

May 11, 2016

MEMORANDUM

To: Brian Hunt,
From: Tom Grimshaw
Copy: Brian Smith, Justin Camp
Subject: Field Trip Stops, Day 2 (May 10) At Rutherford Ranch

I believe we had a very successful second day of field trip stops and outcrop examinations at the Rutherford Ranch as on Day 1. The primary objectives were to verify (or modify) air photo mapping of the Walnut-Edwards contacts and to confirm the existence and locations of Balcones faults.

The main focus of the second day was on the southern part of the Ranch. The field trip stops are shown on the air photo in Attachment A, and the stops are described below.

1. Check of Walnut-Edwards contact. Concluded there is no Edwards; the hilltop is underlain by the Walnut, with a Glen Rose – Walnut contact on the hillside. Remapping is required.
2. Confirmed (by Hunt) Walnut-Edwards contact as mapped, particularly at grotto at head of small ravine.
3. Small-displacement fault crossed by Onion Creek, apparently as mapped by Hauwert and others. Will be added to air photo mapping.
4. Apparent confirmation (by Hunt) of small-displacement fault, but further up on the hill.
5. Possible confirmation of Walnut-Edwards contact on hillside.
6. Ravine examination for evidence of faulting, which was observed in upper reaches of creek.
7. Walnut-Edwards contact confirmation (by Hunt)

Attachments B and C present a recap of the field trip stops from Day 1. I look forward to participating in preparation of a Rutherford Ranch specific geologic map as we discussed yesterday.

Attachment A.

Air Photo of Rutherford Ranch Area Showing Field Stops During Second Day

Find
Kwa-
Ked

Find Kwa-
Ked

Is this
natural?

Look for
fault,
evidence

Conf
Kwa-
Ked
both
sides



215 1372MCS USAF 15APR58 11400FT AF-58-4 ROLL-3

270

58004

10-3

SSS

Attachment B.

Description of Day 1 Stops

1. Walnut-Edwards contact on the hill south of the entrance gate. There are two candidate ledges for the contact, but for 1:24,000 scale mapping, the location of the contact will not be greatly affected.
2. Walnut-Edwards contact west of main road into Ranch on upthrown side of fault.
3. Walnut outcrop on east side of fault, demonstrating the existence of the fault. Top of Walnut difficult to discern on hillside.
4. Fault outcrop observed by Brian; exact location uncertain.
5. Walnut-Edwards contact on south side of hill.
6. Outcrop of highly weathered alluvium – Onion Creek terrace – on hillside. Former borrow pit.
7. Glen Rose outcrop, 8-10 foot high vertical bank, on east side of small tributary to Onion Creek. Flaggy beds noted.
8. Walnut-Edwards contact on road leading down hill.
9. Deeply cut ravine. No evidence of faulting, which confirms fault location northwest of the ravine. Location confirmed by Brian. Walnut-Edwards contact apparently at top of “grotto” at head of ravine.
10. Walnut-Edwards contact on hill.
11. Walnut-Edwards contact on east side of small drain where stock tank has been built. Demonstrate that cross fault is not needed.
12. Walnut-Edwards contact walked by Brian to small tributary to Onion Creek.

Attachment C.

Air Photo of Rutherford Ranch Area Showing Field Stops During First Day

USGS

215 1372MCS USAF 15APR58 1140ET AF-58-4 ROLL-3

230

58004 R-3

Verify Red
Kwa-Ked
both sides
of fault

Verify
Kwa-Ked

Look for
fault
evidence



SCALE
5396mm

01263

52045