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6 May 97

Dear Tim - The lure of seeing a new Pogonip section was too much for me to resist (as well as cabin fever brought on by beautiful Spring weather) so I spent yesterday traversing your proposed Ordovician - Devonian rocks in Leamington Pass Canyon as shown on the enclosed maps. I came away believing that you had been misled by the look-alike characteristics of Devonian and Cambrian carbonate rocks.

The most useful unit I encountered on my traverse from the telephone relay station was an interbedded green-fossile shale and thin-bedded limestone with some large-clast intraformah conglomerate beds. Trilobites in the thin bedded limestone are certainly not Ordovician, but are probably Upper Cambrian from the "Dunderbergia" fossil zone. I have sent them off to Dick Robison for identification.

I saw no typical Ordovician intraformational conglomerate beds. Neither did I see any Devonian stromatoporoids.

I did see quite a bit of white laminated dolomitic algal boundstone, typical of the Middle Cambrian above the Wheeler-Pierson Cove interval. And I did see in your "Du" unit lots of dark-gray dolomite with white discontinuous stringers and blebs typical of upper Cambrian strata and called by some geologists "twiggy bodies". These are a poor imitation of spaghetti stromatoporoids that are common in the Guilmette.

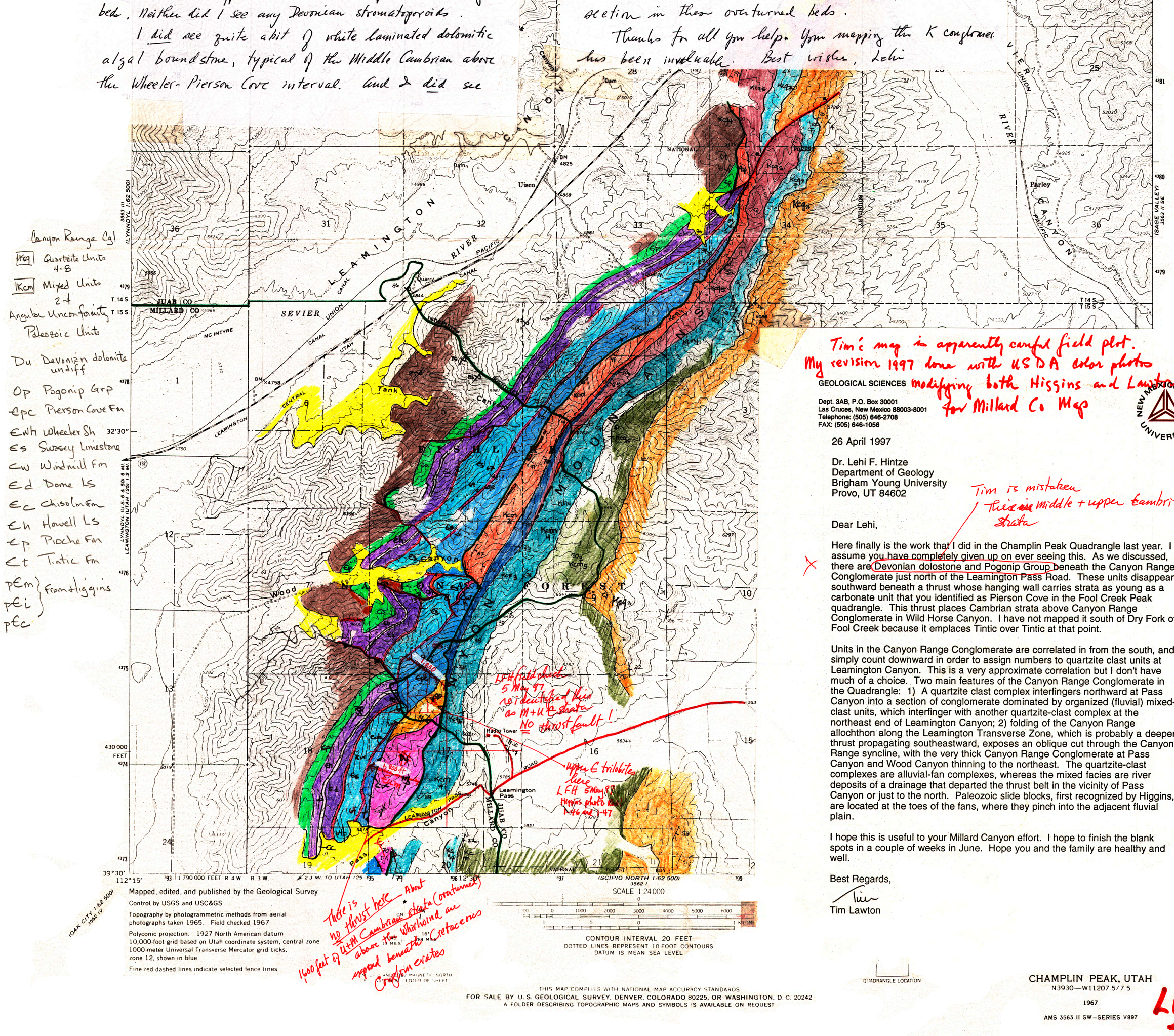
You probably have good reason to have made the Pogonip - Du identifications. If you do, indeed, have some fossils from those units I would be pleased to see them. But for the time being I think that there is nothing other than an upside down Cambrian section there. The thrust fault is of small displacement. Actually I would prefer to extend the tear fault south eastward more or less along the county line.

The good side of this is that we have a more complete Cambrian section on this hillside than I thought we had. If the trilobite I collected are Upper Cambrian, that would give us a complete Middle Cambrian section, and a partial Upper Cambrian section in these overturned beds.

Thanks for all you help. Your mapping the K conglomerate has been invaluable. Best wishes, Lehi

Ly 7

MPLIN PEAK QUADRANGLE
UTAH
MINUTE SERIES (TOPOGRAPHIC)
3563 I NE (FURNER RIDGE)
112°07'30"
39°37'30"
1 820 000 FEET
470 000 FEET
JEEP TRAIL
4.3 MI. TO UTAH 148 NEPHI 17 MI.
Wash
12
13
24
25
35'
5032
5306
5371
5333
5368
5303
5242
5122
4385
4384
4383
4382
4381
4380
4379
(SAGE VALLEY) 3563 II SE



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NEW MEXICO STATE UNIVERSITY

26 April 1997

Dr. Lehi F. Hintze
Department of Geology
Brigham Young University
Provo, UT 84602

Dear Lehi,

Here finally is the work that I did in the Champlin Peak Quadrangle last year. I assume you have completely given up on ever seeing this. As we discussed, there are Devonian dolostone and Pogonip Group beneath the Canyon Range Conglomerate just north of the Leamington Pass Road. These units disappear southward beneath a thrust whose hanging wall carries strata as young as a carbonate unit that you identified as Pierson Cove in the Fool Creek Peak quadrangle. This thrust places Cambrian strata above Canyon Range Conglomerate in Wild Horse Canyon. I have not mapped it south of Dry Fork of Fool Creek because it emplaces Tintic over Tintic at that point.

Units in the Canyon Range Conglomerate are correlated in from the south, and I simply count downward in order to assign numbers to quartzite clast units at Leamington Canyon. This is a very approximate correlation but I don't have much of a choice. Two main features of the Canyon Range Conglomerate in the Quadrangle: 1) A quartzite clast complex interfingers northward at Pass Canyon into a section of conglomerate dominated by organized (fluvial) mixed-clast units, which interfinger with another quartzite-clast complex at the northeast end of Leamington Canyon; 2) folding of the Canyon Range allochthon along the Leamington Transverse Zone, which is probably a deeper thrust propagating southeastward, exposes an oblique cut through the Canyon Range syncline, with the very thick Canyon Range Conglomerate at Pass Canyon and Wood Canyon thinning to the northeast. The quartzite-clast complexes are alluvial-fan complexes, whereas the mixed facies are river deposits of a drainage that departed the thrust belt in the vicinity of Pass Canyon or just to the north. Paleozoic slide blocks, first recognized by Higgins, are located at the toes of the fans, where they pinch into the adjacent fluvial plain.

I hope this is useful to your Millard Canyon effort. I hope to finish the blank spots in a couple of weeks in June. Hope you and the family are healthy and well.

Best Regards,

Tim Lawton

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1965. Field checked 1967

Polyconic projection. 1927 North American datum
10,000-foot grid based on Utah coordinate system, central zone
1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue

Fine red dashed lines indicate selected fence lines

SCALE 1:24000

CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 10-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D.C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

CHAMPLIN PEAK, UTAH
N3930—W11207.5/7.5
1967
AMS 3563 II SW—SERIES V897

Ly 7