Prospech Limited
ABN 24 602 043 265

19 September 2024

# KORSNÄS REE PROJECT
# DRILLING AND METALLURGY UPDATE

- **First modern era diamond drilling program completed**
  - **Over 1,000 metres of large diameter (HQ) diamond core drilling**
  - **Testing mineralisation extensions and continuity**
  - **Validating historic drill core and delivering modern assay results**
  - **Supporting the preparation of a Korsnäs project resource estimate**
  - **Providing core for metallurgical test work**
  - **A total of 355 samples despatched for assaying**
- **Metallurgical test work program advanced**
  - **Characterisation of Korsnäs REE hosting minerals completed at KU Lueven[1]**
  - **Metallurgical test work flowsheet designed from characterisation study**
- **Drilling and metallurgical programs supported by the EU REMHub grant program**

Jason Beckton, Managing Director of Prospech, states:

*"These are the first diamond core holes to be drilled at the Korsnäs project since the 1970s. The drilling program has been specifically designed to confirm the REE potential of the Korsnäs project and to provide material for metallurgical testing.*

*The Masters study to characterise the REE mineralisation at Korsnäs is an important body of work which has enabled Prospech's consulting metallurgist, Dr. Mark Steemson[2], to tailor a scope of work for the metallurgical program specifically to the mineralogy of the Korsnäs project.*

*Core from the drilling program, together with further samples taken from the tailings storage facility and lanthanide concentrate stockpile, will provide the material for the metallurgical test work.*

*We are very please that this work is the basis upon which the European Commission awarded a €432,250 grant to the Company under the REMHub program."*

1. Katholieke Universiteit Leuven is the oldest and largest university in Belgium and the Low Countries with more than 65,000 students enrolled, 21% being international students. In December 2023, KU Leuven was ranked first in Europe among higher education institutions in the Horizon Europe program for research and innovation.

2. Dr. Mark Steemson (BE (Chemical Engineering), MBA, PhD, MAusIMM, RPEQ Senior Process Engineer (Australia)), holds a PhD in Chemical Engineering from the University of Queensland and is a Process Consultant with 40 years' experience. He is an expert in Chemical Process Engineering, Process Modelling and particularly Design Engineering of REE processing facilities.

Prospech Limited (ASX: PRS, **Prospech** or **the Company**) is pleased to announce the completion of a diamond core drilling program and the advancement of the metallurgical test work program at the promising Korsnäs high grade rare earth elements (**REEs**) project in southwest Finland.

The historic Korsnäs mine focused exclusively on lead (Pb) exploration, neglecting the REE mineralisation present in the historic drill core. REEs were often partially or completely overlooked in assays and the database and drill core without visible ore grade lead was not sampled.

**Drill Program Completed**

The diamond core drilling program (ASX announcement: 12 August 2024) of more than 1,000 metres is the first modern era drilling at the Korsnäs project since the 1970s.

To date, assay results received from sampling by Prospech of historic drill core from the Korsnäs mine have:

- Validated the presence of multiple high-grade REE mineralisation targets.
- Extended known mineralisation below the lowest level of the historic Korsnäs mine and 1.5 kilometres to the northwest of the Korsnäs mine.
- Identified five gravity anomalies with a total strike length exceeding 5 kilometres.

The large diameter (HQ) diamond core drilling program replicates selected high-grade REE intersections from sampling of historical core, tests for strike and dip extensions of known high-grade REE mineralisation and provides fresh drill core material for metallurgical testing, all of which will support the preparation of a maiden JORC compliant resource estimate for the Korsnäs project.

Details of the drill holes are:

| Hole ID | East UTM | North UTM | RL Elevation | Dip (Degrees) | Azimuth (Degrees) | Depth (m) | Samples (Number) |
|---|---|---|---|---|---|---|---|
| KR-305 | 206774 | 6977735 | 4.0 | -45.00 | 275.30 | 97.8 | 28 |
| KR-306 | 206808 | 6978262 | 11.9 | -65.00 | 275.30 | 249.0 | 81 |
| KR-307 | 206934 | 6977551 | 2.4 | -53.00 | 95.30 | 226.6 | 128 |
| KR-308 | 206934 | 6977551 | 2.4 | -80.00 | 275.30 | 116.0 | 37 |
| KR-309 | 207215 | 6977421 | 5.4 | -69.00 | 275.30 | 192.3 | 58 |
| KR-310 | 207280 | 6977663 | 7.0 | -90.00 | 0.00 | 150.2 | 23 |
| **Totals** | | | | | | **1,031.9** | **355** |

**An example of REE bearing fluorapatite crystal from KR309.**

## Characterisation of Korsnäs REE Mineralisation

A Prospech sponsored Masters study, *'Investigating the origin of REE mineralisation in the Korsnäs Pb-REE deposit, Finland'* has been completed by Niel van de Kerkhof of the Department of Earth and Environmental Sciences, KU Leuven, Belgium and overseen by global REE expert Professor Anouk Borst (KU Leuven/Royal Museum for Central Africa). Results of the Masters study were presented at the Geologica Belgica meeting, University of Liege, on 11 September 2024 and an extract of the study is in Appendix 1.

In summary, the study aimed to uncover the origin of the Korsnäs REE-Pb deposit and identify where, and in which, minerals the REEs elements have accumulated.

The importance of this study is that it has enabled a metallurgical program to be specifically designed for the mineralogy of the Korsnäs project.

**Niel van de Kerkhof of the Department of Earth and Environmental Sciences, KU Leuven, Belgium sampling drill core with a portable XRF.**

## Metallurgical Test Work Program

Based on the characterisation of the Korsnäs REE mineralisation, a metallurgical test work program has been prepared by the Company's consulting metallurgist, Dr. Mark Steemson, who will also oversee the completion of the program.

The processing route for the REE at Korsnäs has been identified as comprising three stages:

- Production of an REE containing concentrate.
- Processing the REE concentrate using acid or alkali bake processing to a rare earth oxide (**REO**) concentrate. This process selection will be driven by the mineralogy of the REE concentrate.
- Further processing of REO concentrates to REEs.

The metallurgical program is aimed at understanding the REE distribution in Korsnäs tailings and host rock composite samples, developing a preliminary flowsheet for the production of an REE concentrate from each material, preliminary leach test work on REE concentrate samples followed by hydrometallurgical testing to produce an REO concentrate from the REE concentrate.

The metallurgical program includes the following:

- Sample characterisation - mineralogical evaluation (SEM/EDS, QEMSCAN, TIMA imaging) to determine the grain size, mineral associations and the REE distribution in key REE host minerals including monazite, bastnaesite, fluoapatite and allanite)
- Gravity test work - to determine if a gravity separation stage can pre-concentrate the ore prior to flotation.
- Flotation test work - expected to be the main method for REE separation, including roughing, scavenging and multiple cleaning stages using fatty acids or hydroxamates as a collector and a range of depressants as needed.
- Magnetic separation testing - to determine if magnetic separation offers any potential for ore upgrading or REE concentrate upgrading.
- Leach testing on REE concentrate - to be conducted on the REE concentrates as a guide to further REE recovery leach and purification test work

Representative samples of approximately 300 kgs of TSF and 200 kgs of host rock from the current diamond core drilling is being prepared for the metallurgical program. The TREO content of each sample will be about 6,500 ppm. In addition, 200 kgs of low grade REE concentrate (2-3% TREO) will also be supplied for mineral liberation analyses and flotation upgrading test work.

These representative samples will be sent to service provider laboratories (including our REMHub partners) to undertake the metallurgical program under the guidance of Dr. Mark Steemson.


**Prospech's Managing Director, Jason Beckton, cutting REE bearing carbonatite in KR310 prior to dispatch and preparation for metallurgical test work shipment.**

**For further information, please contact:**

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This announcement has been authorised for release to the market by the Managing Director.

**Competent Person's Statement**

The information in this Report that relates to Exploration Results is based on information compiled by Mr Jason Beckton, who is a Member of the Australian Institute of Geoscientists. Mr Beckton, who is Managing Director of the Company, has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Beckton consents to the inclusion in this Report of the matters based on the information in the form and context in which it appears.

## About Prospech Limited

Founded in 2014, the Company engages in mineral exploration in Slovakia and Finland, with the goal of discovering, defining, and developing critical elements such as rare earths, lithium, cobalt, copper, silver, and gold resources.

Prospech is taking steps to be a part of the mobility revolution and energy transition in Europe. The Company has a portfolio of prospective cobalt and precious metals projects in Slovakia and through its acquisition of the Finland Projects is in the process of acquiring prospective rare earth element (REE) and lithium projects. Eastern and Northern Europe are areas that are highly supportive of mining and have a growing demand for locally sourced rare earths and lithium. With the demand for these minerals increasing, Prospech is positioning itself to be a major player in the European market.

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## Appendix 1

### Extract from the Masters Study completed by Niel van de Kerkhof
### Overseen by Professor Anouk Borst (KU Leuven/Royal Museum for Central Africa)
### Presented at the Geologica Belgica meeting, University of Liege, on 11 September 2024

*The Korsnäs deposit consists of white calcite veins rich in sulphides, with elevated REE contents in surrounding skarn-like rocks that crosscut a migmatitic mica gneiss. The elevated contents of REEs in Korsnäs has been known since the 1970s, yet the origin of these REE-rich sulphide-carbonate rocks remains a matter of debate. Some have referred to the calcite veins as magmatic carbonatite dikes. In contrast, others suggested a meteoric origin for the fluids that precipitated these carbonate veins based on stable isotopic signatures of oxygen and carbon. An intrusive or hydrothermal origin appears to be obscured by a later stage of metamorphism, thus forming skarn-like assemblages. This study aims to uncover the origin of the Korsnäs REE-Pb deposit and identify where and in which minerals the rare earth elements have accumulated.*

*For this study, samples were collected from drill cores made in the 1950s and 1960s and stored in the GTK warehouse in Loppi, Finland. The samples were studied with optical microscopy, cold-cathodoluminescence and FEG-SEM EDX. Whole rock chemical assay data was also provided by Prospech. The rocks of the Korsnäs deposit can be divided into 5 categories: calcite veins/dikes, skarn, migmatitic gneiss, granitic pegmatite and strongly altered rocks. The REEs reside in the calcite veins/dikes, skarn and strongly altered rocks. The calcite veins/dikes consist primarily of calcite with Sr-Ba feldspar, pigeonite pyroxene, sulphides such as pyrrhotite, galena and pyrite and REE phases such as bastnäsite and monazite as inclusions (Fig 1A) and around REE fluorapatite. The skarns consist primarily of diopside pyroxene with perthitic Sr-Ba feldspar and albite, scapolite, olivine, calcite and sulphides such as pyrrhotite and pyrite. It also contains REE phases in the form of allanite, monazite, REE-bearing titanite and apatite. The strongly altered rocks have a wide range of compositions, some of them barren, some strongly enriched in REE. There are magnetite veins containing euhedral monazite crystals (Fig 1B), others consist of a chalcedony matrix with REE apatite, monazite and bastnäsite. Some of the altered calcite carbonatite also contain relict olivine and contain two generations of calcite: one rich in Sr and the other poor in Sr. Other minor REE minerals identified include calcioancyllite and britholite.*

*The mineral assemblage and appearance of the rocks point to the Korsnäs veins having formed from a carbonatite magma. An anti-skarn was then formed through the direct reaction of the carbonatitic magma with the silicate-rich gneiss host rock. Part of the antiskarn assemblage may have been formed by a later regional metamorphic overprint. The initial reaction of the carbonate melt with the silicate host rock resulted in the consumption of Mg from the melt to produce diopside pyroxene, which in turn resulted in the deposition of REE rich apatite, sequestering the REEs and leaving behind a relatively depleted carbonatite melt. Through fractional crystallisation, REE minerals could still be deposited at the later brine-melt stage of the carbonatites once concentrations were high enough.*

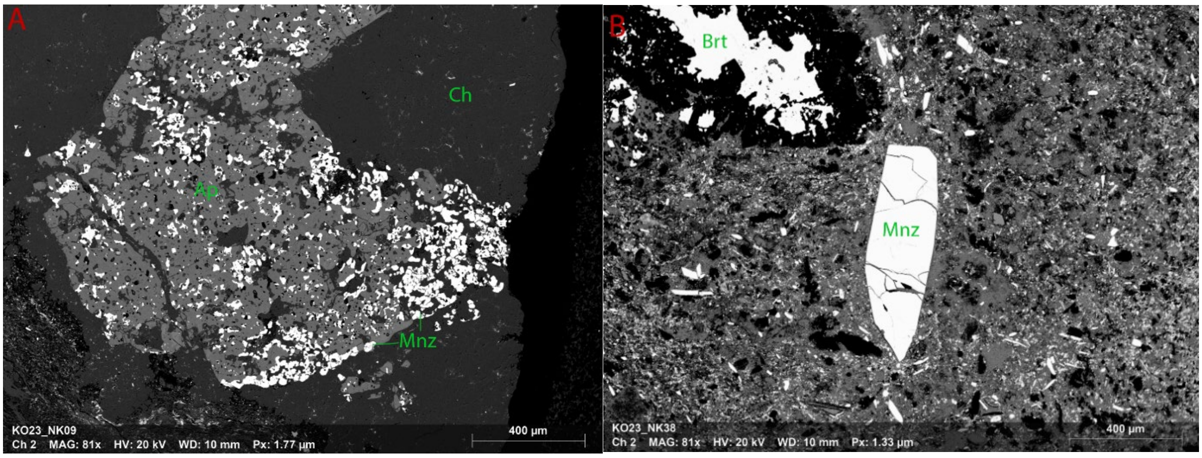
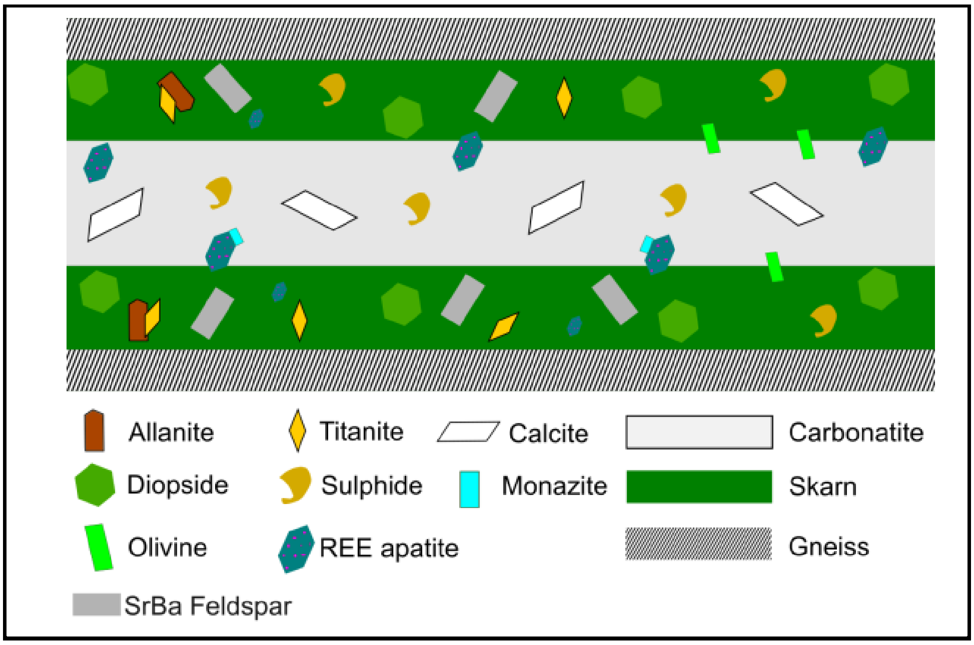



**Fig. 1A SEM image of monazite (Mnz) inclusions in apatite (Ap) crystal.**
**The surrounding mineral is chalcedony (Ch).**
**Fig. 1B Monazite (Mnz) crystal in iron oxide matrix with smaller monazite crystals.**
**Barite (Brt) as vug-filling phase.**

*Thus overall, the petrography and mineralogy of the studied rocks support an origin of carbonatite emplacement with the formation of a REE-rich antiskarn aureole. The geochemical data also show a similar pattern to other carbonatites, more specifically, post-collisional carbonatites. This suggests that the stable isotope study that has been conducted in the past, was influenced by later hydrothermal overprinting, potentially during low-grade regional metamorphism.*




**Conceptual model for the Korsnäs REE-Pb rich carbonatite veins and antiskarn aureole. Calcite veins with sulphides and REE-apatite with inclusions of bastnäsite and monazite. Skarn with diopside and SrBa feldspars, titanite, minor allanite, REE-apatite and olivine.**

## JORC Code, 2012 Edition – Table Korsnäs, Finland

### Section 1 Sampling Techniques and Data

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Sampling techniques* | *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*<br>*Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>*Aspects of the determination of mineralisation that are Material to the Public Report.*<br>*In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.* | ADC contractor provided HQ core which was measured for recovery and orientation lines completed. Prospech sampling was conducted consistently within the specified intervals. A ½-core sampling (for future metallurgical use) method was used, which was then ¼-core sampled for dispatch to the ALS Outokumpu facility.<br>Orientation line was preserved on left side of the cut. |
| *Drilling techniques* | *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).* | HQ size. |
| *Drill sample recovery* | *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>*Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>*Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.* | Core recovery from the drilled program averaged over 98%. |
| *Logging* | *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*<br>*Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>*The total length and percentage of the relevant intersections logged.* | The complete core is logged for geology, recovery, RQD. |
| *Sub-sampling techniques and sample preparation* | *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>*If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>*For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>*Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>*Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*<br>*Whether sample sizes are appropriate to the grain size of the material being sampled.* | ½ or ¼ core cut with a thin diamond blade.<br>QC samples in the form of duplicate of the previous ¼-core interval if have been collected every 25 samples. This has the function of being completely blind or clandestine to the lab. |
| *Quality of assay data and laboratory tests* | *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br>*For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*<br>*Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.* | Assays will be carried out by ALS, an internationally certified laboratory. ALS will conduct Blank and standard assessments in addition to PRS instituted duplicate program. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Verification of sampling and assaying* | *The verification of significant intersections by either independent or alternative company personnel.*<br>*The use of twinned holes.*<br>*Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>*Discuss any adjustment to assay data.* | This program is largely twinning of previous assays and will be reported in due course. |
| *Location of data points* | *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*<br>*Specification of the grid system used.*<br>*Quality and adequacy of topographic control.* | Hole locations determined from historical records and converted to ETRS-TM35FIN projection (EPSG:3067). |
| *Data spacing and distribution* | *Data spacing for reporting of Exploration Results.*<br>*Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*<br>*Whether sample compositing has been applied.* | Only visible lead mineralisation was historically assayed. Prospech is targeting broader zones of REE mineralisation. |
| *Orientation of data in relation to geological structure* | *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*<br>*If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.* | No bias is believed to be introduced by the sampling method. |
| *Sample security* | *The measures taken to ensure sample security.* | Samples were collected by GTK personnel, bagged and immediately dispatched to the laboratory by independent courier. |
| *Audits or reviews* | *The results of any audits or reviews of sampling techniques and data.* | No audits or reviews of the data management system have been carried out. |

## Section 2 Reporting of Exploration Results

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Mineral tenement and land tenure status* | *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*<br>*The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.* | Prospech Limited has 100% interest in Bambra Oy ('Bambra'), a company incorporated in Finland.<br>The laws of Finland relating to exploration and mining have various requirements. As the exploration advances specific filings and environmental or other studies may be required. There are ongoing requirements under Finnish mining laws that will be required at each stage of advancement. Those filings and studies are maintained and updated as required by Prospech's environmental and permit advisors specifically engaged for such purposes.<br>The Company is the manager of operations in accordance with generally accepted mining industry standards and practices. The Korsnäs project's tenure is secured by Exploration Permit Application Number ML2021:0019 Hägg and Reservation Notification VA2023:0040 Hägg 2. |
| *Exploration done by other parties* | *Acknowledgment and appraisal of exploration by other parties.* | The area of Korsnäs has been mapped, glacial till boulder sampled and drilled by private companies including and Outokumpu Oy. |
| *Geology* | *Deposit type, geological setting and style of mineralisation.* | 45 degree dipping carbonate veins and anti-skarn selvedges within sub-horizontally foliated metamorphic terrain. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Drill hole Information* | *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*<br>*easting and northing of the drill hole collar*<br>*elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>*dip and azimuth of the hole*<br>*down hole length and interception depth*<br>*hole length.*<br>*If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.* | Drill Hole Collar Information ETRS-TM35FIN projection (EPSG:3067).<br>Table of collar specifications in the body of the report: |
| *Data aggregation methods* | *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*<br>*Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.*<br>*The assumptions used for any reporting of metal equivalent values should be clearly stated.* | A minimum sample length is 1m generally but can be as low as 0.50m. |
| *Relationship between mineralisation widths and intercept lengths* | *These relationships are particularly important in the reporting of Exploration Results.*<br>*If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>*If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').* | In general the holes have intersected the mineralised zone nearly normal to the host structure – any exceptions to this are noted individually. |
| *Diagrams* | *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.* | The location and results received for surface samples are displayed in the attached maps and/or tables. Coordinates are ETRS-TM35FIN projection (EPSG:3067). |
| *Balanced reporting* | *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | Results for all samples collected will be displayed on the attached maps and the table in the body of the report. |
| *Other substantive exploration data* | *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.* | Mineral characterisation work is referred to in the body of the report which in turn will allow further metallurgical studies to be designed. |
| *Further work* | *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*<br>*Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | Prospech may carry out additional drilling.<br>Additional systematic sampling of the TSF is in planning as is bulk sampling for metallurgical purposes. Half core samples from this drill campaign re ready for dispatch. |