Bergvesenet

Postboks 3021, 7002 Trondheim

Rapportarkivet

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BV 487			Trondheim	**Åpen**
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Falconbridge	Sul 327-74-23	Sulfidmalm A/S		

Tittel

Density determinations on rocks from Pasvik.

Forfatter	Dato	Bedrift
B Lieungh, J A W Bugge	1974	Sulfidmalm A/S

Kommune	Fylke	Bergdistrikt	1: 50 000 kartblad	1: 250 000 kartblad
Sør-Varanger	Finnmark	Finnmark	23331 24334	Kirkenes

Fagområde	Dokument type	Forekomster
Geofysikk	Rapport	
Råstofftype	**Emneord**	
Malm/metall	Ni	

Sammendrag

Tetthetsforskjellen mellom de enkelte bergartstypene er for små til praktisk bruk av gravimetri.

FOR FALCONBRIDGE NIKKELVERK A/S

A/S SULFIDMALM

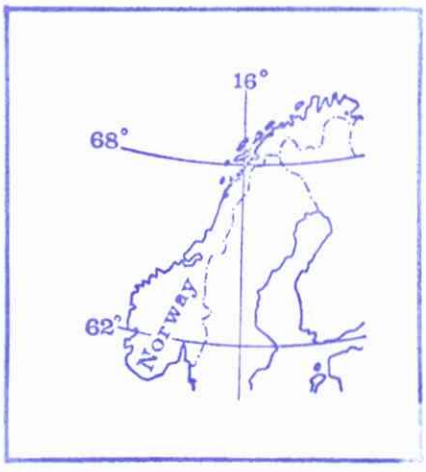
PROJECT 905-23

DENSITY DETERMINATIONS ON ROCKS FROM PASVIK, FINNMARK

BY

B. LIEUNGH

J. A. W. BUGGE



Report Nr. 327/74/23

The question of gravity measurements to find serpentinite lenses in the Skogfoss Arch has often been raised in discussions but no attempt has so far been made to carry this out. The case was last discussed at a meeting ~~meeting~~ between representatives of Sydvaranger and the Geological Survey of Norway.

In connection with possible measurements Lieungh has carried out density determinations for several chosen rock samples. The results are shown on the accompanying diagram.

The average value for the different rock types is given and it appears that they lie very close to each other.

Values are highest for the coarse grained amphibolite with density over 3.0 and an average for two samples of 3.07. Variations for the fine grained amphibolites - greenschists and phyllites all lie within the same general area with the serpentinites which have an average value of 2.95.

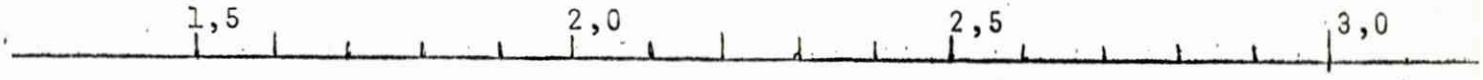
The results are therefore not very encouraging since the differences are very small between the serpentinites and anomalies will not be very marked. The coarse grained amphibolite will be easier to show, but this is not so interesting even though it is not uncommon for serpentinites to lie in the footwall of such matagabbros.

It would nevertheless be very interesting to carry out some orientation measurements. It is suggested that an area is measured in the vicinity of drillhole nr. 1 close to Skjellvann where we have discovered a fairly large serpentinite during the drilling of 1971. The area is well suited for this attempt and there the serpentinite thickness is over 50 m. At the same time several other geophysical techniques should be used to see if the serpentinite lens can be followed in a straight direction to E and W and whether there is sulphide mineralization in connection with it.

More accurate measurements should be carried out during the summer season. But for planning on this some orientation measurements could be quite useful.

DENSITIES OF ROCKTYPES, PETSAMO-FORMATION, PASVIK.

Density g/cm^3



			g/cm^3		
Serpentinite	Lgh 28		3,04		
"	DDH 16	40,8 m	2,93		
"	DDH 6	55,25 m	2,94	2,95	
"	DDH 1	96,6 m	2,94		
"	" "	158,0 m	3,00		
"	Jø 139		2,87		
Serpentine Conglomerate	Lgh 14		2,95		
Coarse Amphibolite	Lgh 125		3,01	3,07	
"	DDH 1	57,0 m	3,12		
Medium fine amphib.	DDH 16	20,8 m	3,09		2,98.
"	DDH 6	65,6 m	2,87	2,92	
"	DDH 1	17,0 m	2,81		
Greenschists	Lgh 32		2,95		
"	Lgh 31		3,07	3,02	
"	DDH 16	34,5 m	3,07		
"	DDH 6	39,5 m	2,99		
Phyllite	Lgh 17		2,72		
"	Lgh 29		2,87		
" with sulphides	DDH 16	75,25m	3,02	2,90	
" with sulphides	DDH 6	27,6 m	3,00		
" with sulphides	DDH 1	22,5 m	2,87		
Kerathophyre	Lgh 106		2,92		
" with amydules	Lgh 183		2,81	2,89	
Greenstone	Lgh 162		2,87		
"	Lgh 89		2,97		
Porphyrite	Lgh 84B		2,86		
Amfibolite	Lgh 144		2,82	2,84	2,78
Rhyolite-keratophyre	Lgh 147		2,65		

Averages values for the different rock types.

Lieungh, March 74.

A/S SULFIDMALM

INTER-OFFICE MEMORANDUM

Date: Oslo, 10th June, 1974

To: Falconbridge Nikkelverk A/S ✓

cc: A. M. Clarke, H. T. Berry, R. B. Band, B. Lieungh

From: J. B. Gammon

Subject:

Project 905-23N. Density determinations, Pasvik. Report Nr. 327/74/23

Please find attached results of density determinations made to determine whether gravity surveying could be utilised for finding ultrabasics at Pasvik. The results suggest that this approach shows little promise.

MOTTATT 12. 06. 74