

January 13, 2015

MEMORANDUM

To: Brian Hunt, Brian Smith, Justin Camp (BSEACD)
From: Tom Grimshaw
Subject: Report for Barber Falls Field Trip, December 16, 2015.
Attendees: Brian Hunt, Brian Smith, Justin Camp, and Tom Grimshaw

Thanks again for the field trip to Barber Falls on Onion Creek last month. The trip will be very helpful for our mapping project for the Mountain City quadrangle.

As you will recall, you and others had made a site visit previously for Onion Creek flow studies and to document the observed geology. Your summary of that visit, shown in Attachment A, was reviewed briefly before our December 16 field trip.

We departed from BSEACD office at about 9:15 am. A summary of the “stops” made at and in the vicinity of Barber Falls is provided below.

Stop 1. Upper Falls.

- Primarily a photo stop. See Attachment B.

Stop 2. Lower Falls

- Again a photo stop in part. See Attachment C.
- Pool into which the cascade is flowing is likely to be a former collapsed sinkhole, as observed previously
- Observed small-displacement fault at falls location. Hunt obtained strike and dip: N40°E, 12°SE. Photo in Attachment D.
- Had extensive discussions with Flora Marvin, local resident providing Barber Falls access.

Stop 3. Downstream Outcrops

- Hunt crossed the creek to south bank in spite of considerable flow to examine Georgetown-Del Rio exposure and fault outcrops. Obtained strike and dip of two small displacement faults: both N40°E, 60°NW. Photo is in Attachment E.
- Camp photographed small slump in Del Rio outcrop (Attachment F).

Stop 4. North Bank of Onion Creek

- Confirmed Del Rio on north bank to guide geologic mapping.
- Noted many blocks of Edward limestone around the north bank apparently transported in for unknown construction or other purpose.
- Hunt also observed Georgetown outcrop further upstream on upthrown side of fault.

Stop 5. Sinkhole Depression

- Made field observation of apparent sink northeast of Barber Falls and just west of FM 1836 that is readily visible on air photos.
- Noted standing water in the depression from a recent rainfall. No outcrops observed. Concluded that there is unlikely to be a layer of Buda limestone on top of the Del Rio clay that underlies the sinkhole
- Flat surface is likely to be an Onion Creek terrace.

Stop 6. Edwards Limestone Outcrop near Fault

- Apparent Edwards rather than Buda Limestone as indicated in preliminary air photo mapping. Re-mapping will be required, with more field checks.

Stop 7. Buda Limestone Cap on Small Hillock

- Limestone cap surrounded by Del Rio Clay. Confirmed as Buda Limestone. Could be a slump block feature. Presents more mapping challenges.

Stop 8. Georgetown Outcrop on South Bank of Small Creek

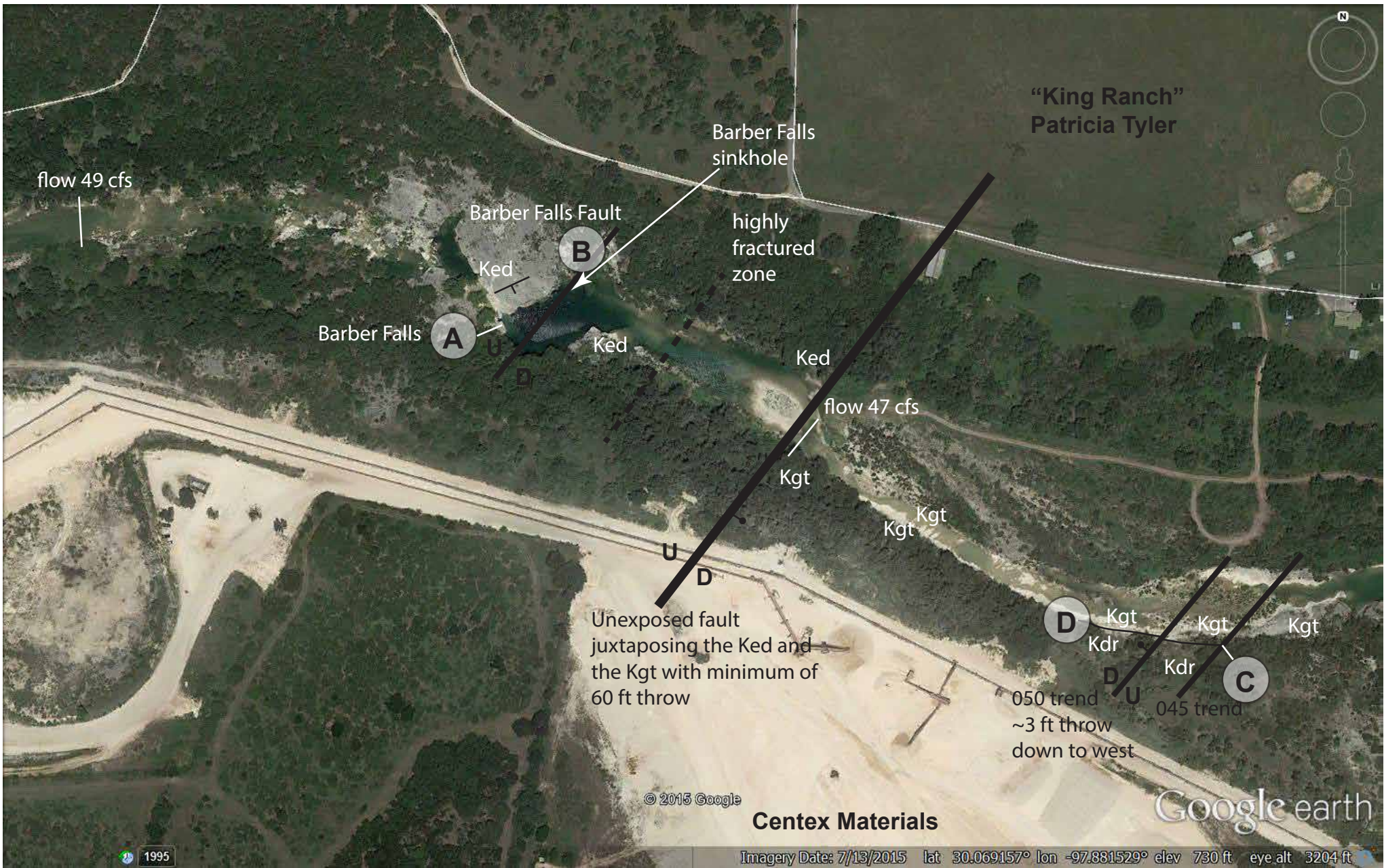
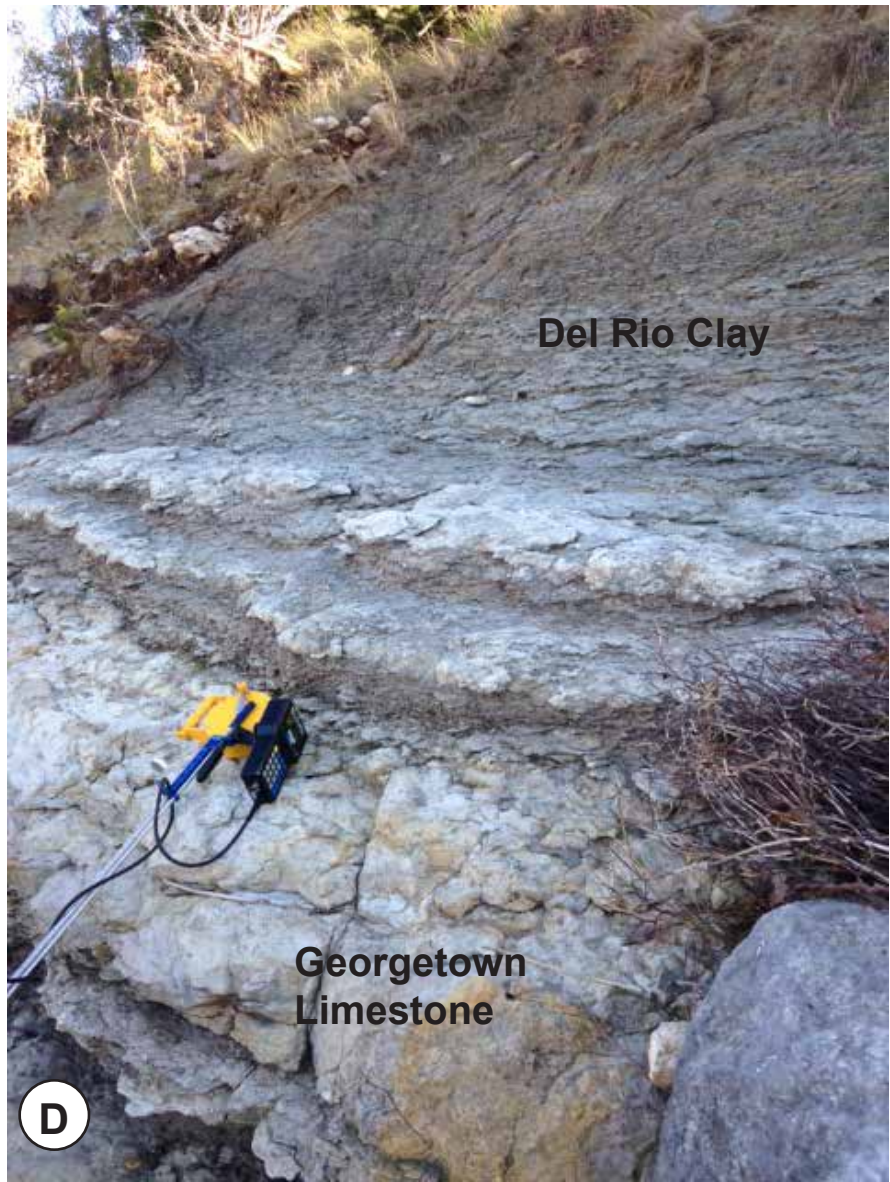
- Observed outcrop south of the gate to exit the property onto FM 1836.
- Will help clarify mapping in this area.

The field team departed for the BSEAD office at about 1:30 pm.

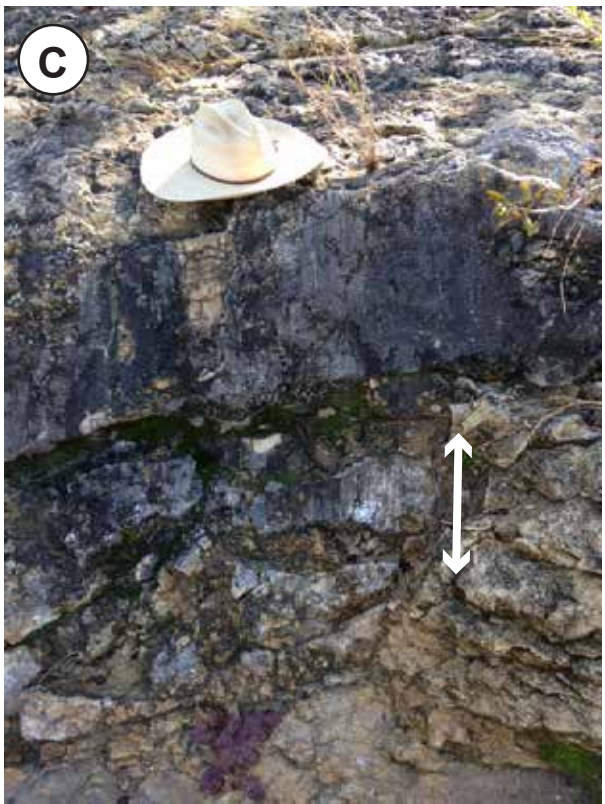
Attachment A.

Previously Prepared BSEACD Barber Falls Description

Barber Falls Field Notes



Fault zone just to the east of Barber Falls. Trend is ~45NE.



Fault scarp in the Georgetown with numerous slickensides. General orientation noted by arrow.

Attachment B.
Upper Falls



Note: View is generally westward. Photo courtesy of Brian Hunt.

Attachment C.
Lower Falls



Note: The pool is over 20 feet deep and is apparently filling a collapsed former cave or sinkhole. View is generally to the southwest. Photo courtesy of Brian Hunt.

Attachment D.

Small-Displacement Fault at Lower Falls



Note: Smith is on the left and Camp is on the right. The fault can be seen just to the left of Smith. View is generally northward. Photo courtesy of Brian Hunt.

Attachment E.

Georgetown and Del Rio Outcrops on South Bank of Onion Creek below Barber Falls



Note: Exposed fault, shown in the center of the photo, is downthrown to the west, which is atypical for the Balcones Fault Zone. The Georgetown formation crops out in the foreground on the upthrown side of the fault. The Del Rio (above the Georgetown) is on the downthrown side in the background. View is generally to the southwest. Photo courtesy of Brian Hunt.

Attachment F.

Slump in Del Rio Outcrop on North Bank of Onion Creek



Note: Slump is shown in central portion of photo. Picture courtesy of Justin Camp.