanation**
- Proposed Well Field
  - Proposed New Well
  - 1 Mile Radius from Well Locations
  - Property Boundary
  - Barton Farm
  - Harlan Farm
  - BVGCD Reported Wells Within 1 Mile
  - Aquifer
  - Simsboro
  - Other Formation

Property boundary as provided by Kerr Surveying.



# UW Brazos Valley Farm, LLC

Figure 7b - Wells within 1 Mile of Proposed Wells





- Explanation**
- Proposed Well Field
  - Proposed New Well (blue dot)
  - Historic Irrigation Well (red dot)
  - 1 Mile Radius from Well Locations (green circle)
  - Property Boundary
  - Barton Farm (brown outline)
  - Harlan Farm (blue outline)
  - BVGCD Reported Wells W/in 1 Mile Aquifer
  - Simsboro (yellow dot)
  - Other Formation (grey dot)

Property boundary as provided by Kerr Surveying.

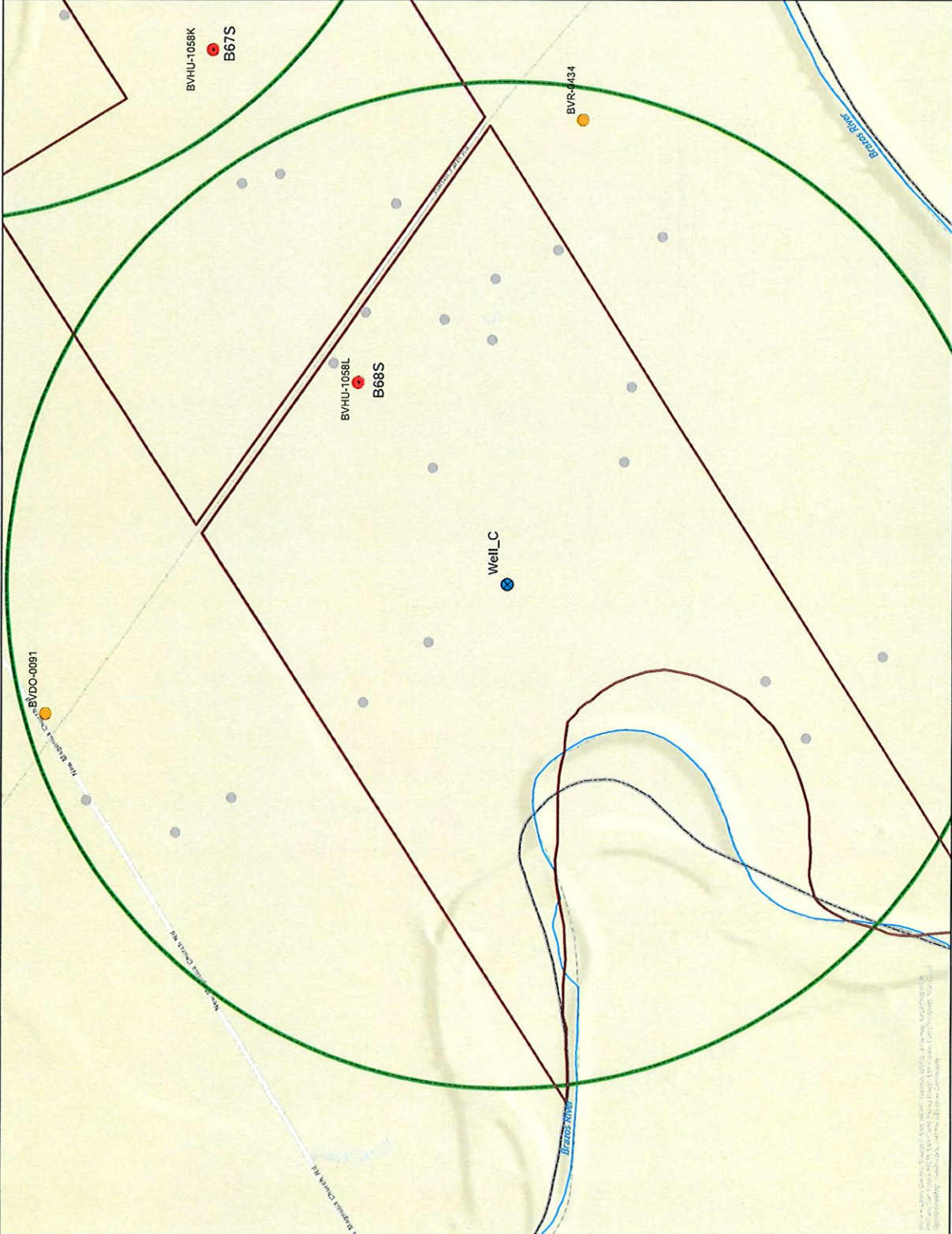


## UW Brazos Valley Farm, LLC

Figure 7c - Wells within 1 Mile of Proposed Wells



Soil Data: County, Survey, Spot, Date, Station, UTM, Elevation, Area, Perimeter, Top, Bottom, and Volume Calculated. Data Source: County, Survey, Spot, Date, Station, UTM, Elevation, Area, Perimeter, Top, Bottom, and Volume Calculated. Data Source: County, Survey, Spot, Date, Station, UTM, Elevation, Area, Perimeter, Top, Bottom, and Volume Calculated.



- Explanation**
- Proposed Well Field
  - Proposed New Wells
  - Historic Irrigation Well
  - 1 Mile Radius from Well Locations
  - Property Boundary
  - Barton Farm
  - County Boundary
  - BVGCD Reported Wells Within 1 Mile
  - Aquifer
  - Simsboro
  - Other Formation

Property boundary as provided by Kerr Surveying.



# UW Brazos Valley Farm, LLC

Figure 7d - Wells within 1 Mile of Proposed Wells



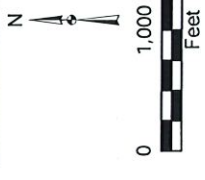
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- Explanation**
- Proposed Well Field
  - ▲ 2019 Permit Well
  - Proposed New Well
  - Historic Well Not Utilized
  - 1 Mile Radius from Well Locations
  - Property Boundary
  - ▭ Barton Farm
  - ▭ Harlan Farm
  - ▭ County Boundary
  - BVGCD Reported Wells Within 1 Mile Aquifer
  - Simsboro
  - Other Formation

Property boundary as provided by Kerr Surveying.



# UW Brazos Valley Farm, LLC

Figure 7f - Wells within 1 Mile of Proposed Wells



**Explanation**

**Proposed Well Field**

- ▲ 2019 Permit Well
- Proposed New Well
- Historic Irrigation Well
- Domestic Well

○ 1 Mile Radius from Well Locations

**Property Boundary**

- Goodland Farm
- Harlan Farm
- County Boundary

**BVGCD Reported Wells W/in 1 Mile Aquifer**

- Simsboro
- Other Formation

Property boundary as provided by Kerr Surveying.

0 1,000 2,000 Feet

N

**UW Brazos Valley Farm, LLC**

**Figure 7g - Wells within 1 Mile of Proposed Wells**

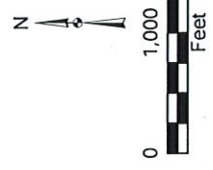
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Professional Hydrogeologic Water Resources Specialists





- Explanation**
- Proposed Well Field
  - ▲ 2019 Permit Well
  - Proposed New Well
  - Historic Irrigation Well
  - 1 Mile Radius from Well Locations
  - Property Boundary
  - Goodland Farm
  - Harlan Farm
  - BVGCD Reported Wells W/in 1 Mile
  - Aquifer
  - Simsboro
  - Other Formation

Property boundary as provided by Kerr Surveying.










# UW Brazos Valley Farm, LLC

## Figure 7h - Wells within 1 Mile of Proposed Wells





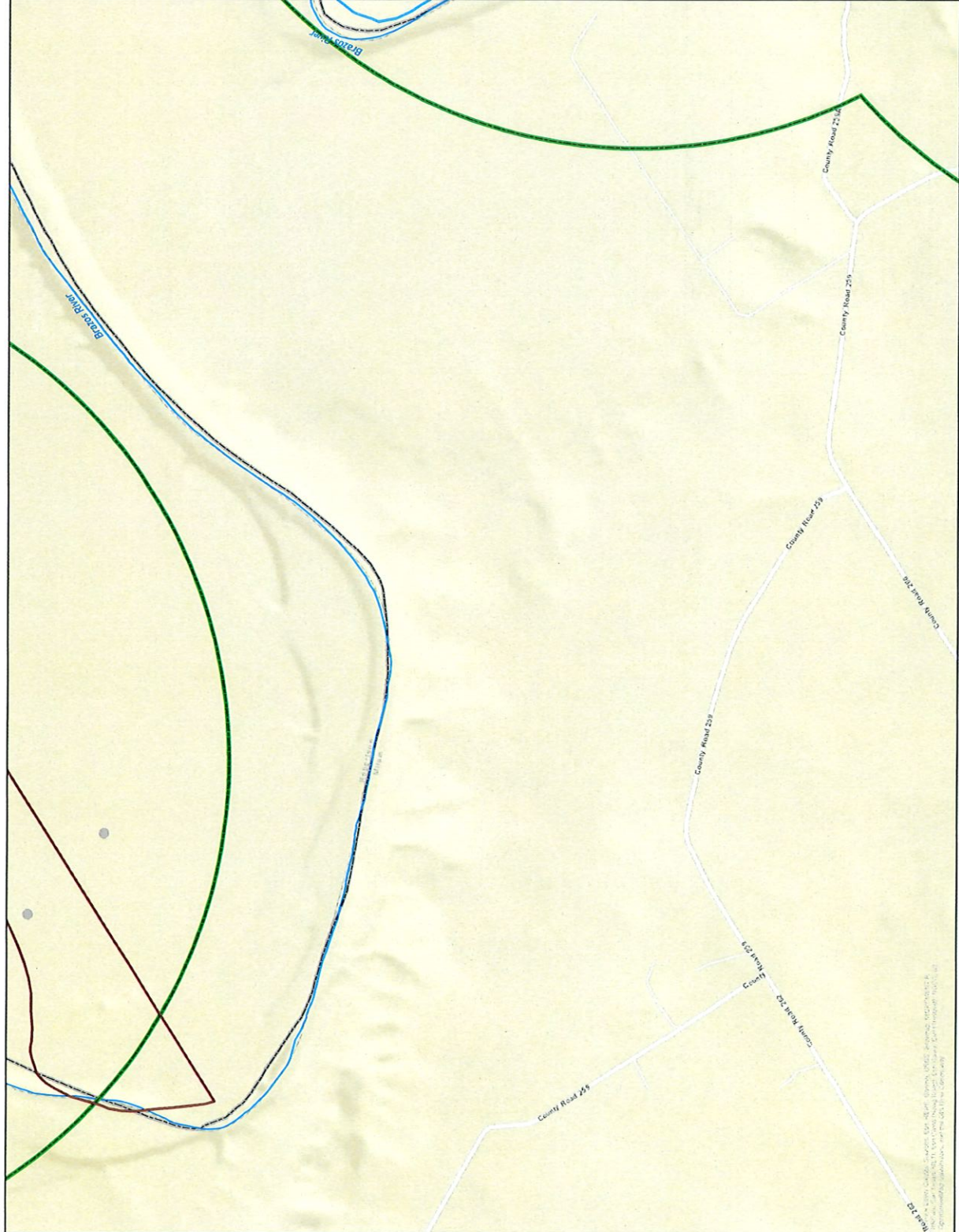
- Explanation**
-  1 Mile Radius from Well Locations
  -  Property Boundary
  -  Barton Farm
  -  Harlan Farm
  -  County Boundary
  -  BVGCD Reported Wells W/in 1 Mile Aquifer
  -  Other Formation

Property boundary as provided by Kerr Surveying.



# UW Brazos Valley Farm, LLC

Figure 71 - Wells within 1 Mile of Proposed Wells



Map 218  
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**Explanation**

- Proposed Well Field
- Proposed New Well
- Historic Irrigation Well
- Domestic Well
- 1 Mile Radius from Well Locations
- Property Boundary
- Goodland Farm
- County Boundary
- BVGCD Reported Wells Within 1 Mile
- Aquifer
- Simsboro
- Other Formation

Property boundary as provided by Kerr Surveying.

0 1,000 2,000 Feet

N

**UW Brazos Valley Farm, LLC**

Figure 7j - Wells within 1 Mile of Proposed Wells

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**Explanation**

- Proposed Well Field
- 2019 Permit Well
- Proposed New Well
- Historic Irrigation Well
- Domestic Well
- 1 Mile Radius from Well Locations
- Property Boundary
- Goodland Farm
- BVGCD Reported Wells W/in 1 Mile
- Aquifer
  - Simsboro
  - Other Formation

Property boundary as provided by Kerr Surveying.

0 1,000 2,000 Feet

N

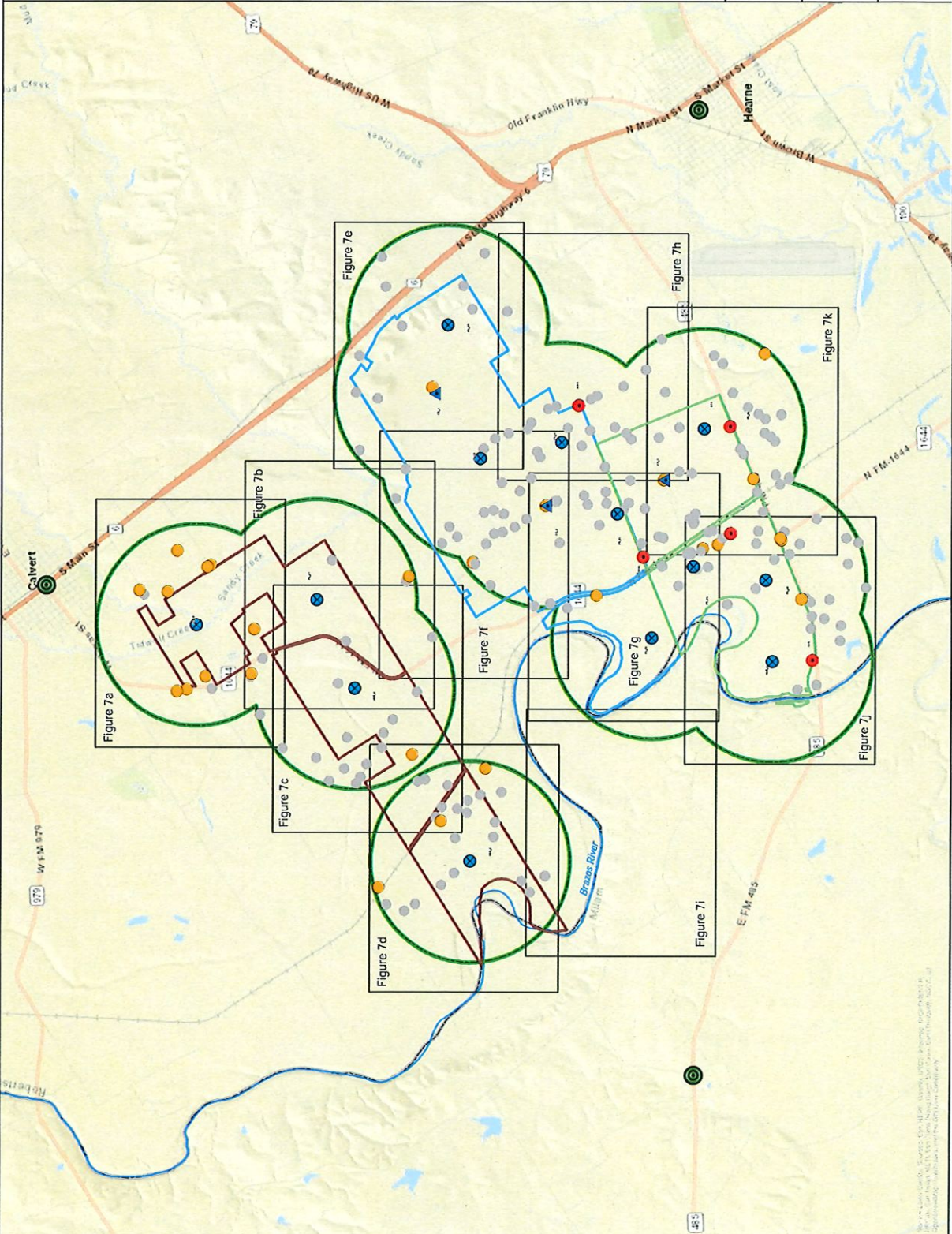
**UW Brazos Valley Farm, LLC**

Figure 7k - Wells within 1 Mile of Proposed Wells

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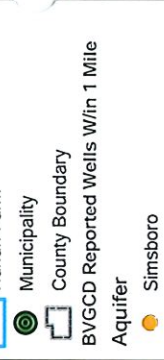


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- Explanation**
- Proposed Well Field
  - Historic Irrigation Well
  - 2019 Permit Well
  - Proposed New Well
  - 1 Mile Radius from Well Locations
  - Property Boundary
  - Barton Farm
  - Goodland Farm
  - Harlan Farm
  - Municipality
  - County Boundary
  - BVGCD Reported Wells W/in 1 Mile Aquifer
  - Simsboro
  - Other Formation

Property boundary as provided by Kerr Surveying.



# UW Brazos Valley Farm, LLC

Figure 7i - Wells within 1 Mile Index Map

Figure 8 - Geophysical Log – CS-1 (BVGCD No. BVDO- )

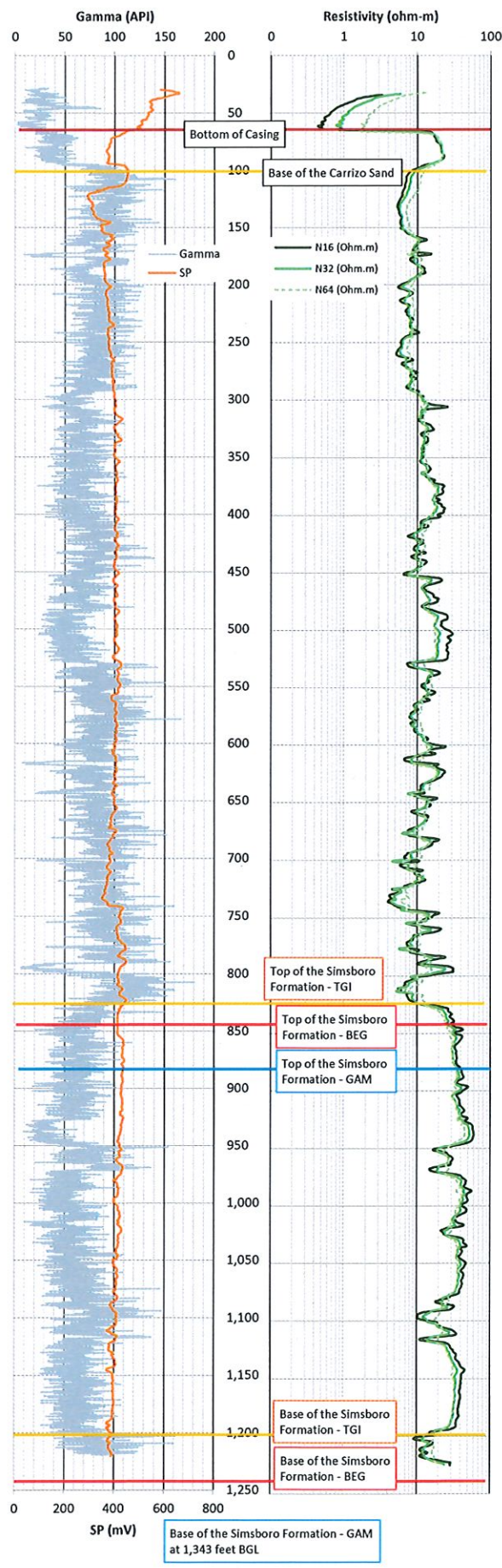


Figure 9 - Geophysical Log – CS-2 (BVGCD No. BVDO- )

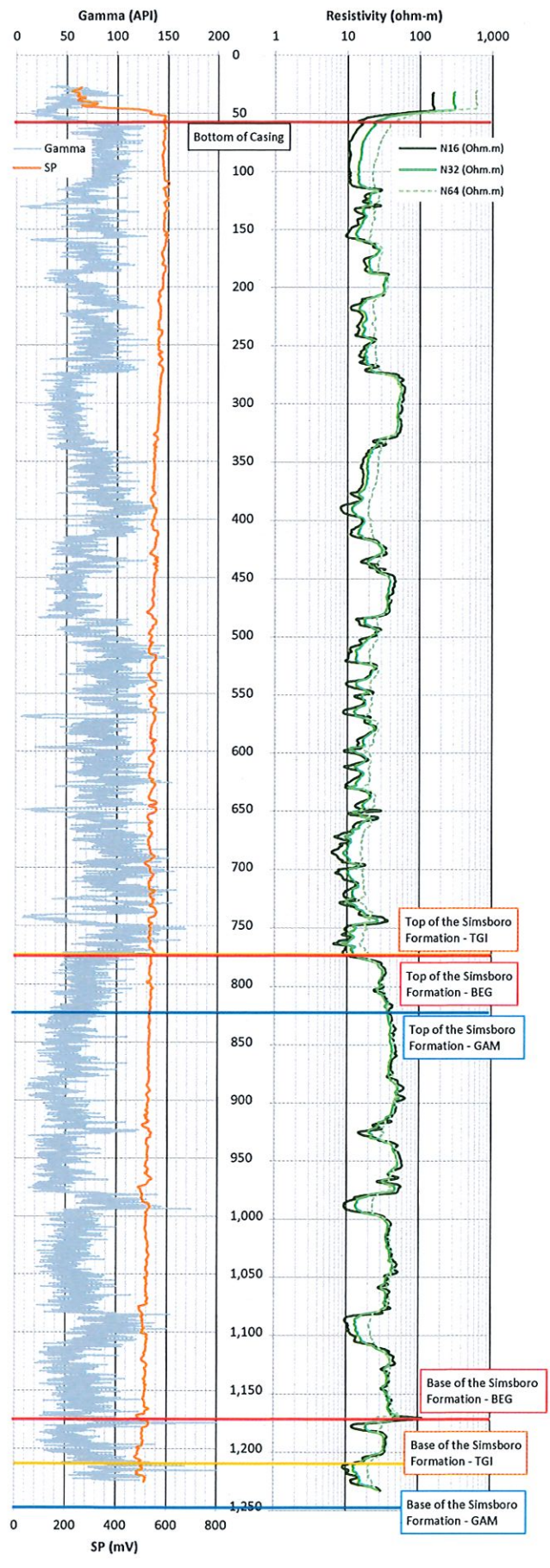
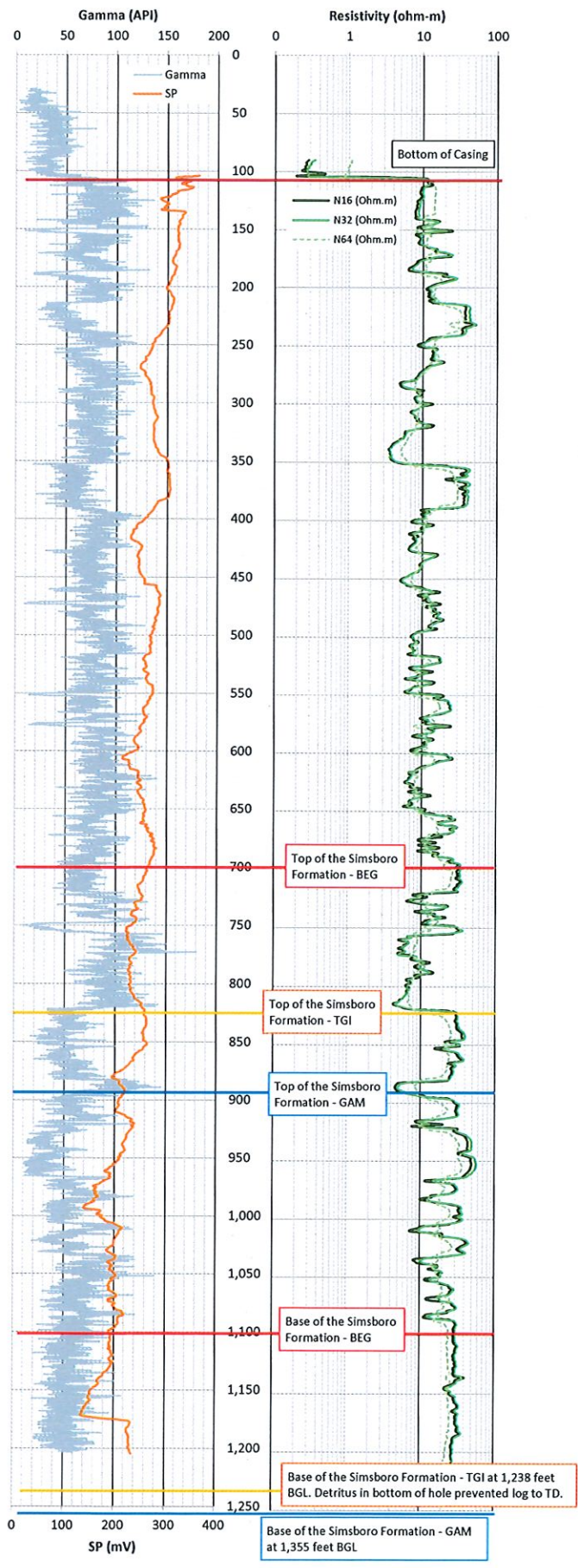
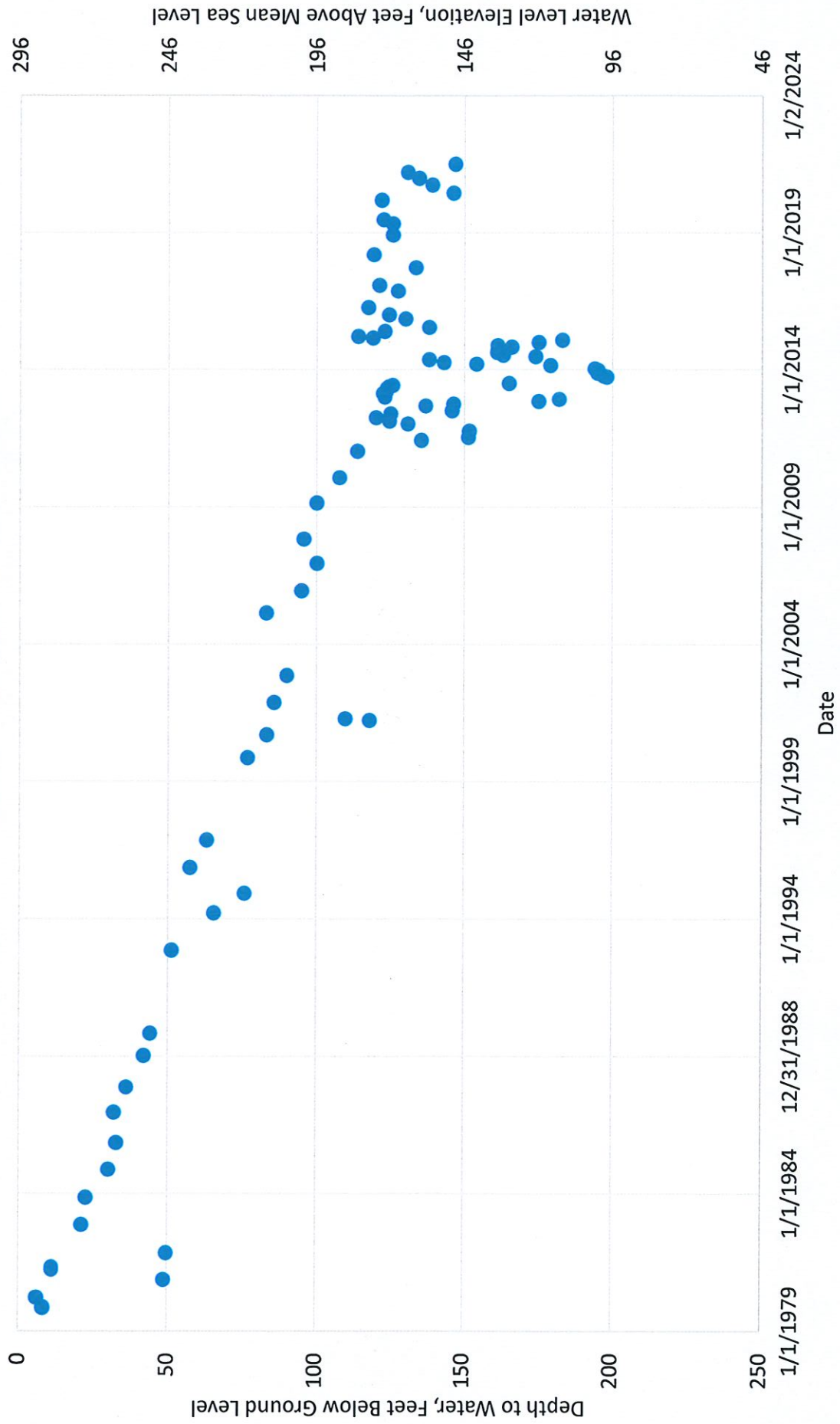


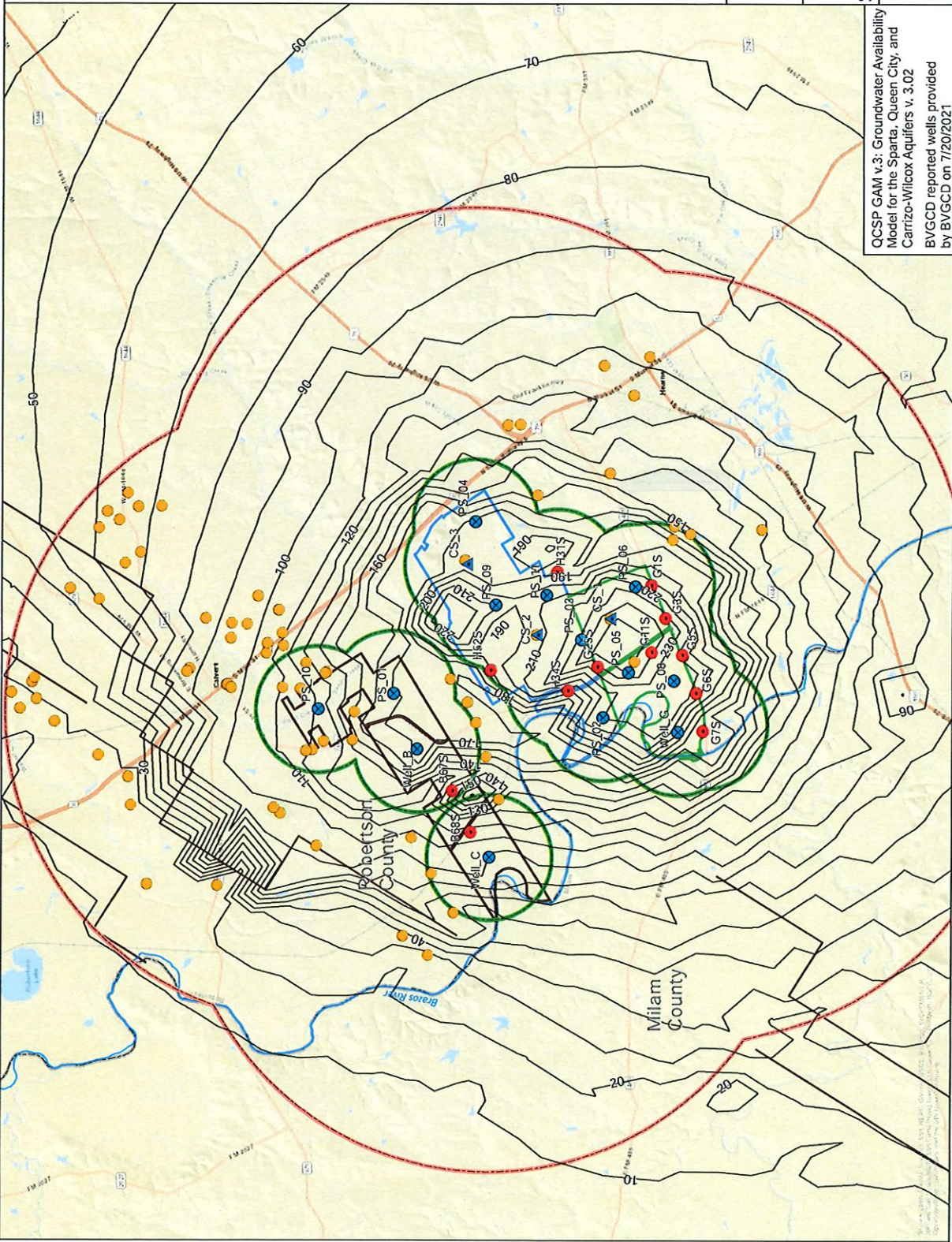
Fig 10 - Geophysical Log – CS-3 (BVGCD No. BVDO 6)



**Figure 11 – City of Hearne Well No. 4  
Texas Water Development Board Number 59-04-701**

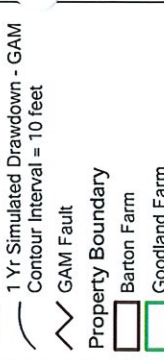






- Explanation**
- Proposed Well Field
  - Historic Irrigation Well
  - 2019 Permit Well
  - Proposed New Well
  - BVGCD Reported Well Completed in the Simsboro and W/in 5 Miles
  - 1 Mile Radius from Well Locations
  - 5 Mile Radius from Well Locations
  - County Boundary
  - 1 Yr Simulated Drawdown - GAM
  - Contour Interval = 10 feet
  - GAM Fault
  - Property Boundary
  - Barton Farm
  - Goodland Farm
  - Harlan Farm

Property boundary as provided by Kerr Surveying.

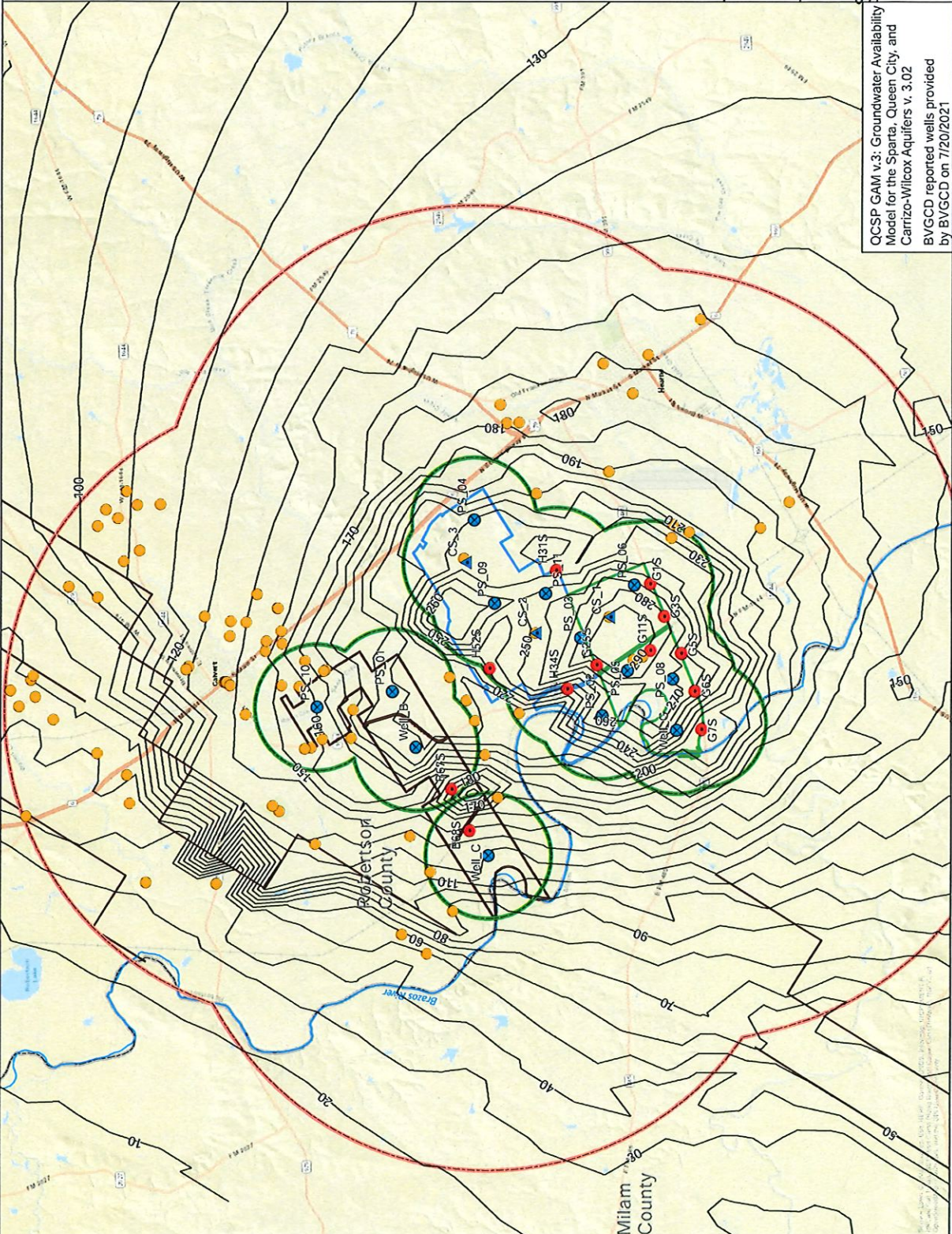


## UW Brazos Valley Farm, LLC

Figure 12 -  
QCSP GAM v.3  
Simulated Drawdown - 1 Year

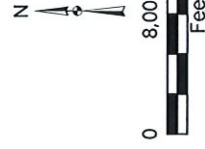


QCSP GAM v.3: Groundwater Availability Model for the Sparta, Queen City, and Carrizo-Wilcox Aquifers v. 3.02  
BVGCD reported wells provided by BVGCD on 7/20/2021



- Explanation**
- Proposed Well Field
  - Historic Irrigation Well
  - 2019 Permit Well
  - Proposed New Well
  - BVGCD Reported Well Completed in the Simsboro and W/in 5 Miles
  - 1 Mile Radius from Well Locations
  - 5 Mile Radius from Well Locations
  - County Boundary
  - 10 Yr Simulated Drawdown - GAM
  - Contour Interval = 10 feet
  - GAM Fault
  - Property Boundary
  - Barton Farm
  - Goodland Farm
  - Harlan Farm

Property boundary as provided by Kerr Surveying.

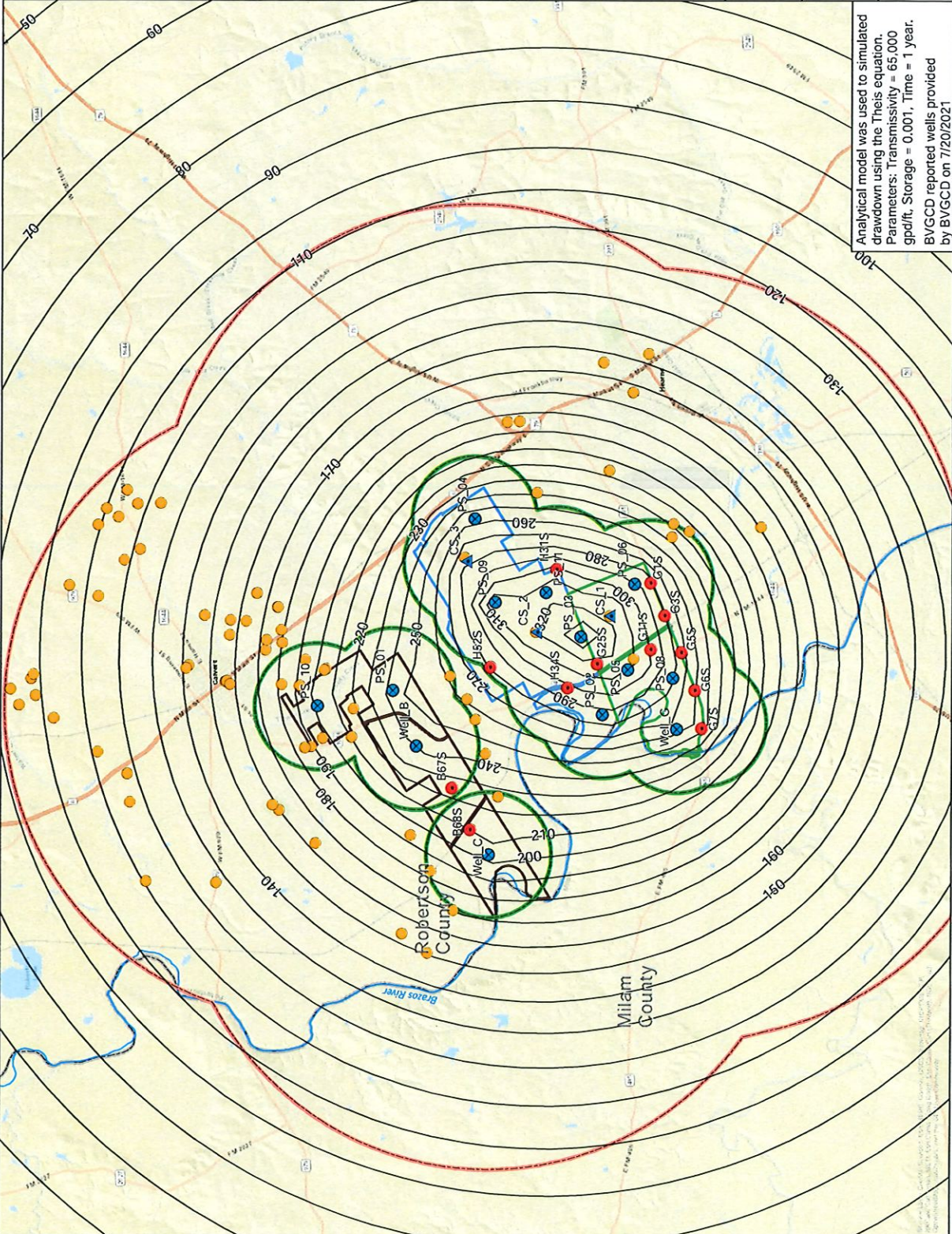


# UW Brazos Valley Farm, LLC

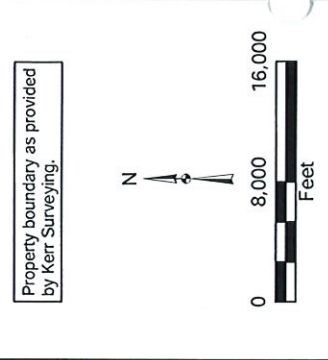
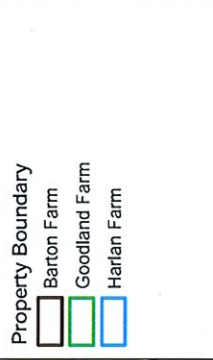
Figure 13 -  
QCSP GAM v.3  
Simulated Drawdown - 10 Year



QCSP GAM v.3: Groundwater Availability Model for the Sparta, Queen City, and Carrizo-Wilcox Aquifers v. 3.02  
BVGCD reported wells provided by BVGCD on 7/20/2021



- Explanation**
- Proposed Well Field
  - Historic Irrigation Well
  - 2019 Permit Well
  - Proposed New Well
  - BVGCD Reported Well Completed in the Simsboro and W/in 5 Miles
  - 1 Mile Radius from Well Locations
  - 5 Mile Radius from Well Locations
  - County Boundary
  - 1 Yr Simulated Drawdown Analytical Contour Interval = 10 feet
  - Property Boundary
  - Barton Farm
  - Goodland Farm
  - Harlan Farm

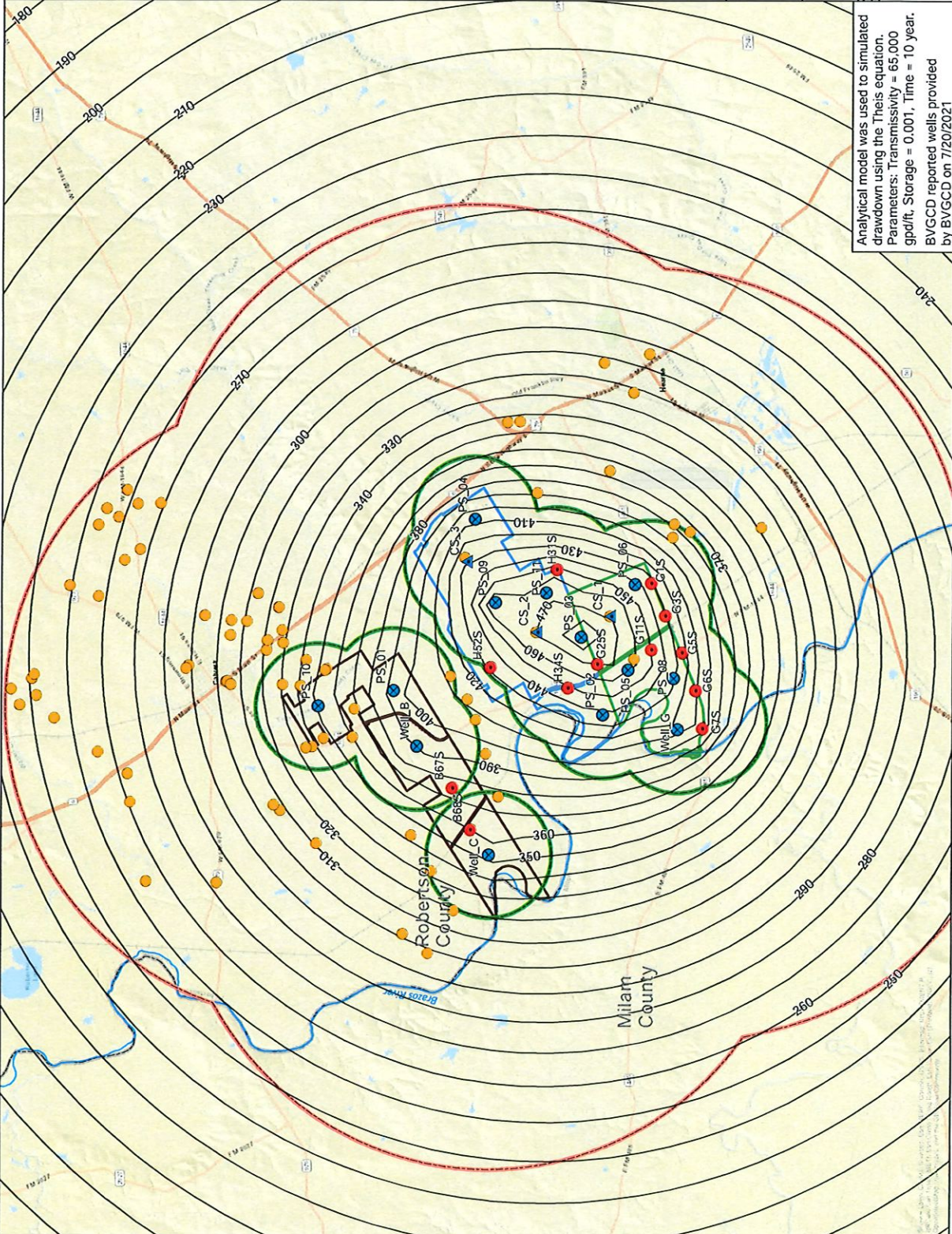


**UW Brazos Valley Farm, LLC**

**Figure 14 - Analytical Model Simulated Drawdown - 1 Year**



Analytical model was used to simulated drawdown using the Theis equation.  
 Parameters: Transmissivity = 65,000 gpd/ft. Storage = 0.001, Time = 1 year.  
 BVGCD reported wells provided by BVGCD on 7/20/2021



- Explanation**
- Proposed Well Field
  - Historic Irrigation Well
  - 2019 Permit Well
  - Proposed New Well
  - BVGCD Reported Well Completed in the Simsboro and W/in 5 Miles
  - 1 Mile Radius from Well Locations
  - 5 Mile Radius from Well Locations
  - County Boundary
  - 1 Yr Simulated Drawdown Analytical Contour Interval = 10 feet

- Property Boundary**
- Barton Farm
  - Goodland Farm
  - Hartan Farm

Property boundary as provided by Kerr Surveying.



# UW Brazos Valley Farm, LLC

Figure 15 - Analytical Model Simulated Drawdown - 10 Year



Analytical model was used to simulated drawdown using the Theis equation.  
 Parameters: Transmissivity = 65,000  
 gpd/ft, Storage = 0.001, Time = 10 year.  
 BVGCD reported wells provided by BVGCD on 7/20/2021