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**CERTIFICATE OF ANALYSIS FOR**

# QUARTZ BLANK
# OREAS 22P

*Prepared by:*
*Ore Research & Exploration Pty Ltd*
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REPORT 22P

## INTRODUCTION

OREAS geochemical reference materials are intended to provide a low cost method of evaluating and improving the quality of precious metal analysis of geological samples. To the analyst they provide an effective means of calibrating analytical equipment, assessing new techniques and routinely monitoring in-house procedures. To the explorationist they provide an important control in geochemical data sets related to exploration from the grass roots level through to prospect evaluation.

As a rule only source materials exhibiting an exceptional level of homogeneity of the element(s) of interest are used in the preparation of standards. This has enabled Ore Research & Exploration to produce a range of gold standards exhibiting homogeneity that matches or exceeds that of currently available international reference materials. In many instances standards produced from a single source are sufficiently homogeneous to produce relatively coarse-grained standards designed to simulate drill cuttings. These have a grain size of minus 3mm and are designated with a "C" suffix to the standard identification number. These standards are packaged in 1kg units following homogenisation and are intended for submission to analytical laboratories in units of 0.25 to 1 kg. They offer the added advantages of providing a check on both sample preparation and analytical procedures while acting as a blind standard to the assay laboratory. The more conventional pulped standards have a grain size of minus 75 microns and a higher degree of homogeneity. These standards are distinguished by a "P" suffix to the standard identification number.

## SOURCE MATERIALS

The precious metal blank OREAS 22P has been prepared from quartz sand to which 0.5% iron oxide has been added to produce a pale grey pulp. It is characterised by extremely low background gold, platinum and palladium contents of less than 5 parts per billion each.

## COMMINUTION AND HOMOGENISATION PROCEDURES

The material was prepared in the following manner:

*a) milling of the quartz sand to approximately 95% less than 75 microns;*

*d) blending with 0.5% iron oxide;*

*e) collection into 25 litre plastic drums;*

*f) packaging into 0.5kg lots*

The presence of a small oversize fraction is intentional in that it more closely resembles a typical sample pulp prepared in a laboratory ring mill.

Three laboratories participated in the analytical program (Appendix I) and have been randomly designated the letter codes A through C in Table 1. Laboratories A and B used a lead fire assay collection on 40-50g charges with an ICPMS finish. Laboratory C used instrumental neutron activation analysis on 30g charges. The results indicate uniform impoverishment in the precious metals gold, platinum and palladium making it an ideal natural blank for monitoring contamination levels in routine assay work.

Table 1. Analytical results for Au, Pt and Pd in OREAS 22P (FA/MS - fire assay/ICP mass spectrometry; INAA - instrumental neutron activation analysis; values in ppb).

| Replicate Number | Lab A FA/MS | | | Lab B FA/MS | | | Lab C INAA |
|---|---|---|---|---|---|---|---|
| | Au | Pt | Pd | Au | Pt | Pd | Au |
| 1 | 1 | <5 | <5 | <1 | <1 | <1 | <1 |
| 2 | 1 | <5 | <5 | <1 | <1 | <1 | <1 |
| 3 | 1 | <5 | <5 | <1 | <1 | <1 | <1 |
| 4 | <1 | <5 | <5 | 1 | <1 | <1 | <1 |
| 5 | 1 | <5 | <5 | <1 | <1 | <1 | <1 |
| 6 | <1 | | | | | | <1 |
| 7 | <1 | | | | | | <1 |
| 8 | <1 | | | | | | <1 |
| 9 | 1 | | | | | | <1 |
| 10 | <1 | | | | | | <1 |

## CONCLUSIONS

A barren quartz was prepared as a standard blank pulp (-75μ). The following concentrations are recommended:

| | |
|---|---|
| Gold | less than 2 parts per billion |
| Platinum | less than 5 parts per billion |
| Palladium | less than 5 parts per billion |

## APPENDIX I

*List of Participating Laboratories:-*

Becquerel Laboratories, Lucas Heights, NSW

Genalysis Laboratory Services, Maddington, WA

Ultra Trace Pty Ltd, Canning Vale, WA