

019035

To

Distribution

Date

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From

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Subject

STRUCTURAL LOG - SYNTHESIS (AND ANTITHESIS)

We have arbitrarily divided structural observations into two types:

- (1) Zone Observations
- (2) Point Observations

Zone observations refer to a region within the core sequence (example - a zone of S-symmetry), and point observations are for single locations (example - a measurement of S2 relative to the core axis).

Zone Observations:

The different symbols (and observations) under this heading are: S, Z, M, P, R, *H, D*.

- (1) S and Z are taken directly from the earlier logging scheme. They refer to zones of S or Z-symmetry.
- (2) M refers to a zone of mixed symmetry. Typical examples include large hinge zones or short, steep limbs. Use of this symbol allows for uncertainty in locating symmetry changes over large zones.
- (3) P is a specific term referring to PS2 or pressure-solution striping. Three criteria should be used to recognize PS2:
 - (a) It is present in more than one rock type.
 - (b) Microlithon structures are not visible.
 - (c) Ideally there should be a transition from a crenulation cleavage to a closely spaced crenulation cleavage to a pervasive schistosity.
- (4) R is a more general term (like garbage term) for regions without microlithon textures which cannot be definitely related to PS2-type textures. It would include regions of transposed S1 or S0. Similarly, it would include regions where lithologies do not contain microlithon textures (like massive 5D or 5C, or totally recrystallized 5A, 3E, etc.). In summary, R is intended to be used for rock-type controlled, fabric domains where criteria for P have not been met.

- 5) *H* refers to horizontal S2
- 6) *D* refers to "down-dip" zone

Point Observations:

The different point observations are:

Σ and 3

F 1/2/3/4/5

S 1/2/3/4/5

The use of Σ and 3 should be restricted to actually observed fold closures. Regions immediately around the Σ or 3 symbol are implied to indicate a reversal of symmetry. Therefore, for Σ the region above the symbol has implied S-symmetry, and for 3 the overlying region has implied Z-symmetry.

F 1/2/3/4/5 is the point observation of a fold related to the appropriate deformation D 1/2/3/4/5. Regions for this observation may be specified in the remarks by listing a range for the fold pattern. This observation is intended for only locally observed fold patterns. Measurements of these folds may be recorded by measuring:

- (1) Angle between dip directions for the observed fold and S2.
- (2) Angle of observed fold element with the core axis.

S 1/2/3/4/5 is a point observation of the orientation of a particular planar element. In most cases in Dy and Vangorda deposits this observation will be the S2 foliation. Measurements of S1, S3, S4, S5 structures must presently be handled in the same manner as above for the F 1/3/4/5 fold elements.

Comments:

Faults will continue to be handled in the customary manner using the lithology log.

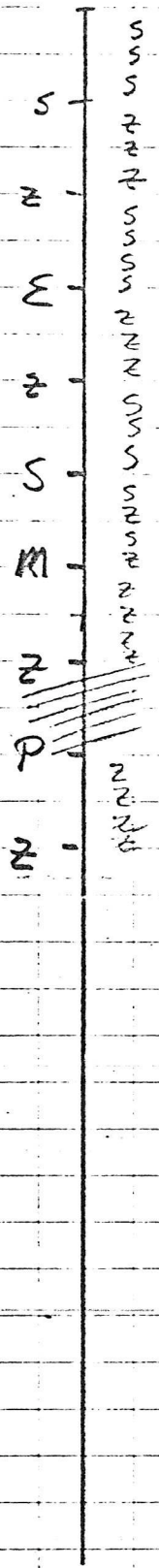
The different observations should be arranged sequentially according to increasing depth in the drill hole.

Zone observations refer to the zone immediately above the plotted symbol.

Point observations are at the locations indicated by the tic mark on the plotted structure log.

cc. Daryl Hanson
Jim Mustard
Brian Hall
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EXAMPLE 1



implied Σ was not observed

implied \exists was not observed

symbol Σ implies zone of S above it

implied \exists was not observed

zone of mixed S & Z symmetry
(large hinge zone)

EXAMPLE 2

