

January 18, 2017

# MEMORANDUM

To: Brian Hunt

From: Tom Grimshaw

Subject: Notes and Revised Geologic Map for Tyler Property Field Visit, January 13, 2017

As part of our continuing joint mapping of the Mountain City Quadrangle, we made a field visit to the Tyler Property on January 13, 2017<sup>1</sup>. During this highly successful visit, we made nine stops to check outcrops and "ground truth" the photogeology. The descriptions of the stops are in Attachment A, and the locations of the are shown in Attachment B, and. Photos taken at Stops 5, 8, and 9 are in Attachment C.

Quite a few changes were made in the geologic map as a result of the visit, including the map of the northern part of the adjacent Dahlstrom Ranch. The revised photo geology is shown in Attachment D. The revised geologic map on the topographic base map is in Attachment E.

I look forward to working with you on this next "piece of the puzzle" for geologic mapping of the Mountain City quad.

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<sup>1</sup> Plans for the trip appeared as follows: "Next Field Visit Proposal: Second Visit to Barber Falls Area". Memo to Brian Hunt from Tom Grimshaw, December 21, 2016.

## Attachment A.

### Descriptions of Stops During Field Visit to Tyler Property, January 13, 2017

Arrived in field about 1:00 pm.

#### 1. Short Distance West of Entrance Gate.

Stopped on the north side of the entrance road. Tried to confirm whether Edwards or Buda. Subsequently confirmed as Edwards (Stop 7).

#### 2. North-South Stretch of Entrance Road.

Sought to confirm north-south cross-fault along road and fenceline by contrasting rock types on either side – Edwards on west, Georgetown on east. Observed second sinkhole (the first sinkhole is the larger sink to the east, previously visited). Hypothesize sinkholes in Georgetown collapsed into Edwards. Decided the flat surface on the east side of the fault is a terrace of Sink Creek, similar to feature on south side of Sink Creek at bridge crossing (1826). Decided that the evidence is sufficient for a cross fault. Discussed rollover into ramps versus cross fault "breaks" between en echelon faults.

#### 3. Georgetown Outcrop on the North Bank of Sink Creek.

Confirmed outcrop from previous field visit. Edwards below in the streambed above Barber Falls. Need to map Georgetown at fault. Observed rounded pebbles and cobbles confirming terrace origin of flat surface (Stop 2).

#### 4. Route West and North along the Dahlstrom Ranch Boundary

Confirmed Edwards or Georgetown along the route. Observed small former sinkhole. Not able to confirm Georgetown as tentatively mapped in one of the large fault blocks. Found Edwards fault blocks extending eastward.

#### 5. Man-Made Excavation in Northwest Corner of Tyler Property

Observed Del Rio excavated with surrounding embankments. Rectangular shape. Apparent Del Rio excavation down to Georgetown. Standing water and water plants (cattails) observed.

#### 6. Road East and South Along Property Boundary

Observed Edwards in northeast extent of property. Burrowed limestone.

#### 7. Stop at Corral on North Side of Entrance Road

Observed Edwards; confirmed not Buda. Requires change in mapping of faults.

#### 8. House on Hilltop

Tried to confirm Del Rio. Found Georgetown bedrock instead on south side of fence. Remapping needed.

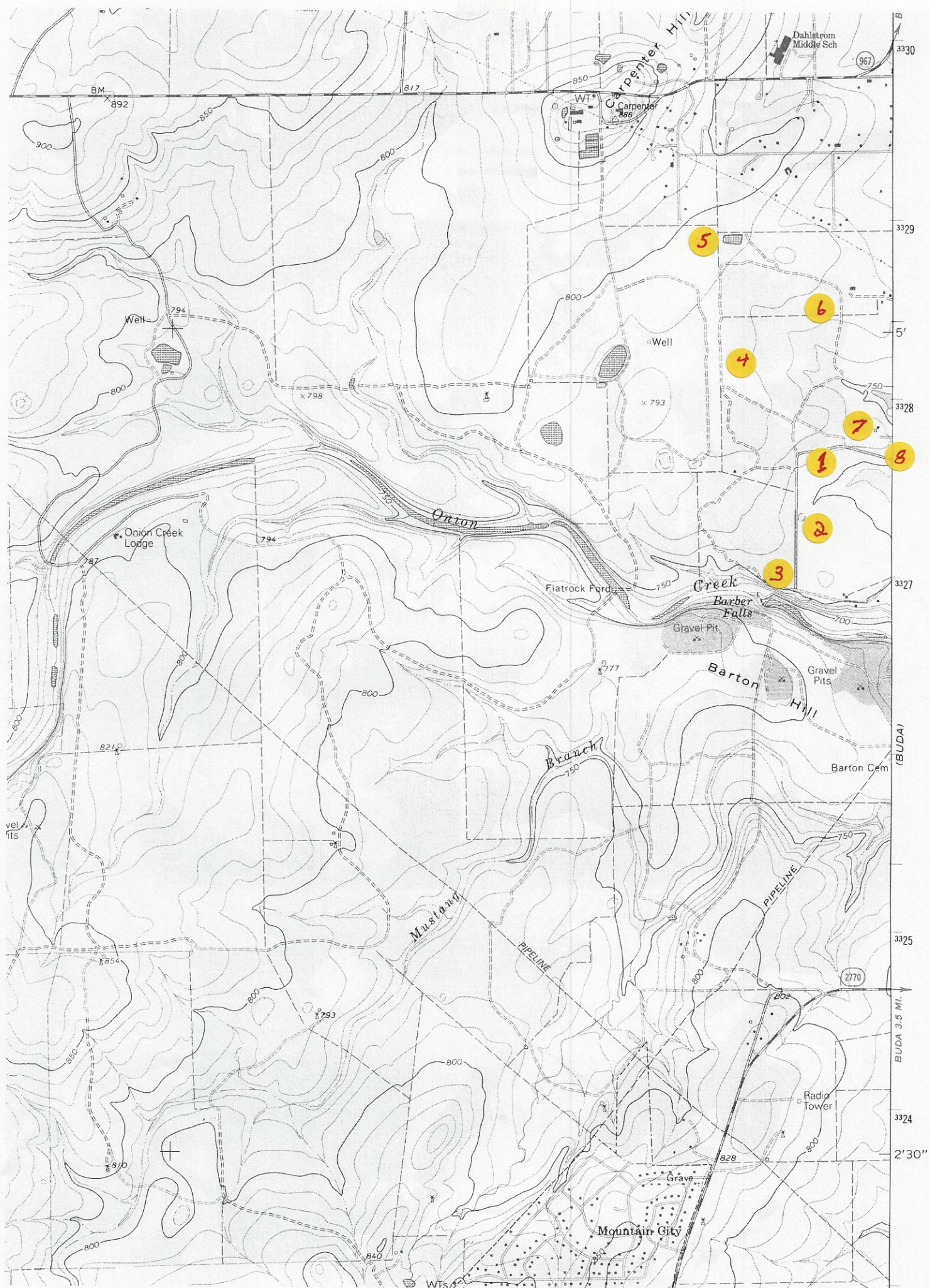
#### 9. Revisit of Georgetown Outcrop on South Side of Creek

Georgetown apparently extends north to the hilltop at Stop 8. Need to remap. Walked up the creek but observed no more outcrops.

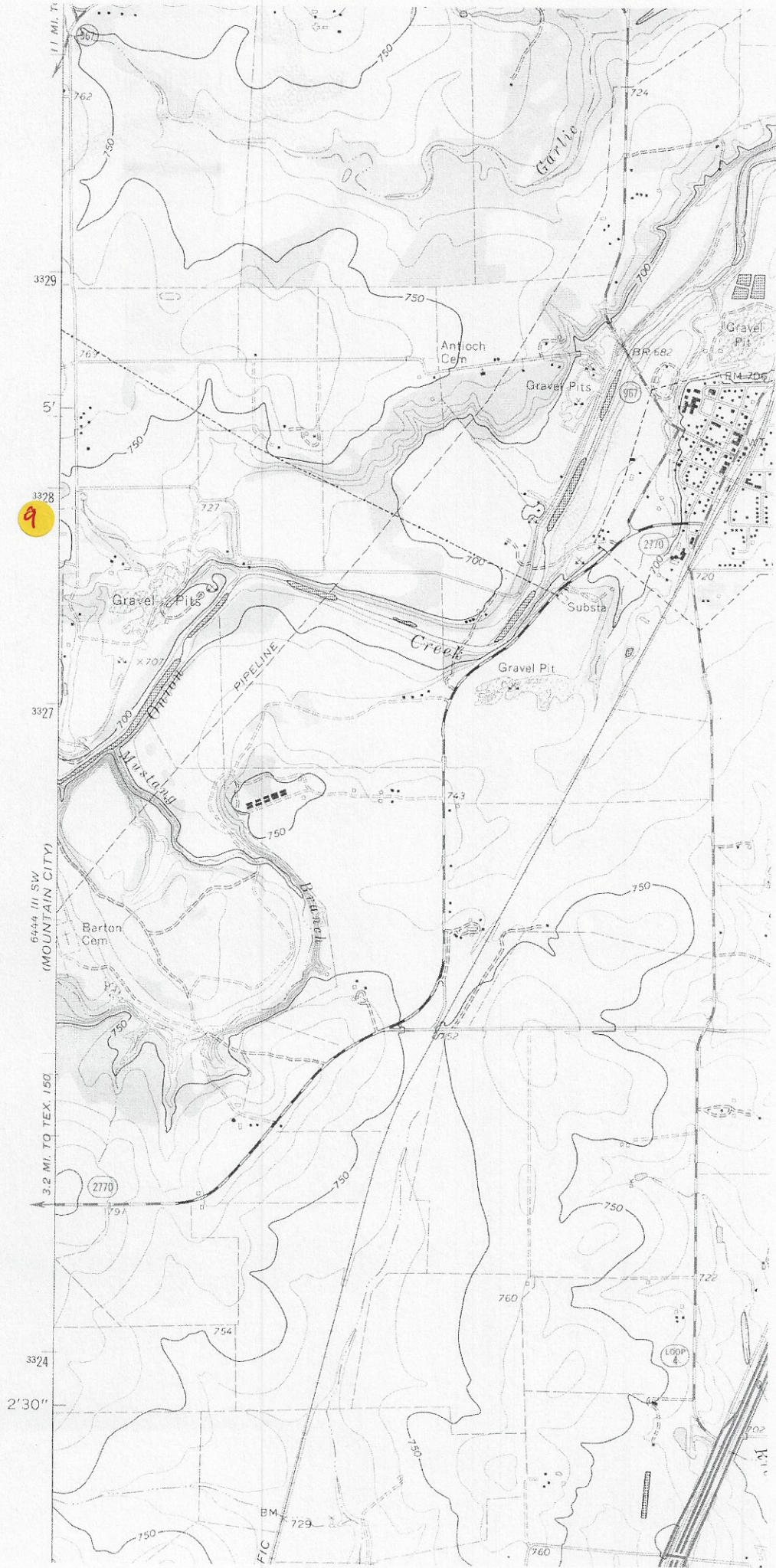
Left field at about 4:30 p.m.

Attachment B.  
Locations of Field Stops











Attachment C.

Photos at Field Stops

A. Rectangular Impoundment Cut in Del Rio Formation, (Above – Eastward View of North Embankment; Below, Southward View of West Embankment) (Stop 5)



C. Georgetown Formation Outcrop with Overlying Rounded Pebbles and Cobbles of Terrace Gravel Deposit (Stop 8)



C. Georgetown Formation Outcrop on North Bank of Small Onion Creek Tributary the Near East Boundary of Tyler Property (Stop 9)



Attachment D.

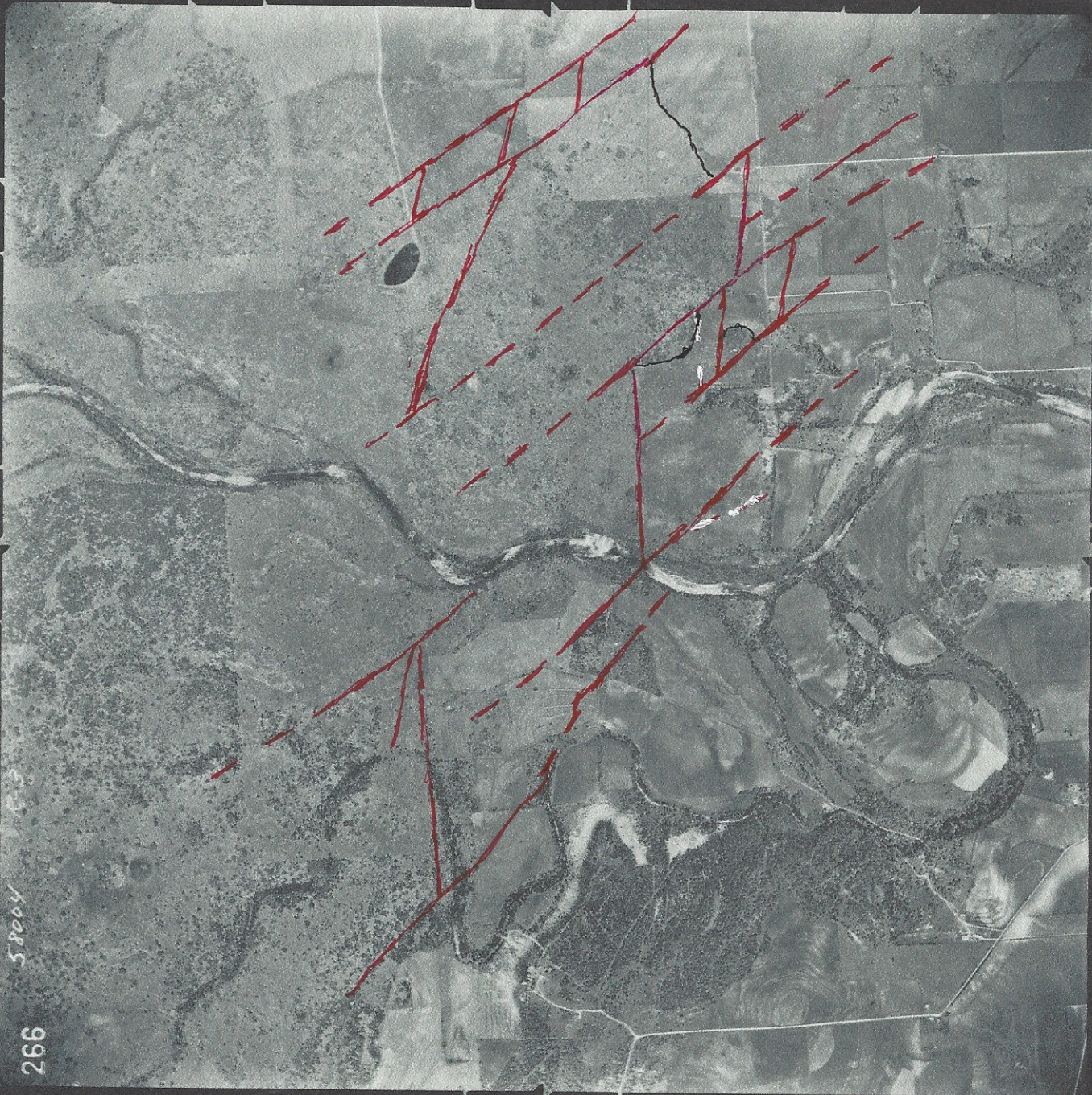
Photogeology of Tyler Property Area



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Attachment E.

Revised Geologic Map of Tyler Property Area



