

Product Catalogue 2023 (AUD)



Raising standards since 1988

At OREAS®, we recognise the critical role that **dependable data** plays in the success of your endeavours. Throughout our history, we have built a reputation for delivering the highest quality products and services for absolute confidence in your data assets.

In 2021, the OREAS® group joined AnalytiChem Holding GmbH, a family of companies united in their mission to provide analytical chemistry products and reference materials to laboratories and associated industries worldwide.



For 35 years, we've been at the forefront of developing and producing **Certified Reference Materials (CRMs)** that set the standard for excellence in our industry. We're proud to have pioneered these materials, which have contributed to the advancement of science and the success of our customers worldwide.



ACCREDITED REFERENCE MATERIAL PRODUCER ISO 17034

Our CRMs are developed exclusively for the mining, exploration and analytical industries and distributed worldwide in over 135 countries. Our products cover a wide range of commodities, concentrations and mineralisation styles and are well characterised in rigorous interlaboratory testing programs in accordance with the requirements of the International Organisation for Standardisation (ISO) 17034.

Empowering scientists with confidence in geological data

OREAS® reference materials are produced from **natural ore materials**, ensuring our CRMs mirror the behaviour of your field samples during sample fusion and digestion. This maintains the integrity of the analytical process, delivering results that are directly comparable to your field samples.

We categorise 85% of our OREAS® range as **SuperCRMs®**. These contain full ICP-OES and MS elemental suite certification for at least two different analytical methodologies with up to 180 analytes certified in a single CRM. They provide greater flexibility in QC monitoring and are the perfect solution for the monitoring of pathfinder elements and alteration mapping.

OREAS® are the only manufacturer who routinely quantifies and reports gold homogeneity, a critical prerequisite for any candidate CRM, especially those sourced from "nuggety" gold ores. Our homogeneity testing is performed via instrumental neutron activation analysis (INAA), a high precision and non-destructive technique using very small (typically 85g) sample masses. With transparency at the core of our business, this data is published in each CRM's Certificate of Analysis. For all gold CRMs produced, we *guarantee homogeneity.

Further to our range of 250+ OREAS® CRMs, we specialise in creating Custom (matrix-matched) CRMs from customer supplied materials that are tailored to any specific project requirements. All **OREAS® Custom CRMs** are prepared using the same equipment, proprietary methodologies and QC protocols as our flagship range. We therefore guarantee their quality, regardless of the nature of the source materials.



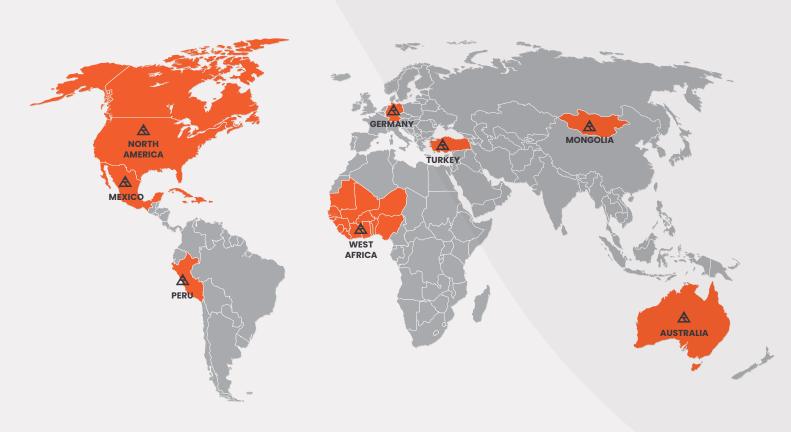


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Global Supply

Our world-class manufacturing facility has the capacity to produce large batch sizes (up to 12,000kg per CRM), ensuring a 3-5 year global supply.

Our extensive distribution channels make our products easily accessible, whenever and wherever they are needed.





Global Stockists

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Why OREAS®

Since 1988, we have consistently raised the industry standard, empowering scientists with reliable geological data. Today, our world-class production facility serves as a global hub, delivering premium Certified Reference Materials (CRMs) to customers in more than 135 countries. Our unwavering commitment to excellence underpins our stellar reputation and has firmly established OREAS® as the number one supplier of CRMs to the mining sector.

Throughout our proud 35-year history, we have prioritised innovation in CRM technologies and data outcomes. Here are some highlights of our accomplishments:

Homogeneity Guarantee

OREAS® is the sole CRM producer that guarantees the homogeneity of all our gold ore CRMs. Through high precision testing using instrumental neutron activation analysis (INAA), we can confirm and quantify the absolute level of homogeneity, regardless of the presence of coarse gold in the source materials. Our expertise in this realm is unparalleled, with published works on absolute and relative homogeneity.

Highly Characterised SuperCRMs®

Our SuperCRMs® offer a comprehensive range of elemental suite certification for at least two different analytical methodologies, including full package ICP-OES and ICP-MS. With up to 180 analytes in a single SuperCRM®, they serve as valuable controls for alteration mapping, pathfinder elements, and various other ICP applications.

Operationally Defined Gold Certification

Our OREAS® gold ore CRMs contain separate gold certification for numerous analytical methodologies including fire assay, aqua regia digestion, cyanide leach, and PhotonAssay.

Certificates and DataPacks

To streamline assay monitoring and data handling, each OREAS® CRM is supplied with a downloadable Certificate of Analysis and DataPack. These comprehensive resources provide users with complete transparency of the preparation and characterisation process.

Sustainability at the Core

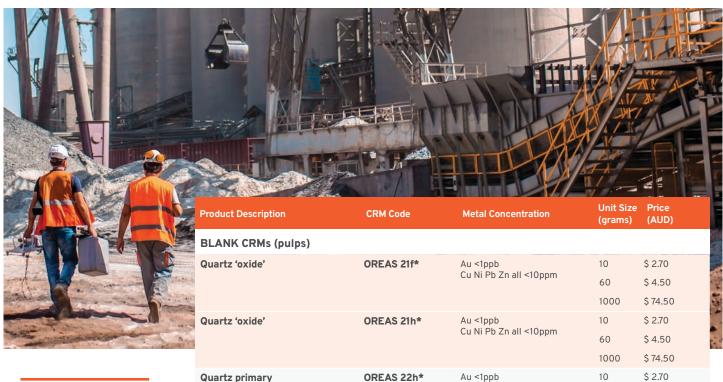
At OREAS®, we prioritise sustainability in our operations by implementing recyclable packaging throughout our business, collecting and recycling rainwater, and utilising a 100kW solar system to power the production plant. Furthermore, we have invested in energy-saving lighting throughout our facilities and will continue to find greener solutions across our operations to minimise our environmental footprint.

At OREAS®, we believe that dedication to excellence, innovation, and sustainability has driven our success. We continue to push boundaries, supporting scientists worldwide with leading edge confidence in geological data.



OREAS® Product Range





BLANK CRMs

OUR RANGE OF BARREN ROCK MATERIALS INCLUDE:

Quartz, basalt, granodiorite and soil.

Basalt and rhyodacite barren chip materials (nominal <10mm) are also available (OREAS C26e, C27f and C27h).

A coarse quartz chip material is available through SCP Science, Canada.

North Man	Product Description	CRM Code	Metal Concentration	Unit Size (grams)	Price (AUD)
NO.	BLANK CRMs (pulps)				
STATE SA	Quartz 'oxide'	OREAS 21f*	Au <1ppb	10	\$ 2.70
TOWN.			Cu Ni Pb Zn all <10ppm	60	\$ 4.50
MI TE				1000	\$74.50
4	Quartz 'oxide'	OREAS 21h*	Au <1ppb	10	\$ 2.70
150			Cu Ni Pb Zn all <10ppm	60	\$ 4.50
				1000	\$74.50
C	Quartz primary	OREAS 22h*	Au <1ppb Cu Ni Pb Zn all <10ppm	10	\$ 2.70
	Quartz primary	OREAS 22i*	Au <1ppb	10	\$ 2.70
			Cu Ni Pb Zn all <10ppm	60	\$ 4.50
				1000	\$74.50
	Basalt lithogeochem	OREAS 24d*	Au <1ppb	10	\$ 2.70
			Cu 43.2ppm	60	\$ 4.50
			Ni 137ppm	1000	\$ 74.50
	Granodiorite lithogeochem	OREAS 20a**	Au <3ppb; Cu 46.7ppm; Ni 40.6ppm; Pb 21.4ppm	10	\$ 3.90
				60	\$ 11.90
				1000	\$ 197.00
	Granodiorite lithogeochem	OREAS 23b*	Au <3ppb; Cu 46.5ppm; Ni 40.0ppm; Pb 22.6ppm	10	\$ 2.70
				60	\$ 4.50
				1000	\$ 74.50
	Soil lithogeochem	OREAS 25b**	Au <2ppb	10	\$ 3.90
			Cu ~37ppm	60	\$ 11.90
	B ###	0051000	Pb ~21ppm	10	¢ 2 22
	Basalt lithogeochem	OREAS 30a**	Au <2ppb; Cu 44.4ppm; Ni 140ppm; Pb 3.75ppm	10	\$ 3.90
				1000	\$ 11.90
	Granodicrito lithage actor	OREAS 20b**	Au 4ppb; Cu 22.7ppm;	1000	\$ 197.00 \$ 3.90
	Granodiorite lithogeochem	UREAS 200°°	Au 4ppb; Cu 22./ppm; Ni 18.7ppm; Pb 24.5ppm	60	\$ 3.90
				500	\$ 98.50
	Basalt chip lithogeochem	OREAS C26e*	Au <1ppb	500g	\$ 15.80
	_ searcemp innegation	J 02.06	Cu 45.4ppm	20kg	\$ 530.00
			Fe 7.87%	200kg	\$ 3,930.00
	Rhyodacite chip lithogeochem	OREAS C27h*	Au <2ppb	500g	\$15.80
	,		Cu 5.4ppm	20kg	\$ 530.00
			Pb 24.0ppm	200kg	\$ 3,930.00

Product Description	CRM Code	Metal Concentration	Unit Size (grams)	Price (AUD)		
EXPLORATION						
Pure glacial till	OREAS 46**	Au <3ppb; Cu 23.1ppm; Zn	10	\$ 3.90		
	35.5ppm; Ni 28.3ppm	60	\$ 11.90			
			1Kg	\$ 197.00		
Anomalous ferruginous soil	OREAS 45f**	Au 19.3ppb; Pd 56.6ppb; Pt 38.1ppb; Cu 363ppm; Ni 256ppm; Cr 476ppm	10	\$ 3.90		
			60	\$ 11.90		
			500	\$ 98.50		
Anomalous ferruginous soil	OREAS 45h**	Au 41.1ppb; Pd 128ppb;	10	\$ 3.90		
		Pt 87.5ppb; Cu 767ppm; Ni 423ppm; Cr 677ppm	60	\$ 11.90		
			500	\$ 98.50		
GOLD, GOLD-COPPER, GOLD-SILVER & GOLD-ANTIMONY CRMs (pulps)						
		A AB .5 1	10	^ 4 40		

EXPLORATION

This group of multi-element geochem SuperCRMs® are ideally suited to exploration programs and enable the monitoring of up to 180 analytes using a single CRM. This makes them an ideal control for alteration mapping, pathfinder elements, and other ICP applications.

Copper ore (argillaceous	OREAS 903**	Au AR <5ppb	10	\$ 4.40
sandstones)		Cu 0.652%	60	\$ 11.90
		CuSol 0.434%	1000	\$ 197.00
Anomalous gold (Carlin style)	OREAS 260*	Au FA 16ppb	60	\$ 6.90
		Au AR 14ppb	500	\$ 57.00
		Cu AR 46.5ppm		
Copper-gold bearing oxide	OREAS 906**	Au 49ppb	10	\$ 4.40
(oxidised VMS / weathered rhyodacite)		Cu 0.310%	60	\$ 11.90
•		CuSol 0.259%	500	\$ 98.50
Anomalous gold (Carlin style)	OREAS 261*	Au FA 49ppb	60	\$ 6.90
		Au AR 41ppb	500	\$ 57.00
		Cu AR 64ppm		
Gold ore (quartz-hosted, VCR-	OREAS 293**	Au FA 72.5ppb	60	\$ 9.40
Witwatersrand style)		U 2.40ppm; S 0.038%	500	\$76.50
Low level gold (Carlin style)	OREAS 262*	Au FA 99ppb	60	\$ 6.90
		Cu AR 118ppm	500	\$ 57.00
		Co AR 26.9ppm		
Iron oxide copper-gold bearing	OREAS 520**^	Au 176ppb	10	\$ 4.40
(IOCG felsic volcanic breccia)		Cu 0.293%	60	\$ 11.90
				4 0 0 5 0

GOLD, GOLD-COPPER, GOLD-SILVER & GOLD-**ANTIMONY**

This broad group covers various mineralisation styles including orogenic metasediment and greenstone hosted, Carlin, Witwatersrand, VMS, porphyry, IOCG and high-sulphidation epithermal.

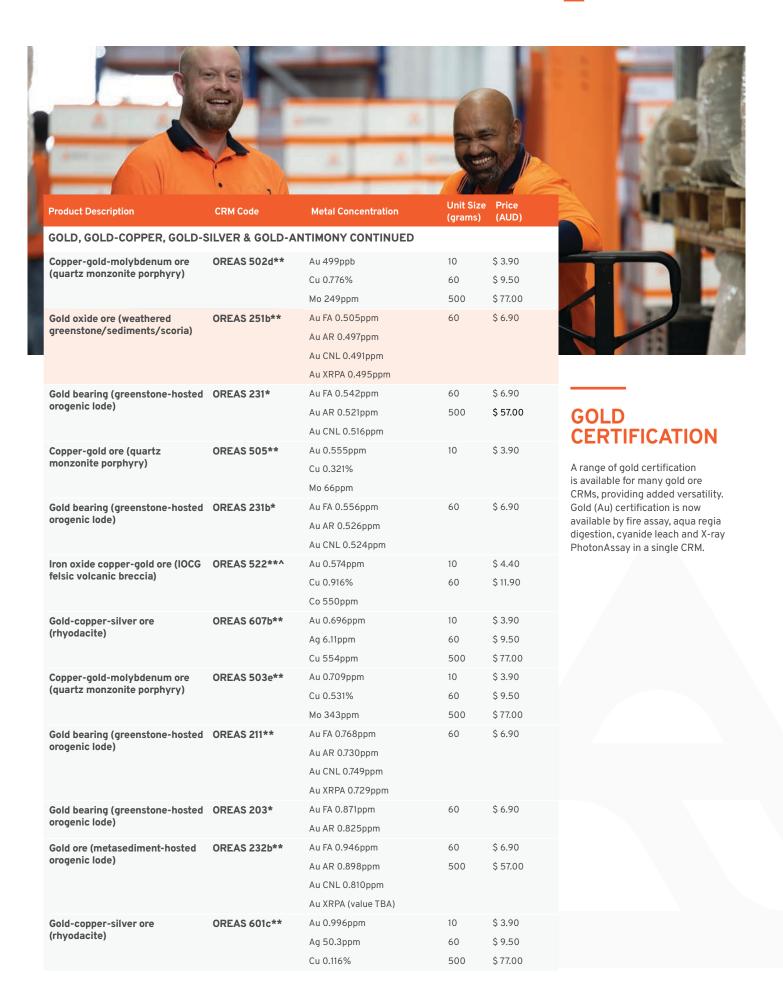


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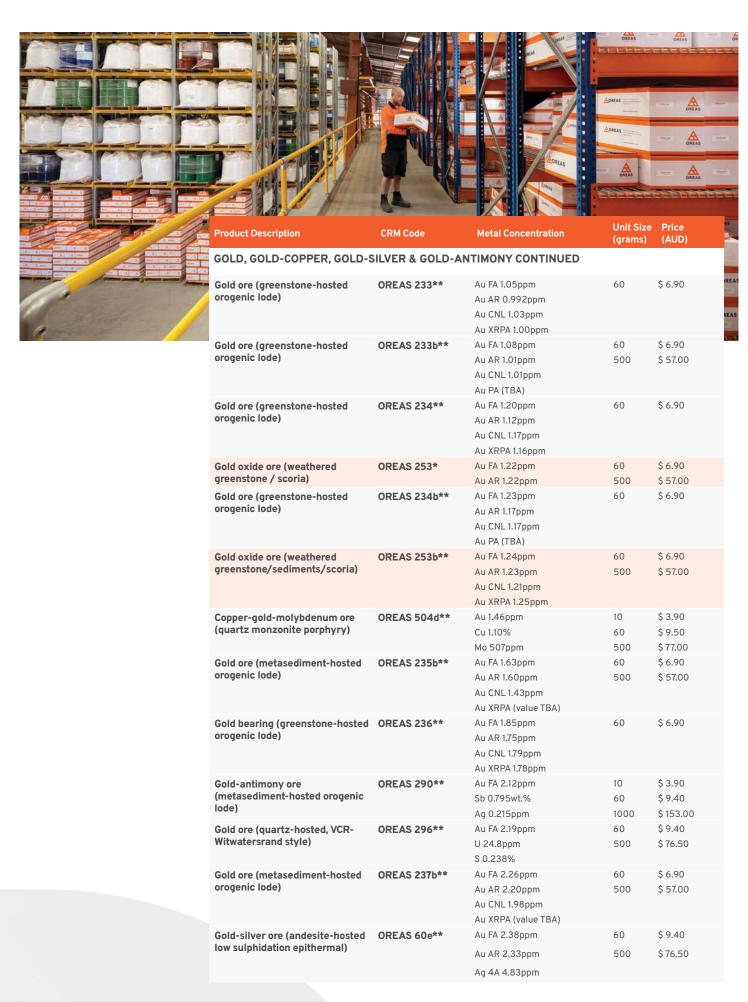
Product Description	CRM Code	Metal Concentration	Unit Size (grams)	Price (AUD)
GOLD, GOLD-COPPER, GOLD-S	SILVER & GOLD-A	NTIMONY CONTINUED		
Copper-gold ore (quartz	OREAS 507**	Au 176ppb	10	\$ 3.90
monzonite porphyry)		Cu 0.622%	60	\$ 9.50
		Mo 114ppm	500	\$77.00
Copper-gold oxide ore (oxidised	OREAS 908**	Au 187ppb;	10	\$ 4.40
VMS / weathered rhyodacite)		Cu 1.26%;	60	\$ 11.90
		CuSol 1.06%	500	\$ 98.50
Gold ore (quartz-hosted, VCR-	OREAS 294**	Au FA 207ppb	60	\$ 9.40
Witwatersrand style)		U 4.46ppm	500	\$76.50
		\$ 0.067%		
Low level gold (Carlin style)	OREAS 263*	Au FA 214ppb	60	\$ 6.90
		Au AR 166ppb	500	\$ 57.00
		Cu AR 87ppm		
Copper-gold-molybdenum ore	OREAS 501d**	Au 0.232ppm	10	\$ 3.90
(quartz monzonite porphyry)		Cu 0.272%	60	\$ 9.50
		Mo 95ppm	500	\$77.00
Gold oxide ore (sediment-hosted,	OREAS 264**	Au FA 0.308ppm	60	\$ 6.90
Carlin style)		Au AR 0.295ppm	500	\$ 57.00
		Au CNL 0.273ppm		
		Au XRPA 0.313ppm		
Gold ore (quartz-hosted, VCR-	OREAS 295**	Au FA 313ppb	60	\$ 9.40
Witwatersrand style)		U 6.06ppm	500	\$76.50
		S 0.091%		
Gold bearing (greenstone-hosted	OREAS 230**	Au FA 0.337ppm	60	\$ 6.90
orogenic lode)		Au AR 0.318ppm		
		Au CNL 0.321ppm		
		Au XRPA 0.323ppm		
Zn-Pb-Au-Ag sulphide mine	OREAS 630b**^	Au 358ppb	10	\$ 5.20
tailings		Zn 1.11%	60	\$ 15.20
(rhyolitic volcaniclastic sediments)		Pb 0.442%		
Copper-gold ore (quartz	OREAS 506**	Au 364ppb	10	\$ 3.90
monzonite porphyry)		Cu 0.444%	60	\$ 9.50
		Mo 87ppm		
Iron oxide copper-gold ore (IOCG	OREAS 521**^	Au 376ppb	10	\$ 4.40
felsic volcanic breccia)		Cu 0.607%	60	\$ 11.90
		Co 386ppm		
Copper-gold-molybdenum ore	OREAS 508**	Au 470ppb	10	\$ 3.90
(quartz monzonite porphyry)		Cu 0.548%	60	\$ 9.50
		Mo 152ppm	500	\$77.00
				10//













Product Description	CRM Code	Metal Concentration	Unit Size (grams)	Price (AUD)
GOLD, GOLD-COPPER, GOLD-S	ILVER & GOLD-AN	ITIMONY CONTINUED	— (grams)	_(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Gold-silver ore (andesite-hosted low sulphidation epithermal)	OREAS 61h**	Au FA 4.42ppm Au AR 4.35ppm Ag 4A 3.65ppm	60 500	\$ 9.40 \$ 76.50
Gold-silver ore (andesite-hosted low sulphidation epithermal)	OREAS 62h**	Au FA 10.54ppm Au AR 10.31ppm Ag 4A 7.69ppm	60 500	\$ 9.40 \$ 76.50
Gold ore (metasediment-hosted orogenic lode)	OREAS 238*	Au FA 3.03ppm Au AR 2.95ppm Au CNL 2.65ppm	60	\$ 6.90
Gold ore (metasediment-hosted orogenic lode)	OREAS 238b**	Au FA 3.08ppm Au AR 3.00ppm Au CNL 2.74ppm Au XRPA (value TBA)	60 500	\$ 6.90 \$ 57.00
Gold ore (sediment-hosted, Carlin style)	OREAS 277*	Au FA 3.39ppm C 1.86% S 0.62%	60 500	\$ 6.90 \$ 57.00
Gold ore (metasediment-hosted orogenic lode)	OREAS 239b**	Au FA 3.61ppm Au AR 3.50ppm Au CNL 3.24ppm Au XRPA (value TBA)	60 500	\$ 6.90 \$ 57.00
Gold-antimony ore (metasediment-hosted orogenic lode)	OREAS 291**	Au FA 4.20ppm Sb 1.50wt.% Ag 0.305ppm	10 60 500	\$ 3.90 \$ 9.40 \$ 76.50
Gold-copper-silver ore (rhyodacite)	OREAS 603c**	Au 4.96ppm Ag 294ppm Cu 1.21%	10 60	\$ 3.90 \$ 9.50
Gold-copper-silver ore (rhyodacite)	OREAS 609b**	Au 4.97ppm Ag 24.6ppm Cu 0.498%	10 60 500	\$ 3.90 \$ 9.50 \$ 77.00
Gold ore (greenstone-hosted orogenic lode)	OREAS 240**	Au FA 5.51ppm Au AR 5.28ppm Au CNL 5.36ppm Au XRPA 5.23ppm	60	\$ 6.90
Gold ore (greenstone-hosted orogenic lode)	OREAS 240b**	Au FA 5.65ppm Au AR 5.53ppm Au CNL 5.44ppm Au PA (TBA)	60 500	\$ 6.90 \$ 57.00
Gold ore (sediment-hosted, Carlin style)	OREAS 279*	Au FA 6.55ppm C 1.13% S 1.27%	60	\$ 6.90
Gold bearing (greenstone-hosted orogenic lode)	OREAS 241**	Au FA 6.91ppm Au AR 6.73ppm Au CNL 6.77ppm Au XRPA 6.78ppm	60	\$ 6.90
Gold bearing (greenstone-hosted orogenic lode)	OREAS 241b**	Au FA 7.13ppm Au AR 6.96ppm Au CNL 6.87ppm Au PA (TBA)	60	\$ 6.90
Gold ore (greenstone-hosted orogenic lode)	OREAS 242**	Au FA 8.67ppm Au AR 8.33ppm Au CNL 8.48ppm Au XRPA 8.26ppm	60	\$ 6.90
Gold oxide ore (sediment-hosted, Carlin style)	OREAS 273**	Au FA 10.76ppm Au XRPA 10.69ppm	60 500	\$ 6.90 \$ 57.00
Gold-antimony ore (metasediment-hosted orogenic lode)	OREAS 292**	Au FA 11.06ppm Sb 4.54wt.% Ag 0.772ppm	10 60	\$ 3.90 \$ 9.40

CARLIN GOLD ORE CRMs

Carlin gold ore contains submicroscopic gold that is finely disseminated among a sulphiderich matrix within carbonaceous material. Given its complex nature, a successful fusion is only possible when the correct flux composition is used.



Product Description	CRM Code	Metal Concentration	Unit Size (grams)	Price (AUD)
PLATINUM GROUP ELEMENTS	3			
Dishaba PGE ore with copper- nickel ore added to a gabbro- norite matrix	OREAS 680**^	Cu 0.904%; Ni 2.15% Pt 405ppb; Pd 218ppb Au 161ppb	60	\$ 15.20
PGE ore, pyroxenite/gabbro- norite matrix	OREAS 681**^	Au 51ppb Pd 243ppb Pt 526ppb	60 1000	\$ 15.20 \$ 247.00
PGE ore, pyroxenite/gabbro- norite matrix	OREAS 682**^	Au 74ppb Pd 444ppb Pt 868ppb	60 500	\$ 15.20 \$ 125.00
PGE ore, pyroxenite matrix	OREAS 683**^	Au 207ppb Pd 853ppb Pt 1760ppb	60 500	\$ 15.20 \$ 125.00
PGE ore, pyroxenite matrix	OREAS 684**^	Au 0.248ppm Pd 1.72ppm Pt 3.87ppm	60	\$15.20

PGE

These Merensky Reef ore CRMs have Gold and Platinum Group Element certification available by both lead collection fire assay (Au, Pt and Pd) and nickel sulphide collection fire assay (Au, Pt, Pd, Ir, Rh, Ru and Os). In addition, fusion with ICP elemental suite certification is available along with 4-acid digestion.

COPPER, COPPER-COBALT

,				
Barren shale / siliceous dolomite	OREAS 160*	Cu 13ppm	10 1000	\$ 4.00 \$ 390.00
Cu-bearing siltstone	OREAS 920b**	Cu 116ppm	10 500	\$ 4.50 \$ 224.00
Cu-bearing siltstone	OREAS 91*	Cu 265ppm	10	\$ 4.00
Cu-bearing siltstone	OREAS 921b**	Cu 254ppm	10 500	\$ 4.50 \$ 224.00
Cu-bearing siltstone	OREAS 921**	Cu 274ppm	10	\$ 4.50
Copper-gold oxide ore (oxidised VMS / weathered rhyodacite)	OREAS 905**	Cu 0.153% CuSol 0.127% Au 391ppb	10 60 500	\$ 4.40 \$ 11.90 \$ 98.50
Massive sulphide low grade ore breccia	OREAS 110*^	Cu 0.160%	10	\$ 4.00
Copper ore (sediment-hosted)	OREAS 922**	Cu 0.212%	10 1000	\$ 4.50 \$ 450.00
Copper-gold-molybdenum ore	OREAS 501d**	Cu 0.272%	10	\$ 3.90
(quartz monzonite porphyry)		Au 0.232ppm	60	\$ 9.50
		Mo 95ppm	500	\$77.00
Copper-cobalt oxide ore	OREAS 550**	Cu 0.278%	10	\$ 4.50
dolomitic shale		Co 0.145%	1000	\$ 450.00
	200		1	7

COPPER, COPPER-COBALT

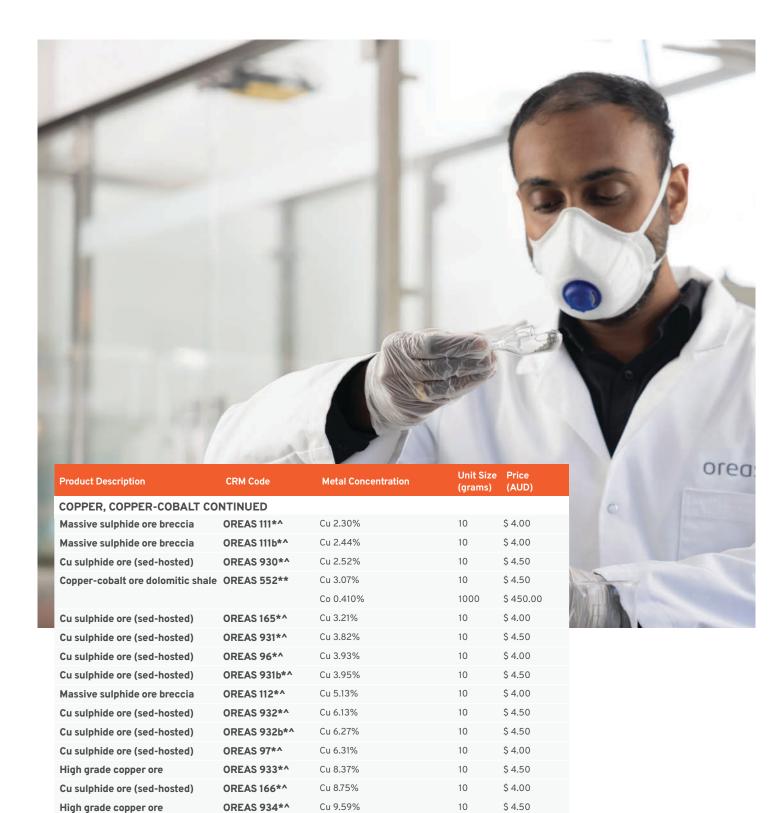
This group covers various mineralisation styles including sediment-hosted, porphyry, VMS and high-sulphidation epithermal.

Cu concentrate and Ni-Co concentrate CRMs are also available (see 'Concentrates').

Ore grade Cu-Co CRMs (OREAS 550 to 555) are prepared from materials sourced from the Democratic Republic of the Congo and cover Cobalt grades 0.15-1.14% Co.



Product Description	CRM Code	Metal Concentration	Unit Size (grams)	Price (AUD)
COPPER, COPPER-COBALT CO	NTINUED			
Copper low grade ore	OREAS 902**	Cu 0.301%	10	\$ 4.40
argillaceous sandstone		CuSoI 0.111%	60	\$ 11.90
			1000	\$ 197.00
Copper-gold oxide ore (oxidised	OREAS 906**	Cu 0.310%	10	\$ 4.40
VMS / weathered rhyodacite)		CuSol 0.259%	60	\$ 11.90
		Au 49ppb	500	\$ 98.50
Copper-gold ore (quartz	OREAS 505**	Cu 0.321%	10	\$ 3.90
monzonite porphyry)		Au 0.555ppm		
		Mo 66ppm		
Cu sulphide low grade ore (sediment-hosted)	OREAS 161*^	Cu 0.400%	10	\$ 4.00
Copper ore (sediment-hosted)	OREAS 923**	Cu 0.423%	10	\$ 4.50
			1000	\$ 450.00
Copper-gold ore (quartz monzonite porphyry)	OREAS 506**	Cu 0.444%	10	\$ 3.90
monzonite porpriyry)		Au 0.364ppm	60	\$ 9.50
		Mo 87ppm	1000	\$ 154.00
Copper ore (sediment-hosted)	OREAS 924**	Cu 0.512%	10	\$ 4.50
			500	\$ 224.00
Copper-cobalt oxide ore dolomitic shale	OREAS 551**	Cu 0.569%	10	\$ 4.50
		Co 0.304%	1000	\$ 450.00
Copper-cobalt oxide ore dolomitic shale	OREAS 553**	Cu 0.581%	10	\$ 4.50
		Co 0.612%	1000	\$ 450.00
Copper ore (sediment-hosted)	OREAS 925**	Cu 0.615%	10	\$ 4.50
		0.04004	1000	\$ 450.00
Copper-gold ore (quartz monzonite porphyry)	OREAS 507**	Cu 0.622%	10	\$ 3.90
, , , , ,		Au 0.176ppm	60	\$ 9.50
0 ""	0054000044	Mo 114ppm	500	\$77.00
Copper ore argillaceous sandstones	OREAS 903**	Cu 0.652% CuSol 0.434%	10	\$ 4.40 \$ 11.90
		Cu30I 0.434%	1000	\$ 197.00
Cu sulphide ore (sed-hosted)	OREAS 162*^	Cu 0.761%	10	\$ 4.00
Copper ore (sediment-hosted)	OREAS 926**	Cu 0.813%	10	\$ 4.50
copper ore (semillerit-nosted)	OILEAS 720	54 5.01570	1000	\$ 450.00
Cu sulphide ore (sed-hosted)	OREAS 927**	Cu 1.08%	10	\$ 4.50
			1000	\$ 450.00
Copper-gold oxide ore (oxidised	OREAS 908**	Cu 1.26%	10	\$ 4.40
VMS / weathered rhyodacite)		CuSol 1.06%	60	\$ 11.90
		Au 187ppb	500	\$ 98.50
Cu sulphide ore (sed-hosted)	OREAS 928*	Cu 1.53%	10	\$ 4.50
,			1000	\$ 450.00
Copper-cobalt ore dolomitic shale	OREAS 554**	Cu 1.58%	10	\$ 4.50
		Co 0.806%	500	\$ 224.00
Cu sulphide ore (sed-hosted)	OREAS 163*^	Cu 1.71%	10	\$ 4.00
Cu sulphide ore (sed-hosted)	OREAS 929*	Cu 2.00%	10	\$ 4.50
			1000	\$ 450.00
Cu sulphide ore (sed-hosted)	OREAS 164*^	Cu 2.22%	10	\$ 4.00
Copper-cobalt ore dolomitic shale	OREAS 555**	Cu 2.28%	10	\$ 4.50
		Co 1.14%		



High grade copper ore

Massive sulphide ore breccia

Cu sulphide ore (sed-hosted)

Cu 12.6%

Cu 13.3%

Cu 14.8%

OREAS 935*^

OREAS 113*^

OREAS 98*^

10

10

\$ 4.50

\$ 4.00

\$ 4.00

CONCENTRATES

These downstream metallurgical products cover a range of precious and base metal combinations and grades.

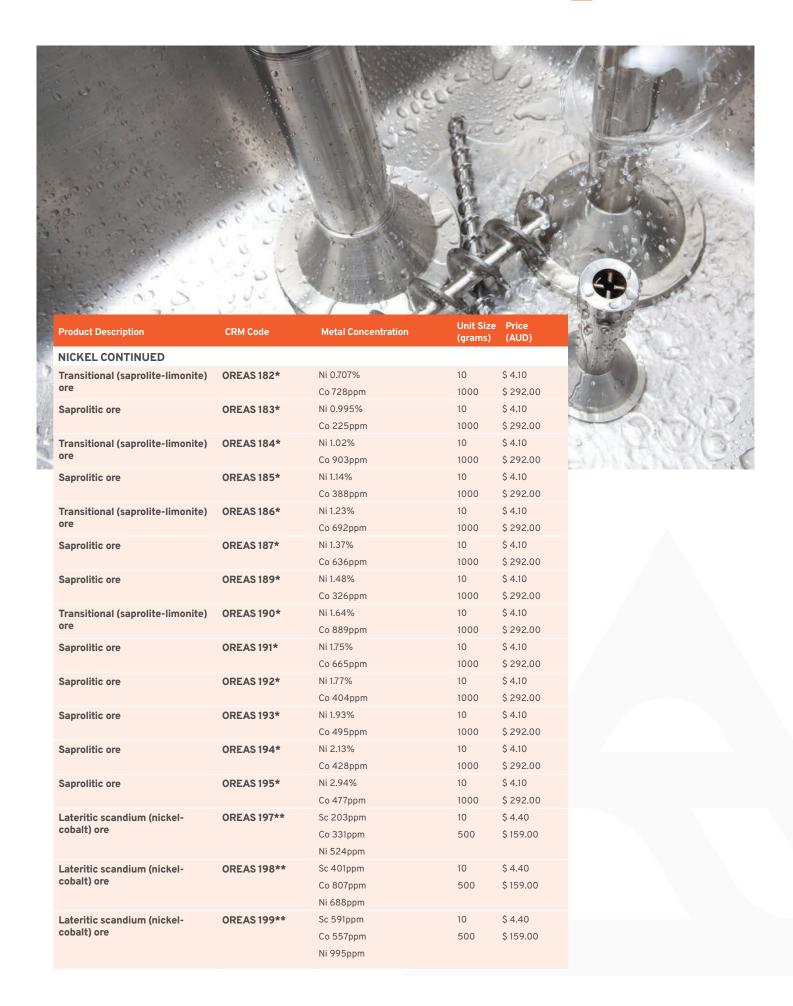
Product Description	CRM Code	Metal Concentration	Unit Size (grams)	Price (AUD)
CONCENTRATE				
Copper-gold-silver sulphide	OREAS 990b**^	Cu 16.37%	10	\$ 6.50
concentrate		Ag 6741ppm	50	\$ 32.20
		Au 63.67ppm		
Copper-gold-silver sulphide	OREAS 990c**^	Cu 17.13%	10	\$ 6.50
concentrate		Ag 2732ppm	50	\$ 32.20
		Au 35.35ppm		
Copper-gold-silver sulphide	OREAS 991 [^]	Cu 20.66%; Ag 48.1ppm	50	\$ 28.50
concentrate		Au 47.0ppm		
Copper sulphide concentrate	OREAS 995**^	Cu 22.7%; Au 4.52ppm	10	\$ 6.70
		Ag 37.3ppm; Zn 1.33%	50	\$ 33.00
		As 1277ppm; Pb 2883ppm		
Copper-gold-silver sulphide concentrate	OREAS 993^	Cu 23.90%	10	\$ 6.50
		Ag 41.6ppm	50	\$ 32.20
		Au 54.85ppm		
Copper sulphide refinery product	OREAS 994**^	Cu 30.00%	10	\$ 6.70
		Ag 181ppm		
Copper sulphide refinery product	OREAS 992 [^]	Cu 43.90%	10	\$ 6.10
		S 36.97%		
Zinc sulphide concentrate	OREAS 354 [^]	Zn 49.30%	10	\$ 6.70
		Pb 1.58%		
		Ag 98.0ppm		
Lead sulphide concentrate	OREAS 353b^	Pb 64.58%; Ag 2184ppm	10	\$ 6.70
		Au 34.73ppm; Zn 3.88%	50	\$ 33.00
Nickel-cobalt sulphide refinery product	OREAS 78^	Co 23.74%	10	\$ 6.10
product		Ni 25.79%		
		S 28.61%		
NICKEL				

NICKEL

This group covers both primary (Komatiite-hosted) and oxide (lateritic) nickel ore CRMs. Note, oxides are highlighted in orange.

		S 28.61%		
NICKEL				
Komatiite altered ultramafic Nickel-copper-cobalt ore magmatic	OREAS 70b**^ OREAS 85**^	Ni 0.218% Ni 0.344% Cu 0.176%	10 10 60	\$ 4.50 \$ 4.50 \$ 14.10
		Co 178ppm	00	\$ 14.10
Komatiite-hosted nickel sulphide	OREAS 72b**^	Ni 0.686%	10	\$ 4.50
Nickel-copper-cobalt ore	OREAS 86**^	Ni 1.23%	10	\$ 4.50
magmatic		Cu 0.562%	60	\$ 14.10
		Co 507ppm		
Komatiite-hosted nickel sulphide	OREAS 73b**^	Ni 1.48%	10	\$ 4.50
Komatiite-hosted nickel sulphide	OREAS 74b**^	Ni 3.38%	10	\$ 4.50
Komatiite-hosted nickel sulphide	OREAS 75a*^	Ni 5.11%	10	\$ 4.00
Komatiite-hosted nickel sulphide	OREAS 75b**^	Ni 5.29%	10	\$ 4.50
Komatiite-hosted nickel sulphide	OREAS 76a*^	Ni 7.29%	10	\$ 4.00
Komatiite-hosted nickel sulphide	OREAS 76b**^	Ni 7.62%	10	\$ 4.50
Komatiite-hosted nickel sulphide	OREAS 77a*^	Ni 10.71%	10	\$ 4.00
Komatiite-hosted nickel sulphide	OREAS 77b**^	Ni 11.30%	10	\$ 4.50
Transitional (saprolite-limonite) ore	OREAS 180**	Ni 3093ppm Co 244ppm Sc 41.5ppm	10 500	\$ 4.40 \$ 159.00
Transitional (saprolite-limonite) ore	OREAS 181**	Ni 5123ppm Co 541ppm Sc 38.2ppm	10 500	\$ 4.40 \$ 159.00

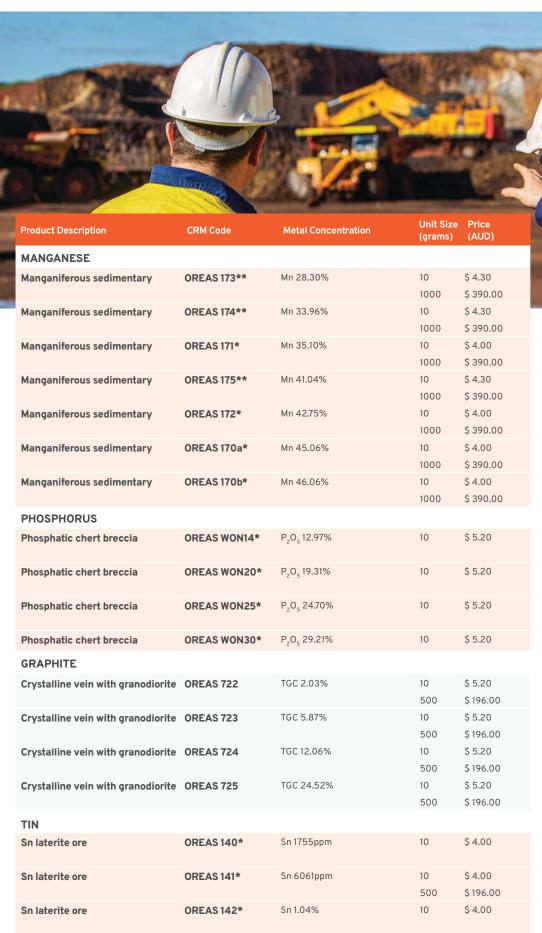




ZINC-LEAD-SILVER

This group covers a range of mineralisation styles including Volcanic Massive Sulphide (VMS), Broken Hill Type (BHT) and Sedimentary Exhalative (SEDEX)

			Unit Size	Prico
Product Description	CRM Code	Metal Concentration	Unit Size (grams)	Price (AUD)
ZINCE-LEAD-SILVER				
Zinc sulphide ore (Broken Hill Type meta-sediment / sulphide)	OREAS 36*^	Zn 4.19%	10	\$ 5.60
Type meta-seument / sulpinue)		Ag 10.17ppm		
		Pb 0.579%		
Zinc sulphide ore (Broken Hill Type meta-sediment / sulphide)	OREAS 37*^	Zn 6.26%	10	\$ 5.60
Type meta-seument / sulpinue/		Ag 5.19ppm		
		Pb 0.615%		
Zinc sulphide ore (Broken Hill Type meta-sediment / sulphide)	OREAS 38*^	Zn 10.06%	10	\$ 5.60
.,,,,		Ag 5.49ppm		
		Pb 0.592%		
Zn-Pb-Ag sulphide ore (SEDEX Type sulphidic graphitic slate)	OREAS 130**^	Zn 1.71%	10	\$ 5.20
. , po carpinato grapinato ciato,		Pb 0.13%		
		Ag 6.57ppm	10	A.F. 0.
Zn-Pb-Ag sulphide ore (SEDEX Type sulphidic graphitic slate)	OREAS 135b**^	Zn 2.73%	10	\$ 5.20
., , , , , , , , , , , , , , , , , , ,		Pb 1.71%		
	0051040454	Ag 52.9ppm	10	Ĉ.F. 20
Zn-Pb-Ag sulphide ore (SEDEX Type sulphidic graphitic slate)	OREAS 136**^	Zn 3.63%	10	\$ 5.20
		Pb 4.76%		
7n Dh. An authbide and (CEDEV	OREAS 137**^	Ag 151ppm Zn 4.92%	10	\$ 5.20
Zn-Pb-Ag sulphide ore (SEDEX Type sulphidic graphitic slate)	OREAS 137	Pb 0.673%	10	Ş J.20
		Ag 25.9ppm		
Zn-Pb-Ag sulphide ore (SEDEX	OREAS 315**^	Zn 5.45%	10	\$ 5.20
Type sulphidic graphitic slate)	OKEAG 013	Pb 3.79%	10	Ų 3.E0
		Ag 72.5ppm		
Zn-Pb-Ag sulphide ore (SEDEX	OREAS 138**^	Zn 8.19%	10	\$ 5.20
Type sulphidic graphitic slate)		Pb 1.23%		
		Ag 45.2ppm		
Zn-Pb-Ag sulphide ore (SEDEX	OREAS 316**^	Zn 11.16%	10	\$ 5.20
Type sulphidic graphitic slate)		Pb 5.02%		
		Ag 103ppm		
Zn-Pb-Ag sulphide ore (SEDEX	OREAS 139**^	Zn 13.63%	10	\$ 5.20
Type sulphidic graphitic slate)		Pb 2.21%		
		Ag 76.7ppm		
Zn-Pb-Ag sulphide ore (SEDEX	OREAS 317**^	Zn 17.45%	10	\$ 5.20
Type sulphidic graphitic slate)		Pb 12.13%		
		Ag 232ppm		
Zn-Pb-Ag-Au tailings (VMS Type pyritic/gangue)	OREAS 630b**^	Zn 1.11%; Pb 0.442 %;	10	\$ 5.20
pyritic/galigue)		Au 0.358ppm; Ag 19ppm	60	\$15.20
		Cu 521ppm		
VMS Type Cu ore	OREAS 110*^	Cu 0.160%; Zn 95ppm	10	\$ 4.00
VMS Type Cu ore	OREAS 111*^	Cu 2.30%; Zn 4196ppm	10	\$ 4.00
VMS Type Cu ore	OREAS 111b*^	Cu 2.44%; Zn 4334ppm	10	\$ 4.00
1010 = -6	OREAS 112*^	Cu 5.13%; Zn 4302ppm	10	\$ 4.00
VMS Type Cu ore	OREAS 113*^	Cu 13.30%; Zn 4158ppm	10	\$ 4.00
Cu-Ag-Au concentrate (VMS Type origin)	OREAS 990b**^	Cu 16.37%; Ag 6741ppm;	10	\$ 6.50
		Au 63.67ppm	50	\$ 32.20



MANGANESE

These Australian (Groote Eylandt) and South African (Postmasburg) oxide ores contain major oxide certification by fusion XRF + LOI at 1000° C.

PHOSPHORUS

These shallow marine, sediment-hosted ores were sourced from the Wonarah Phosphate Project located in the Northern Territory, Australia.

GRAPHITE

A group of crystalline vein, graphite-rich ores (Queens Graphite Mine, Sri Lanka) were blended with granodiorite to achieve target grades of Total Graphitic Carbon (TGC).

TIN

These CRMs were sourced from the oxide zone of the Doradilla Project located in New South Wales, Australia. Sn is certified by both fusion with ICP and pressed powder pellet with XRF.



LITHIUM

As the demand for lithium and battery mineral CRMs continue to grow, we're ahead of the game with plans to extend our range to over 150 battery CRMs by 2024.

TUNGSTEN

This skarn tungsten-magnetite ore was sourced from the White Rock W-Sn deposit located in New South Wales, Australia.

IRON

OREAS 700 is a magnetite ore containing various speciality Fe certifications including reduced Fe (as FeO), MassRec by Davis Tube Recovery (DTR) and magnetic iron as Fe3O4 along with Total Fe by fusion with XRF, Fe by 4-acid digestion and Fe by aqua regia digestion.

OREAS 401 to 406 are hematiterich (BIF-hosted) while OREAS 40 is very high grade hematite (sediment-hosted)

Product Description	CRM Code	Metal Concentration	Unit Size (grams)	Price (AUD)
LITHIUM				
Pegmatite ore	OREAS 750**	Li20 0.498%; Li 0.231%	10	\$ 5.20
		Nb 21.8ppm; Sn 43ppm		
Pegmatite ore	OREAS 751**	Li20 1.01%; Li 0.468%	10	\$ 5.20
		Nb 40.9ppm; Sn 156ppm	500	\$196.00
Pegmatite ore	OREAS 752**	Li20 1.52%; Li 0.707%	10	\$ 5.20
		Nb 54ppm; Sn 238ppm	500	\$ 196.00
Pegmatite ore	OREAS 753**	Li20 2.19%; Li 1.02%	10	\$ 5.20
		Nb 36.2ppm; Sn 135ppm	500	\$196.00
Spodumene concentrate	OREAS 999**	Li20 5.76%; Li 2.67%	10	\$ 6.10
		Nb 74ppm; Sn 84ppm	500	\$ 297.00
TUNGSTEN				
Skarn tungsten magnetite ore	OREAS 700**	W 1.13%	10	\$ 4.40
		Au 0.506ppm	60	\$13.70
		Cu 0.202%	500	\$ 114.00
IRON				
Skarn tungsten magnetite ore	OREAS 700**	TOTAL Fe 16.06%	10	\$ 4.40
(with Au-Cu-W mineralisation)	ONEAG 100	FeO 12.07%	60	\$ 13.70
		DTR (MassRec) 11.28%	500	\$ 114.00
		Satmagan Fe3O4 10.91%	300	Ş 114.00
Hematite ore (BIF-hosted)	OREAS 401*	Fe 45.63%	10	\$ 4.00
riematite die (Dii -nosteu)	ONEAS 401	SiO2 24.88%	1000	\$ 390.00
		P 0.105%	1000	Q 070.00
Hematite ore (BIF-hosted)	OREAS 402*	Fe 48.41%	10	\$ 4.00
Hematite of e (Diff-flosted)	ONEAS 402	SiO2 19.77%	1000	\$ 390.00
		P 0.119%	1000	Q 070.00
Hematite ore (BIF-hosted)	OREAS 403*	Fe 52.31%	10	\$ 4.00
ricinatic ore (bii nosteu)	ONEAG 400	SiO2 13.67%	1000	\$ 390.00
		P 0.123%	.000	V 070100
Hematite ore (BIF-hosted)	OREAS 404*	Fe 55.14%	10	\$ 4.00
		SiO2 7.88%	1000	\$ 390.00
		P 0.151%		
Hematite ore (BIF-hosted)	OREAS 405*	Fe 58.02%	10	\$ 4.00
Tremance ore (Bit Hostea)		SiO2 8.37%	1000	\$ 390.00
		P 0.111%		
Hematite ore (BIF-hosted)	OREAS 406*	Fe 61.44%	10	\$ 4.00
1100000		SiO2 7.96%	1000	\$ 390.00
		P 0.085%		
Hematite ore (supergene)	OREAS 40*	Fe 66.72%	10	\$ 4.00
itematice ore (supergene)	C.LLAG TO	SiO2 4.64%	1000	\$ 390.00
		P 0.004%	1000	Ç 070.00
		. 5.00 1/0		

Product Description	CRM Code	Metal Concentration	Unit Size (grams)	Price (AUD)				
URANIUM								
U bearing sandstone	OREAS 120**	U 40.5ppm	10	\$ 5.10				
			1000	\$ 500.00	URANIUM			
U bearing haematitic breccia	OREAS 100a*	U 135ppm	10	\$ 5.10	A collection of sandstone-			
U ore (sandstone hosted)	OREAS 121**	U 215ppm	10 1000	\$ 5.10 \$ 500.00	hosted ores sourced from the Nyota Prospect in Tanzania and breccia-hosted ores from the			
U ore haematitic breccia	OREAS 101b*	U 396ppm	10	\$ 5.10	Mt. Gee uranium prospect in South Australia.			
11 6	00540101-4	11.422222	500	\$ 246.00				
U ore haematitic breccia	OREAS 101a*	U 422ppm	10	\$ 5.10				
Hand form datases to act at	0054012244	11.422222	500	\$ 246.00				
U ore (sandstone hosted)	OREAS 122**	U 423ppm	10 1000	\$ 5.10 \$ 500.00				
U ore haematitic breccia	OREAS 102a*	U 662ppm	10	\$ 5.10				
			500	\$ 246.00				
U ore (sandstone hosted)	OREAS 123**	U 858ppm	10	\$ 5.10				
			1000	\$ 500.00				
U ore (sandstone hosted)	OREAS 124**	U 1845ppm	10	\$ 5.10				
			1000	\$ 500.00				
RARE EARTH ELEMENT-NIOE	віим							
REE-Nb laterite ore	OREAS 460**	Nb 711ppm; La 1347ppm	10	\$ 5.90				
		Ce 1813ppm; Nd 791ppm; Pr 244ppm; Sm 107ppm; Zr 472ppm	1000	\$ 430.00	RARE EARTH ELEMENT-			
REE-Nb laterite ore	OREAS 461**	Nb 1343ppm; La 2644ppm;	10	\$ 5.90	NIOBIUM			
	5K2/15 151	Ce 3510ppm; Nd 1638ppm; Pr 491ppm; Sm 220ppm Zr 613ppm	1000	\$ 430.00	These six carbonatite supergene			
REE-Nb laterite ore OREAS	OREAS 462**	Nb 1452ppm; La 3798ppm	10	\$ 5.90	ores are enriched in the light rare			
		Ce 4951ppm; Nd 2551 Pr 739ppm; Sm 369ppm Zr 598ppm	1000	\$ 430.00	earth elements ranging TREO 0.53 – 9.88% (Note: TREO is not certified) and contain certification			
REE-Nb laterite ore	OREAS 463**	Nb 1524ppm; La 4967ppm	10	\$ 5.90	of REE's, majors and traces by			
		Ce 0.659%; Nd 3706ppm Pr 1004ppm; Sm 538ppm Zr 576ppm	1000	\$ 430.00	fusion XRF, fusion ICP and 4-acid digestion.			
REE-Nb laterite ore	OREAS 464**	Nb 1917ppm; La 1.17%	10	\$ 5.90				
		Ce 1.53%; Nd 0.994% Pr 2578ppm; Sm 1498ppm Zr 462ppm	1000	\$ 430.00				
REE-Nb laterite ore	OREAS 465**	Nb 4759ppm; La 2.40%	10	\$ 5.90				
		Ce 3.98%; Nd 1.18% Pr 3772ppm; Sm 1360ppm Zr 1806ppm	1000	\$ 430.00				





All prices are quoted in Australian Dollars (AUD) and exclude Goods and Services Tax (GST). GST is only applicable to Australian customers. Ore Research & Exploration Pty Ltd reserves the right to change listed prices at any time.

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