

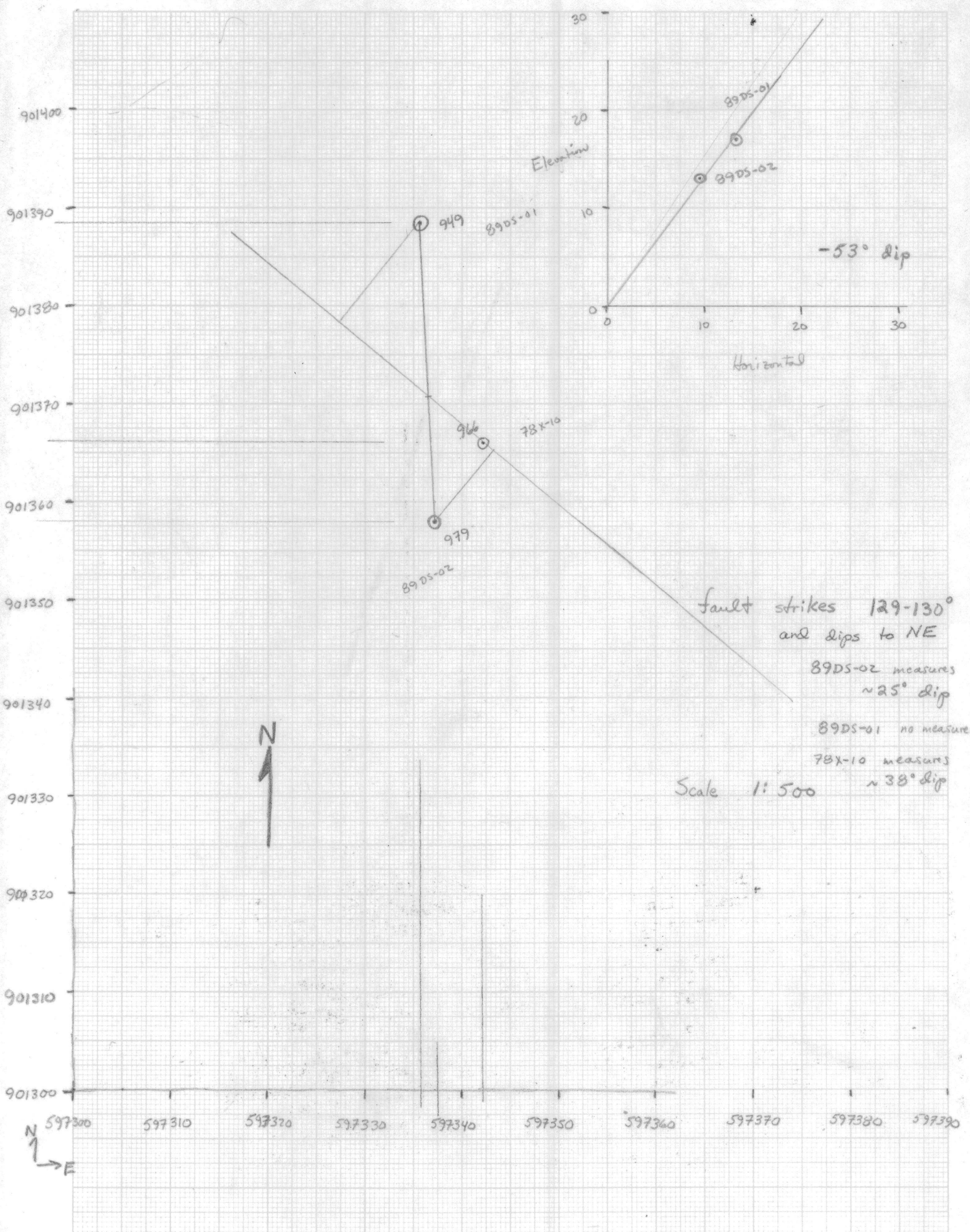
## DRILL HOLE RESULTS

Problems were encountered in DDH 89DS-02 with a fault extending over the interval 128.1 - 130.5 m. Looking at cross-section 15+00, this fault interval correlates well with a logged fault zone in DDH 78X-10 at depth 138.4 - 141.4 m. With this correlation the most reasonable "same fault" in DDH 89DS-01 occurs in the interval 146.6 - 166.1 m.

The center point for each of these intervals ~~was~~ <sup>was</sup> converted to x, y, z coordinates using the extraction file in PCXPOR. The coordinates are as follows:

DDH	Nothing	Easting	Elv.
78X-10	901366	597342	966
89DS-01	901388	597336	949
89DS-02	901358	597337	979

The orientation of the plane containing these points was then calculated graphically as a three point problem. The resulting fault orientation is 130 / 53 NE. With this dip the core axis angle for the fault margins ideally would be 37° (assuming a vertical DDH). Measured angles from the drill logs are 38° (lower contact - 78X-10), 25° (upper contact - 89DS-02), and 40° (lower contact 89DS-02).



## MAPPING RESULTS

Two and one half days were spent recording outcrops in the pilot hole area of the Dy deposit. Major emphasis was on recording all available outcrop and mapping lithologic contacts. Structure was recorded only in a few instances. Many of the "outcrops" consisted of phyllite series with no measurable structure.  $S_2$  foliations were generally gently dipping both to the southwest and southeast.

The geological map shows the following sequence of units progressing from southwest to northeast:

- 1.) intimately interlayered metabasite and hornfelsed green Vangorda phyllite (site of DDH 77X-11)
- 2.) silvery grey, carbonaceous Vangorda phyllite (530)
- 3.) intimately interlayered metabasite and hornfelsed green Vangorda phyllite (pilot hole sequence)
- 4.) moderately carbonaceous Vangorda phyllite immediately adjacent to unit 3
- 5.) silvery grey Vangorda phyllite with minor thin metabasite bands
- 6.) metabasite with lesser hornfelsed green Vangorda phyllite.

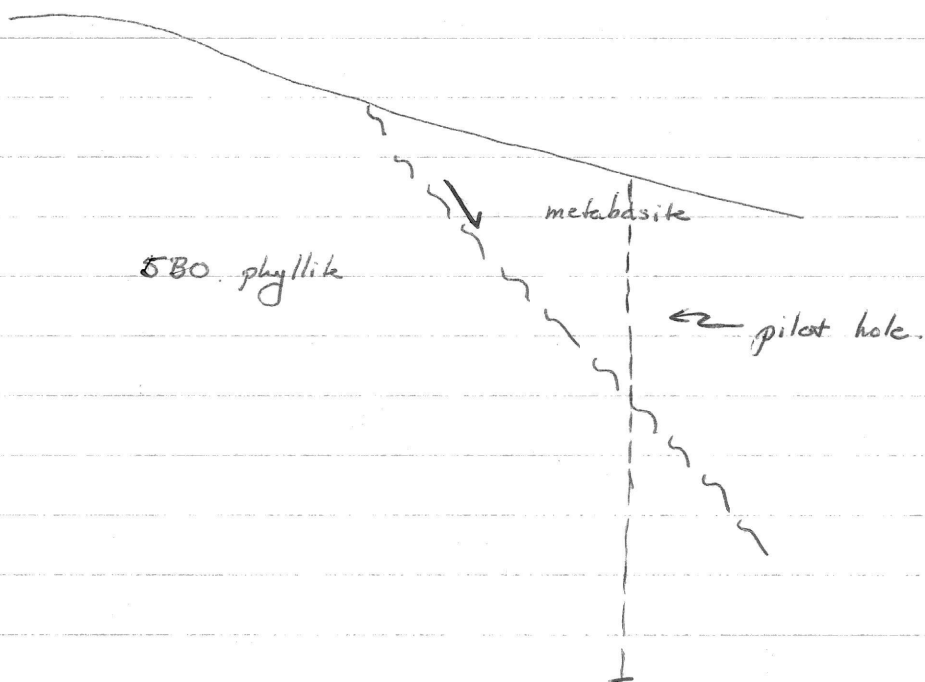
With general S-vergence (valid for pilot hole area) this sequence would correspond to structurally and stratigraphically youngest to oldest. Therefore the metabasite - hornfelsed phyllite sequence in the immediate vicinity of the pilot holes contains thick phyllite sequences on both sides of it. This metabasite sequence can be traced through the pilot hole area with no apparent discontinuities or offsets. No extensive faults were noted in any of the outcrops. There is no "mapping" evidence for a major fault offsetting this unit. The calculated fault strike is closely similar to the strike of the metabasite sequence containing the pilot hole.

### CROSS SECTION INTERPRETATION

On section 15+00 the pilot drilling shows that the southwest metabasite - metasediment contact dips steeply to the northeast. This contact is crudely parallel to the projected trace of the problem fault. The contact is strongly discordant with the general compositional banding and the overall distribution (dip) of the ~~ore~~ horizons.

From the cross sections, the fault trace would "daylight" (i.e. come to the surface) along the approximate ~~contact~~ southwest contact between the metabasite sequence and the phyllite sequence. Because the calculated fault trend and the metabasite margin trend are similar, the fault trace would be parallel to the mapped contact.

The cross-section interpretation of this relationship is as shown below:



## RECOMMENDATIONS

If this fault orientation is correct, the fault cannot be avoided by moving the pilot hole only a short distance. Placing the pilot hole in the footwall would probably result in the drill hole intersecting ~~the~~ mineralization at depth.

The suggested orientation should be checked by drilling a hole collared on section 15+00 slightly southwest of the current pilot hole 89 DS-02. The hole should be inclined to the southwest. The depth to the fault could be estimated once the collar location was known more exactly.

A second hole should also be collared in the flat area close to section 13+50. This hole would also start in the metabasite and attempt to drill through the ~~metabasite into~~ fault zone and into the phyllites. This hole would also be inclined to the southwest.