



Bergvesenet

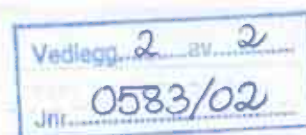
Postboks 3021, N-7441 Trondheim

Rapportarkivet

| | | | | |
|---|------------------------------|--|--|--|
| Bergvesenet rapport nr 4783 | Intern Journal nr 0583/02 | Internt arkiv nr | Rapport lokalisering | Gradering Fortrolig |
| Kommer fra ..arkiv | Ekstern rapport nr | Oversendt fra Tertiary Minerals plc | Fortrolig pga Muting | Fortrolig fra dato: |
| Tittel Quarterly report on exploration activities for the period ended 30 septber 2001. Finnmark Project, Norway (Porsvann, Karenhaugen, Gallujavre, other targets) (+PGM etc in Sweden and Tallium Rosendal in Finland) | | | | |
| Forfatter Cheetham, Patrick L | | Dato År oct 2001 | Bedrift (Oppdragsgiver og/eller oppdragstaker) Tertiary Minerals plc | |
| Kommune Porsanger Karasjok | Fylke Finnmark | Bergdistrikt | 1: 50 000 kartblad 20352 20353 20341 20342 20343 20344 | 1: 250 000 kartblad Karasjok Honningsvåg |
| Fagområde Geologi Geokjemi | | Dokument type | Forekomster (forekomst, gruvefelt, undersøkelsesfelt) Porsvann Karenhaugen Gallujavre | |
| Råstoffgruppe Malm/metall | | Råstofftype Pt Pd Au | | |

Sammendrag, innholdsfortegnelse eller innholdsbeskrivelse

This report gives details of exloration work carried out during the quarter ended 30 september 2001 and up to the date of this report, and the result offor the period



PH80483 - 43
024 1/11-01
OTO



Tertiary Minerals plc.

EXTRACT FROM :

**QUARTERLY REPORT
ON EXPLORATION ACTIVITIES
FOR THE PERIOD ENDED 30 SEPTEMBER 2001**



INTRODUCTION

This report gives details of exploration work carried out during the quarter ended 30 September 2001 and up to the date of this report, and the results for the period.

PLATINUM GROUP METAL ("PGM") & NICKEL-COPPER PROJECTS

FINNMARK PROJECT (Norway) – Tertiary Minerals 100%

The Company has completed the Summer field programme on its Finnmark platinum group metal ("PGM") project in Norway.

Exploration has been carried out by SRK Consultants of Toronto, Canada ("SRK"), in conjunction with geologists from Tertiary Minerals. The aim of the programme has been to define drill targets through a better understanding of the controls on PGM mineralisation at Porsvann and Karenhaugen and the evaluation of the Company's 10 claim blocks by reconnaissance mapping and sampling.

This work has been successful in extending the strike length of known PGM mineralisation at both the Karenhaugen and Porsvann prospects and has highlighted the Gallujavri ultramafic intrusive, the largest so far found in the N.Karasjok greenstone belt, as the highest priority target following the discovery of economically interesting grades of PGM's in association with low grade Ni-Cu sulphide mineralisation, now known to occur over at least 2.5km of the 10km long ultramafic intrusive.

As the discovery of economically interesting PGM values at Gallujavri occurred during the later part of the Summer season, only limited follow up work has been possible to-date.

Porsvann

Previous work by the Norwegian Geological Survey ("NGU") in the early 1990's identified surface PGM anomalism and tested a 120m strike length of the prospect with a small drilling programme. This encountered wide intervals of low-grade PGM mineralisation as previously reported.

Work this Summer focussed on further profile sampling and geological mapping. Mineralisation at Porsvann was found to comprise disseminated pyrite/pyrrhotite and chalcopyrite within a pyroxenite sill intruded along the base of a gabbro and thrust into the underlying metasediments. The style of mineralisation at Porsvann is atypical for ultramafic intrusions but it is thought to be of primary magmatic origin and the highest grades of PGM's appear to be located at the base of the intrusion.

Further profile sampling has returned values up to 6.85 grammes per tonne ("g/t") palladium+platinum+gold ("Pd+Pt+Au") and the strike length containing economically interesting grades has so far been doubled to 240m. The highest grades of mineralisation are usually found at the base of the intrusive. Detailed mapping suggests that, in the area drilled, the pyroxenite is complexly folded and that previous drill holes may not have tested its full thickness. SRK have proposed a number of drill holes to test this further.

Mapping and sampling indicates that the ultramafic thins to the north of the existing drilling, but to the south of the most southerly drill hole PV4 (which intersected 17m grading 1.27 g/t Pt+Pd) its extension is covered by a lake and fluvioglacial deposits.

As at Karenhaugen, the relatively small size of the host intrusion at Porsvann suggests that strike extensions to the existing drilled mineralisation will need to be found to maintain a viable exploration target and SRK have recommended a programme of induced polarisation ("IP") and magnetic surveys to trace the southern extent of the mineralised ultramafic under cover.

Karenhaugen.

PGM mineralisation at Karenhaugen is similarly hosted by a pyroxenite sill, but there are two distinct styles of mineralisation. A zone of primary PGM bearing pyrite/pyrrhotite-chalcopyrite-bornite mineralisation appears to have been later remobilised into secondary shear zones where it occurs as PGM bearing chalcocite (-malachite) mineralisation.



Previous drilling by NGU has tested a limited 140m strike length of the intrusion at its eastern end. Mapping and surface sampling this season has shown that mineralisation occurs throughout the exposed 500m length of the intrusion, with assays up to 6.6ppm Pd+Pt+Au from the undrilled western end. The western end of the prospect is defined by a lake and to the west of this lake a further 300m strike length of possibly related pyroxenite has been found and has returned anomalous PGM values from limited surface reconnaissance.

Gallujavri

The Gallujavri intrusion is the largest known intrusion in the Company's exploration area. It trends north-south, has an outcrop thickness of over 500m and a probable strike length of over 10km.

Exploration for nickel during 1978-82 found low-grade nickel-copper sulphide mineralisation during shallow drilling of two 500m spaced mineralised outcrops. PGM analyses were not made during this period but a later surface sample collected by NGU from a third mineralised outcrop some 2.5km to the north returned a value of 0.5g/t Pd+Pt+Au.

This Summer, the Company's prospecting activity has resulted in the discovery of economically interesting grades of PGM mineralisation in two grab samples taken 60m apart along the strike of the ultramafic in a fourth mineralised area. These samples also contained discontinuous low-grade nickel and copper sulphide mineralisation of the type discovered during the 1978 programme and assayed 2.00 and 2.45 g/t Pt+Pd+Au, as follows:

| Sample Number | Platinum g/t (ppm) | Palladium g/t (ppm) | Gold g/t (ppm) | Pt+Pd+Au g/t (ppm) | Nickel % | Copper % | Sulphur % |
|---------------|-----------------------|------------------------|-------------------|-----------------------|-------------|-------------|--------------|
| P352161 | 1.10 | 1.05 | 0.30 | 2.45 | 0.31 | 0.29 | 0.68 |
| P352163 | 0.75 | 1.00 | 0.25 | 2.00 | 0.42 | 0.42 | 1.25 |

The samples were taken 1.5km south of the above NGU sample, and between 500m and 1km north of the previously drilled low-grade nickel-copper sulphide mineralisation.

Work to date, therefore, indicates a 2.5km strike length within which low grade Ni-Cu mineralisation has been found at four locations, with associated PGM mineralisation up to 2.45g/t Pt+Pd+Au. Rock exposure is less than 5% in this area and so continuity of mineralisation is unknown, but these results are considered to be highly encouraging.

The Gallujavri ultramafic is significantly different from the smaller intrusions at Porsvann and Karenhaugen. It is a more primitive olivine bearing intrusion and the associated low-grade copper-nickel mineralisation is more obviously of primary-magmatic origin. The ratio of platinum to palladium is also different – 1:1 Pt/Pd as opposed to 3:1 Pd/Pt at Porsvann and Karenhaugen.

The nickel values of samples from Gallujavri plot in the sulphur-saturated field and analytical results recalculated to 100% sulphides show nickel-in-sulphide tenors of 11-17% indicating the potential for the separation of significant volumes of high-grade nickel sulphide minerals.

The potential is considered excellent for the discovery of Ni-Cu-PGM massive sulphides near the unexposed base of the intrusion, where sulphide ponding may have occurred, and also for the further discovery of disseminated sulphides containing economic grades of PGM's. Of particular interest are two TURAM electromagnetic anomalies under lake Gallujavri which run parallel to the interpreted base of the ultramafic and which have never been tested despite being the strongest anomalies discovered during the 1978-82 exploration.

A programme of follow up magnetic and electromagnetic surveying will take place immediately ice-conditions permit access over lake Gallujavri. Diamond drilling of geophysical targets will follow, most likely in early Spring 2002.

Other targets.

During the Summer programme reconnaissance sampling was carried out on numerous individual mineral occurrences. The data from this work is still being evaluated but above detection limit PGM values have been returned from a number of additional intrusions confirming the Company's belief that its holdings in the N.Karasjok greenstone belt represent an exciting PGM and Ni-Cu exploration opportunity for the Company.

PGM PROJECTS - SWEDEN – Tertiary Minerals 100%

The Company has completed data reviews for each of the **Notträsk**, **Flinten** and **Annehill** projects and SRK consultants of Toronto, working together with a geologist from the Company, has commenced follow up mapping and sampling on these projects which are all considered prospective for nickel-copper-PGM- bearing massive and disseminated sulphide mineralisation.

TANTALUM PROJECTS

ROSENDAL (Finland) – Tertiary Minerals 100%

Phase 1 metallurgical testwork on samples from the Rosendal tantalum deposit in south-west Finland has shown the pegmatite ore is mineralogically simple and that tantalum can be recovered in a relatively simple processing plant. In addition, most of the other constituents of the Rosendal ore are commercially valuable industrial minerals that can be recovered as marketable by-products.

Lakefield Research, an independent Canadian laboratory, undertook the testwork, on samples collected on Tertiary's behalf by the Geological Survey of Finland. It included detailed mineralogical investigations, six gravity concentration tests and two flotation tests.

In their final report Lakefield concluded that:

- Respectable recovery of tantalum from the Rosendal pegmatite ore can be achieved using gravity concentration, which yields a high-grade concentrate averaging over 30% tantalum pentoxide.
- Sodium feldspar can be recovered from the gravity tailings and a premium-grade feldspar concentrate was produced in the preliminary tests.
- Additional marketable products of mica and quartz were produced as by-products of the above tests.
- The Rosendal ore contains a minimal amount of waste material; the various marketable minerals (tantalum, feldspar, quartz and mica) recovered during the testwork represent approximately 95% of the raw ore.

The Lakefield testwork also showed that the tantalite in the Rosendal ore is present as the high-grade ferrotantalite and ferrotapiolite minerals and that commercial recoveries of tantalum can be achieved at relatively coarse grind sizes and without sizing the ground ore.

The Rosendal pegmatite is estimated by the Geological Survey of Finland to contain 1.3 million tonnes of material to a vertical depth of 100 metres with an average grade of 289 grammes/tonne tantalum pentoxide estimated from previous surface sampling and limited drilling. The deposit is located on the coast adjacent to an existing industrial minerals processing plant and ship-loading facilities.

Planning is underway for the next stage of evaluation of the Rosendal deposit which will include infill drilling and economic scoping studies.

BASE-METAL PROJECTS

DJURAGRUVAN PROJECT (Sweden) – Tertiary Minerals 75% - 100%

This is a priority target following the Company's discovery of a 3km long high-grade ore-boulder train (18 boulders averaging 10.6% zinc, 3.9% lead, 0.3% copper) to the south-south-east of the historic Gruvberget mining centre.

During the quarter an orientation geophysical exploration programme was carried out in the main mining centre to test the response of known mineralisation to various geophysical exploration techniques. The IP and ground magnetic geophysical techniques gave strong anomalies over known mineralisation and were selected to explore for the source of the high-grade ore-boulders.

Results became available from a till geochemical survey carried out during the last quarter. These results show strong geochemical anomalies associated with known mineralisations as well as parallel anomalies and a large geochemical anomaly coincident with the 3km strike length of the ore-boulder train.

A 30 line km magnetic survey has recently been completed to identify targets for IP profiling and follow up drilling. Results are awaited.

WINDFALL PROJECT (Sweden) – Tertiary Minerals 75% - 100%

Integration of the Boliden and Tertiary Minerals drill databases has been completed and a thorough re-evaluation of the data has been carried out.

Whilst this review has confirmed that significant zones of zinc mineralisation occur at both Vindfall and Sörtärnan, the geology and geometry of mineralisation is complex. A reliable interpretation of the geology and an estimation of resources have been hampered by differences in logging and sampling protocols between the Boliden and Tertiary data sets.

All of the core from the Boliden drill holes is available in Sweden and the Company has planned a two phase re-logging and sampling programme, which will be carried out over the winter to determine if a geological interpretation can be made which would permit a reliable resource estimate.

A review of the surrounding geology has highlighted a corridor of prospective geology, which will be targeted with renewed exploration in the Spring of 2002.

GOLD PROJECTS

No work was carried out on the company's gold exploration projects during the quarter as the Company has concentrated activity on its PGM, tantalum and base metal interests.

Patrick L Cheetham
Executive Chairman

31 October 2001

For further information contact :

*Patrick Cheetham, Executive Chairman, Tertiary Minerals
Tel: + 44 (0)1625 626203 or visit the Company's website : www.tertiaryminerals.com*