

## **Gold Ore (Frogs Leg Gold Mine, Western Australia), CRM**

Art. ID	OREAS-233-60G
Unit	60 g (powder)
Deliverydetails	No Dangerous Good /not restricted

### Description

OREAS 233 was prepared from a blend of gold-bearing ore and barren greenstone. The ore was sourced from the Frogs Leg Gold Mine located 19km west of Kalgoorlie in Western Australia. The Cambrian greenstone was sourced from a quarry 145km north of Melbourne, Australia.

Text/Information	Analyte/Parameter	CAS number	Concentration/Value	Unit	Method	Source
± standard deviation	Gold (Au)	[7440-57-5]	1,05 ± 0,029	ppm	Pb Fire Assay	
± standard deviation	Gold (Au)	[7440-57-5]	0,992 ± 0,036	ppm	Aqua Regia Digestion (sample weights 10-50g)	
± standard deviation	Gold (Au)	[7440-57-5]	1,03 ± 0,041	ppm	Cyanide Leach	
± standard deviation	Gold (Au)	[7440-57-5]	1 ± 0,044	ppm	X-ray Photon Assay	
± standard deviation	Silver (Ag)	[7440-22-4]	0,285 ± 0,028	ppm	Aqua Regia Digestion	
± standard deviation	Aluminium (Al)	[7429-90-5]	3,45 ± 0,145	%	Aqua Regia Digestion	
± standard deviation	Arsenic (As)	[7440-38-2]	47,4 ± 2,67	ppm	Aqua Regia Digestion	
± standard deviation	Boron (B)	[7440-42-8]	20,2 ± 2,5	ppm	Aqua Regia Digestion	
± standard deviation	Barium (Ba)	[7440-39-3]	26,2 ± 2,27	ppm	Aqua Regia Digestion	
± standard deviation	Beryllium (Be)	[7440-41-7]	0,23 ± 0,014	ppm	Aqua Regia Digestion	
± standard deviation	Bismuth (Bi)	[7440-69-9]	0,04 ± 0,004	ppm	Aqua Regia Digestion	
± standard deviation	Calcium (Ca)	[7440-70-2]	2,75 ± 0,398	%	Aqua Regia Digestion	
± standard deviation	Cadmium (Cd)	[7440-43-9]	0,5 ± 0,023	ppm	Aqua Regia	

± standard deviation	Cerium (Ce)	[7440-45-1]	8,97 ± 0,467	ppm	Digestion Aqua Regia
± standard deviation	Cobalt (Co)	[7440-48-4]	29,8 ± 1,5	ppm	Digestion Aqua Regia
± standard deviation	Chromium (Cr)	[7440-47-3]	19,1 ± 1,53	ppm	Digestion Aqua Regia
± standard deviation	Caesium (Cs)	[7440-46-2]	0,58 ± 0,031	ppm	Digestion Aqua Regia
± standard deviation	Copper (Cu)	[7440-50-8]	162 ± 7	ppm	Digestion Aqua Regia
± standard deviation	Dysprosium (Dy)	[7429-91-6]	2,18 ± 0,28	ppm	Digestion Aqua Regia
± standard deviation	Erbium (Er)	[7440-52-0]	1,28 ± 0,17	ppm	Digestion Aqua Regia
± standard deviation	Europium (Eu)	[7440-53-1]	0,39 ± 0,031	ppm	Digestion Aqua Regia
± standard deviation	Iron (Fe)	[7439-89-6]	5,58 ± 0,227	%	Digestion Aqua Regia
± standard deviation	Gallium (Ga)	[7440-55-3]	10,2 ± 0,79	ppm	Digestion Aqua Regia
± standard deviation	Gadolinium (Gd)	[7440-54-2]	1,95 ± 0,192	ppm	Digestion Aqua Regia
± standard deviation	Germanium (Ge)	[7440-56-4]	0,11 ± 0,03	ppm	Digestion Aqua Regia
± standard deviation	Hafnium (Hf)	[7440-58-6]	0,51 ± 0,06	ppm	Digestion Aqua Regia
± standard deviation	Holmium (Ho)	[7440-60-0]	0,42 ± 0,05	ppm	Digestion Aqua Regia
± standard deviation	Indium (In)	[7440-74-6]	0,032 ± 0,003	ppm	Digestion Aqua Regia
± standard deviation	Potassium (K)	[7440-09-7]	0,12 ± 0,01	%	Digestion Aqua Regia
± standard deviation	Lanthanum (La)	[7439-91-0]	3,83 ± 0,149	ppm	Digestion Aqua Regia
± standard deviation	Lithium (Li)	[7439-93-2]	10,2 ± 0,74	ppm	Digestion Aqua Regia
± standard deviation	Lutetium (Lu)	[7439-94-3]	0,15 ± 0,02	ppm	Digestion Aqua Regia

± standard deviation	Magnesium (Mg)	[7439-95-4]	1,65 ± 0,058	%	Digestion Aqua Regia
± standard deviation	Manganese (Mn)	[7439-96-5]	0,075 ± 0,005	%	Digestion Aqua Regia
± standard deviation	Molybdenum (Mo)	[7439-98-7]	0,83 ± 0,042	ppm	Digestion Aqua Regia
± standard deviation	Sodium (Na)	[7440-23-5]	0,197 ± 0,013	%	Digestion Aqua Regia
± standard deviation	Neodymium (Nd)	[7440-00-8]	5,63 ± 0,59	ppm	Digestion Aqua Regia
± standard deviation	Nickel (Ni)	[7440-02-0]	56 ± 3,8	ppm	Digestion Aqua Regia
± standard deviation	Phosphorus (P)	[7723-14-0]	0,038 ± 0,003	%	Digestion Aqua Regia
± standard deviation	Lead (Pb)	[7439-92-1]	20,9 ± 1,12	ppm	Digestion Aqua Regia
± standard deviation	Praseodymium (Pr)	[7440-10-0]	1,23 ± 0,111	ppm	Digestion Aqua Regia
± standard deviation	Platinum (Pt)	[7440-06-4]	14,5 ± 1,1		Digestion Aqua Regia
± standard deviation	Rubidium (Rb)	[7440-17-7]	5,05 ± 0,357	ppm	Digestion Aqua Regia
± standard deviation	Rhenium (Re)	[7440-15-5]	0,002 ± 0,001	ppm	Digestion Aqua Regia
± standard deviation	Sulfur (S)	[7704-34-9]	0,32 ± 0,026	%	Digestion Aqua Regia
± standard deviation	Antimony (Sb)	[7440-36-0]	0,58 ± 0,18	ppm	Digestion Aqua Regia
± standard deviation	Scandium (Sc)	[7440-20-2]	5,45 ± 0,327	ppm	Digestion Aqua Regia
± standard deviation	Samarium (Sm)	[7440-19-9]	1,51 ± 0,066	ppm	Digestion Aqua Regia
± standard deviation	Tin (Sn)	[7440-31-5]	0,61 ± 0,1	ppm	Digestion Aqua Regia
± standard deviation	Strontium (Sr)	[7440-24-6]	33,8 ± 3,5	ppm	Digestion Aqua Regia
± standard deviation	Tantalum (Ta)	[7440-25-7]	< 0,010 ± IND	ppm	Digestion Aqua Regia

					Digestion
± standard deviation	Terbium (Tb)	[7440-27-9]	0,33 ± 0,028	ppm	Aqua Regia Digestion
± standard deviation	Tellurium (Te)	[13494-80-9]	0,083 ± 0,011	ppm	Aqua Regia Digestion
± standard deviation	Thorium (Th)	[7440-29-1]	0,68 ± 0,07	ppm	Aqua Regia Digestion
± standard deviation	Titanium (Ti)	[7440-32-6]	0,313 ± 0,054	%	Aqua Regia Digestion
± standard deviation	Thallium (Tl)	[7440-28-0]	0,097 ± 0,008	ppm	Aqua Regia Digestion
± standard deviation	Thulium (Tm)	[7440-30-4]	0,18 ± 0,02	ppm	Aqua Regia Digestion
± standard deviation	Uranium (U)	[7440-61-1]	0,17 ± 0,011	ppm	Aqua Regia Digestion
± standard deviation	Vanadium (V)	[7440-62-2]	139 ± 21	ppm	Aqua Regia Digestion
± standard deviation	Tungsten (W)	[7440-33-7]	18,2 ± 2,7	ppm	Aqua Regia Digestion
± standard deviation	Yttrium (Y)	[7440-65-5]	11,9 ± 0,98	ppm	Aqua Regia Digestion
± standard deviation	Ytterbium (Yb)	[7440-64-4]	1,19 ± 0,18	ppm	Aqua Regia Digestion
± standard deviation	Zinc (Zn)	[7440-66-6]	116 ± 4	ppm	Aqua Regia Digestion
± standard deviation	Zirconium (Zr)	[7440-67-7]	16,8 ± 1,09	ppm	Aqua Regia Digestion
± standard deviation	Silver (Ag)	[7440-22-4]	0,295 ± 0,016	ppm	4-Acid Dig estion
± standard deviation	Aluminium (Al)	[7429-90-5]	6,97 ± 0,206	%	4-Acid Dig estion
± standard deviation	Arsenic (As)	[7440-38-2]	46,8 ± 2,79	ppm	4-Acid Dig estion
± standard deviation	Barium (Ba)	[7440-39-3]	129 ± 4	ppm	4-Acid Dig estion
± standard deviation	Beryllium (Be)	[7440-41-7]	0,39 ± 0,028	ppm	4-Acid Dig estion
± standard deviation	Bismuth (Bi)	[7440-69-9]	0,042 ± 0,007	ppm	4-Acid Dig

± standard deviation	Calcium (Ca)	[7440-70-2]	7,1 ± 0,396	%	estion 4-Acid Dig
± standard deviation	Cadmium (Cd)	[7440-43-9]	0,52 ± 0,04	ppm	estion 4-Acid Dig
± standard deviation	Cerium (Ce)	[7440-45-1]	11,9 ± 0,64	ppm	estion 4-Acid Dig
± standard deviation	Cobalt (Co)	[7440-48-4]	42 ± 2,84	ppm	estion 4-Acid Dig
± standard deviation	Chromium (Cr)	[7440-47-3]	118 ± 11	ppm	estion 4-Acid Dig
± standard deviation	Caesium (Cs)	[7440-46-2]	0,79 ± 0,048	ppm	estion 4-Acid Dig
± standard deviation	Copper (Cu)	[7440-50-8]	162 ± 6	ppm	estion 4-Acid Dig
± standard deviation	Dysprosium (Dy)	[7429-91-6]	3,69 ± 0,164	ppm	estion 4-Acid Dig
± standard deviation	Erbium (Er)	[7440-52-0]	2,24 ± 0,113	ppm	estion 4-Acid Dig
± standard deviation	Europium (Eu)	[7440-53-1]	0,89 ± 0,025	ppm	estion 4-Acid Dig
± standard deviation	Iron (Fe)	[7439-89-6]	7,72 ± 0,272	%	estion 4-Acid Dig
± standard deviation	Gallium (Ga)	[7440-55-3]	15,1 ± 0,74	ppm	estion 4-Acid Dig
± standard deviation	Gadolinium (Gd)	[7440-54-2]	3,16 ± 0,288	ppm	estion 4-Acid Dig
± standard deviation	Hafnium (Hf)	[7440-58-6]	1,61 ± 0,106	ppm	estion 4-Acid Dig
± standard deviation	Holmium (Ho)	[7440-60-0]	0,79 ± 0,059	ppm	estion 4-Acid Dig
± standard deviation	Indium (In)	[7440-74-6]	0,073 ± 0,006	ppm	estion 4-Acid Dig
± standard deviation	Potassium (K)	[7440-09-7]	0,37 ± 0,017	%	estion 4-Acid Dig
± standard deviation	Lanthanum (La)	[7439-91-0]	4,92 ± 0,288	ppm	estion 4-Acid Dig
± standard deviation	Lithium (Li)	[7439-93-2]	11,2 ± 0,46	ppm	estion 4-Acid Dig

± standard deviation	Lutetium (Lu)	[7439-94-3]	0,32 ± 0,022	ppm	estion 4-Acid Dig
± standard deviation	Magnesium (Mg)	[7439-95-4]	3,76 ± 0,139	%	estion 4-Acid Dig
± standard deviation	Manganese (Mn)	[7439-96-5]	0,134 ± 0,004	%	estion 4-Acid Dig
± standard deviation	Molybdenum (Mo)	[7439-98-7]	0,92 ± 0,09	ppm	estion 4-Acid Dig
± standard deviation	Sodium (Na)	[7440-23-5]	1,73 ± 0,065	%	estion 4-Acid Dig
± standard deviation	Niobium (Nb)	[7440-03-1]	3,31 ± 0,233	ppm	estion 4-Acid Dig
± standard deviation	Neodymium (Nd)	[7440-00-8]	7,89 ± 0,296	ppm	estion 4-Acid Dig
± standard deviation	Nickel (Ni)	[7440-02-0]	86 ± 5	ppm	estion 4-Acid Dig
± standard deviation	Phosphorus (P)	[7723-14-0]	0,04 ± 0,002	%	estion 4-Acid Dig
± standard deviation	Lead (Pb)	[7439-92-1]	21,3 ± 1,17	ppm	estion 4-Acid Dig
± standard deviation	Praseodymium (Pr)	[7440-10-0]	1,65 ± 0,082	ppm	estion 4-Acid Dig
± standard deviation	Rubidium (Rb)	[7440-17-7]	10,9 ± 0,6	ppm	estion 4-Acid Dig
± standard deviation	Sulfur (S)	[7704-34-9]	0,319 ± 0,024	%	estion 4-Acid Dig
± standard deviation	Antimony (Sb)	[7440-36-0]	1,1 ± 0,095	ppm	estion 4-Acid Dig
± standard deviation	Scandium (Sc)	[7440-20-2]	39,6 ± 2,28	ppm	estion 4-Acid Dig
± standard deviation	Samarium (Sm)	[7440-19-9]	2,38 ± 0,165	ppm	estion 4-Acid Dig
± standard deviation	Tin (Sn)	[7440-31-5]	0,95 ± 0,15	ppm	estion 4-Acid Dig
± standard deviation	Strontium (Sr)	[7440-24-6]	175 ± 7	ppm	estion 4-Acid Dig
± standard deviation	Tantalum (Ta)	[7440-25-7]	0,23 ± 0,04	ppm	estion 4-Acid Dig

± standard deviation	Terbium (Tb)	[7440-27-9]	0,55 ± 0,049	ppm	4-Acid Dig estion
± standard deviation	Tellurium (Te)	[13494-80-9]	0,091 ± 0,014	ppm	4-Acid Dig estion
± standard deviation	Thorium (Th)	[7440-29-1]	0,84 ± 0,046	ppm	4-Acid Dig estion
± standard deviation	Titanium (Ti)	[7440-32-6]	0,595 ± 0,021	%	4-Acid Dig estion
± standard deviation	Thallium (Tl)	[7440-28-0]	0,18 ± 0,011	ppm	4-Acid Dig estion
± standard deviation	Thulium (Tm)	[7440-30-4]	0,33 ± 0,015	ppm	4-Acid Dig estion
± standard deviation	Uranium (U)	[7440-61-1]	0,25 ± 0,017	ppm	4-Acid Dig estion
± standard deviation	Vanadium (V)	[7440-62-2]	270 ± 11	ppm	4-Acid Dig estion
± standard deviation	Tungsten (W)	[7440-33-7]	26,3 ± 1,96	ppm	4-Acid Dig estion
± standard deviation	Yttrium (Y)	[7440-65-5]	19,8 ± 1,01	ppm	4-Acid Dig estion
± standard deviation	Ytterbium (Yb)	[7440-64-4]	2,21 ± 0,094	ppm	4-Acid Dig estion
± standard deviation	Zinc (Zn)	[7440-66-6]	128 ± 7	ppm	4-Acid Dig estion
± standard deviation	Zirconium (Zr)	[7440-67-7]	52 ± 4,5	ppm	4-Acid Dig estion