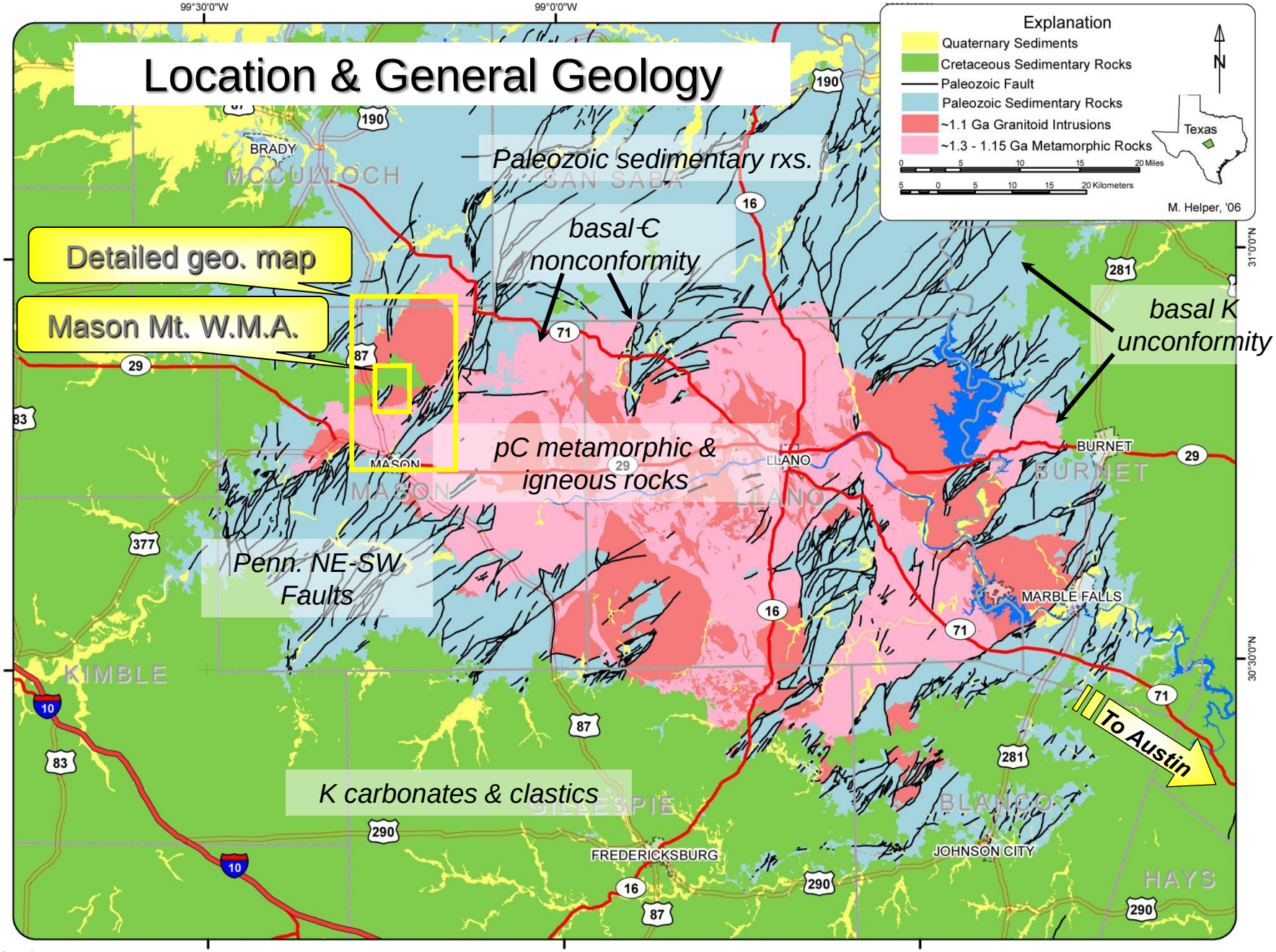
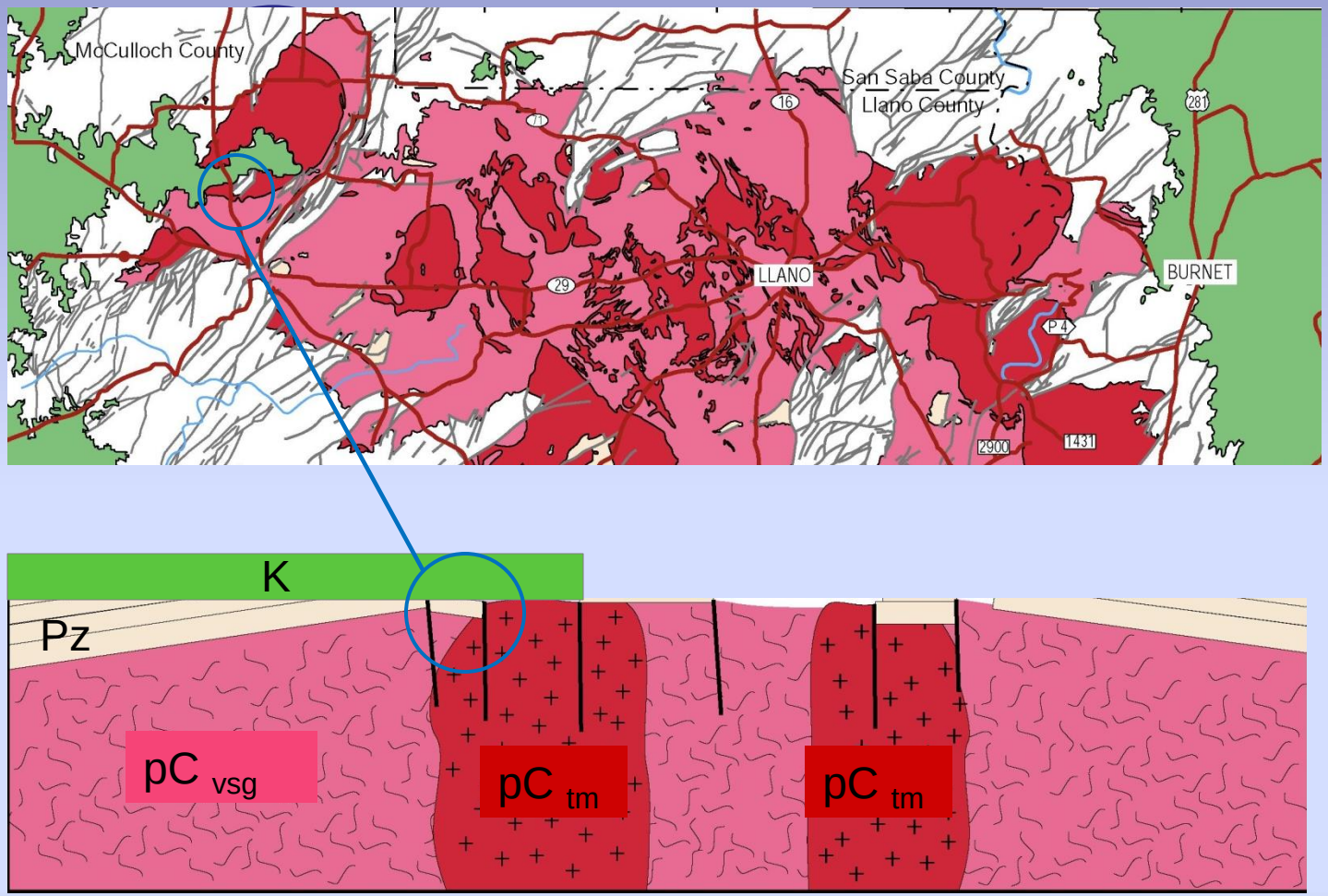
# 420k Field Trip 4, ‘14

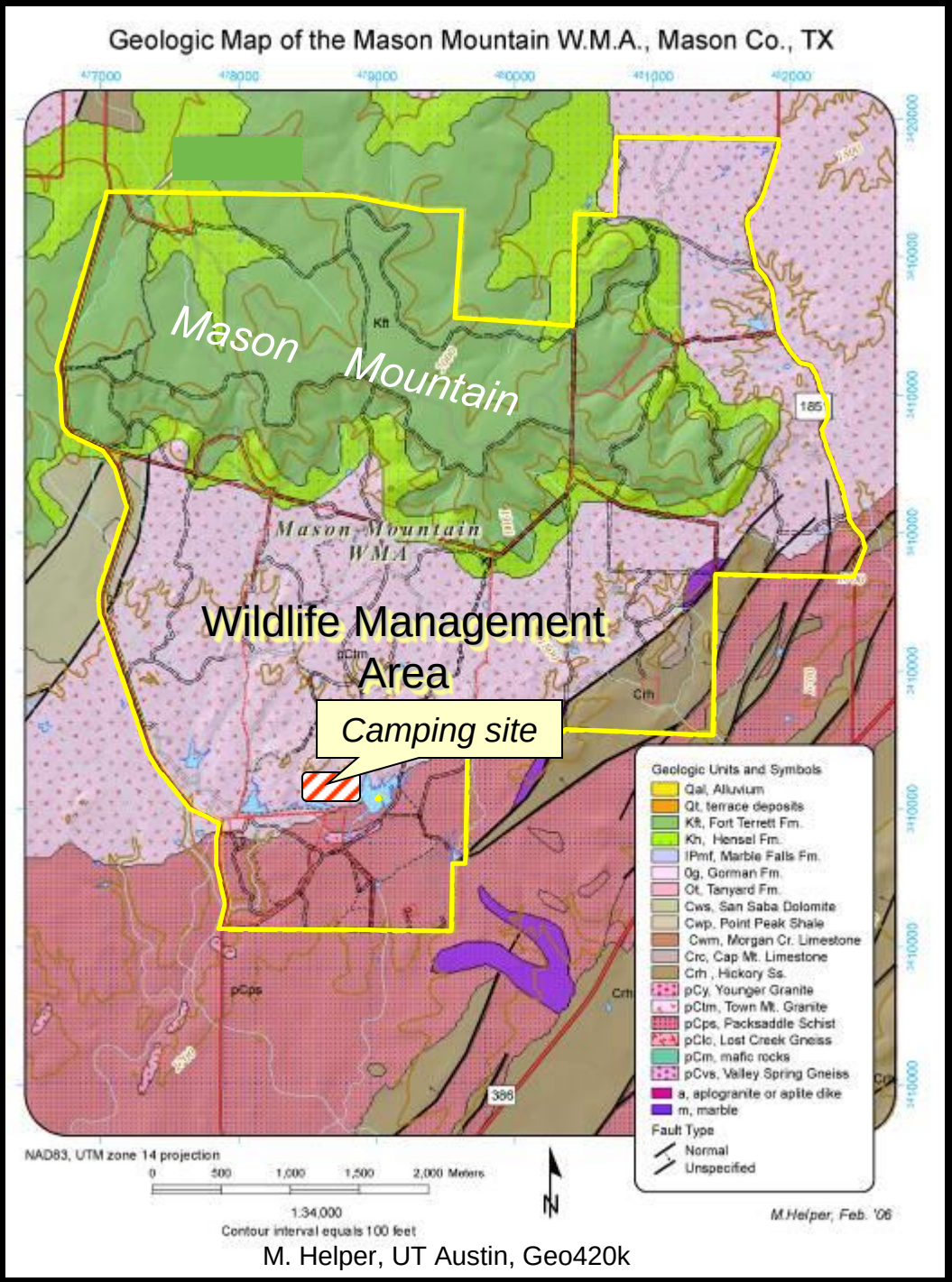
## Mapping a Basal Cretaceous Nonconformity, Mason Mt. W.M.A., Mason Co., TX

# Location & General Geology



# Schematic Cross Section



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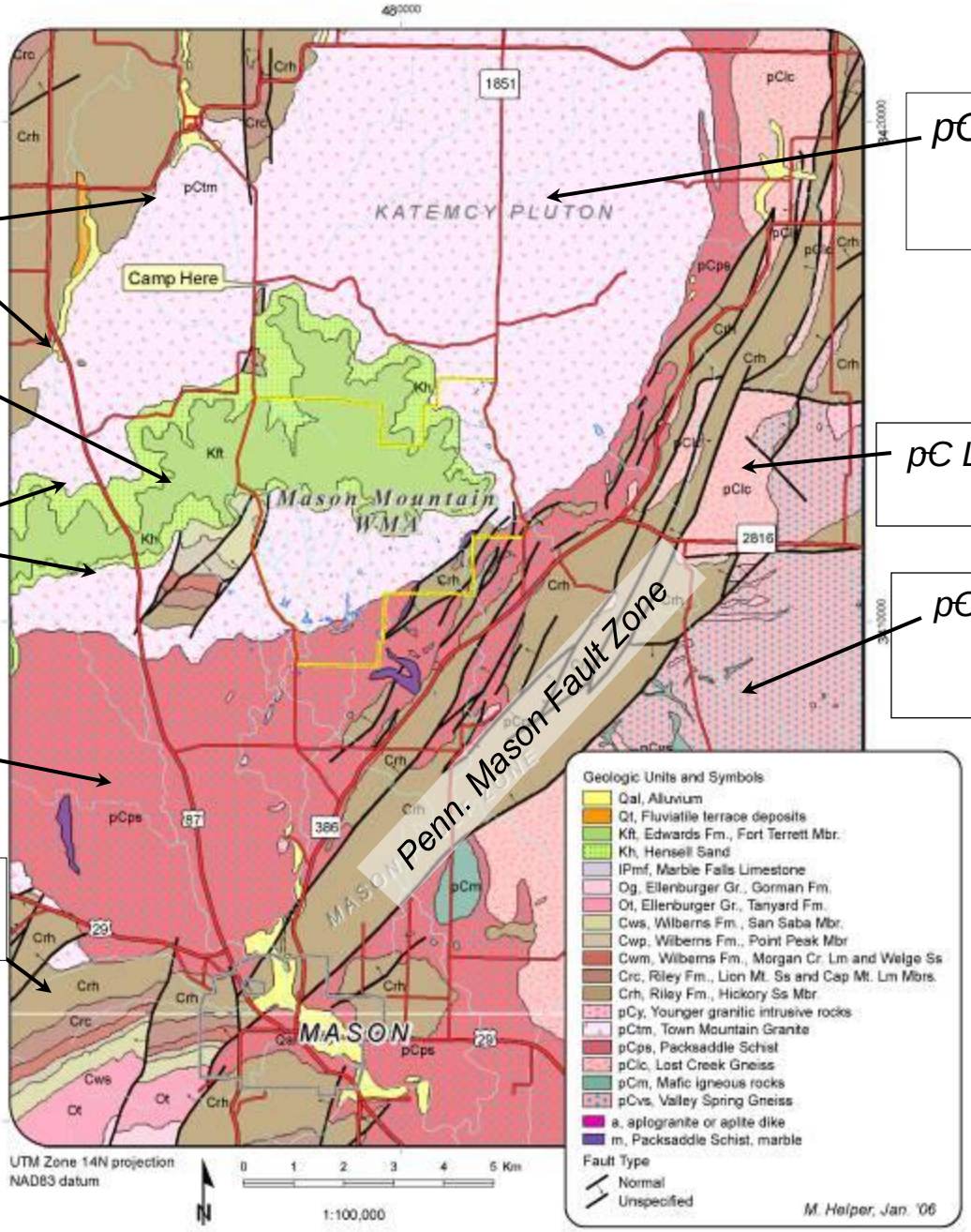
# 1:100k ("Detailed") Geology, Mason Area




*basal C nonconformity*

*K Carbonates & Clastics*

*basal K nonconformity*

*pC Packsaddle Schist ~1.25 Ga*

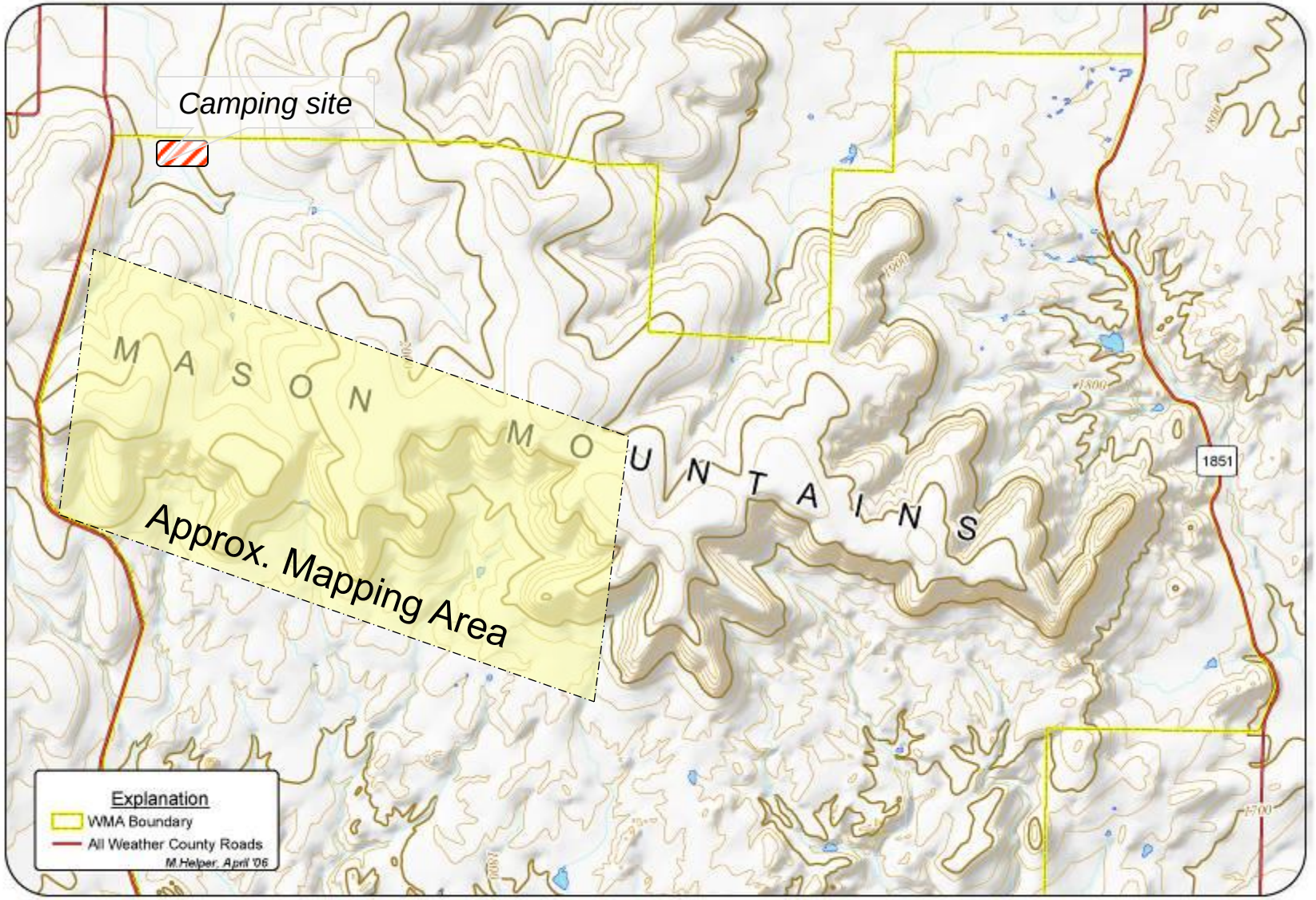
*CO Sediments (e.g. Riley, Ellenburger)*

*pC Katemcy Pluton ~ 1.1 Ga*

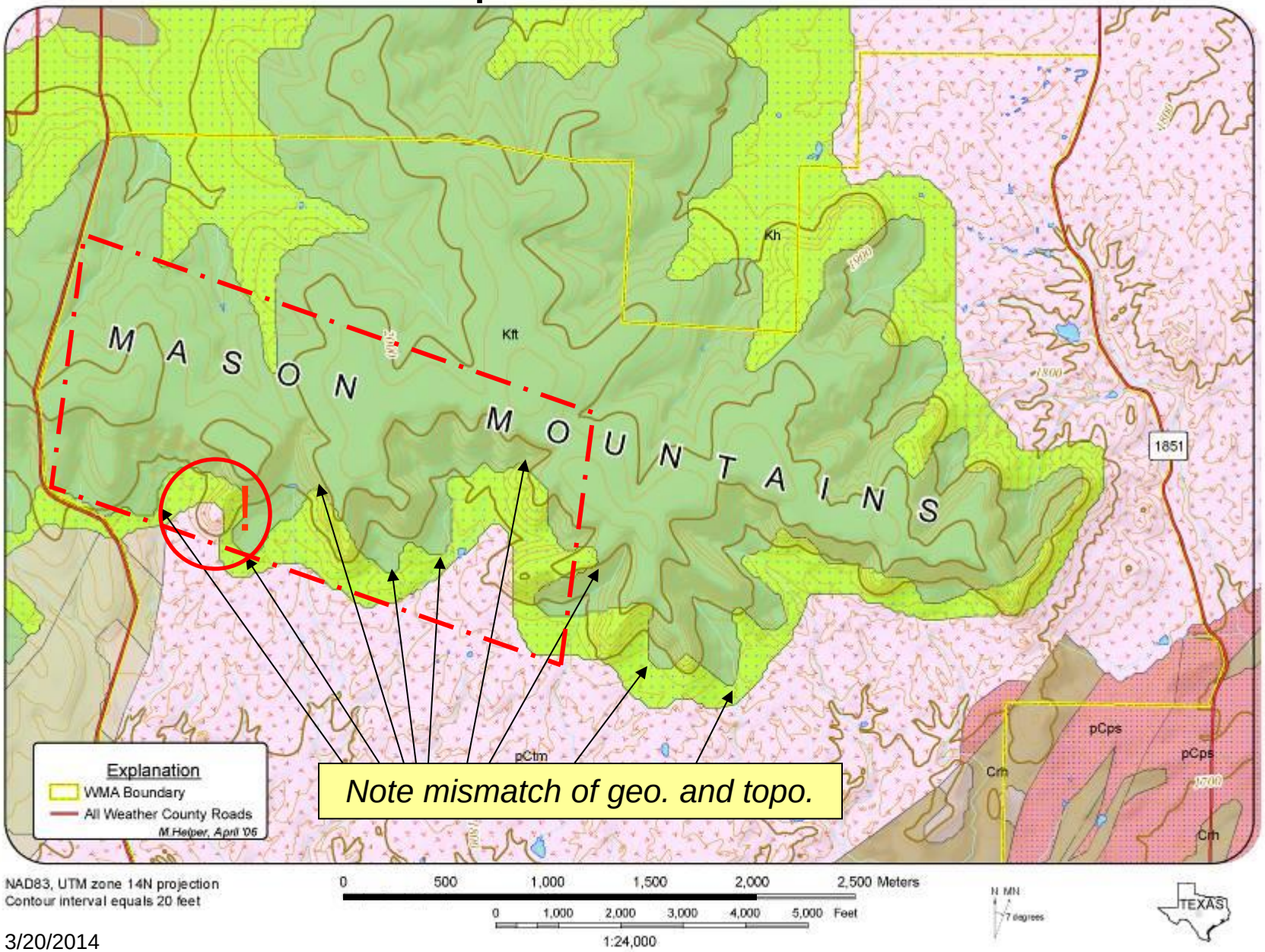
*pC Lost Creek Gneiss ~1.25 Ga*

*pC Valley Spring Gneiss ~1.3 Ga*

# 1:24,000 Topography, Mason Mt.



# 1:24k Topo. & Geo., Mason Mt.



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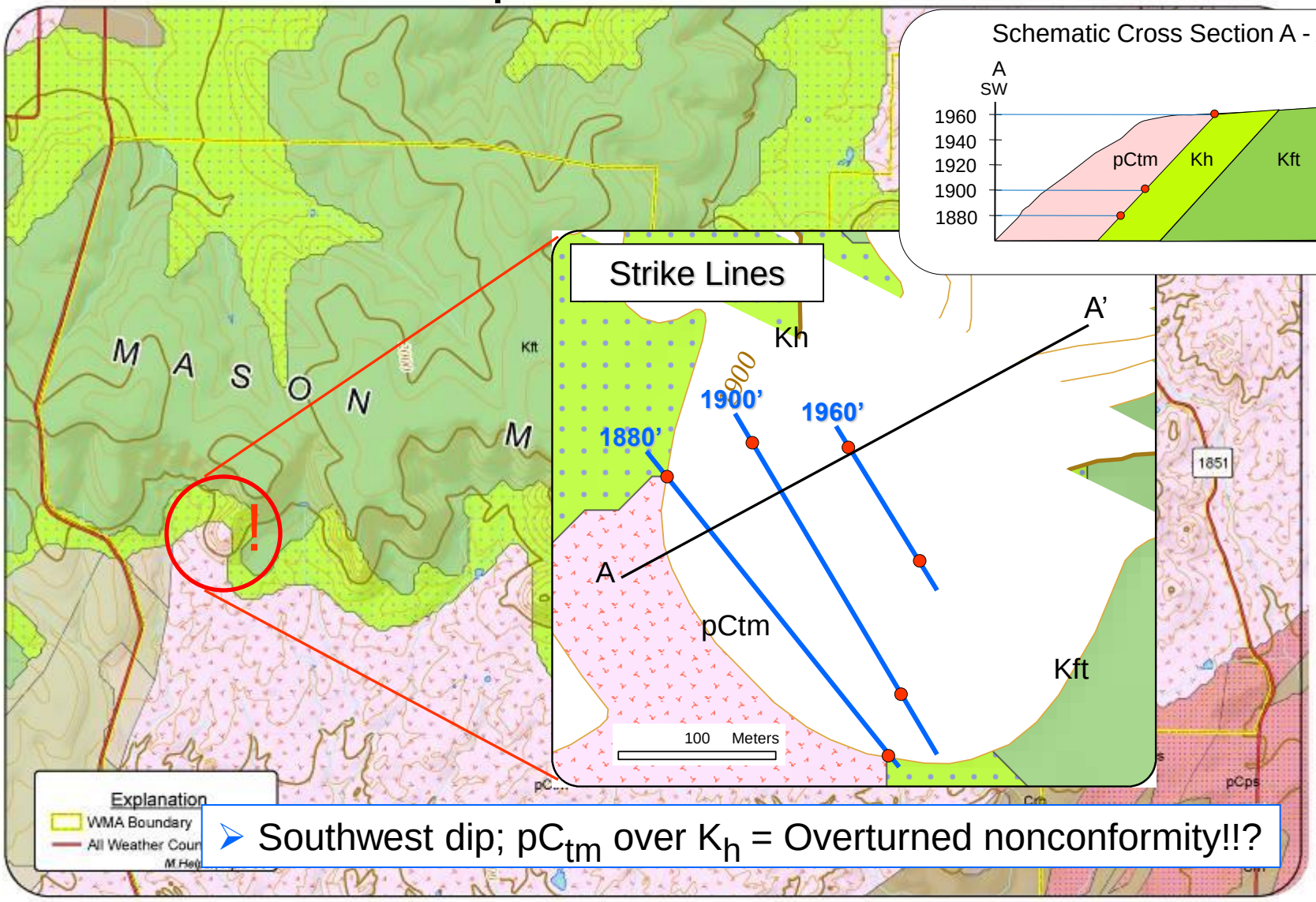
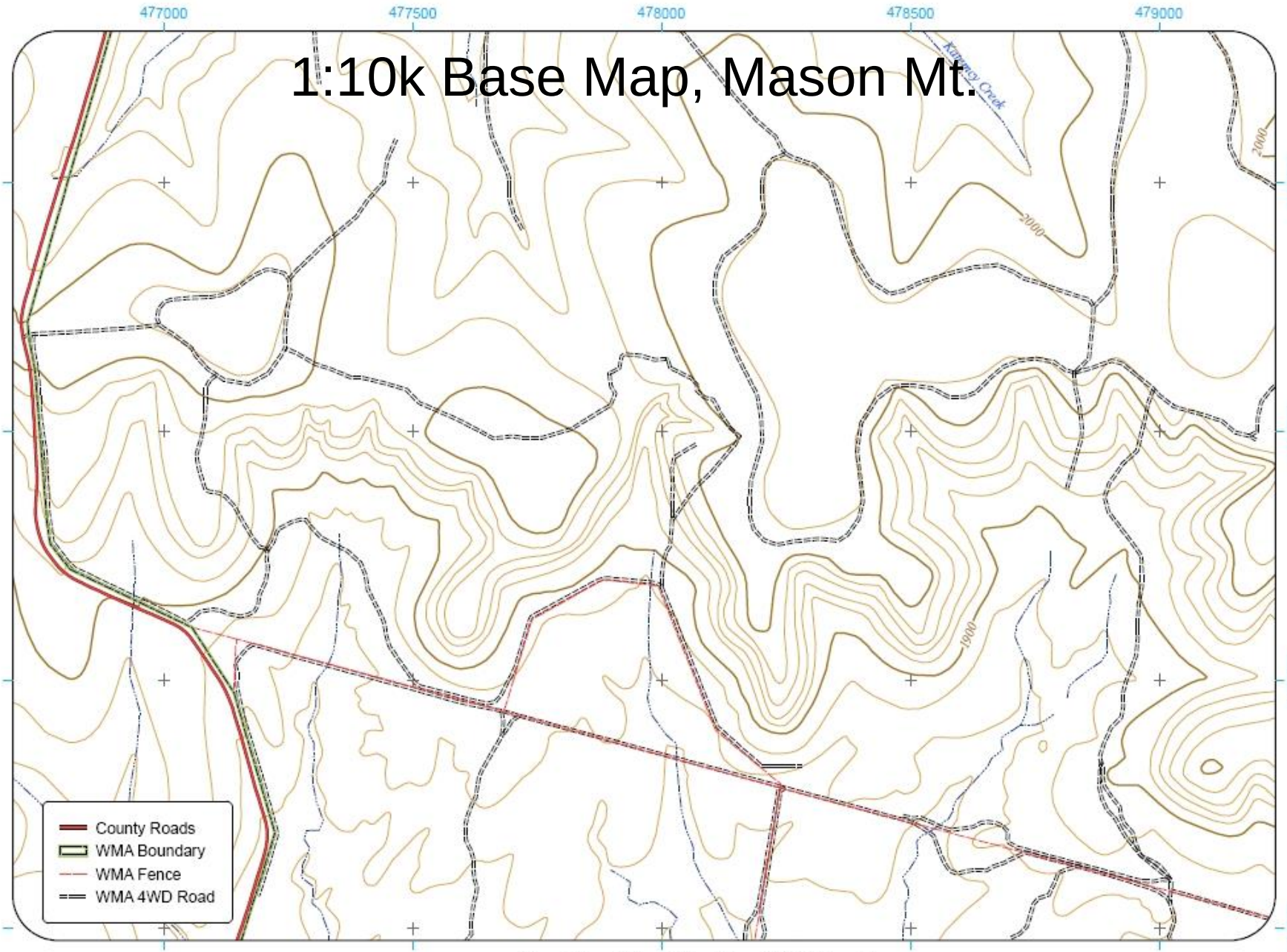
# 1:24k Topo. & Geo., Mason Mt.

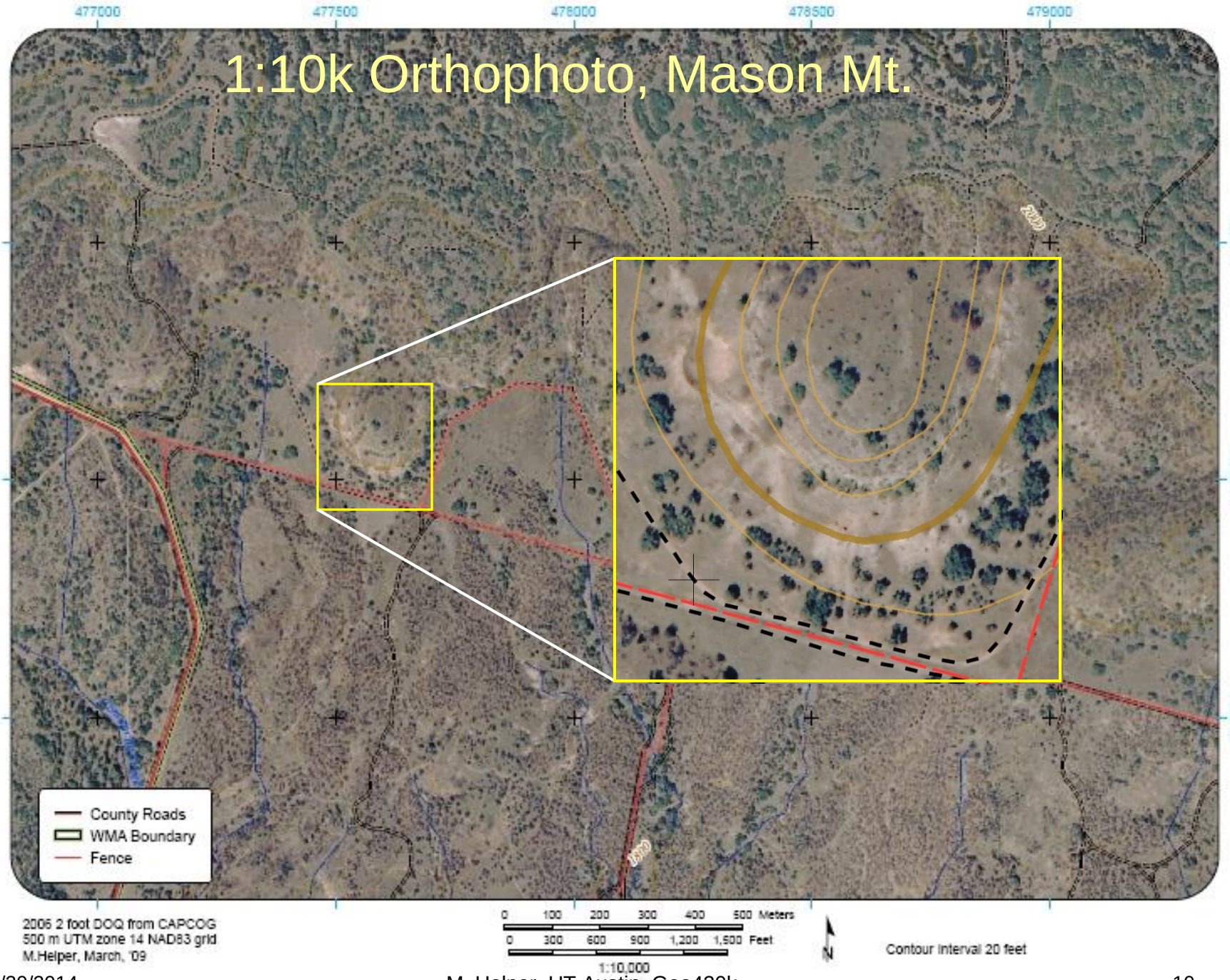



➢ Southwest dip; $pC_{tm}$ over $K_h$ = Overturned nonconformity!!?

# 1:10k Base Map, Mason Mt.

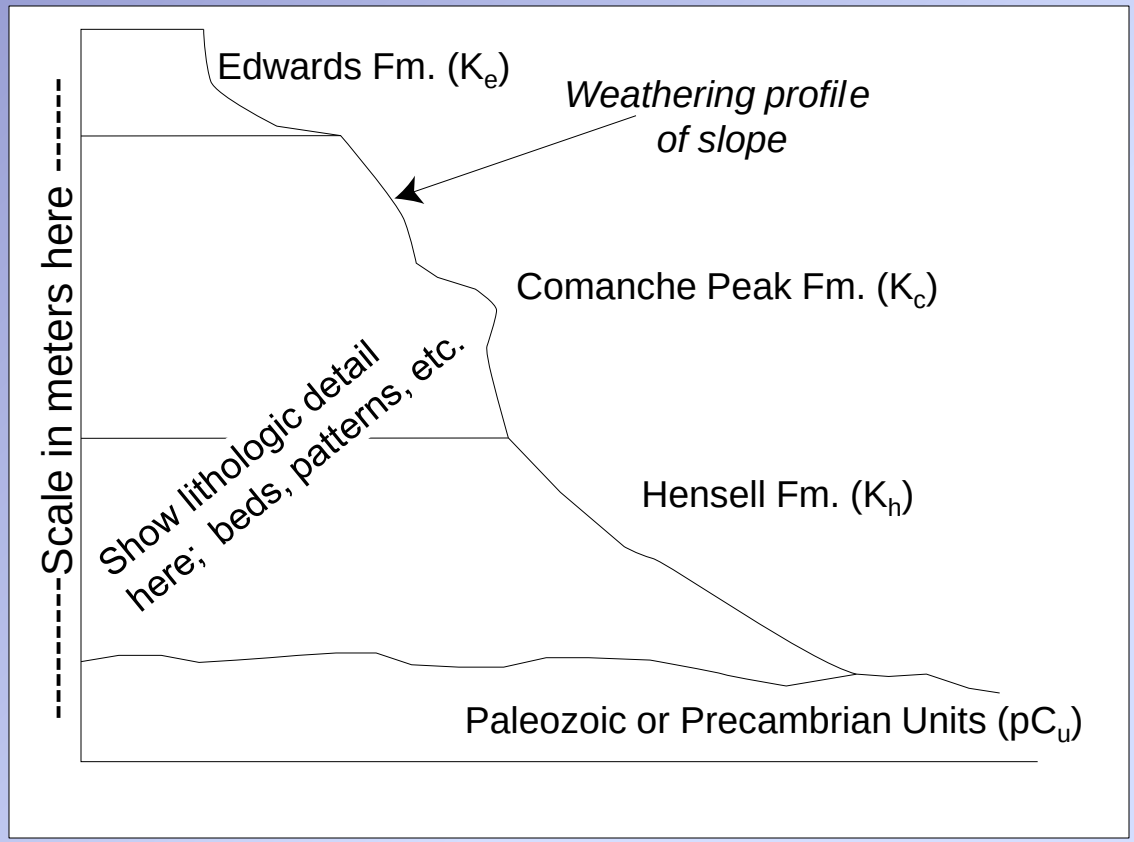


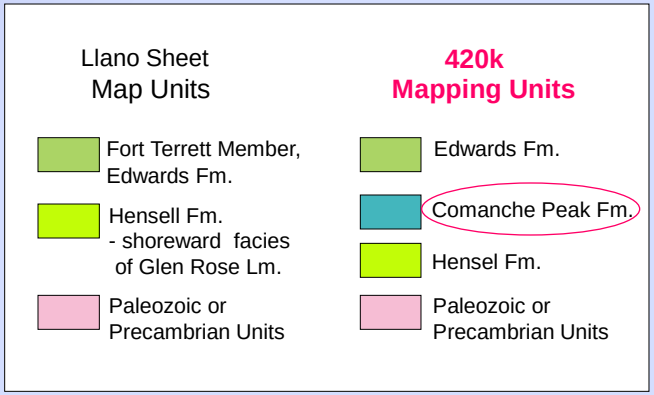
# 1:10k Orthophoto, Mason Mt.



# Day 1: 1st Task – Measure a Section

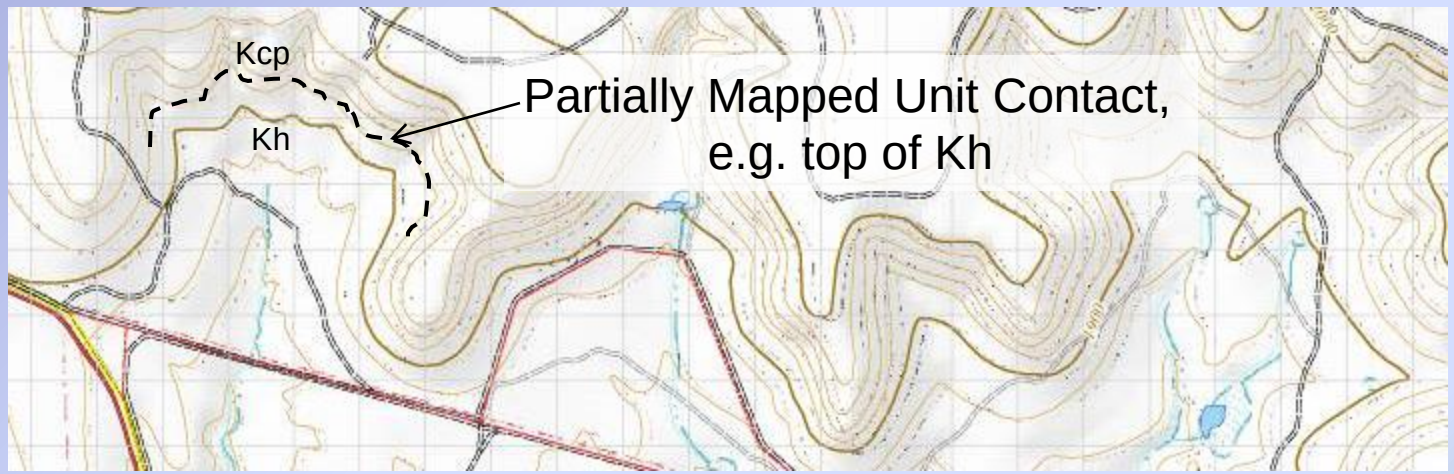
***Example Template for Weathing Profile, S. Slope of Mason Mt.***



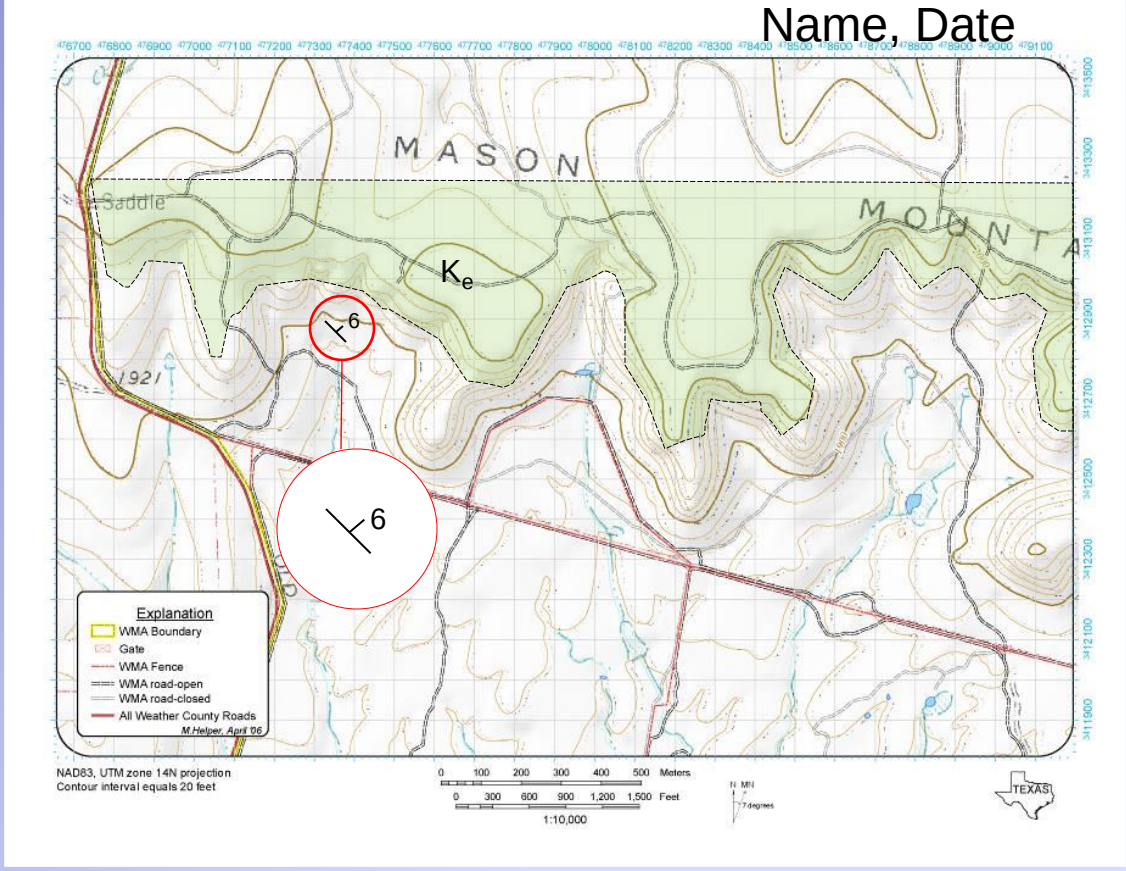



# Day 1: 2nd Task – Map Unit Contacts

| Llano Sheet Map Units | | 420k Mapping Units | |
|---|---|---|---|
| Kft | Fort Terrett Member Edwards Fm. | Ke | Edwards Fm. |
| Kh | Hensell Fm. (shoreward facies of Glen Rose Fm.) | Kc | Comanche Peak Fm. |
| | | Kh | Hensell Fm. |
| pCtm | Paleozoic or Precambrian Units | pCu | Paleozoic or Precambrian Units |



# Day 2: Half-day – Finish and turn in map




**MAP IS FINISHED WHEN:**

1. All contacts are in ink, (dashed or solid lines)
2. All units are LIGHTLY colored
3. All units are labeled – e.g. "$K_e$"
4. All strike and dips are plotted
5. Name in date is in UPPER RIGHT corner

# Your weekend mapping goals:

- Is the digital Geologic Atlas of Texas, Llano sheet, correct?
- If not, what are the true geometric relationships and how do they map out?

Deliverables (before returning to Austin):

1. Geologic Map: showing nonconformity, K-unit contacts, and strikes/dips
2. Weathering Profile/"Measured Section"