

BOREHOLE NO. 76.

Hjerkinn

2440

Borehole no. 76, HJERKINN.

(Petrographical description.)

0,00 - 7,00

The chloritic and little bit sericitic greenschist with some intercalations, pellets or schliers of carbonates (max. 1-1,5 mm average thickness.) In this rock are present quartz, klnozoisite, feldspar (weak only), actinolite, amphibolitic, epidote very rare too. The schistose structure is very clear in this rock. The mineralisation or impregnation is very scarce only in (FeS_2 or FeS too). Some intercalations, pellets, schliers are thick more 1,5 mm (2-5 mm) on some places. These intercalations are created by carbonates. The total colour of this rock is green, bright green or grey green. The average gradient of foliation is 35° - 40° round.

7,00 - 12,60

The tender or tiny-grained amphibolitic and amphibolitic-chloritic greenstone with some intercalations of coarse grained and medium-grained amphibolitic greenstone, not thickness enough, 1-3 cm max. These positions of coarse-grained amphibolitic greenstone have a lot of big rodlike or acicular crystales of amohibole, some more intercalations, schliers or pellets of carbonates with FeS_2 mineralisation (schliers of FeS_2 grains - 1-2 mm thickness). These positions of coarse-grained amphibolitic greenstone are at 7,70 m round, 8,00 m round, 8,45 m round. The other basementic rock of tender-tiny and medium grained amphibolitic greenstone have a lot of acicular crystales (1-3 mm but 5 mm too) of amhibolle and a lot of intercalations, schliers, pellets, lenticles or grains of carbonates (1 mm thickness in average, but some more thickness 0,5 - 1 cm and in 9,70 m, 9,80 m, 9,95 m, 10,50 m and 11,45 m round the positiones of carbonates have thickness 3-5 cm. The mineralisation, impregnation of FeS_2 or FeS is very, very weak only. The total colour of this rock is green, gray-green or dark green too. The average gradient of foliation is 40° round (on some places is not clear schistosity of rock).

12,60 - 15,60

The medium-grained or little bit medium-coarse-grained amphibolitic calcarscous greenstone with actinolite, klnozoisite, epidote and little bit, chlorite and feldspar too. Some not thick intercalations or weak joints are filled by carbonates. The mineralisation or impregnation of FeS_2 is very weak - scarce only. The total colour of this rock is green or little bit dark ore grey-green too. The structure is porphyroblastic and foliation is clear round some intercalations of tiny grained amphibolitic greenstone only or along clongation of graines. The average gradient of foliation is 35° round.

15,60 - 17,20

The coarse-grained amphibolitic calcarscous greenstone with rodlike and acicular crystales of

amphibole, with actinolite, klnozoisite, epidote and with some schliers or pellets or joints which are filled by carbonates. The mineralisation or impregnation of FeS₂ only is very scarce but little bit strongly round some intercalations of medium-grained amphibolitic greenstone (some grains 1 - 1,5 or 2 mm in average). The total colour of this rock is dark green or dark grey-green too. The structure is porphyroblastic. The average gradient of foliation isn't clear 40° round (along elongation of porphyroblasts only).

17,20 - 18,50

The medium-grained calcareous amphibolitic greenstone as well as in 12,60 - 15,60 m. In 18,50 m round is some dislocation, which is filling by quartz and limonitic coat. The angle of dip of this dislocation is 65° - 70° round, thickness 1-2 cm round.

18,50 - 19,40

The medium-grained calcareous amphibolitic greenstone as well as in 17,20 - 18,50 m but with much more chlorite and with some lot of not thick intercalations of tiny or tender-grained chloritic amphibolitic greenstone. The total gradient of foliation is 30°-35° round.

19,40 - 19,60

The medium-grained calcareous amphibolitic greenstone as well as in 17,20 - 18,50 m.

19,60 - 21,15

The coarse-grained amphibolitic greenstone with rodlike or acicular crystals of amphibole, with aktinolite, klnozoisite, chlorite, feldspar, some carbonates and with some impregnation of FeS₂ (1-2 mm in average - the grains of FeS₂). The epidote present too. The structure is porphyroblastic. The total colour of this rock is dark green. The average gradient of foliation is 40° round (not very clear).

21,15 - 21,95

The medium-grained calcareous amphibolitic greenstone as well as in 19,40 - 19,60 m.

21,95 - 22,90

The chloritic and chloritic-amphibolitic greenstone and greenschist with some thin intercalations or schliers of carbonates and with some weak impregnation of FeS₂ mostly. The schistose structure is very clear. Amphibole creat some not big acicular, crystals. The feldspar and quartz are present little bit only but too. The total colour of this rock is dark green. The average gradient of foliation is 40° round, but in 22,50 m, 30° in 22,70 m is some brachy actinoline, but after 5 cm inclination to the same clination as before 22,70 m with angle of dip 60° round. In 22,40 - 22,45 m is some position (pellets) of white quartz.

22,90 - 24,00

The tiny-grained or medium-grained calcareous amphibolitic greenstone with chlorite, klnozoisite epidote with a lot of grains, schliers and pellets of carbonates and with some weak impregnation of FeS₂. Amphibole creat some not big rodlike or

acicular crystales. The total colour of this rock is dark green. The average gradient of foliation is 45° round. Garnet is present too but scarcely only.

24,00 - 24,50

The medium-grained or tiny-grained amphibolitic greenstone with some thin intercalations or pellets of carbonates with some chlorite with a lot of graines of garnet with acicular crystales of amphibole and with very strong mineralisation of Fe_3O_4 (positions 1-4 mm thickness) and FeS (also some positions 1 mm thickness max. of graines). Garnets graines creat some intercalations or schliers. Round carbonatic schliers, pellets, intercalationes or round filling (carbonatic) of joints (antithetic or transversal) is present some more strong mineralisation (graines) of FeS_2 but CuFeS_2 is present too may be. The total colour of this rock is dark and black green. The average gradient of foliation is 40° - 45° round.

24,50 - 25,70

The chloritic greenschist with some a lot of schliers, pellets, lenticles of carbonates, with klnozoisite, amphibole acicular crystales, with biotite. The mineralisation of FeS_2 is very scarce only. The schistose or phacoidal-schistose structure is very clear. The total colour of this rock is grey-green or bright grey-green. The average gradient of foliation is 40° - 45° round. In 24,50 m is some fault with some parallel system of joints with carbonatic filling and with some mineralisation of FeS_2 (may-be CuFeS_2). Maine this fault is filled by carbonates with limonitic coates. The angle of dip of this fault is 10° round.

25,70 - 26,90

The carbonatic and dolomitic coarse-grained amphibolitic greenstone with big rodlike minerales of amphibole, with aktinolite, biotite and klnozoisite, epidote and with sericite too and with some a lot of schliers, pellets etc. of carbonates. The mineralisation of FeS_2 mostly is very scarce only. The structure of rock is porphyroblastic. The total colour of this rock is grey-green or bright gray-green.

26,90 - 27,65

The chloritic calcarcous greenstone and greenschist as well as in 24,50 - 25,70 m.

27,65 - 27,90

The carbonatic and dolomitic amphibolitic coarse-grained greenstone as well as in 25,70 - 26,90 m but with little bit smaller graines.

27,90 - 28,70

The carbonatic and dolomitic amphibolitic coarse-grained greenstone as well as 25,70 - 26,90 m.

28,70 - 29,10

The chloritic-calcarcous greenstone and greenschist as well as 26,90 - 27,65 m.

29,10 - 30,80

The carbonatic and dolomitic amphibolitic coarse-grained greenstone as well as in 25,70 - 26,90 m.

30,80 - 31,40

The rock as well as in 28,70 - 29,10 m but with more chlorite.

31,40 - 31,70

The position in which exchange biotitic amphibolitic greenstone, coarse-grained amphibolitic greenstone, chloritic amphibolitic greenstone with some carbonatic positiones, schliers etc. with strong mineralisation of FeS mostly. In every types of these rocks are present a lot of big rodlike or acicular crystales of amphibole. The average gradient of foliation is 50° round.

31,70 - 37,20

The carbonatic chloritic amphibolitic greenschist or chloritic carbonatic amphibolitic tiny-grained or medium-grained greenstone with clear schistosity. These types of rocks are just the same as in 28,70 - 29,10 m. In 32,00 - 32,10 m is the same position as in 31,40 - 31,70 m. In 33,65 m round is some (1 cm) intercalation with strong mineralisation of FeS_2 in carbonates.

37,20 - 44,72

The tiny-grained or tender-grained chloritic amphibolitic greenstone with a lot of small graines of Fe_3O_4 with carbonatic schliers, pellets etc., with klnozoisite, epidote. This type of amphibolitic greenstone (20 cm, 50 cm, or 1 m thickness) which are created by the same types of amphibolitic greenstone as well as in 27,65 - 27,90 m and 28,70 - 29,10 m. The mineralisation of FeS_2 or FeS is very very weak only. The total colour of this rock is grey-green. The average gradient of foliation is 50° round.

44,72 - 50,20

The tiny-grained amphibolitic greenstone with a lot of intercalations, schliers, pellets or grained or falling of some jointes of carbonates. This greenstone has much chlorite. Some mineralisation (impregnation) of FeS_2 or FeS is very very weak only but round some carbonatic positions or in is some strong impregnation of FeS_2 , exactly in 49,50 m, 49,80 m and 49,90 m. Ca. from 48,30 m some Fe_3O_4 impregnation are begun by small graines (max. 1 mm in average). Round 49,60 - 50,00 m are present a lot of some thick positions or intercalations of carbonates (average thickness 1-5 cm max.) On some places greenstone has very clear schistosity, on some places not. The total colour of this rock is dark green or green. The average gradient of foliation is 55° - 60° round.

50,20 - 50,90

Some very strong impregnation of FeS_2 mostly, but also with few CuFeS_2 in carbonates position with a lot of acicular crystales or weak intercalations of amphibole. Chlorite, epidote, klnozoisite are present too on some places.

50,90 - 51,55

The very strongly calcarcous medium-grained or little bit coarse-grained amphibolitic greenstone, with chlorite, klnozoisite, very relation of greenstone in 26,90 - 27,65 m but with more

chlorite and with some little bit more strong impregnation of FeS and FeS₂. The total colour of this rock is green and dark green. Schistosity isn't clear.

51,55 - 56,00

The tender or tiny-grained amphibolitic greenstone with a lot of chlorite and with some more little bit strongly impregnation of FeS and FeS₂ and Fe₃O₄ grains (1 mm in average max.). Carbonates create some filling of little joints or schliers intercalations etc. Schistosity isn't clear. The total colour of this rock is dark green.

56,00 - 56,60

The position tiny-grained amphibolitic and chloritic greenstone with intercalations of carbonates with very strong mineralisation of FeS₂, but with little bit CuFeS₂ (5-10 %). Some positions of ore are very homogenitic (thick 10-15 cm).

56,60 - 59,40

The carbonatic chloritic amphibolitic greenstone with biotite, with a lot of parallel positions intercalations, pellets, schliers etc of carbonates with some very weak impregnation of FeS₂ mostly. On some places are positions and intercalations of coarse-grained amphibolitic greenstone or biotitic and chloritic mica schist are present. The schistose or phacoidal-schistose structure is clear. The total colour of this rock is grey-green. The average gradient of foliation is 45°-55° round.

59,40 - 61,35

The tender or tiny-grained amphibolitic greenstone as well as in 51,55 - 56,00 m. In 61,10 - 61,20 m is some homogenitic position of impregnation FeS₂ in carbonates or strong calcareous greenstone.

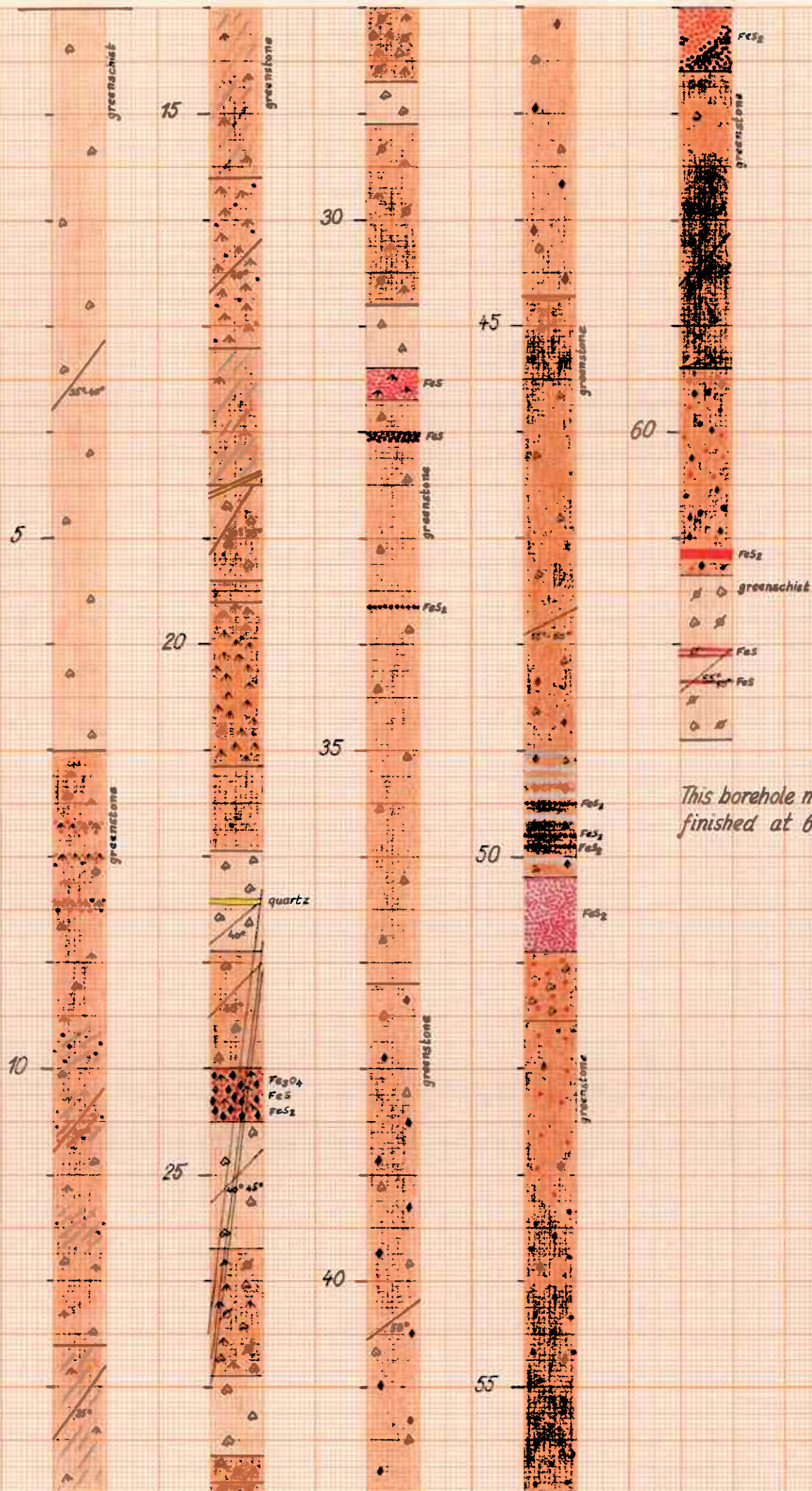
61,35 - 62,90

The biotitic greenschist with chlorite, amphibole, actinolite with a lot of schliers, pellets, lenticles of carbonates. The impregnation of FeS or FeS₂ is weak only, but in 62,05 m, 62,10 m and 62,35 m are some weak positions (1-1,2 cm) of very strong impregnation of FeS mostly. This rock has phacoidal-schistose structure. The total colour of this rock is dark green or grey-green. The average gradient of foliation is 55°-60° round.

This borehole of no. 76 was finished at 62,90 m.

(M. Motys).

Prophile of borehole nr. 76.



This borehole nr. 76 was
finished at 62,90 m.