



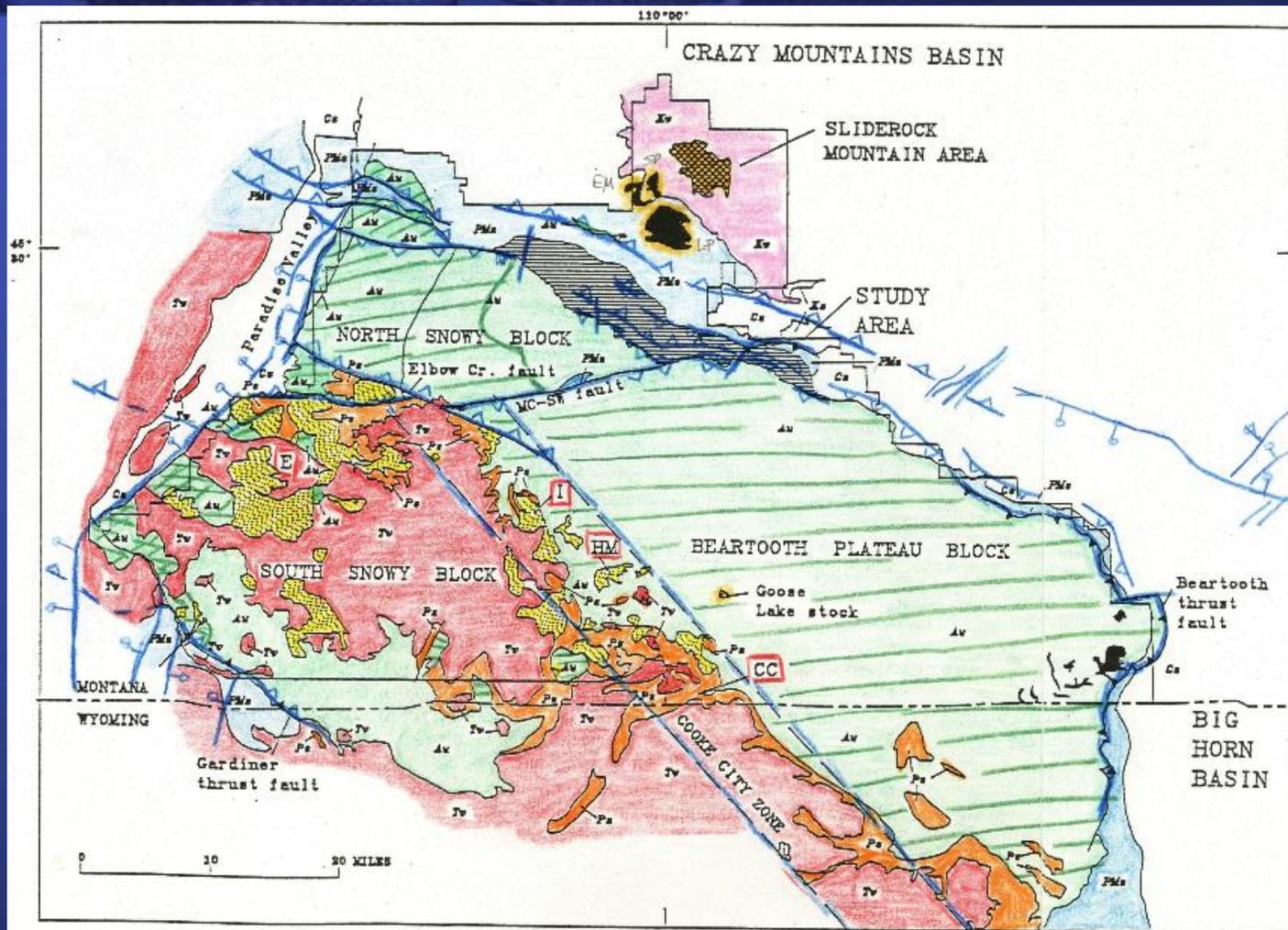
Geology of Sibanye Stillwater's Benbow Injection Well –
Why the Madison Limestone Was Not Where It Was
Supposed To Be

Ennis Geraghty





BEARTOOTH UPLIFT

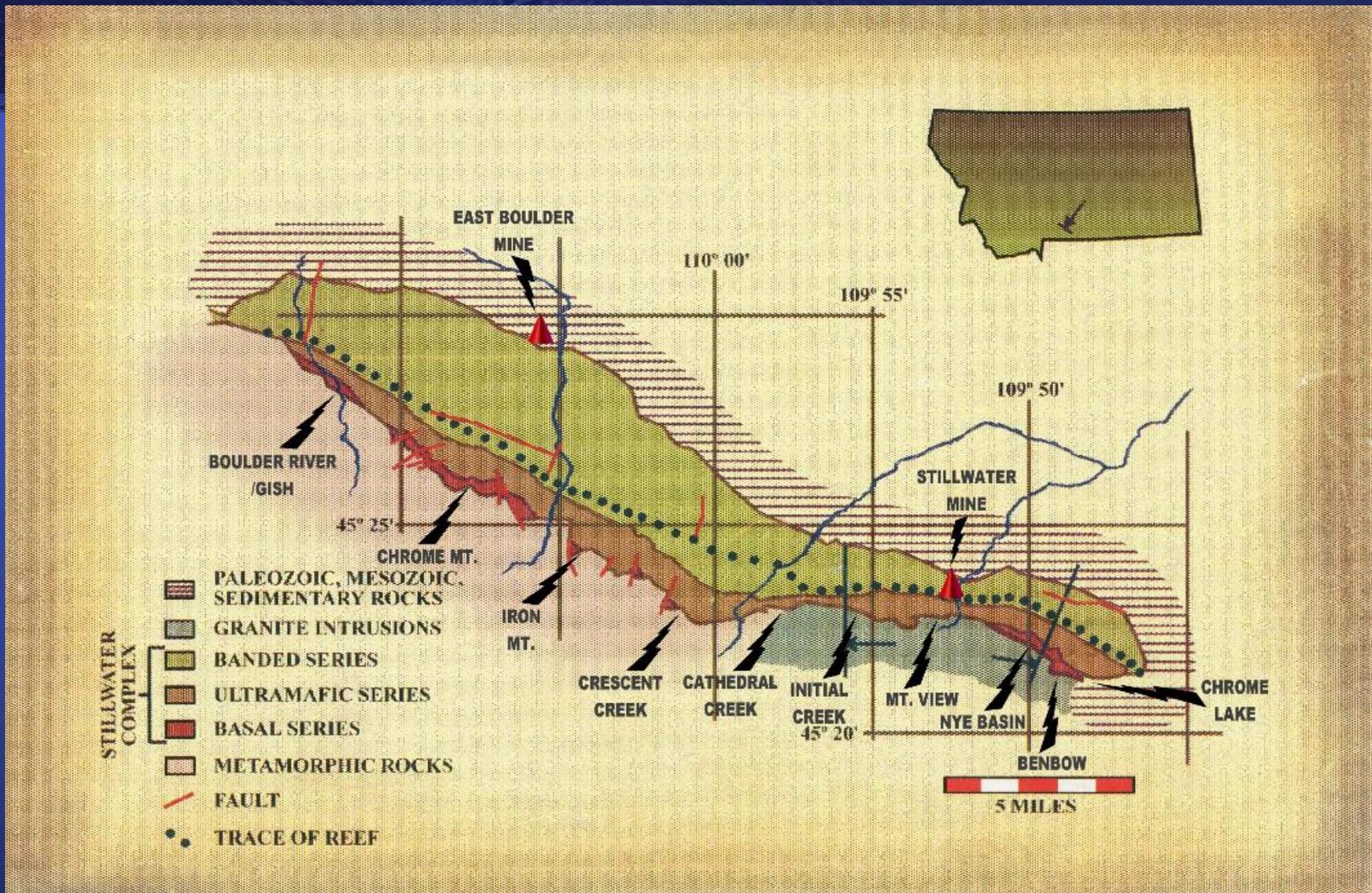


ORIGINAL STILLWATER COMPLEX

Stillwater Mining Company

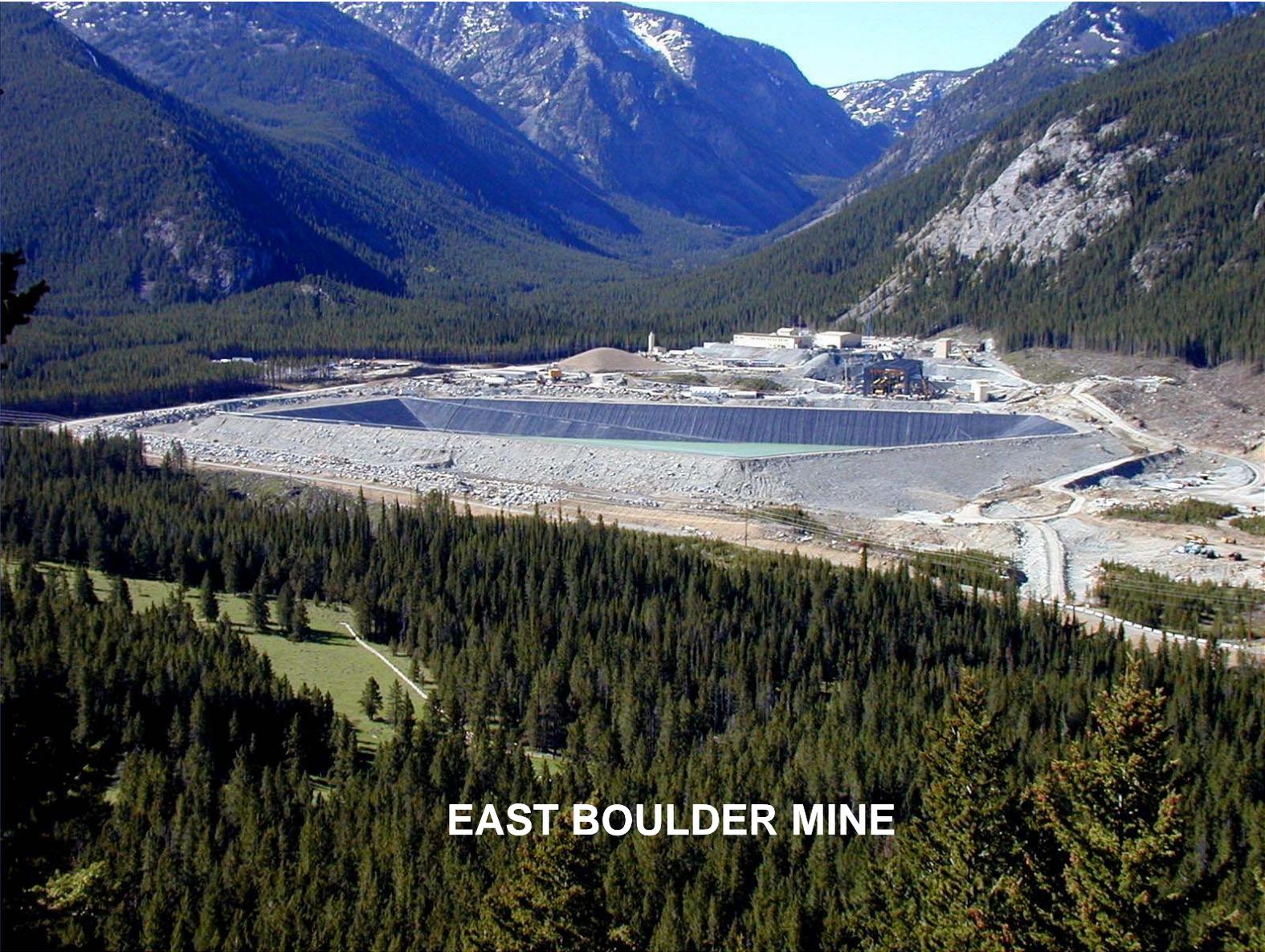


- **2.7 Billion-Year-Old Intrusion**
- **Layering Develops Through Slow Cooling, Crystallization, and Other Processes**
- **Complex Subsequently Tilted and Eroded to Present Surface**

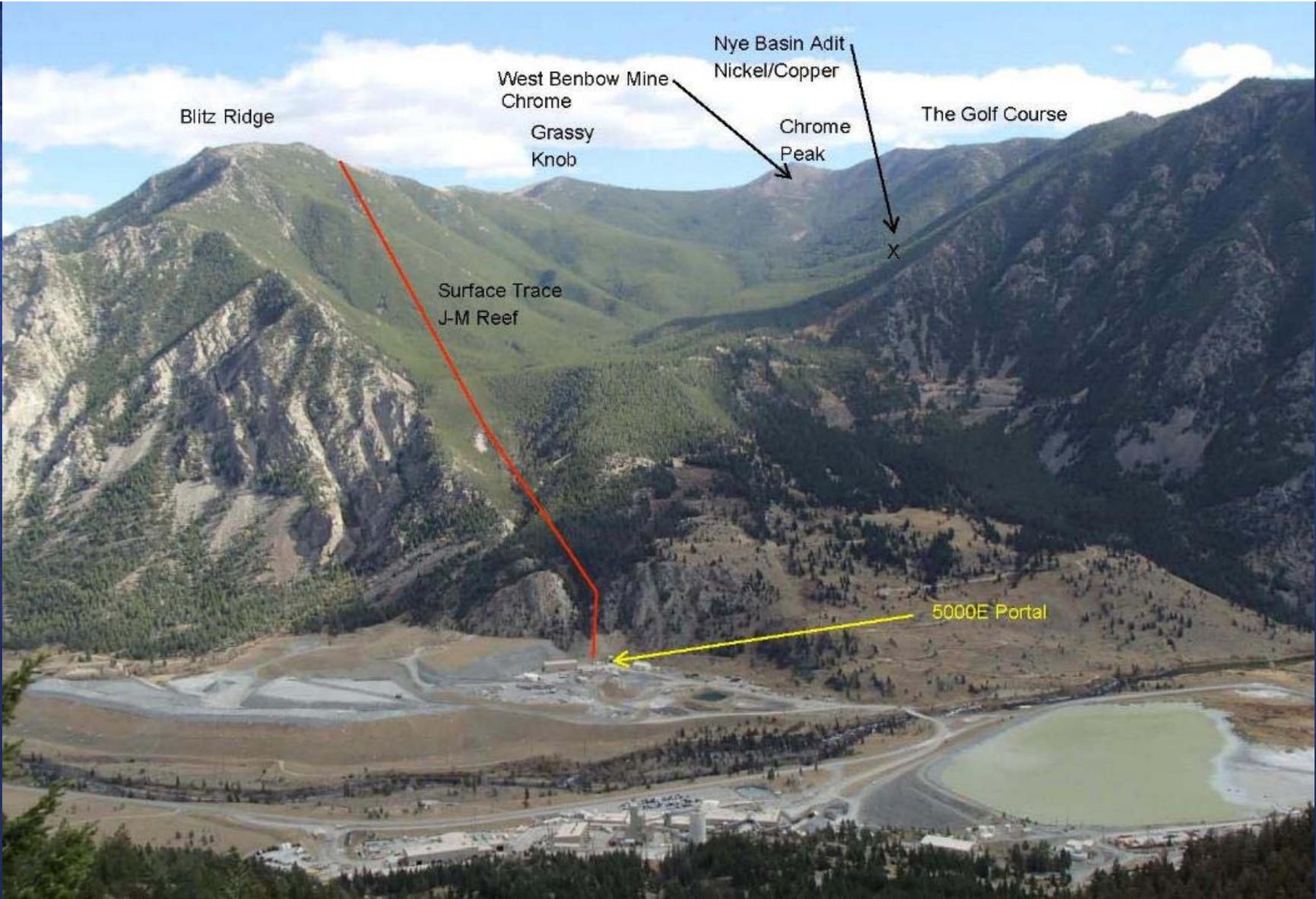


STILLWATER MINE NYE, MT





EAST BOULDER MINE









06/07/2013







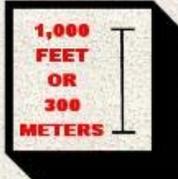
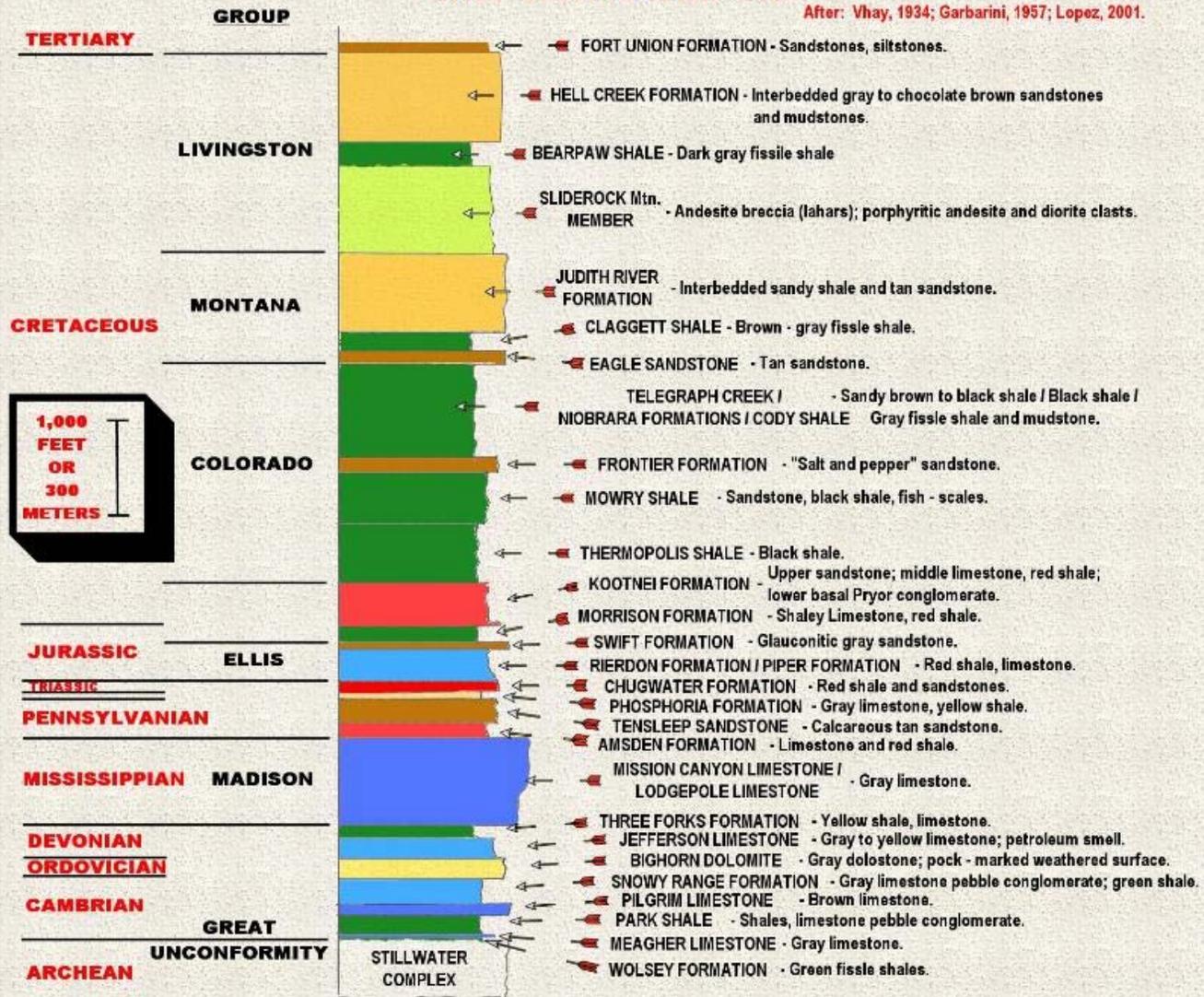






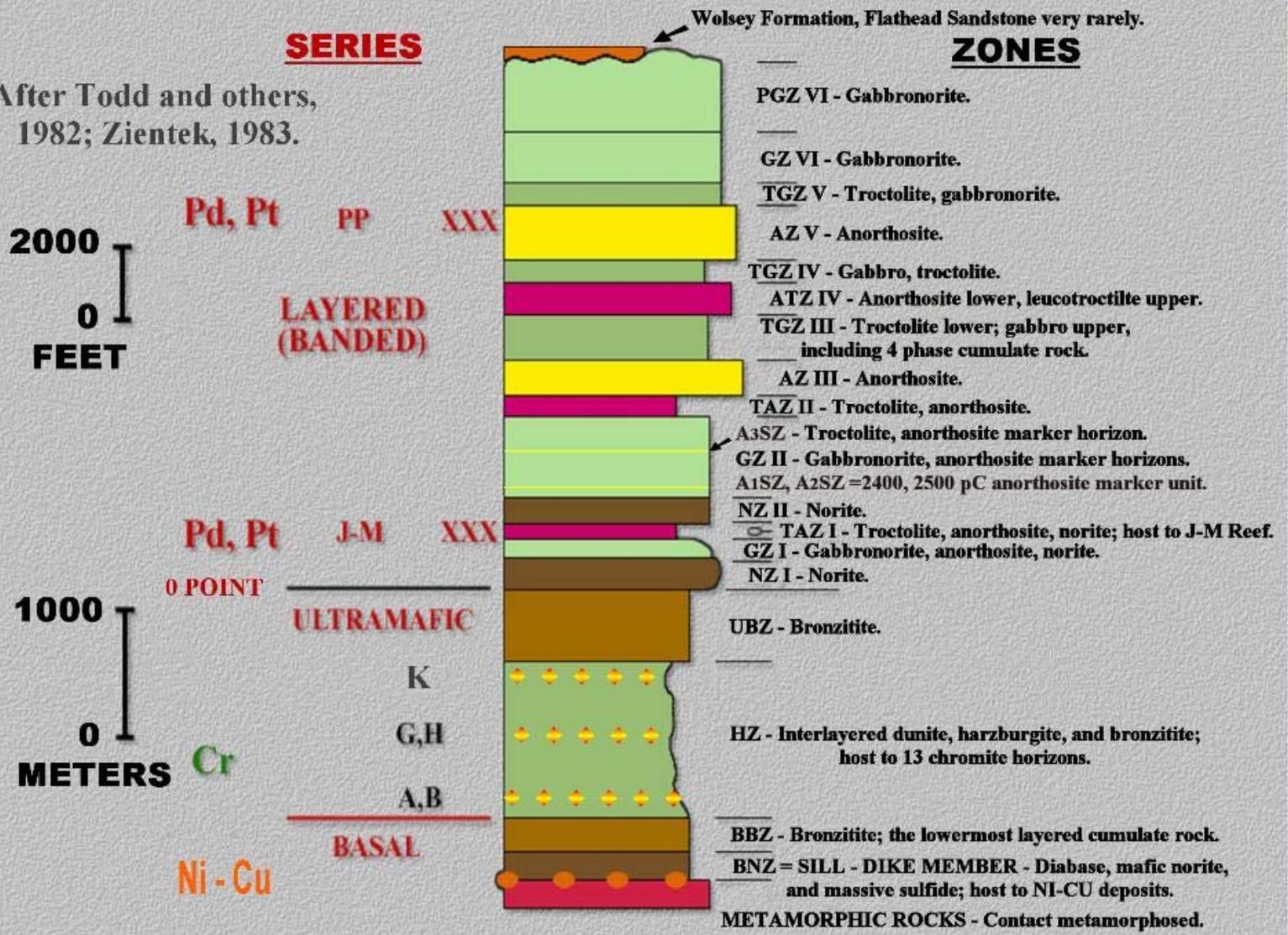
PHANEROZOIC STRATIGRAPHIC COLUMN STILLWATER COMPLEX AREA

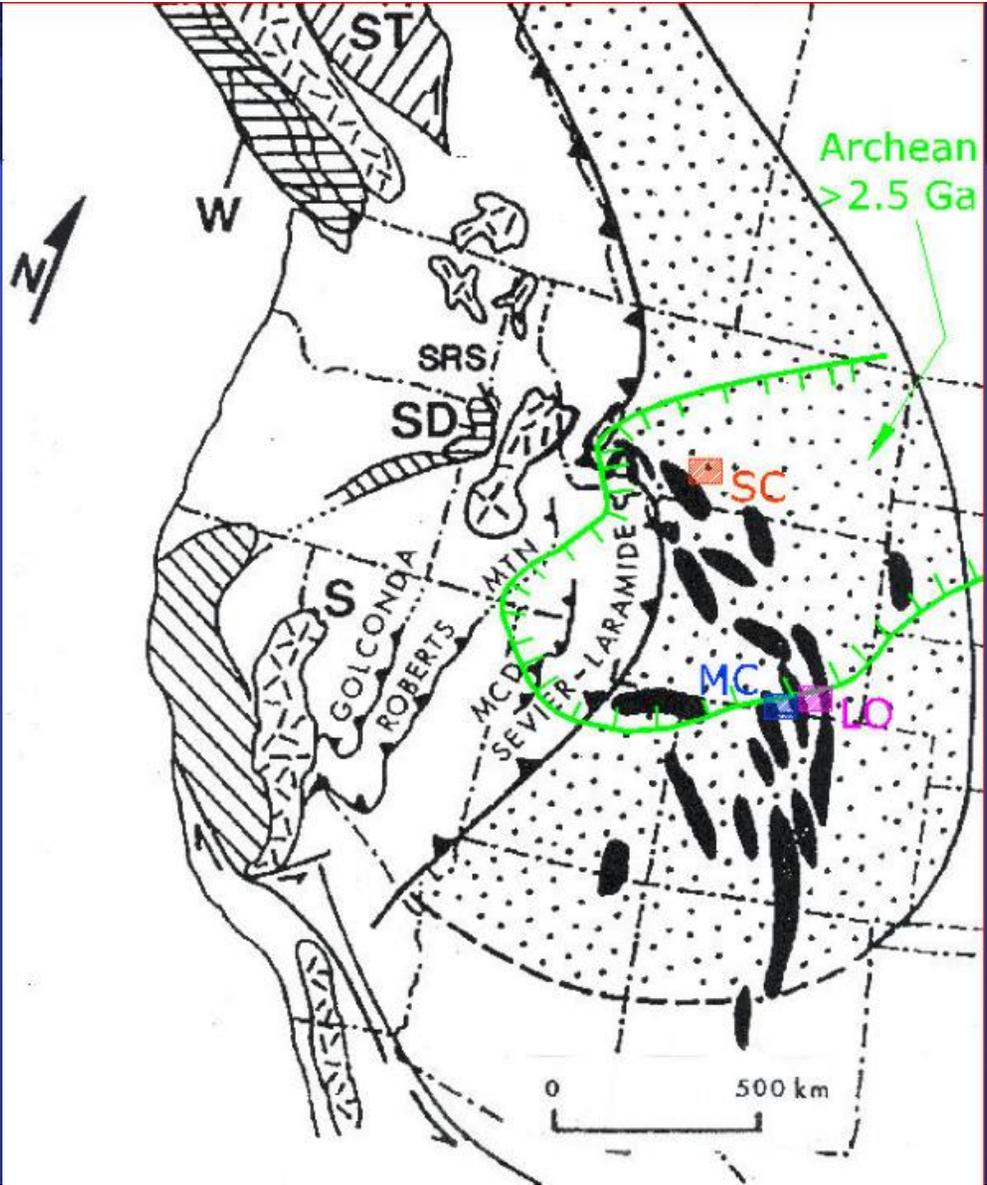
After: Vhay, 1934; Garbarini, 1957; Lopez, 2001.





After Todd and others,
1982; Zientek, 1983.

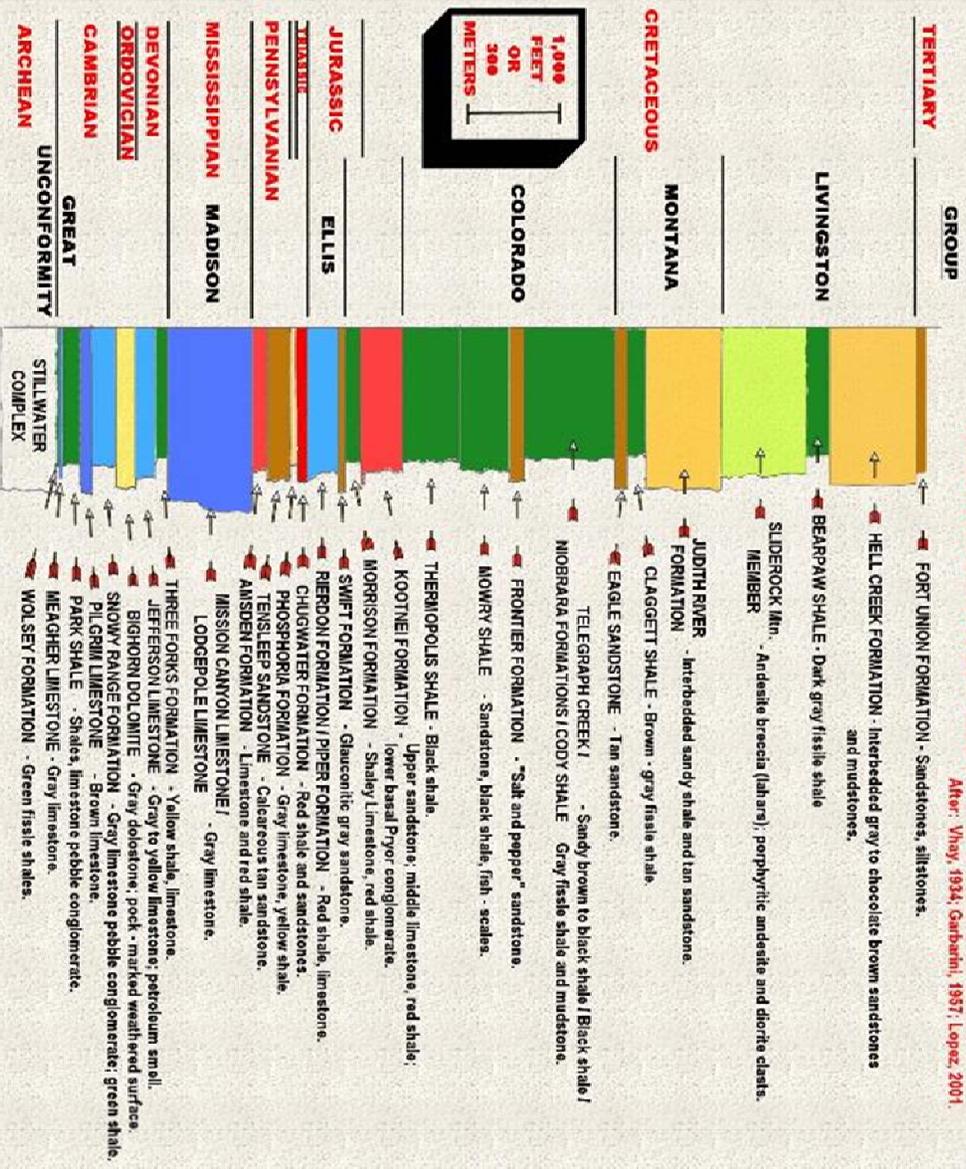


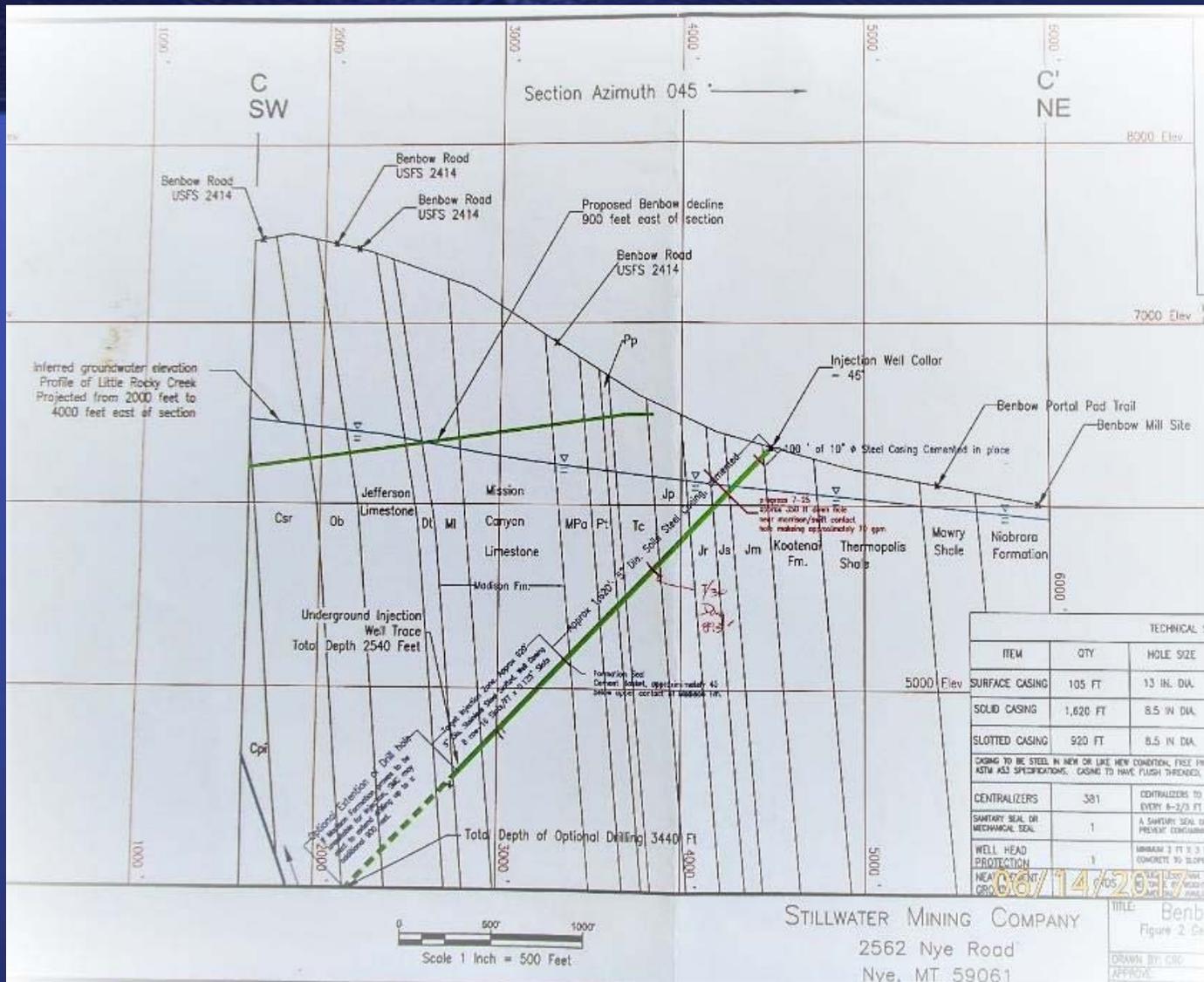


PHANEROZOIC STRATIGRAPHIC COLUMN

STILLWATER COMPLEX AREA

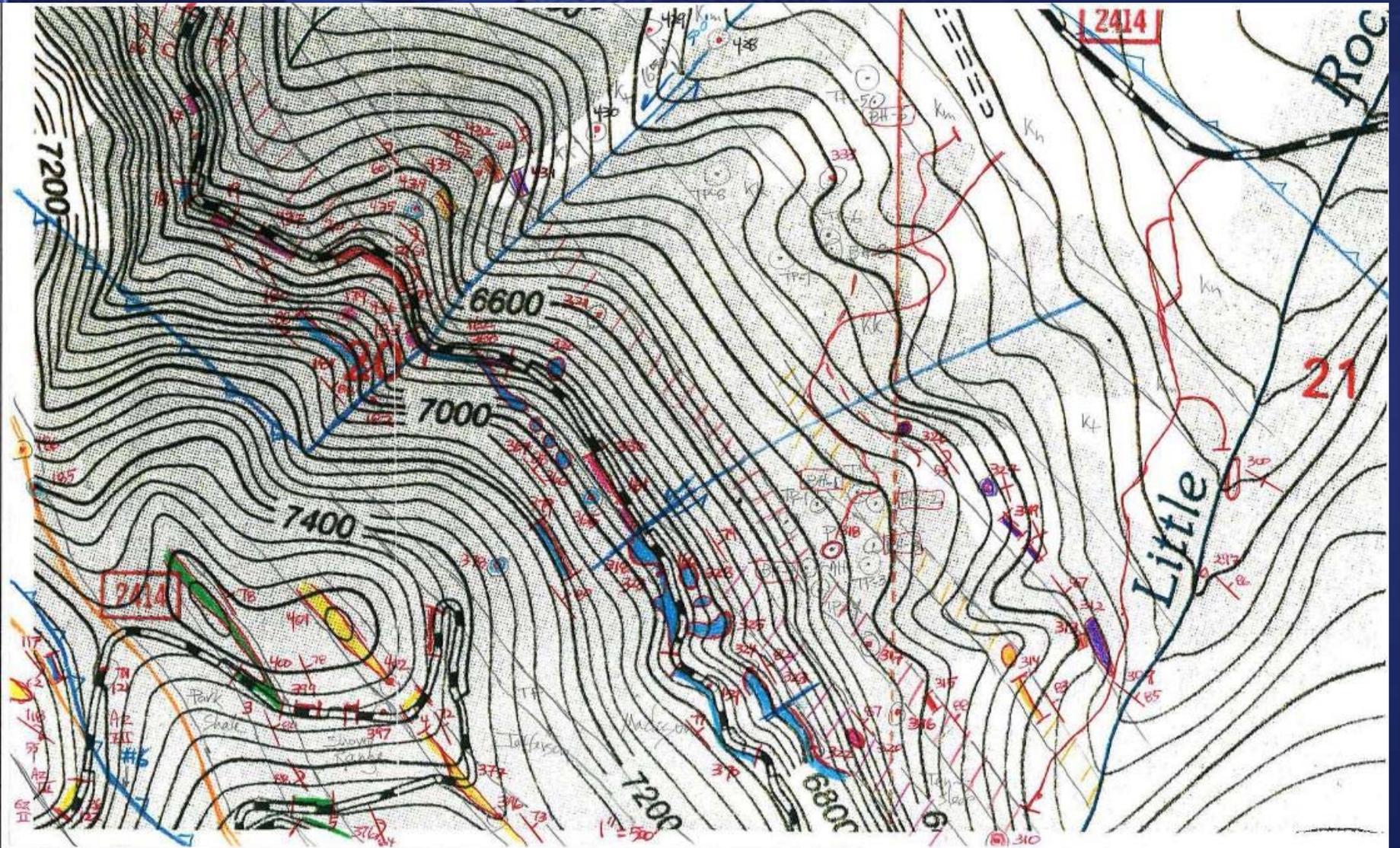
After: Vhay, 1934; Garbani, 1957; Lopez, 2004.

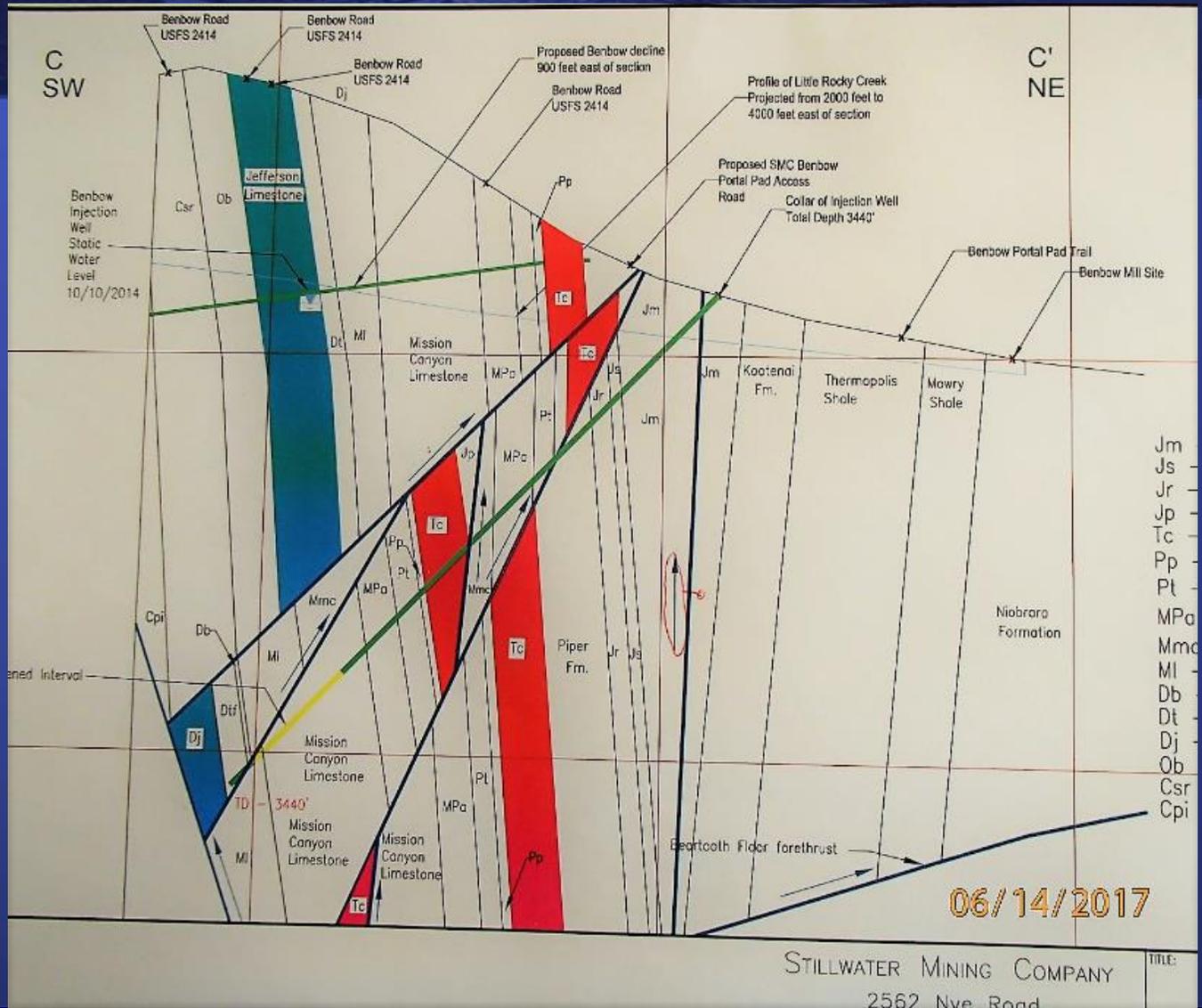




STILLWATER MINING COMPANY
 2562 Nye Road
 Nye, MT 59061

TITLE: Benbow
 Figure 2 Cont.
 DRAWN BY: CMC
 APPROVED:





- Jm
- Js
- Jr
- Jp
- Tc
- Pp
- Pt
- MPa
- Mmc
- MI
- Db
- Dt
- Dj
- Ob
- Csr
- Cpi

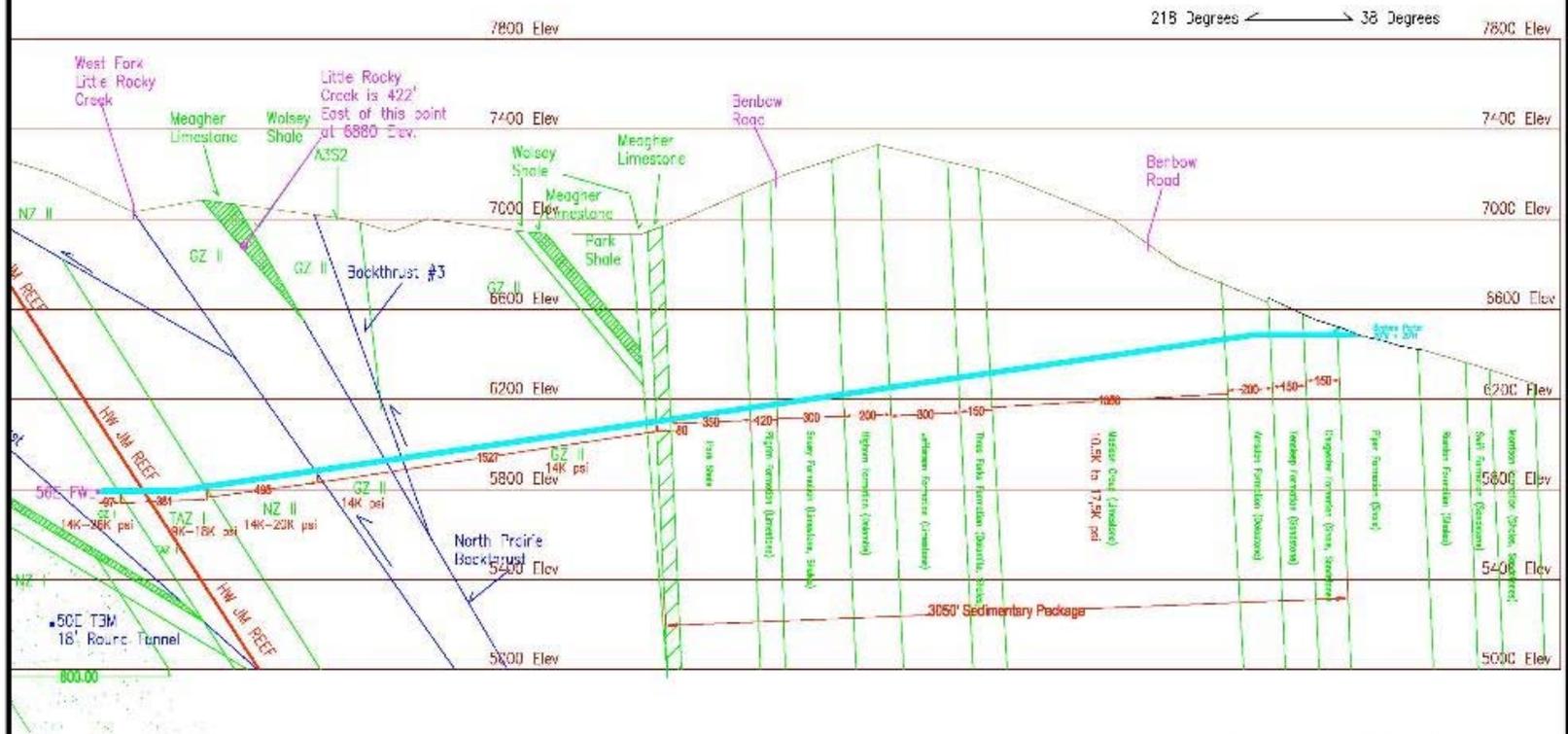
06/14/2017

STILLWATER MINING COMPANY
2562 Nye Road

TITLE:

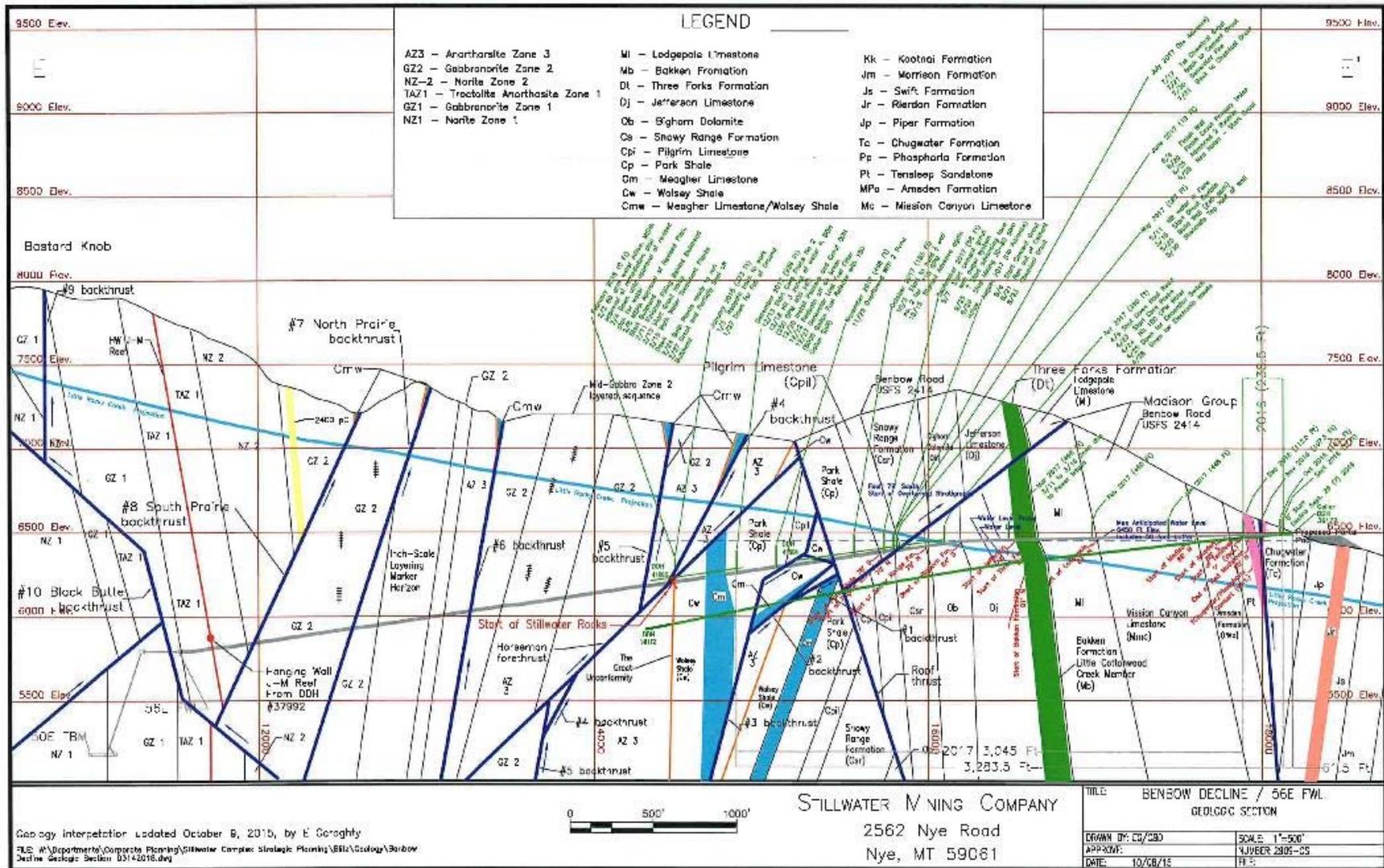


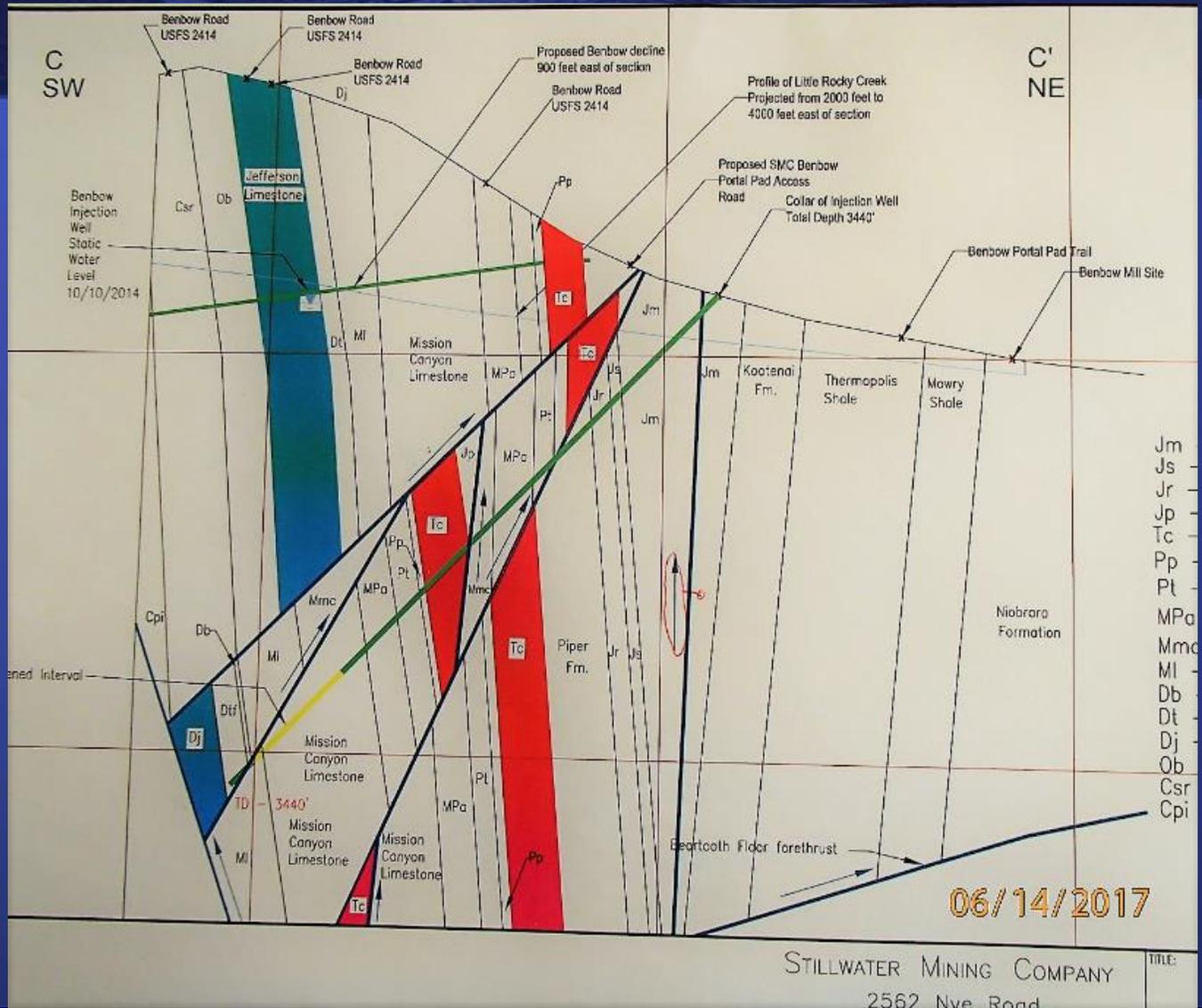
Benbow Portcl Section



STILLWATER MINING COMPANY
 1321 Discovery Drive
 Billings, MT 59102

TITLE: BENBOW TUNNEL	
Cross Section	
DRAWN BY: A. Campbell	SCALE: N/S
APPROVE:	NUMERO:
DATE: 04/12/2012	TITLE:

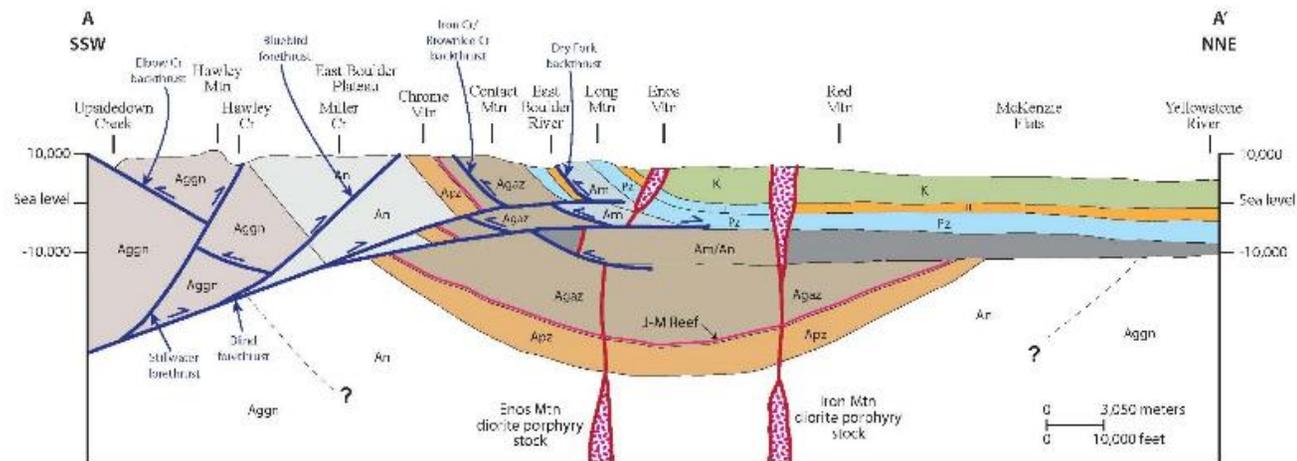




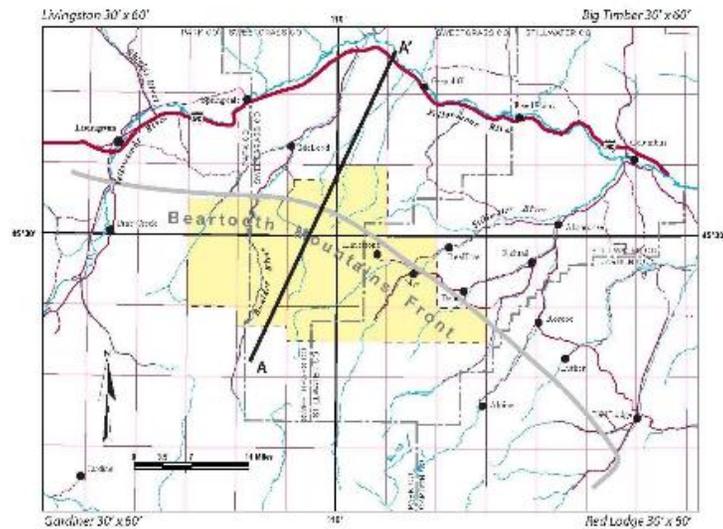
06/14/2017

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2562 Nye Road

TITLE:



- K Cretaceous rocks
 - JT Jurassic/Triassic rocks
 - Pz Paleozoic rocks
 - Agaz Bancroft series
 - Uoz Ultramafic series
 - Am Contact metamorphic rocks
 - Am Mylonitic rocks
 - Am/Am Mylonitic / contact metamorphic rocks
 - Aggn Regional metamorphic rocks
- J-M reef
 - Stocks
 - Faults



Stillwater Complex cross section 1. Generalized Cross Section of the Beartooth Mountains Front Triangle Zone showing hypothetical Stillwater Complex Depth







