Geology of Taylor Ranch area from Reed Lewis. Summarized by Holly Akenson

Hoodoo Quartzite - had been a quartz sand (a cooked sandstone)
Precambrian
under sea sediment
white colored angular rock
Argilite & Siltite - solidified silt or mud - twd Horse Mtn
Yellowjacket Quartzite is a 1.5 billion years old siltite - example here is the darker talus above Timbered Bench.
Lava flows at Big Cr
9 billion years old (really old volcanics) (Not Challis Volcanics) caused by
- mouth of Rush to above Lookout - round shape area

Diorite @ Rush Cr - feeder zone for lava flows but didn't make it to surface - maybe some

as 9 billion yr old. Also plutons at Diorite Acorn Butte & Ramey Ridge sites
Round shaped (plutons).
Rich in iron - magnetite or ilmenite (are both magnetic)

Idaho Batholith - granite 90 million yrs ago
Thrust faults → Idaho Batholith cooled slowly → large feldspar & quartz crystals. Salmon River to main South

Challis Volcanics - 50-45 million yrs old
Makay → Challis → Elk City. Not many volcanoes - some "mega calderas" Ellistuff was from

Challis Volcanics start at Cave @ Cave Creek - to Thunder Mtn (Thunder Mtn Caldera)

Talc, Milk, Chalk Cr are Challis Volcanics - hot water alters rocks - clays...
(Gold in the Challis Volcanics where hot water percolated out & caused mineralization or on top of Idaho Batholith)

MORE RECENT GEOLOGY (Tertiary)
Salmon River drainage 500,000 years ago flowing there - PhD student recent research.
Climate change cyclical - glaciation & freeze/thaw = high erosion rate previously. (10X flow on rivers).
3rd bench & E Knob were massive landslides - not river bars.

1st bench = river terrace (rounded rocks)

S & E of here (when fly in can see) all of peaks are all the same height (Idaho Peneplane) - erosion & uplift similar

Hot springs are along fault lines mostly in the lowest valleys (river corridors).

FROM TAYLOR CABIN:

Horse Mt mostly Hoodoo Q with Yellowjacket Q on top. , Same for Benches

E Knob & 3B & 2B & W of 3B are landslides. 1B is river bar.

Granidiorite - E side of benches where no outcrops - same age as Challis Volcanics (younger than Id Batholith - but not Id Batholith)

Hornblend (black mineral) more common in Granidiorite than Batholith.

Rocks @ Big Gr along Airstrip

- Quartzite - fine grained, light colored, some have layers (coarse to fine) from flood events
  Fine layers & darker colors are Yellowjacket?

Diorite from Rush Horse blend - black feldspar light color - coarse grain

Challis Volcanics - light colored w/ air pockets. Iron oxides cause colors (red & green)

Feeder dikes into challis Volcanics
- Porpherys - erosion resistant so common in streams (ryolite or daysite)

(Gorge green = chlorite)

Volcanic

Tuff from Challis Volcanics

pumice - from monumental

1.5 billion = Yellowjacket / Hoodoo

900 million = Big Lava
+ Rush Cr. Rhyolite

90 million = Idaho batholith

50 million = Challis Volc.

-45 + granodiorite (Bail Falls)
+ pink (Creeps)