



# Alberta Energy Information Exchange

April 26, 2007



# Agenda

- |  |               |
|--|---------------|
| 1. Introduction                                  | 09:00 – 09:10 |
| 2. e-Freehold Mineral Tax                        | 09:10 – 09:55 |
| 3. Break   | 09:55 – 10:25 |
| 4. ETS and Passwords                             | 10:25 – 10:40 |
| 5. What You Need to Know<br>About ZDs and DRRZDs | 10:40 – 11:10 |
| 6. New and Revised Forms                         | 11:10 – 11:30 |



# What You Need to Know About ZDs and DRRZDs

Presented by David Pollock, P. Geol.

(Refer to Information Letter 1998-14 & Information Bulletin 2007-02  
in the information package)

- The rights held by NG and P&NG agreements are described by a Zone Designation (ZD) or a Deeper Rights Reversion Zone Designation (DRRZD)
- ZDs are different than DRRZDs

- Errors can occur if you misinterpret the type of zone designation describing your rights
- A new report listing Deeper Rights Reversion Zone Designations and Zone Designations by company may be requested from the department

This presentation will explain and illustrate:

- Zone Designations (ZDs)
- Deeper Rights Reversion Zone Designations (DRRZDs)
- You should ensure your technical people understand this prior to drilling, perforating or producing a well

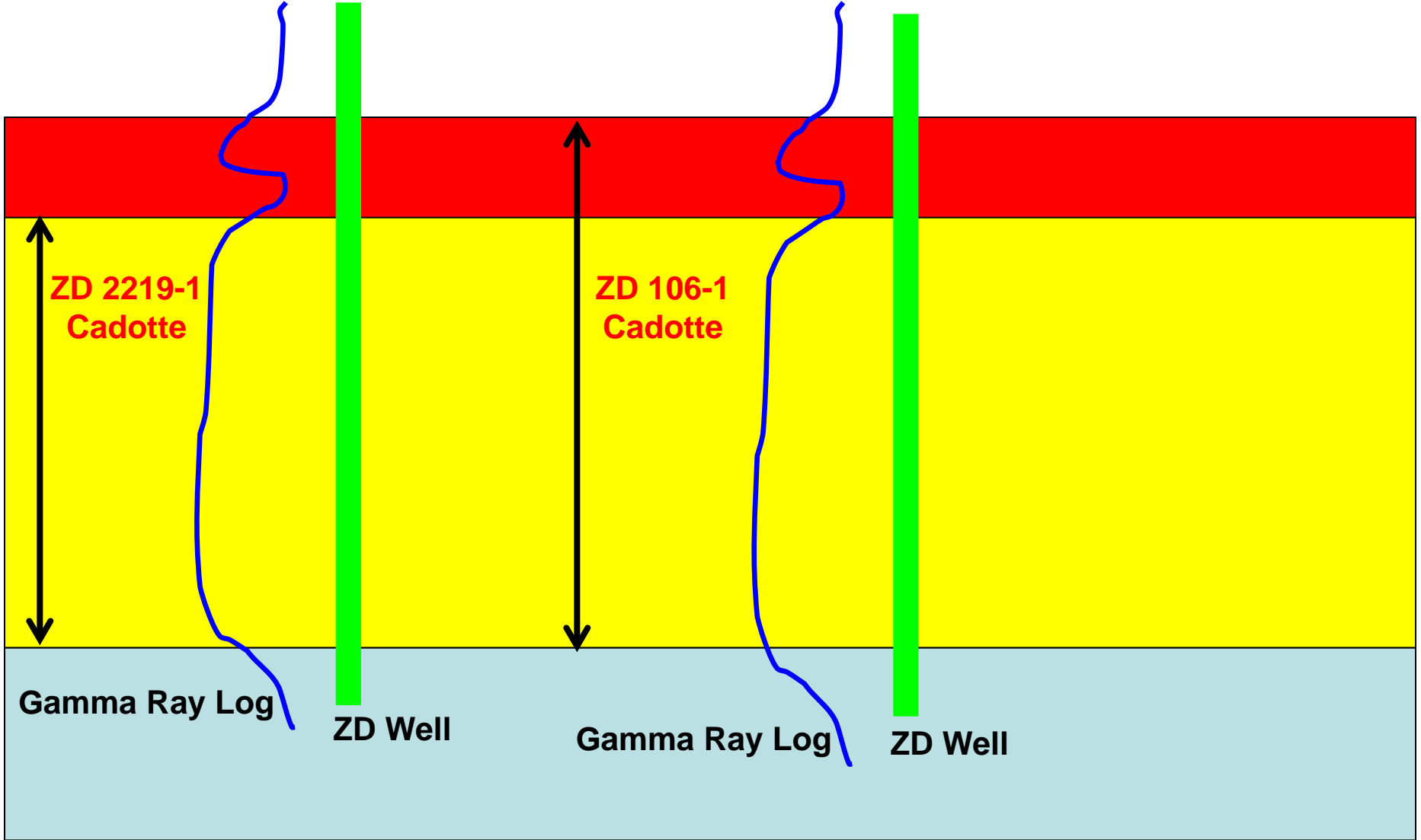


# ZD - Zone Designation

- Natural Gas Leases
- Discovery Well Petrophysical Logs
- Lithostratigraphic Interval/Zone
- Pay Zone



# Cadotte Sandstone ZDs 2219-1 & 106-1





# Rules and Application of ZDs

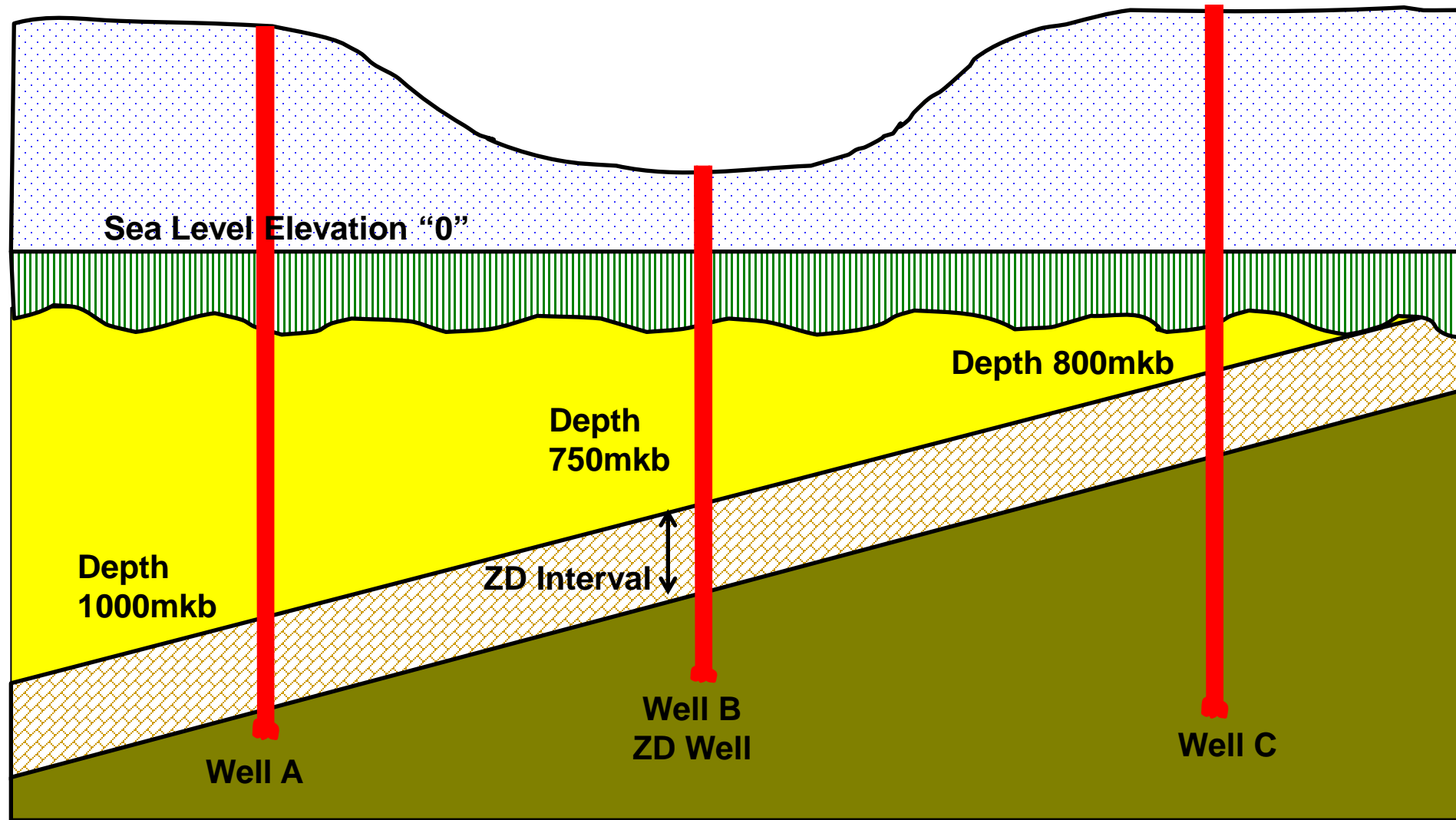
## Rules

- Well Log Correlation
- Designated Well Log Interval
- Stratigraphic
- Independent of Depth

## Application

- Name as a Guide
- Gas Bearing Discovery

# ZD/Well Depth Relationships



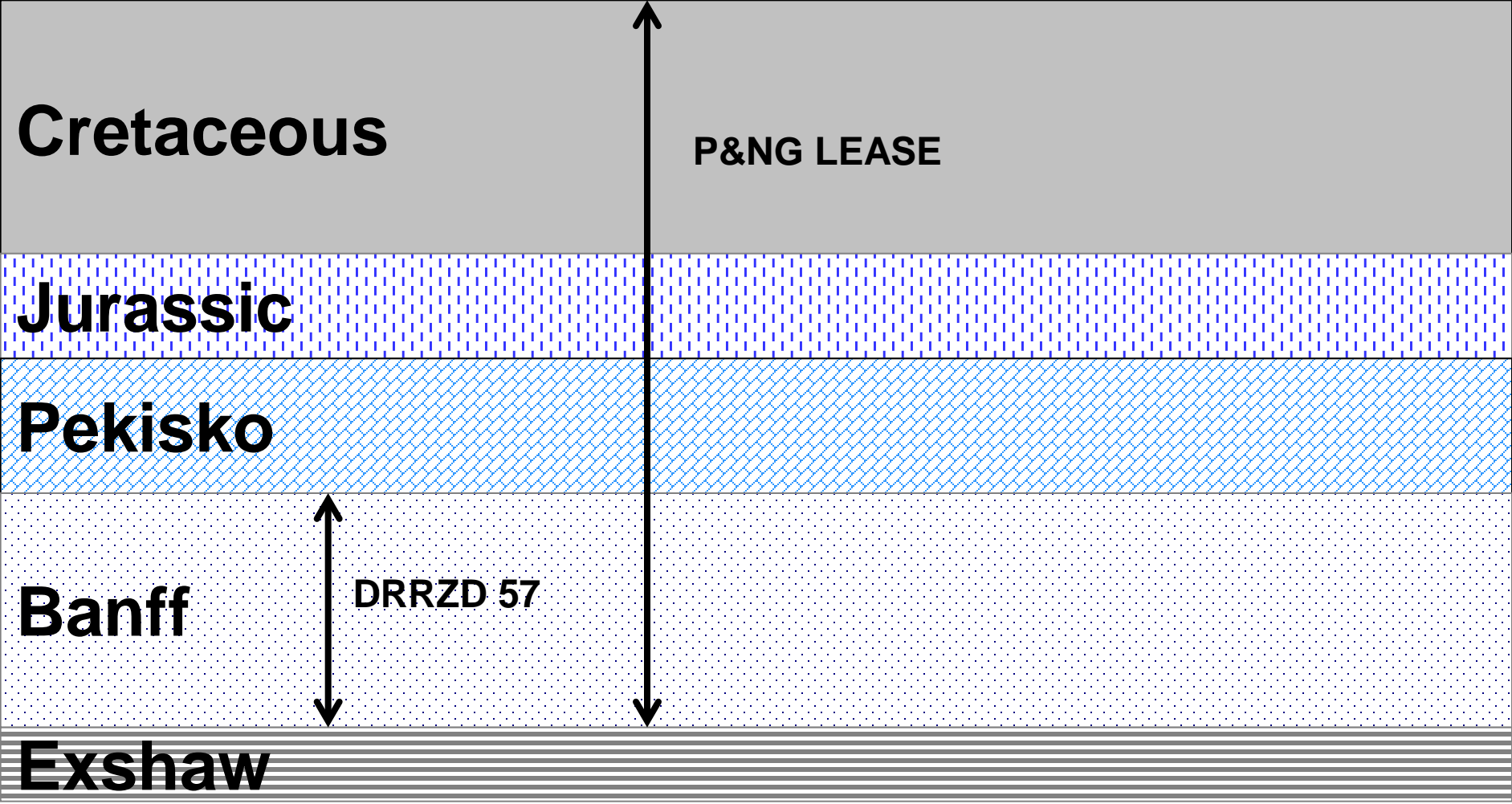


# DRRZD - Deeper Rights Reversion Zone Designation

- Continuous Development of Resources
- Earn to Base of Deepest Production



**Surface**



## ZDs

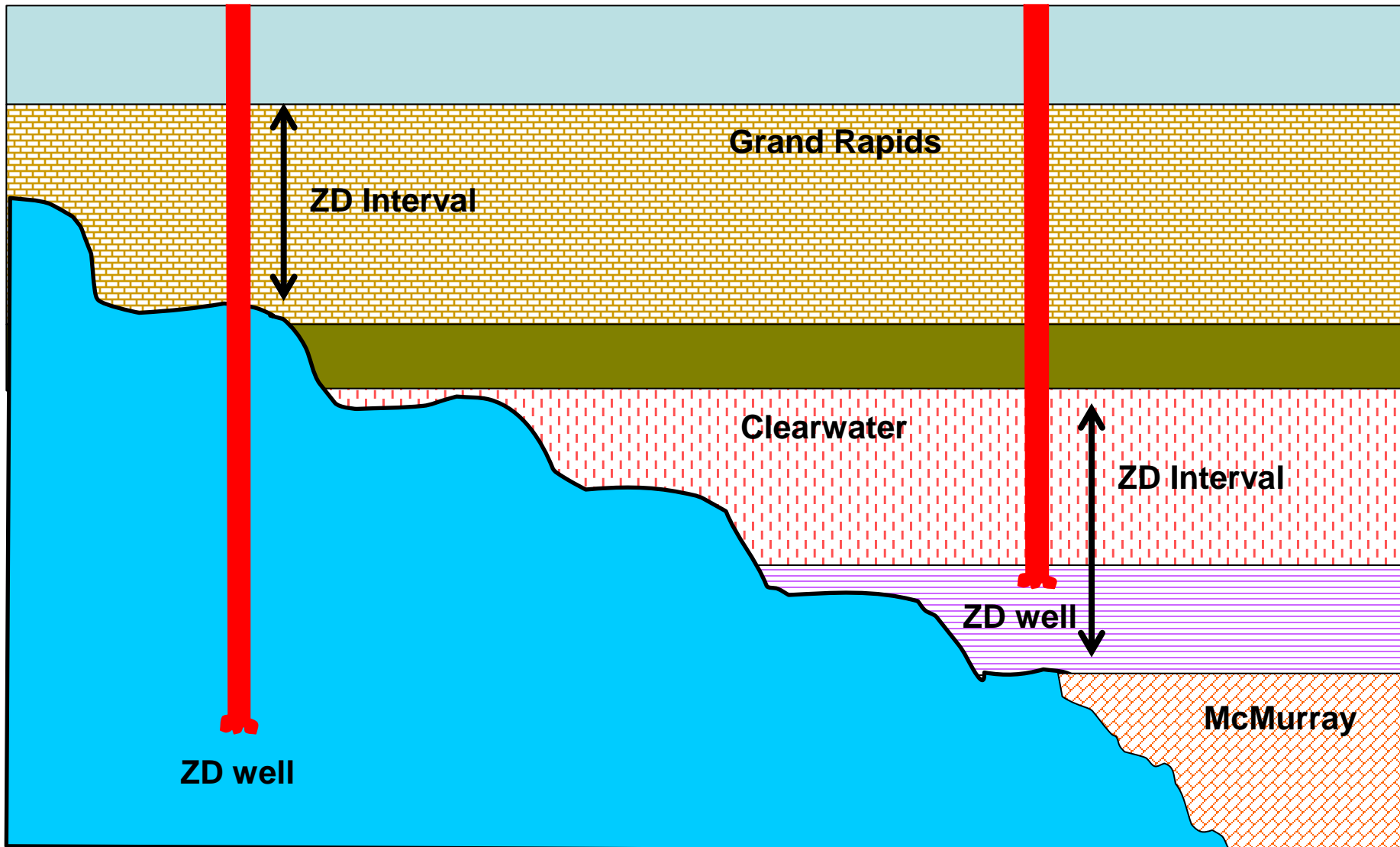
- Unconformity Bounded Zones
- Logging Practices
- Channeling and Erosion
- Facies Changes
- Administrative

## DRRZDs

- Unconformity Bounded Zones
- Facies Changes

# Unconformity Bounded Zones

# Logging Practises




## ZDs

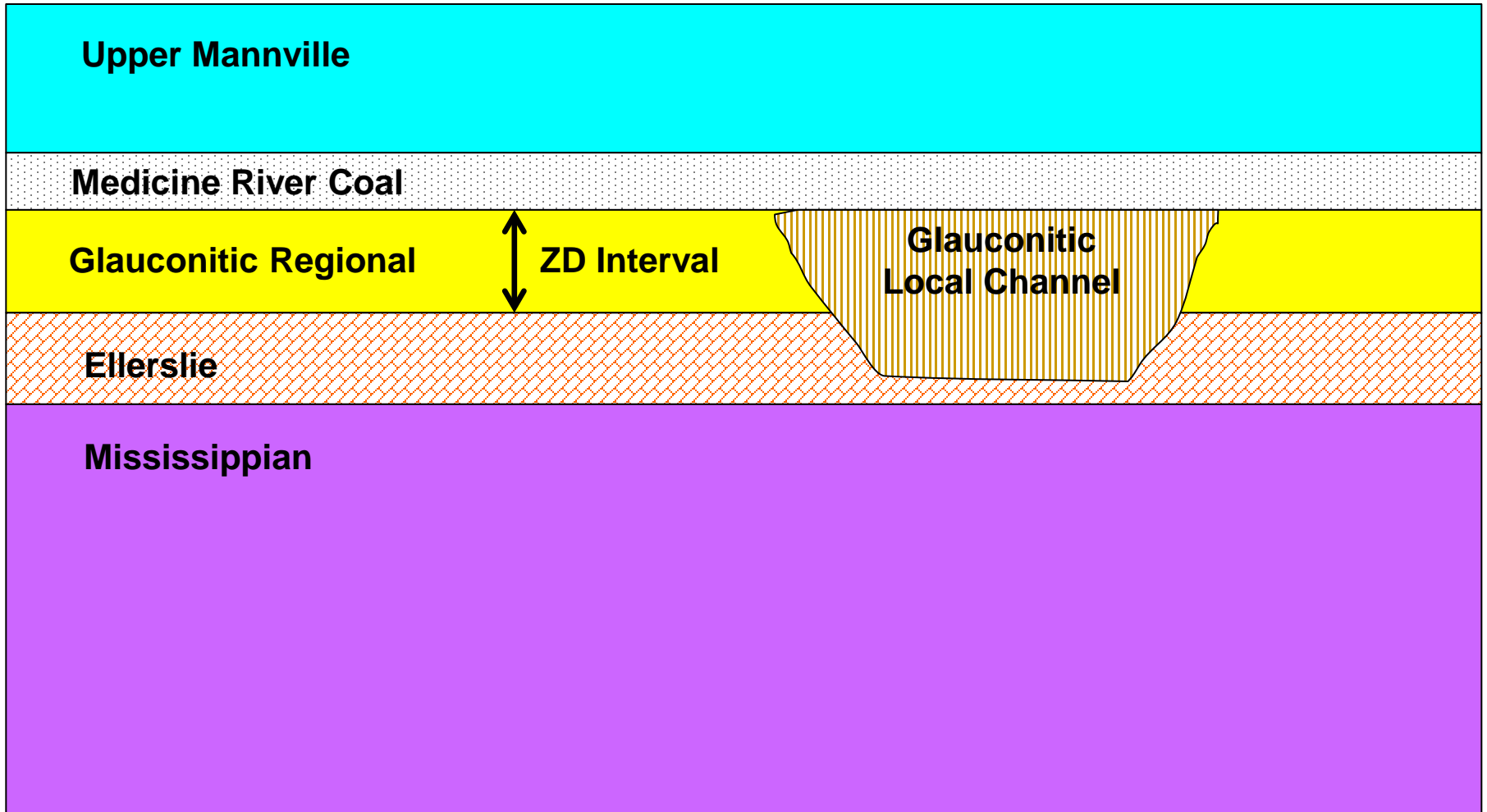
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## DRRZDs

- Unconformity Bounded Zones
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# Removal of regional markers owing to channeling and erosional valley fill



## ZDs

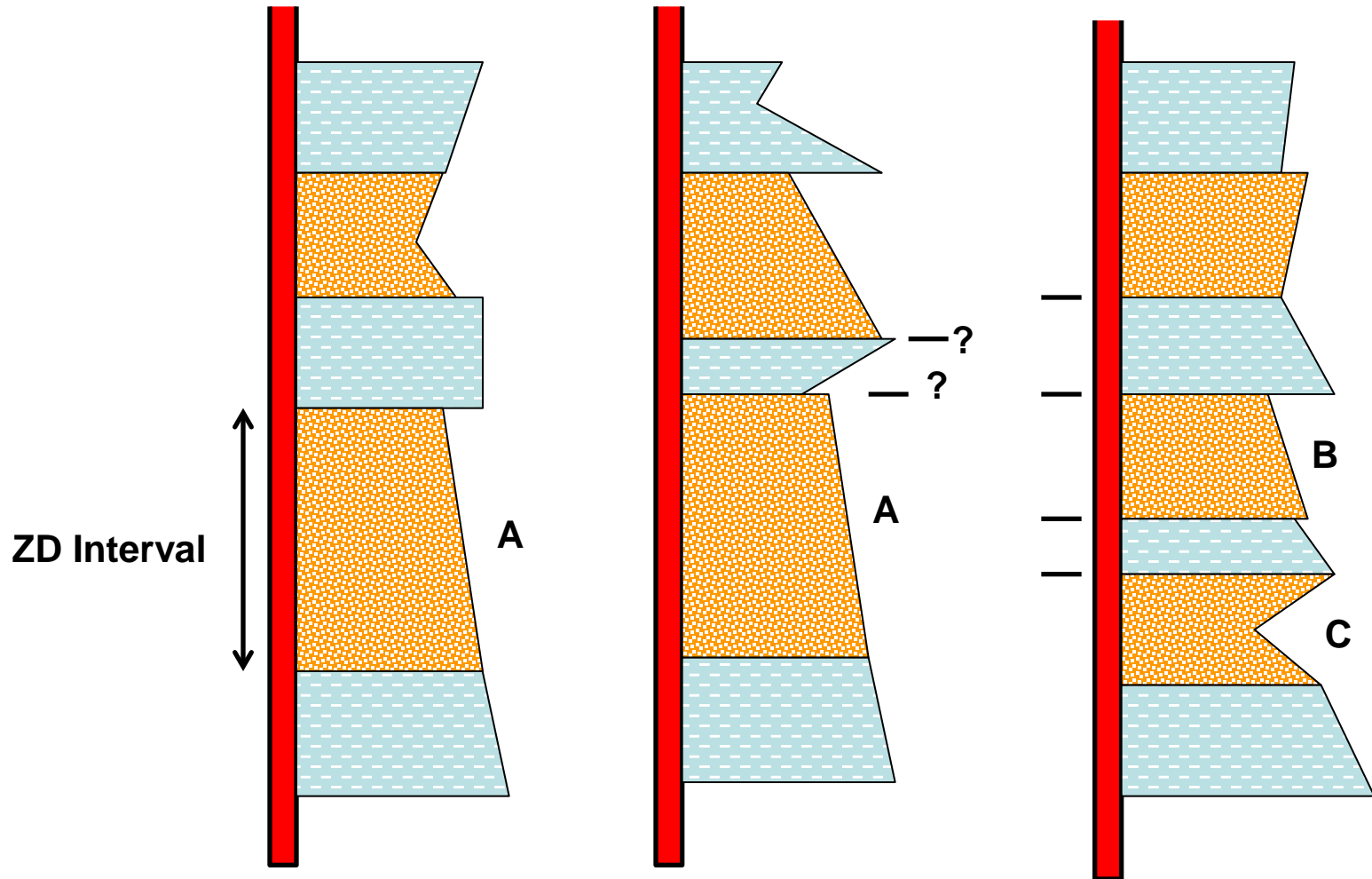
- Unconformity Bounded Zones
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## DRRZDs

- Unconformity Bounded Zones
- **Facies Changes**
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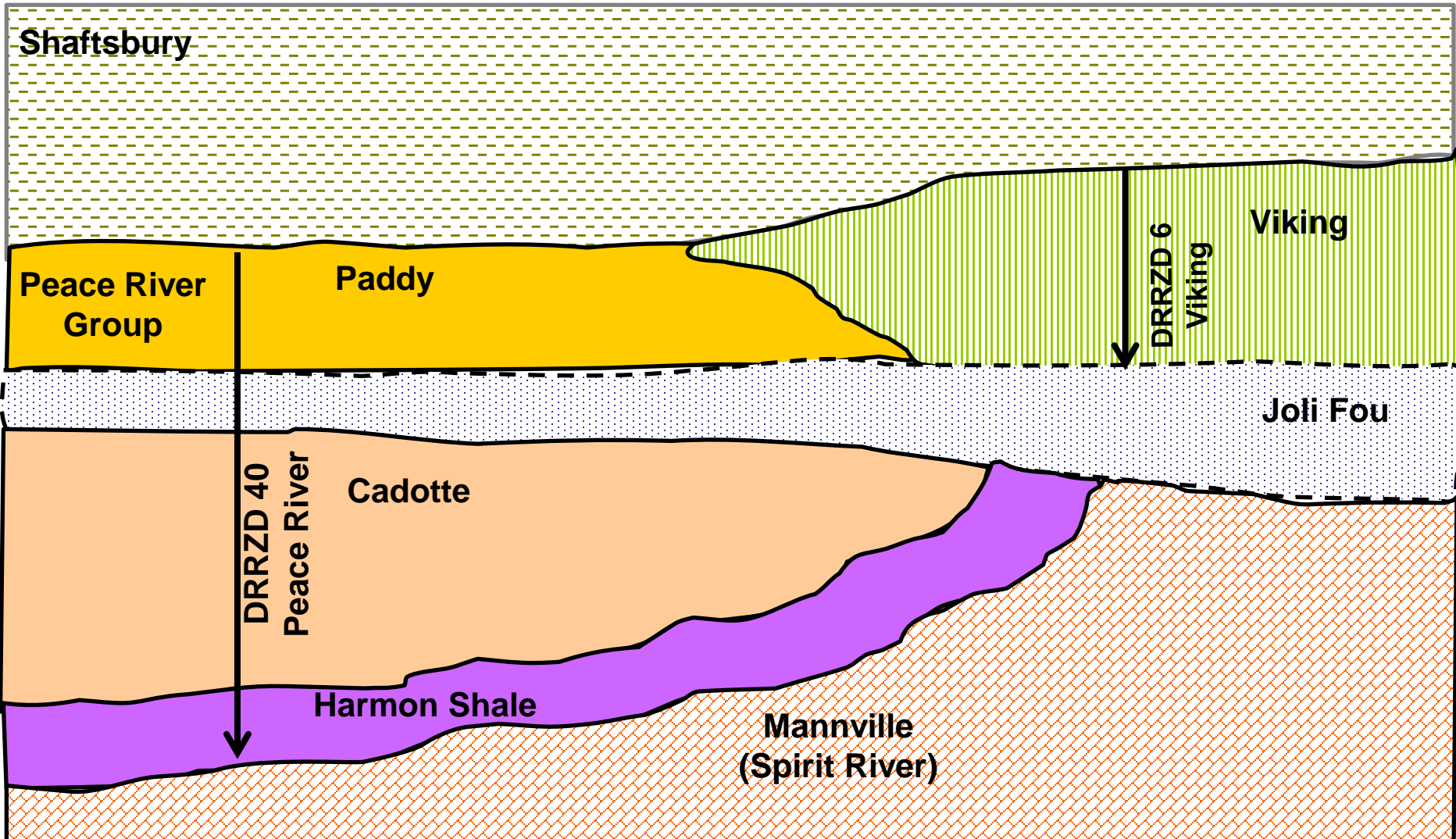


# Facies Changes



# Facies Changes

Base Fish Scales



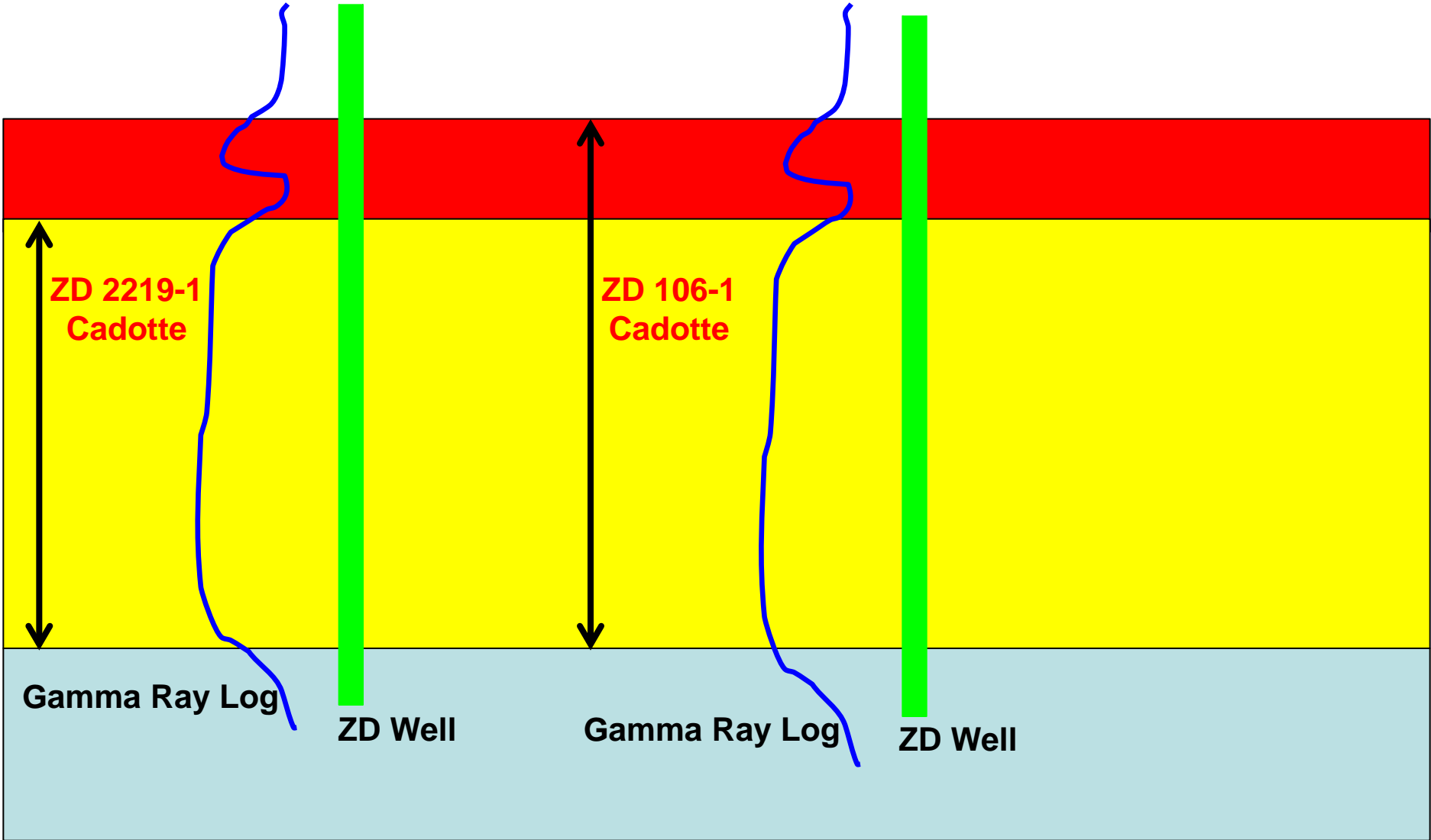
## ZDs

- Unconformity Bounded Zones
- Logging Practices
- Channeling and Erosion
- Facies Changes
- **Administrative**

## DRRZDs

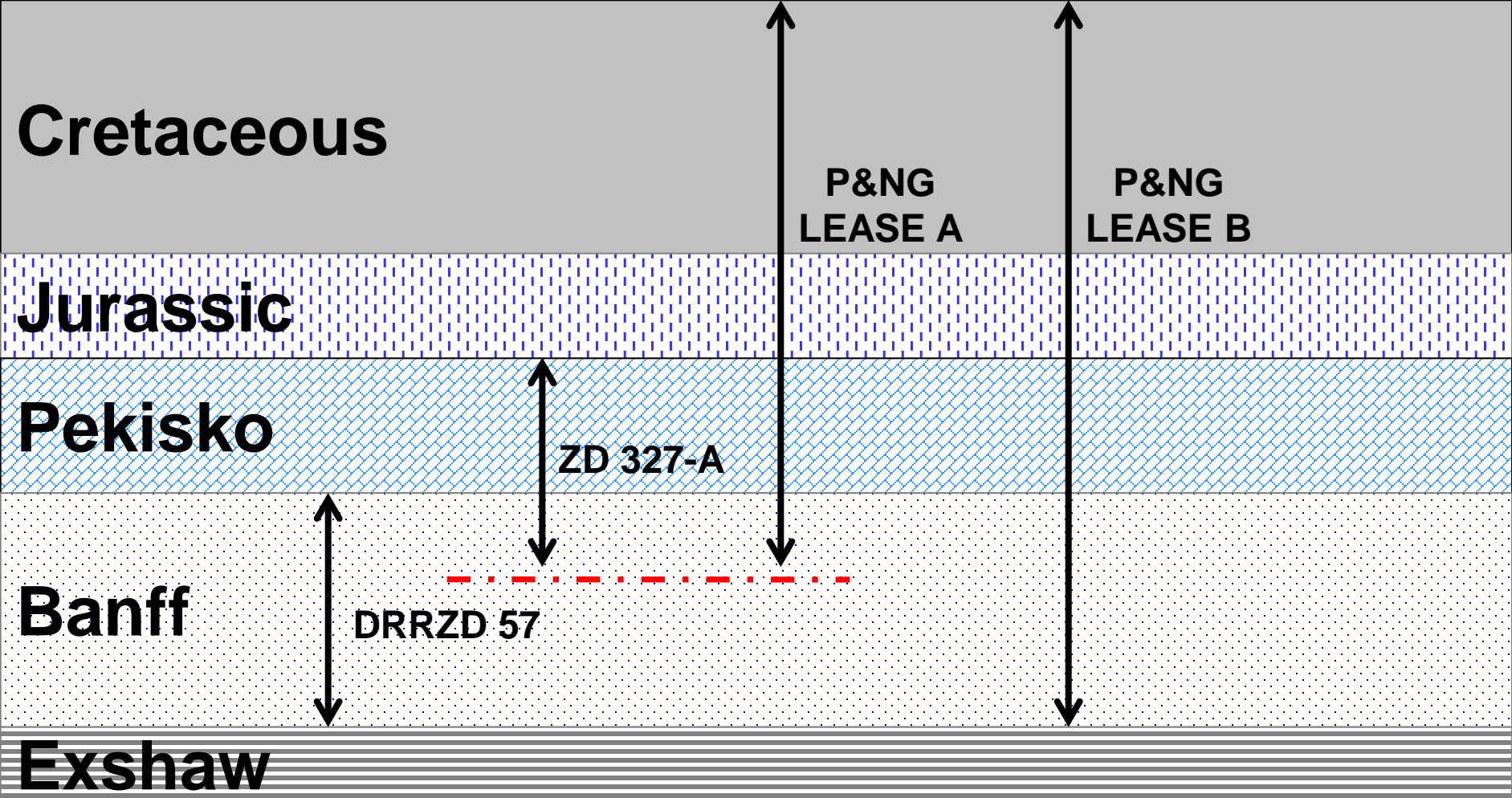
- Unconformity Bounded Zones
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- **Administrative**

# Cadotte Sandstone ZDs 2219-1 & 106-1





**Surface**



- ZD
  - natural gas leases or exceptions
  - depth independent
  - it's the correlated well log interval that counts
- DRRZD
  - it's the name that counts



# Summary

- A best practice to adopt might be for companies to flag all their agreements that contain a ZD in its rights description in order to avoid costly mistakes