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**JUNE MONTH-END REPORT
OF ACTIVITIES**

DENNIS BROWN

30/06/1990

The last week of May and the month of June were spent getting familiar with the geology of the area, both regionally and locally, as well as getting to know the rock types on Vangorda Plateau in drill core and in outcrop. Core logging, both production and detailed logging, were the main objectives for June. Pit mapping was done in the newly exposed southeast corner of the 1152 bench.

The earliest objective of this summers field work was to get familiar with the geology of the Anvil District on a regional scale and on the scale of Vangorda Plateau (the Vangorda deposit in particular). This was done through a series of talks and field trips, looking at the present geological interpretations of the Vangorda deposit in cross-section, and by hands on work logging core.

The majority of June was spent logging Vangorda deposit core. Core logging was done on two different levels; production logging for mine purposes, and detailed logging for thesis purposes. Only detailed logging will be discussed. Detailed logging consisted of 1 : 100 scale description of lithologies, structural fabrics and fabric orientations, mineralogy, and textures. An attempt was made to look at several drill cores from a section in order to correlate between them. Some success was achieved by doing this. Selected samples of core were taken for later analysis. Copies of all detailed logs were given to the geologists at the mine.

Pit mapping was carried out along the newly exposed east wall of the 1152 bench. A simplified map and copies of pit wall sketches are attached to this report.

Preliminary results of pit wall mapping suggest that the ore body in this area is upside down with older, ribbon-banded quartzite (4A) structurally on top of younger pyritic quartzite (4C), which is in turn on top of a pyrite sand interpreted to be derived from a 4E massive sulphide. No structural discontinuities were found between lithological boundaries (in general boundaries are poorly exposed). S-asymmetries in mesoscopic, southeast-plunging, F2 folds (see sketch P2 - P4) indicate these rocks are situated in the overturned limb of a macroscopic, southwest-verging F2 fold.

Rocks in this wall are cut by a number of extensional faults. These faults appear to be minor and likely have minimal offset along them. It is not yet possible to determine if these faults link to a major fault system. However, in the southeast corner of the wall (see sketch with pyrite sand on it) an extensional fault has truncated the ore units and dropped non-calcareous phyllites (3G) down along the hangingwall. This geometry is in keeping with the interpretation of an overturned F2 limb that was subsequently cut by an extensional fault along which structurally higher rocks in the limb moved down.

Post-F2 mesoscopic folding is common in the wall. However, no

overprinting relationships were found to distinguish between fold generations.

Several outcrops of ore and phyllites were found on the floor of the 1152 bench. Paucity of exposure makes any correlation between these outcrops tenuous. Further, fabric orientations in these outcrops may be fallacious as a result of slump processes occurring beneath the overburden, and from reorientation by equipment moving around on them.

My objectives for July are to increase the amount of pit mapping as the pit opens up. Geologists and engineers at the mine will be kept informed of my work. A traverse-type database is in the process of being set-up in PC-EXPLORER to store pit data. Both production and detailed logging of 1990 DDH's and, time permitting, earlier holes will continue.

Note: Surveyors still haven't properly picked-up stations P₁ to P₄ so I can't pass on the locations.

* 46
* 36

— outcrop locations on 1152 bench floor are approximate

— * Note surveyor did not pick up locations P_1 to P_9 which are located further north. Location P_2 is located ≈ 2 m north of P_{10}

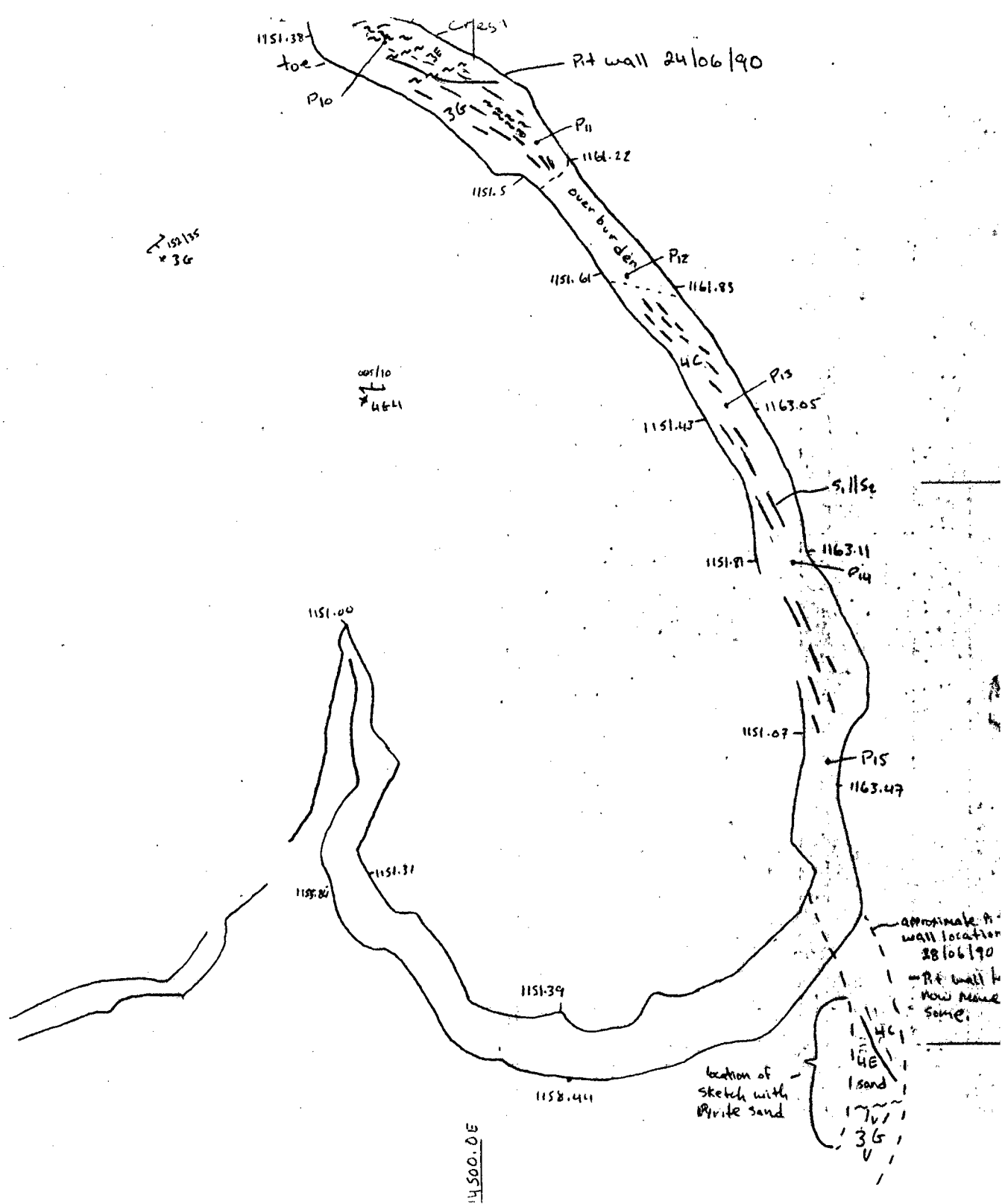
2900.0N

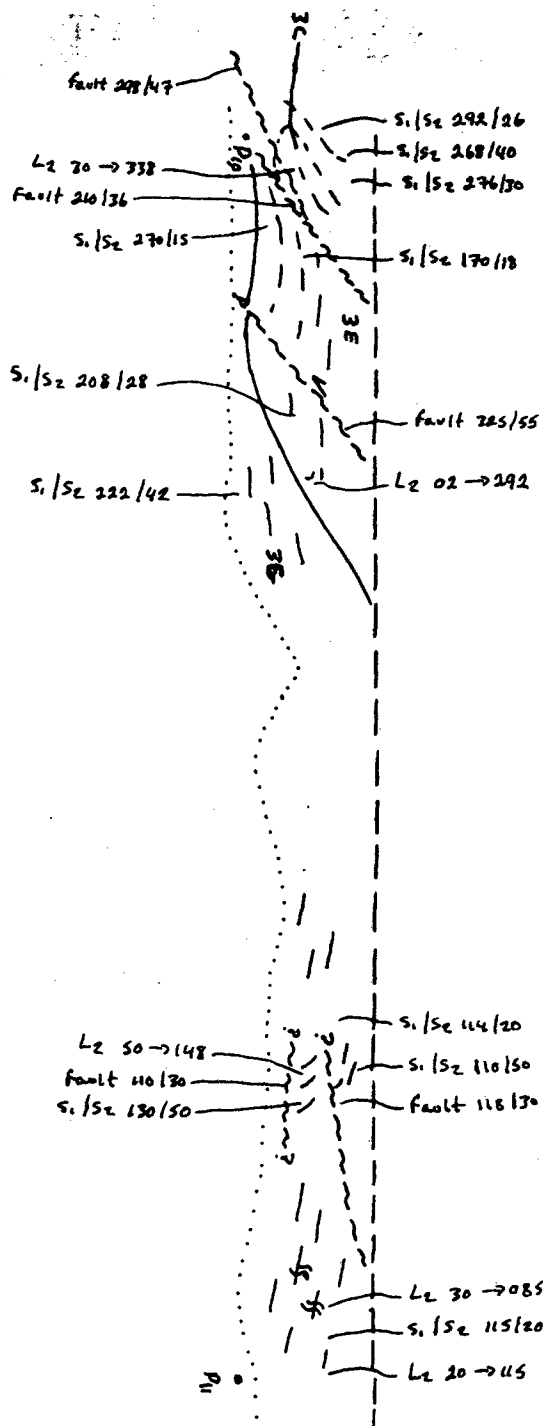
Vangorda Pit Outline

Scale 1:1080

2800.0N

14400.0E





Vaugoroda Pt Ranch 1150

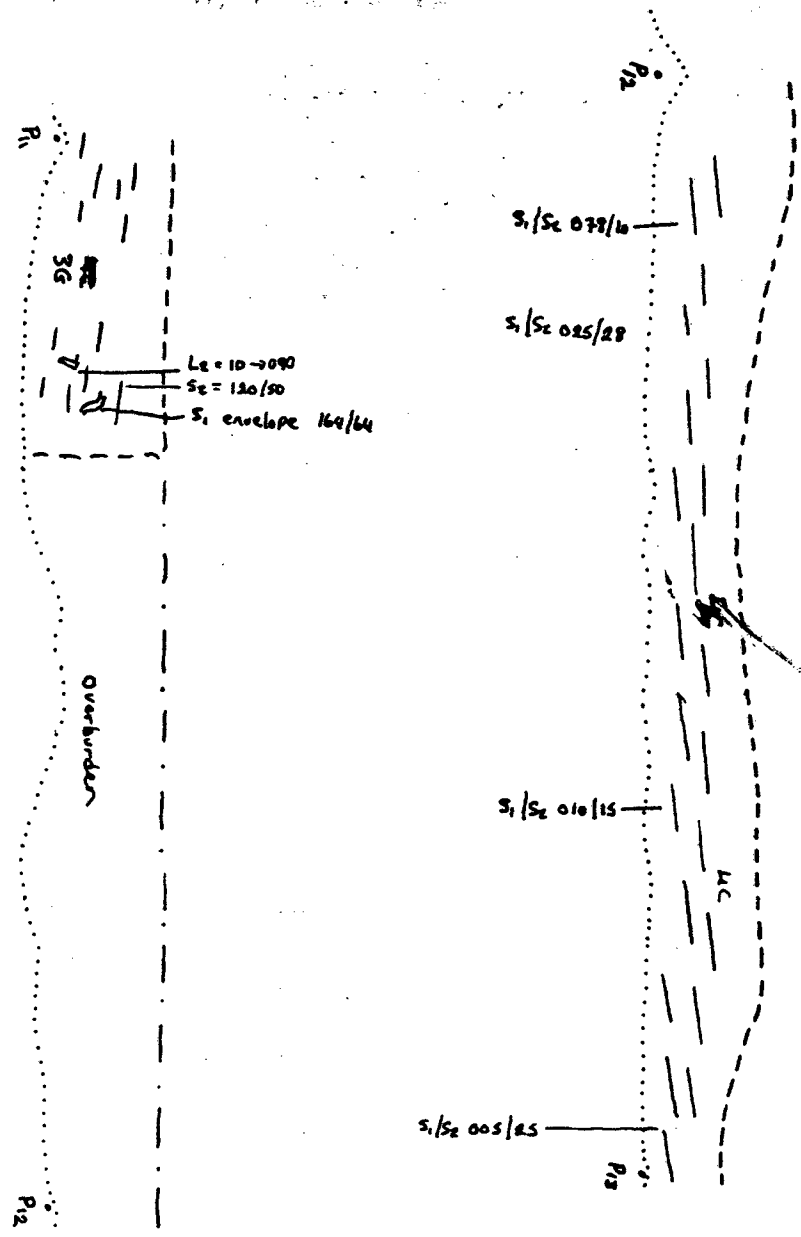
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Kanganda Pit. Bench 1150

Scale 1:200

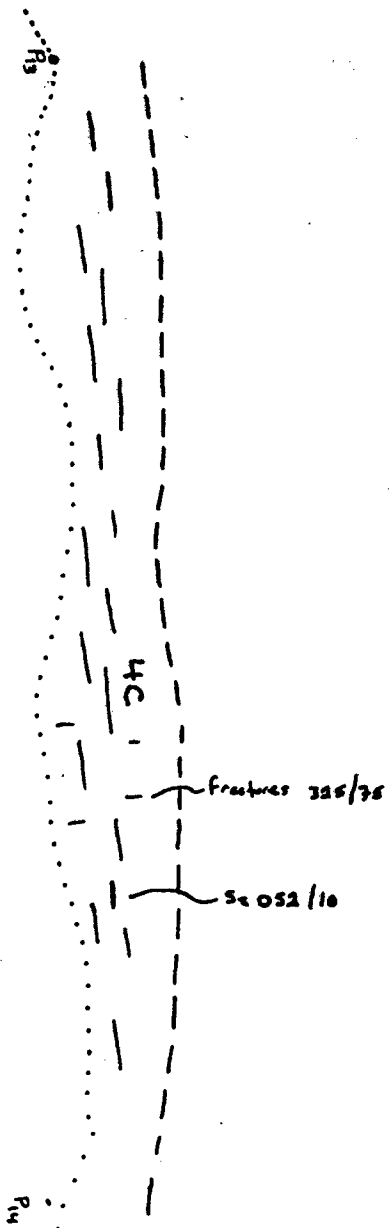
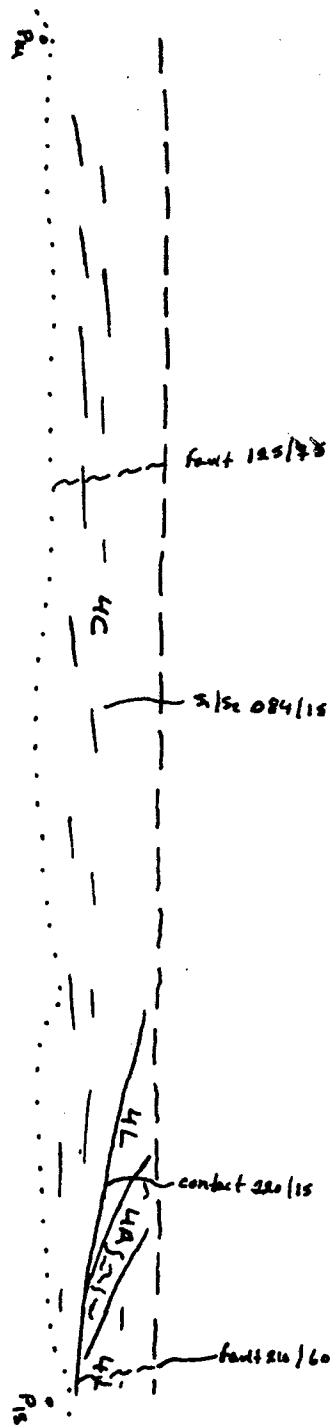
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North east Face, Vargonda Pit. 1152 Bench

Scale 1:200

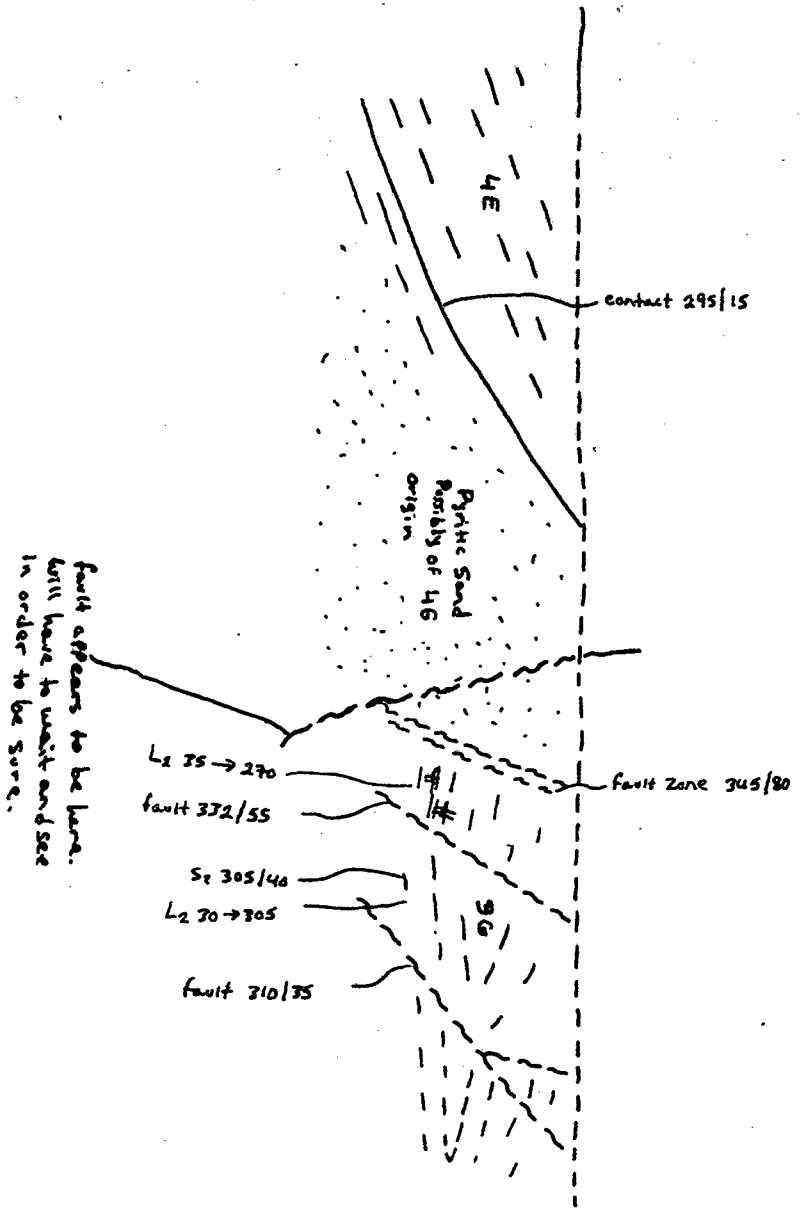
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Vanguard Pt, Bench 1150

Scale 1:200

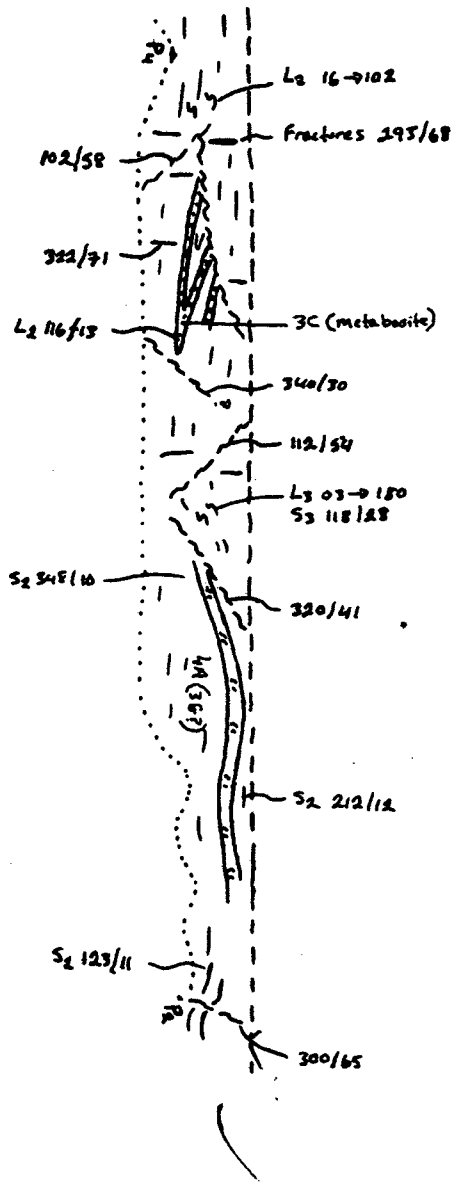
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Northeast face, Vangorda Pt. Branch 1150

Scale 1:250

06/06/90



North east face, Vargorda Pt. Beach 1150

Scale 1:250 06/06/90

