

## Geology “Test Style” Quick Review

- “Well Efficiency” is presented as a ratio of theoretical drawdown to actual drawdown
- Examples of **Deposition traps** for petroleum: lenses of facies of clastic and igneous rocks, such as lenticular sand bodies, barrier bars, channel deposits, and pinchouts; and lenses and facies of biochemical rocks, such as biostromes, organic reefs, and bioherms.
- Pyrite is formed by indirect action bacteria; they reduce sulfur (oxidized) to sulfide (reduced). This releases hydrogen sulfide gas that changes ferric iron to ferrous iron, and precipitates pyrite.
- Contact metamorphism- intrusion of an igneous mass causing metamorphic changes caused by heat, magma composition, and deformation. Pressures are relatively low.
- Silt or clay sieve size: <No. 200 or 0.074 mm
- A plunging syncline plunges away from the closure
- Poorly-sorted (well-graded) sediment contains many grain sizes.
- Below 60% oil saturation, a reservoir will produce mostly water.
- A blowout is a depression caused by deflation.
- Transverse dunes: perpendicular to the wind with a gentle windward slope and steep slip face. Barchans and Parabolic dunes are varieties of Transverse dunes.
- Specific conductance multiplied by a factor between 0.55 and 0.75 approximated the TDS value
- Stratiform Deposit: the ore constitutes a layer and is stratabound.
- Minerals in igneous rocks chemically weather in an inverse order to their formation in the Bowen Reaction Series.
- Diagenesis is the change of sedimentary rock after the original lithification; not including metamorphism or weathering.
- Dolomite forms from the diagenetic process of exchanging calcium for magnesium in the existing calcium carbonate in the pore spaces of limestone during highly saline tides.
- “Invaded Zone” of a Borehole refers to drilling mud penetrating the formation fluids.
- Transgressive sequence: advance of sea onto land. Sandstone overlain by shale overlain by limestone
- Law of Superposition: oldest layer usually on the bottom.
- Law of Initial Horizontality: layers are usually deposited horizontally.
- In a reverse dip-slip fault, the hanging wall has moved up relative to the foot wall.
- Type section: The originally described stratigraphic unit to which other parts of the unit are compared; ideally at its maximum thickness and both the top and bottom are exposed.
- Type locality: the place a geologic feature was first recognized and described.
- Unconformity: a gap in the geologic record.
- Net slip: the distance between two formerly adjacent points on either side of a fault.
- Tarn: the small lake at the bottom of a cirque.
- Hydraulic budget, think PERU:
  - $\text{Change in storage} = \text{Precipitation} - \text{Evapotranspiration} + \text{Runoff} + \text{Underflow}$
- Ghyben-Herzberg principle: the depth to which freshwater extends below sea level is approximately 40 times the height of the water table above sea level.
- TEGD requires a minimum of one up gradient and three down gradient monitoring wells.
- Mohr’s Circle is used to represent the state of stress

- 6.23 Gallons in a cubic foot
- Potassium- Argon dating is preferred over Rubidium-Strontium because K bearing minerals are more common than Rubidium bearing minerals.
- Supergene enrichment of an ore deposits occur relatively near the surface and include the predominance of meteoric water
- “Reserve Base” means that the resources have been identified and meet the minimum criteria for physical and chemical qualities as well as meeting the financial criteria related to the current mining and production practices.
- Diatomite is a soft, fine grained, siliceous rock with a very low density. Chemically inert, it is used as a filter aid, absorbent for spills, insulation, and a silica additive in cement.
- Laterite is both a soil and a rock type rich in iron and aluminum and is commonly considered to have formed in hot and wet tropical areas. Nearly all laterites are of rusty-red coloration.
- Seismic zone factor is used to calculate the forces in the building design process
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