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Sammendrag				

A/S SULFIDMALM
INTER-OFFICE MEMORANDUM

Date: 14th February, 1978 ✓
To: Falconbridge Nikkelverk A/S
cc: W. D. Harrison, H. T. Berry, R. Sivertsen
From: F. Nixon
Subject:

Please find enclosed a report on investigations over the Kletten ultramafic in the Kvikne region. The ultramafic seems to be somewhat different than the nickel rich Vakkerlien/Kaltberget type and the results of assays from Kletten gave low Ni values.

F. Nixon

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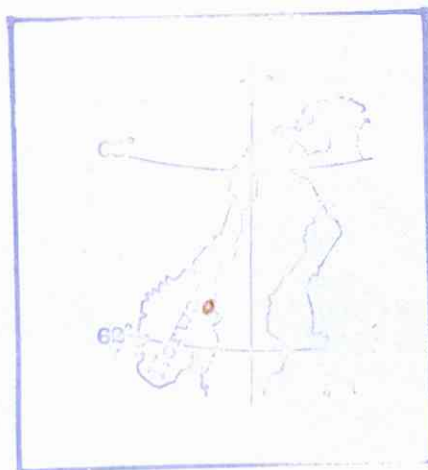
FOR FALCONBRIDGE NIKKELVERK A/S
A/S SULFIDMALM

PROJECT 905-20

Investigations in the Kvikne
Region 1977

Geophysical and geological
investigations at Kletten.

By
R. Sivertsen



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Introduction

The Kletten ultrabasic body is situated approximately 11 km SE. of Kvikne around the peak of the Kletten mountain.

The ultrabasic body is well inside an area covered by helicopter geophysical and streamsediment survey in 1974 (Reports 247/74/20 and 377/75/20). Both surveys gave interesting magnetic-, EM- and geochemical-(Cu, Ni) anomalies. They are coincident with the metaultrabasic, i.e. the eastern and structurally upper contact. A grab sample sent in for assaying in 1975 returned 0.25% Ni. The area was considered as very interesting, and a small survey was planned and carried out in 1977. A grid was put out, and the area was mapped and surveyed with VLF and partly mag. Several profiles were sampled.

Geology

The main rock unit in the Kletten grid area is metaultrabasic enveloped by quartz biotite schist and amphibolite. The amphibolite is laying structurally above the metaultrabasic. A persisting and prominent schistosity is parallel to the rock units. In the plane of schistosity the rock units are generally dipping 15-20°E and striking N-S.

The metaultrabasic body consists mainly of coarse grained amphibole with some plagioclase in the structural upper part.

Two mineralized zones were found. The mineralization consists of mainly pyrrhotite with chalcopyrite and takes the form of disseminated (5-10%) blebs of sulphides.

Several samples were sent in for assaying and the following results were returned:

Sample no.	Type	Loc.	Ni	Cu
20/375	Chip.	100S/10E	0.05	0.02
20/376	"	100S/10E	0.05	0.02
20/377	"	70S/60W	0.04	0.02
20/378	"	70S/30W	0.05	0.01
20/379	"	90S/90W	0.04	0.02
20/380	"	80S/90W	0.05	0.02
20/281	"	80S/60W	0.04	0.02
20/382	"	90S/40W	0.06	0.25
20/383	"	80S/90W	0.03	0.01
20/384	"	70S/60W	0.05	0.02
20/385	"	70S/60W	0.04	0.03
20/386	"	80S/35W	0.05	0.01

Analysed at Falconbridge Nikkelverk, Kristiansand.

Sample no.	ppm Co	% Cr	ppm Cu	ppm Ni	%S
20/382	89	0.21	94	360	0.69

Analysed at Institute for Atomic Energy.

Geophysics

The geophysical tool used in the Kletten grid was a Norwegian made VLF unit (Paulsen).

A magnetometer survey with a Scintrex MP2 unit was started. But the instruments strong sensitivity and the ultrabasic high magnetite content resulted in not repeatable measurements. The magnetometer survey was stopped.

The main VLF anomaly zone strikes across the grid from 100S/400E to 1400S/400W. This anomaly zone is coincident with the eastern and structural upper contact of the amphibolite.

A weak but distinct anomaly is coincident with visible po dissemination (5-10%) in the metaultrabasic 100S/40E.

The results are presented on the accompanying maps.

Conclusions

The magnetic response (magnetite content) and the Cr content of the ultramafic at Kletten is different from the trend found at Vakkerlien/Kaltberget/Gråhø. The ultramafics there are lacking Cr and has a fairly weak magnetic response. The Kletten ultramafic body is similar to ultramafic which is flanking the Trondhjems region in the SE and SW.

A closer examination of the source of the VLF anomaly which is coincident with the amphibolite should be carried out in the future.

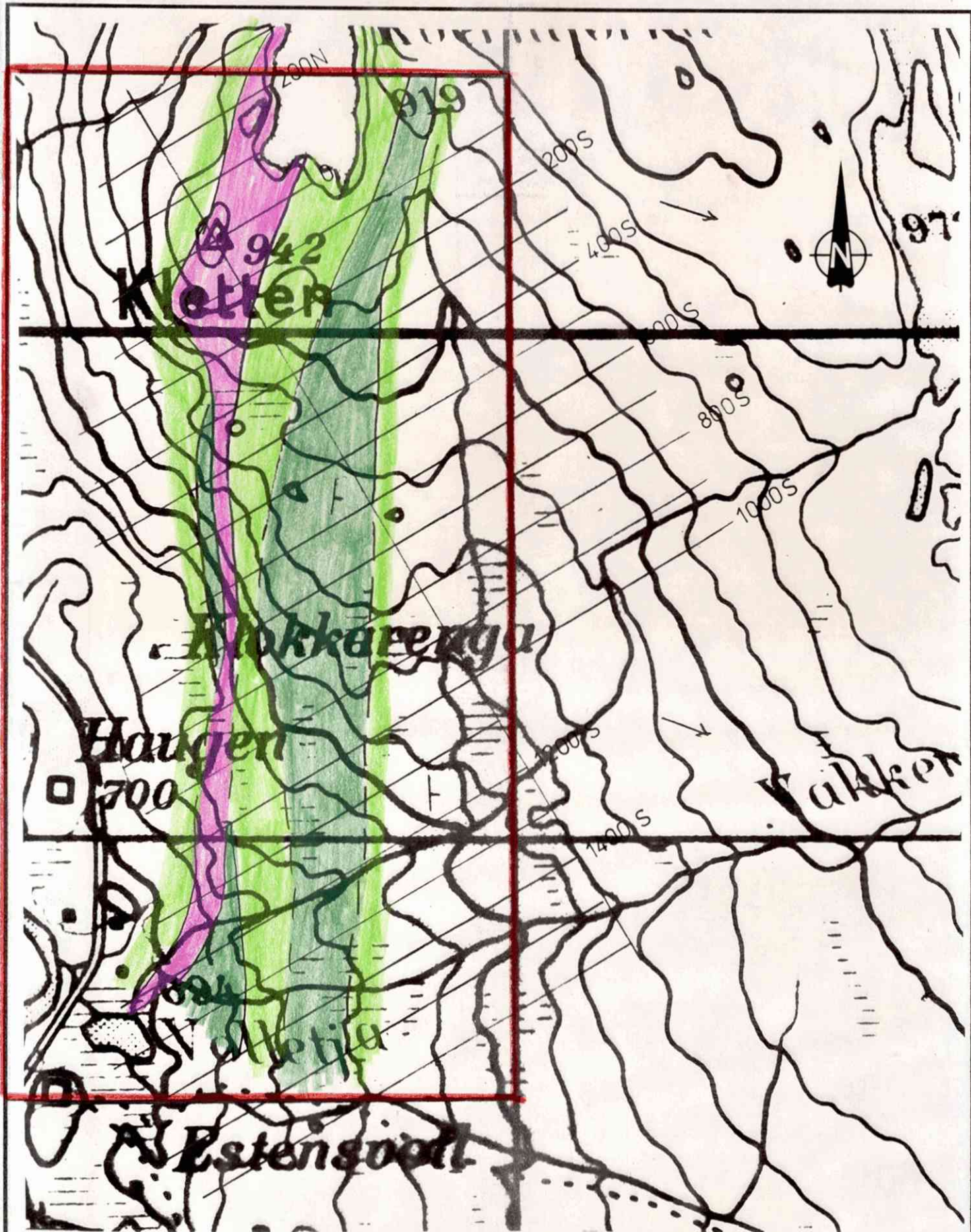


- Greenstone } STÖREN GROUP
- Siltstone }
- Greenstone } GULA GROUP
- Graphite schist }
- Schist }
- Ultrabasic
- Gabbro
- Acid intrusives

- Stream sed sampled area
- Helicopter survey area
- Claim blocks
- Vakkerli grid summer 1975
- Vakkerli grid winter 1976

- Detailed geophysical grid
- Position and direction of known mineralized bodies

KVIKNE AREA LOCATION AND SUMMARY		SCALE 1:50000	OBS. O.N.
			DRAW. R.S.
1/2 SULFIDMALM			TRAC. R.S.
			CHK.
		MAP NO.	
		MAP SHEET	



-  Ultrabasic
-  Amphibolite
-  Schist
-  claim block

A/S SULFIDMALM	
Kletten grid	
SCALE 1:10000	DRAWN RS.
DATE 1. 78	TRACED RS

