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NATIONAL REPORT

GOLD REFINERS AND BARS IN THE RUSSIAN FEDERATION

RUSSIA

FOCUS

Gold Refiners and Bars

The 8 LBMA-accredited refiners in
Central, Urals, Siberian and Far Eastern Russia

Official Statistics

Provided by The Gokhran of Russia

Addendum

Silver, platinum and palladium
bars and official exports

The report is supported by
The Gokhran of Russia

The report is written by
Nigel Desebrock

Grendon International Research Pty Ltd
Manager, www.goldbarsworldwide.com
Curator, The Industry Collection of Gold Bars Worldwide

GRENDON
INTERNATIONAL
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A GRENDON INTERNATIONAL RESEARCH PUBLICATION

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By

NIGEL DESEBROCK

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THE GOKHRAN OF RUSSIA

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Gold Refiners and Bars in the Russian Federation

Prepared for the Internet in January 2010
by Grendon International Research Pty Ltd

First published in sections on www.goldbarsworldwide.com between June and October 2009

GRENDON INTERNATIONAL RESEARCH PTY LTD
33 Alexandra Road
East Fremantle
WA 6158
Australia

Tel: +61-8-9319 2171
Fax: + 61-8-9319 2154
Email: grendon@grendon.com.au

Grendon International Research Pty Ltd for Grendon International Research Trust
Incorporated in Western Australia
A.B.N. 79 486 548 064

ISBN 978-0-9577495-4-2

Designed by Graphic Elements, Perth, Australia
Cover photograph: Prioksky Non-Ferrous Metals Plant

PREFACE

The **National Report** is indebted to the support of **The Gokhran of Russia**, which kindly made available official statistics, liaised with the eight LBMA-accredited gold refiners in the supply of information and arranged GIR's meetings with the industry, apart from providing extensive translation and interpreting services.

GIR is especially grateful to **Vladimir Rybkin**, Head of Gokhran, for his personal interest in the project and to **Konstantin Mikhaltchuk**, Head of Gokhran's Scientific and Technical Board. Mr Mikhaltchuk acted as GIR's primary contact, accompanied GIR to the refineries in Moscow, Krasnoyarsk and Novosibirsk and with great patience communicated his knowledge of the Russian gold industry over the past 40 years.

The support and tolerance of the eight LBMA-accredited refiners in responding to requests for information and photographs were greatly appreciated, as was the background information on the Russian gold market and industry provided by Sberbank, Standard Bank, VTB, NBLgold and Polyus Gold. GFMS (London) also kindly allowed GIR to refer to some of its international data base.

Nigel Desebrock
Director

Grendon International Research Pty Ltd (GIR)
Manager, www.goldbarsworldwide.com
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THE GOKHRAN OF RUSSIA

The Gokhran of Russia (The State Repository of Precious Metals and Gemstones of the Russian Federation) is a subordinate organization of the Ministry of Finance of the Russian Federation.

Although it was established in its current structure in 1996, it traces its origins back to 1920, and further back to 1719, when Peter the Great, Emperor of Russia, established Russia's first State Treasury.

The organization, which is based in Moscow and employs a staff of 1,600, is engaged in an extensive range of activities that support the mining, refining, handling of gold, silver, platinum group metals, grading, pretreatment and assessment of diamonds and other precious stones, development of norms and specifications, including standards for handling of precious metals and precious stones in the Russia Federation. This includes the storage and management of part of the gold reserves of the Russian Federation.

Email: gokhran@ttc-net.ru (enquiries in English)
Website: www.gokhran.ru

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Russian gold refiners have been accredited to the London Bullion Market Association (LBMA) under their own names since 1999.

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Small gold bars have been widely manufactured in the Russian Federation since 1996.

Novosibirsk
Siberia

ACKNOWLEDGEMENTS

Grendon International Research is indebted to the industry participants in Russia and internationally who kindly provided information or supported the National Report:

The Gokhran of Russia

Vladimir Rybkin
Konstantin Mikhaltchuk
Gennady Skrobkin
Maria Konstantinova
Elena Rodicheva
Margarita Pavlova

Russian Refiners

Nicolay Alpatov
Aleksey Batuev
Victor Chepelenko
Vladislav Feokstikov
Vladimir Glukhov
Olga Izbash
Aleksey Khan
Yury Kalmykov
Andrey Kruglikov
Alexander Lvovich
Alexander Maltsev
Anatoly Moskalev
Sergey Pirko
Alexander Shubakov
Dmitry Shulgin
Alexey Zhukov

Russian Banks

Sergey Grudev
Dmitry Smirnov
Vladimir Tarankov

Russian Mining

Andrey Pikanovskij
Roman Schetinskij

International

Cameron Alexander
Philip Newman
William Tankard
Paul Walker

Notable other sources of information on the Russian gold industry

The Central Bank of The Russian Federation: www.cbr.ru

Polyus Gold Mining Company. *The Russian Bullion Market: Bursting through the Asphalt.* By Andrey Pikanovskij. Article published in the LBMA's *Alchemist*, April 2009.

NBLgold. *Mining Investment Climate in the CIS*. By Mikhail Leskov, Roman Schetinskij and Anna Kryuchkova. Article published in the LBMA's *Alchemist*, April 2009.

The Gokhran of Russia has its headquarters in Moscow.

INTRODUCTION AND HIGHLIGHTS

This **National Report** consolidates information on the 8 LBMA-accredited gold refiners in the Russian Federation, alongside official statistics provided by The Gokhran of Russia.

Some information can be highlighted that is relevant to the Russian and international gold bar market:

- Russian 400 oz bars have been accepted as London Good Delivery (LGD) since 1937. During the USSR period, **Novosibirsk (Siberia)** produced almost all of the USSR's LGD bars from the 1940s until 1990.
- The 8 refiners have been accredited by name to the LBMA progressively since 1999. The largest is **Krastsvetmet (Siberia)**, which has refined around 50% of Russian gold mine production in recent years.
- Although **official gold production** fell from 170 tonnes (2003) to 159 tonnes (2007), it increased to 176 tonnes (2008), due to more output from major mines and the opening of new mines.
- **Exports,** in the form of gold bars, powders, granules and semi-finished products, have fallen from 128 tonnes (2003) to 17 tonnes (2008), as much gold production has been retained within the Federation.
- The **official gold reserves** of the Russian Federation have increased from 402 tonnes (2006) to 520 tonnes (2008). Official comments have underlined an intention to further increase the Federation's gold reserves over time.
- The **manufacture of small bars**, 1000 g and less, has grown from 6 tonnes (2002) to 22 tonnes (2008), due mainly to an increase in their use by small gold jewellery fabricators and investors that took physical delivery.
- Many banks now offer a range of gold investment products. **Gold investment**, mainly in the form of metal accounts, has grown significantly in recent years. Sberbank has reported that its Metal Account programme for gold, silver, platinum and palladium, which it launched in 2005, had attracted 300,000 investors by the end of 2008, an increase of 170,000 during 2008. As the precious metal is not deliverable, metal account transactions do not incur 18% VAT.
- The Guild of Russian Jewellers estimates that there are now 1,130 **jewellery fabrication units** and 12,000 retail jewellery outlets in the Russian Federation. In 1990, at the end of the USSR period, there were only 9 large jewellery factories in Russia and 600 retail jewellery outlets.
- An addendum includes official **silver**, **platinum** and **palladium** exports (2003-2008).

RUSSIA

Polyus Gold Mining Company
Russia

The Russian Federation is the 5th largest gold producing country.

Its official gold production was 176 tonnes in 2008.

According to GFMS (London), world gold mine production was 2,416 tonnes in 2008.

Moscow
Central

Uralelectromed
Urals

BACKGROUND INFORMATION

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FOCUS

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The Russian Federation was founded in 1991.

The Russian Federation is the world's largest country. Its land mass (17.1 million sq. km.) is almost twice the size of the USA (9.4 million sq. km.).

Main sources of illustrations in this section:

Maps: ©*maps.com* and ©*worldatlas.com*
Exchange: *RTS Exchange*
Gold Mining: *Polyus Gold Mining Company*
Official Gold Reserves: *The Gokhran of Russia*

RUSSIAN FEDERATION

The Russian Federation has a population of 141 million.

GOVERNMENT

The Russian Federation, founded in 1991, is governed by the President, the Prime Minister, the *State Duma* (lower house) with 450 elected deputies and the *Council of the Federation* (upper house) with two representatives from each geographical unit.

The President and State Duma are elected for four years. The next elections will take place in 2012. Mr Dmitry Medvedev has been the President, and Mr Vladimir Putin the Prime Minister, since March 2008. Mr Putin had previously acted as the President since 1999.

FEDERAL DISTRICTS

The Federation comprises 83 geographical units, including 46 regions and 21 semi-autonomous republics, which are grouped under 7 Federal Districts.

Federal District	Capital City	Population	
		Millions	% Split
Central	Moscow	37.2	26
Volga	Nizhny Novgorod	30.2	21
Southern	Rostov-na-Donu	22.8	16
Siberia	Novosibirsk	19.6	14
North West	St Petersburg	13.5	10
Urals	Ekaterinburg	12.2	9
Far Eastern	Khabarovsk	6.5	4
Russian Federation	**Moscow**	**141.8**	**100**

Source: Britannica Book of the Year 2009.

Federation population (IMF number for mid-2008): 141 million.

Moscow (10.4 million), St Petersburg (4.6 million), Novosibirsk (1.4 million) and Ekaterinburg (1.3 million) are the largest cities.

Ethnic Russians constitute 79.8% of the population. Many minority ethnic groups account for the remaining 20%, the largest being the Tatar (3.8%).

BORDERS

Stretching 12,000 km from St Petersburg in the west to Vladivostok in the east, the Federation borders 14 countries:

Country	Length of Border Km	Country	Length of Border Km
Kazakhstan	6,846	Azerbaijan	284
China (south east)	3,605	Lithuania	280
Mongolia	3,485	Poland	232
Ukraine	1,576	Latvia	217
Finland	1,340	Norway	196
Belarus	959	China (south)	40
Georgia	723	North Korea	19
Estonia	294	**Total**	**20,097**

Source: Russia: The World Factbook 2008.

COMMONWEALTH OF INDEPENDENT STATES (CIS)

The CIS, which has 12 member countries, was founded in 1991.

The Russian Federation accounts for 51% of the CIS population of 279 million.

Member of CIS	Population		Capital City
	Millions	% Split	
Russian Federation	142.5	51	Moscow
Ukraine	46.2	17	Kiev
Uzbekistan	27.8*	10	Tashkent
Kazakhstan	15.4	6	Astana
Belarus	9.7	3	Minsk
Azerbaijan	8.5	3	Baku
Tajikistan	6.7	2	Dushanbe
Kyrgyzstan	5.3	2	Bishkek
Turkmenistan	5.2*	2	Ashgabat
Georgia	4.4	2	Tbilisi
Moldova	3.8	1	Kishinev
Armenia	3.0	1	Yerevan
Total	**278.5**	**100**	**-**

Source: IMF International Financial Statistics Yearbook 2008: mid-year estimates in 2007. * Russia: The World Factbook 2008.

In 2000, 5 countries of the CIS established the "Eurasian Economic Council": Russia, Kazakhstan, Belarus, Tajikistan and Kyrgyzstan. Uzbekistan became a member in 2005.

The CIS has a population of 279 million.

The CIS has 12 member countries.

ECONOMIC BACKGROUND

During 2003-2008, the Russian Federation economy expanded rapidly, the cumulative real rate of GDP growth exceeding 40% over the period.

The share market boomed, the annual average index (2000=100) increasing to 829 in 2007.

The rouble strengthened against the US dollar, the exchange rate falling from an annual average of 31 roubles (2003) to 25 roubles (2008).

The deposit interest rate ranged between 3.8% and 5.8%, while annual inflation remained high, ranging between 9% and 14%.

The population declined from 145 million to 141 million.

The Russian economy expanded rapidly during 2003-2008, GDP increasing in real terms by more than 40%.

Year	GDP Volume		GDP Volume 2000 Prices	GDP Per Capita		Rouble Exchange Rate
	Billion Roubles	% +/-	% +/-	Roubles	US Dollars	Per US Dollar
2003	13,243	+ 22.3	+ 7.2	91,055	2,967	30.69
2004	17,048	+ 28.7	+ 7.2	117,816	4,089	28.81
2005	21,625	+ 26.8	+ 6.4	150,226	5,312	28.28
2006	26,880	+ 24.3	+ 7.4	187,683	6,903	27.19
2007	32,987	+ 22.7	+ 8.1	231,488	9,050	25.58
2008	41,668	+ 26.3	+ 5.6	294,703	11,859	24.85

Year	Share Index		Deposit Interest Rate	Inflation		Population
	2000=100	% +/-	%	2000=100	% +/-	Millions
2003	204.08	+40.8	4.48	159.9	+13.7	145.44
2004	275.44	+35.0	3.79	177.2	+10.8	144.70
2005	343.76	+24.8	3.99	199.7	+12.7	143.95
2006	660.38	+92.1	4.08	219.1	+9.7	143.22
2007	828.80	+25.5	5.14	238.8	+9.0	142.50
2008	n.a.	n.a.	5.76	272.5	+14.1	141.39

Source: 2003-2008 (IMF International Financial Statistics Yearbook 2008). GDP volume: production based. GDP Volume 2000 prices: derived percentages. GDP per capita in roubles and US dollars are derived figures. Exchange rate: official rate, period average. Share prices: period average, 2000=100. Deposit interest rate: percent per annum. Inflation: consumer prices, period average, 2000=100. Population: mid-year estimates. Figures for 2008 derived from IMF's Internet service: some may be provisional.

The RTS (Russian Trading System) Exchange in Moscow was founded in 1995 as the first regulated stock market in the Russian Federation.

OFFICIAL GOLD RESERVES

The Federation's official gold reserves are held partly by The Central Bank of the Russian Federation (The Bank of Russia) and partly by The Gokhran of Russia.

In recent years, several official comments have underlined an intention to increase the Federation's gold reserves substantially over time.

In November 2008, in an interview with Reuters, Mr Alexey Ulyukaev, First Deputy Chairman of the Central Bank, referred to a policy of doubling the gold reserves.

In 2007 and 2008, gold reserves grew by 29% (118 tonnes), from 402 tonnes (2006) to 520 tonnes (2008).

Official gold reserves have increased in recent years. The total was 520 tonnes at the end of 2008.

The Gokhran of Russia holds part of the reserves.

Year	Million Troy Ounces	Tonnes
1995	9.414	292.8
1996	13.490	419.6
1997	16.297	506.9
1998	14.738	458.4
1999	13.326	414.5
2000	12.359	384.4
2001	13.599	423.0
2002	12.464	387.7
2003	12.545	390.2
2004	12.441	387.0
2005	12.438	386.9
2006	12.908	401.5
2007	14.479	450.3
2008	16.705	519.6

Source: 1993-2007 – IMF International Financial Statistics Yearbook 2008: End of period. Figures in tonnes derived from the IMF figures in million ounces on basis of 1 tonne = 32,150.74 oz. 2008 – IMF Internet service.

The Central Bank of the Russian Federation has its headquarters near the Revolutionary Square in Moscow.

GOLD MINING

STRUCTURE OF INDUSTRY

According to NBLgold, there are 453 gold producing companies in Russia, 274 (60%) mining less than 100 kg annually.

Annual Gold Production	COMPANIES		HOLDINGS*	
	Number	% Split	Number	% Split
Less than 100 kg	274	60	258	65
100 – 300 kg	95	21	82	18
300 – 1,000 kg	49	11	31	7
More than 1,000 kg	35	8	25	6
Total	**453**	**100**	**396**	**100**

Source: NBLgold. * Takes into account that some companies operate more than one mine.

Polyus Gold is the largest gold mining company. It produced 38 tonnes of gold in Siberia and Far Eastern Russia in 2008.

Major Mining Companies

However, although the industry is fragmented, 5 companies accounted for 49% (81 tonnes) of gold mine production in 2008.

Company Name	Headquarters City	Gold Production 2008 Tonnes*	Main Regions where Gold Produced#
OJSC "Polyus Gold"	Moscow	38.3	Siberia (Krasnoyarsk, Irkutsk), Far Eastern (Magadan, Amur, Sakha)
JSC "Chukotskaya GKK"	Magadan	15.4	Far Eastern (Chukotka)
JSC "Petropavlovsk Group"	Moscow	12.2	Far Eastern (Amur, Magadan)
OJSC "Polymetal"	St Petersburg	8.9	Far Eastern (Khabarovsk, Magadan), Urals (Sverdlovsk)
JSC "Sever-Stal Resurs"	Moscow	6.0	Far Eastern (Sakha), Siberia (Chita)

Source: * The Gokhran of Russia. # NBLgold.

GOLD PRODUCTION

According to official statistics, the Russian Federation produced a total of 176 tonnes, from gold mines and other mines as a by-product, in 2008.

Although gold mine production had fallen between 2004 and 2007, the increase of 19 tonnes in 2008 was due mainly to a growth in output by some major mines and the opening of new mines.

Year	Gold Mines	Gold as a Mining By-Product*	Total Gold Production	
	Tonnes	Tonnes	Tonnes	% +/-
2003	158.1	12.0	170.1	- 1.1
2004	158.9	10.4	169.3	- 0.5
2005	152.1	11.1	163.2	- 3.6
2006	147.6	11.7	159.3	- 2.4
2007	144.8	12.1	156.9	- 1.5
2008	163.8	12.5	176.3	+ 12.4

Source: The Gokhran of Russia. *Mainly from copper, nickel and silver mining.

Official Russian gold production was 176 tonnes in 2008.

According to NBLgold, gold output in 2008 was derived from hard rock mining (62%), alluvial mining (31%) and gold as a by-product of other mining (7%).

Gold Mine Production – Split by Federal District

Far Eastern Russia and Siberia account for more than 90% of annual gold mine production.

Federal District	2001		2008	
	Tonnes	% Split	Tonnes	%
Far Eastern	77.1	55	82.8	51
Siberia	55.3	39	70.3	43
Urals	8.9	6	10.8	6
Total	**141.3**	**100**	**163.9**	**100**

Source: NBLgold

Gold-bearing ore.

Far Eastern Russia accounted for 51% (83 tonnes) of gold mine production in 2008.

Gold Mine Production – Main Regions, Territories and Republics

Mine production in some areas has grown significantly, notably in Chukotka (Far Eastern) from 5 tonnes (2003) to 20 tonnes (2008).

While production has fallen in other areas, notably in Magadan (Far Eastern) from 26 tonnes (2003) to 13 tonnes (2008).

Federal District	Region, Territory or Republic	2003	2008	
		Tonnes	Tonnes	% +/-
Far Eastern	Chukotka	4.8	20.1	+ 319
Far Eastern	Sakha Yakutia	20.3	18.9	- 7
Far Eastern	Amur	13.1	18.7	+ 43
Far Eastern	Khabarovsk	17.7	16.2	- 8
Far Eastern	Magadan	26.3	13.9	- 47
Far Eastern	Kamchatka	0.4	1.5	+ 275
Siberia	Krasnoyarsk	30.0	33.5	+ 12
Siberia	Irkutsk	16.6	14.6	+ 12
Siberia	Buryatia	8.1	6.2	- 23
Siberia	Chita	6.2	5.7	- 8
Siberia	Tuva	1.2	1.4	+ 17
Siberia	Khakassia	1.9	0.7	- 63
Urals	Sverdlovsk	5.5	6.7	+ 22
Urals	Chelyabinsk	3.7	3.7	-

Source: The Gokhran of Russia

New-mined gold doré bar.

The value of Russian gold production was approximately 123 billion roubles (US$ 4.9 billion) in 2008.

INDICATIVE VALUE OF GOLD PRODUCTION

Using annual average gold prices, the annual value of gold production in the Federation has doubled from 61 billion roubles (2003) to 123 billion (2008).

Year	US Dollars		Roubles	
	Billions	% +/-	Billions	% +/-
2003	2.0	+ 18	60.9	+ 16
2004	2.2	+ 10	64.1	+ 5
2005	2.3	+ 5	65.9	+ 3
2006	3.1	+ 35	83.9	+ 27
2007	3.5	+ 19	89.8	+ 7
2008	4.9	+ 32	122.6	+ 37

Source: Calculated using LBMA annual average London Fixing p.m. gold prices and IMF annual average rouble/US dollar exchange rates.

EXPORTS AND INDICATIVE RETENTION

In recent years, the bulk of annual gold production has been retained within the Federation, approximately 159 tonnes (90%) in 2008, used mainly to supply the jewellery fabrication and electronics industries and increase official gold reserves

This has resulted in annual gold exports in the form of bars, powders, granules, semi-finished products and other forms (excludes finished products, such as jewellery) falling from 128 tonnes (2003) to 17 tonnes (2008).

Around 90% of official gold production in 2008 was retained for use within the Russian Federation.

Year	Gold Production*	Exports	Indicative Retention	
	Tonnes	Tonnes	Tonnes	% of Gold Production
2003	170	128	42	25
2004	169	134	35	21
2005	163	116	47	29
2006	159	94	65	41
2007	157	42	115	73
2008	176	17	159	90

Source: The Gokhran of Russia. *Includes gold as a by-product of other mining.

GOLD JEWELLERY

The Guild of Russian Jewellers, based in Moscow, estimates there are 1,130 jewellery fabrication units and 12,000 jewellery retail outlets in the Russian Federation.

Gold jewellery is sold at a fixed price. An indicative caratage split, provided by the Guild: 14 carat (75%), 18 carat (25%).

There are 1,130 jewellery fabrication units and 12,000 retail outlets in the Russian Federation.

Fabrication

According to GFMS Ltd (London), Russian carat jewellery fabrication (including scrap) more than doubled from an estimated 19.2 tonnes (2000) to 53.2 tonnes (2008).

Important fabrication centres include Moscow and Kostroma (Central), St Petersburg (North West) and Krasnoyarsk (Siberia).

Consumption

According to GFMS, Russian gold jewellery consumption (including imports) more than trebled from an estimated 30.6 tonnes (2000) to 94.1 tonnes (2008).

Historical Perspective

In 1990, at the end of the USSR period, Glavalmazzoloto reported that jewellery manufacture was undertaken by only 9 large factories in Russia and 9 factories in other USSR republics.

The Guild estimates there were only 600 jewellery retail outlets in Russia in 1990.

ROUBLE GOLD PRICES

The rouble gold price is normally closely related to the international US dollar gold price at the prevailing rouble/US dollar exchange rate.

In 1998 and 1999, the annual average rouble gold price increased dramatically by more than 250% due to a devaluation of the rouble against the US dollar by 75% over this period.

Between 2003 and 2008, the annual average rouble price increased by a further 200%.

The annual average rouble gold price has increased by more than 1000% since 1997.

Year	US Dollar		Rouble		Exchange Rate
	Average*	% +/-	Average#	% +/-	Rouble per US Dollar
1996	**387.87**	+ 1.0	**1,986**	n.a.	5.12
1997	**331.29**	- 14.6	**1,915**	- 3.6	5.78
1998	**294.09**	- 11.2	**2,856**	+ 49.1	9.71
1999	**278.57**	- 5.3	**6,858**	+ 140.1	24.62
2000	**279.10**	+ 0.2	**7,851**	+14.5	28.13
2001	**271.04**	- 2.9	**7,906**	+ 0.7	29.17
2002	**309.68**	+ 14.3	**9,708**	+ 22.8	31.35
2003	**363.32**	+ 17.3	**11,150**	+ 14.9	30.69
2004	**409.17**	+ 12.6	**11,788**	+ 5.7	28.81
2005	**444.45**	+ 8.6	**12,569**	+ 6.6	28.28
2006	**603.77**	+ 35.8	**16,417**	+ 30.6	27.19
2007	**695.39**	+ 15.2	**17,788**	+ 8.4	25.58
2008	**871.96**	+ 25.4	**21,668**	+ 21.8	24.85

Sources: * Based on London P.M. Gold Fixing Prices: courtesy of The London Gold Market Fixing Limited; data source: www.lbma.org.uk "PM" relates to the afternoon fixing meeting that starts at 3.00 p.m. # Rouble gold prices are derived using the annual average rouble/US dollar exchange rate: IMF International Financial Statistics Yearbook 2008 (1996-2007). IMF Internet service (2008).

Mr Dmitry Medvedev, President of the Russian Federation, examining London Good Delivery 400 oz bars during a visit to Kolyma Refinery in Far Eastern Russia in 2008.

RUSSIAN GOLD REFINERS

MANUFACTURERS OF LONDON GOOD DELIVERY GOLD BARS FOR THE INTERNATIONAL MARKET

RUSSIA

FOCUS

Accredited Gold Refiners
The Role of The Gokhran of Russia

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Kolyma
Far Eastern

Russian gold refiners are located in Central, Urals, Siberian and Far Eastern Russia.

Krastsvetmet (Siberia), established in 1943, is the largest gold refiner. In recent years, it has refined around 50% of Russian gold mine production.

ACCREDITED GOLD REFINERS

There are 8 gold refiners in the Russian Federation that meet the stringent criteria for accreditation to the London Bullion Market Association (LBMA).

They are located in Central, Urals, Siberian and Far Eastern Russia.

LBMA-accreditation in their own names, which has occurred progressively since 1999, ensures that the 400 oz bars they manufacture are accepted as **London Good Delivery** (LGD) bars on the international market.

Accreditation also generates confidence around the world that the refiner's range of other gold bars and products would also be manufactured to the same high standard.

Russian gold refiners have been accredited to the LBMA under their own names since 1999.

Federal District	Gold Refiner	Refinery Location	Region	LBMA Accreditation	
Siberia	Novosibirsk Refinery Plant	Novosibirsk	Novosibirsk	11 January	1999
Urals	Ekaterinburg Non-Ferrous Metal Processing Plant	Verkhnyaya Pyshma	Sverdlovsk	11 January	1999
Central	Shelkovsky Plant of Secondary Precious Metals	Shelkovo	Moscow	27 October	1999
Siberia	The Gulidov Krasnoyarsk Non-Ferrous Metals Plant (Krastsvetmet)	Krasnoyarsk	Krasnoyarsk	29 November	1999
Central	Prioksky Non-Ferrous Metals Plant	Kasimov	Ryazan	29 November	1999
Far Eastern	Kolyma Refinery	Khasyn settlement	Magadan	17 September	2004
Urals	Uralelectromed	Verkhnyaya Pyshma	Sverdlovsk	12 May	2006
Central	Moscow Special Alloys Processing Plant (MZSS)	Moscow	Moscow city	11 May	2007

Source: The Gokhran of Russia, London Bullion Market Association

It can be noted that Russia has been a renowned manufacturer of LGD 400 oz bars since 1937, most bars issued with a generic USSR ("CCCP") stamp from 1947 until 1996, when a new generic Russian stamp was introduced and refiners also started applying their own official stamps to 400 oz bars.

Novosibirsk (Siberia), established in 1941, is legendary. It was the largest gold refiner during the USSR period.

THE ROLE OF THE GOKHRAN OF RUSSIA

The Gokhran of Russia (The State Repository for Precious Metals and Gemstones of the Russian Federation) actively cooperates with the **London Bullion Market Association** (LBMA) and the **London Platinum and Palladium Market** (LPPM) and supports their policy aimed at ensuring circulation of only high quality bars on the precious metals market.

Good Delivery status, which is assigned by these organizations, ensures high liquidity of precious metal bars on the international market, and thus it is a basis for forming the gold reserve in The Gokhran of Russia and The Central Bank of the Russian Federation.

The Gokhran of Russia, which is a subordinate organization of the **Ministry of Finance of the Russian Federation**, for many years has been actively working to ensure that precious metal bars, which are produced by Russian refiners, satisfy the requirements of national and international standards, that the refiners perform with stability, that their staff is regular and highly qualified and that all production processes are carried out on modern equipment. All this work being done secures the high quality of Russian precious metals in bars.

After the breakup of the USSR, there were difficulties on the international precious metals market, associated with the following issue: Russian, Uzbek and Tadjik gold was all referred to as "soviet". In this connection, **N.M. Rothschild & Sons Limited**, whose representative had chaired the daily London Gold Fixing meetings since 1919, addressed the Russian Government and advised that Russian refiners, which were subordinate to the Ministry of Finance of the Russian Federation, should confirm their London Good Delivery status.

Since 1995

On the instructions of the Russian Government, The Gokhran of Russia has been promoting the improvement of work undertaken by Russian refiners since 1995. Gokhran has organized the retraining of experts-analysts, prepared proposals for changing the marking of bars to refer to "РОССИЯ" (Russia), instead of to "СССР" (USSR) and the hammer and sickle symbol, and for changing the National Standards, as well as preparing Presidential decrees and Government resolutions in order to send sample precious metal bars to the LBMA for analysis and then for re-import.

As a result of working jointly with the Russian refiners that sought international accreditation, the following received Good Delivery status for gold and silver bars in 1999: **Ekaterinburg**, **Shelkovsky**, **Novosibirsk**, **Krastsvetmet** and **Prioksky** plants. Subsequently, Good Delivery status was also received by the **Kolyma**, **Uralelectromed** and **Moscow** (MZSS) plants.

During the period of 1996 - 2001, platinum and palladium bars, manufactured by the **Krastsvetmet** and **Ekaterinburg** plants, also received Good Delivery status.

At present, The Gokhran of Russia, just as three years ago, is assisting Russian gold and silver refiners in the procedure of Proactive Monitoring according to LBMA Good Delivery Rules.

Source: The Gokhran of Russia

Ekaterinburg (Urals) was founded in 1916.

Uralelectromed (Urals) was founded in 1934.

Shelkovsky (Central) was founded in 1941.

OWNERSHIP

CURRENT STATUS

Although 7 of the 8 refiners are designated as an "Open Joint Stock Company" (OJSC), most are owned entirely by Federal or Regional State institutions.

An OJSC status means that the company has a Board of Directors and much flexibility to act on its own initiative.

Ekaterinburg (Urals) was the first to achieve an OJSC status, in 1993.

Federal District	Gold Refiner	Corporate Status	Major Shareholders	Year became OJSC, JSC or FSUE	Number of Employees
Urals	Ekaterinburg	OJSC	Indesticoplaz Trading Limited (86.29%), Limasol, Cyprus	1993	560
Siberia	Krastsvetmet	OJSC	Krasnoyarsk Region Administration of Russian Federation (100%)	1994	2,800
Far Eastern	Kolyma	OJSC	KUGI (Committee of Federal Property Control) of Magadan Region: 64%. OJSC "Bank Rossisysky Credit": 35%	1997	190
Urals	Uralelectromed	OJSC	Core company of Ural Mining and Metallurgical Company (UMMC).	2002	350*
Siberia	Novosibirsk	OJSC	Government of Russian Federation (100%)	2003	180
Central	Shelkovsky	OJSC	Government of Russian Federation (100%)	2003	400
Central	Prioksky	OJSC	Government of Russian Federation: Federal Agency of Property Control (100%)	2003	480
Central	Moscow	FSUE	Government of Russian Federation (100%)	1999	690

Source: Russian refiners. *Uralelectromed: refers only to employees in the chemical-metallurgical unit.

The Ministry of Finance normally represents the Government of the Russian Federation on the Boards of OJSC and JSC companies.

Representatives of the Ministry of Finance are also based on-site at each refinery to monitor the amount of gold refined (and other aspects).

Moscow (Central) was founded in 1946.

HISTORICAL SUPERVISION

During the USSR period, the refining of gold was controlled by People's Commissariat of Heavy Industry (1920s-1939), People's Commissariat of Non-Ferrous Metallurgy (1939-1946), Ministry of Non-Ferrous Metallurgy (1946-1988) and Glavalmazzolotto (1988-1992).

In the 1990s, following the establishment of the Russian Federation in 1991, Russian refiners remained subject to some supervision by Roskomdragmet, The Committee of the Russian Federation for Precious Metals and Gemstones (1992-1996), and The Gokhran of Russia (1996-1998).

Since 1998, and in some cases earlier, the refiners have operated independently, competing against each other to provide refining services and products for the Russian and international gold industry.

BACKGROUND

ESTABLISHMENT

The refiners in the Urals, Ekaterinburg (1916) and Uralelectromed (1934), are the longest-established. The refiners in Siberia, Novosibirsk (1941) and Krastsvetmet (1943), were founded during the Great Patriotic War. More recently, Prioksky (Central) was established in 1989, and Kolyma (Far Eastern) in 1997.

Federal District	Gold Refiner	Origin of Company	Establishment of Gold Refinery	Year First Made 400 oz Gold Bars
Urals	Ekaterinburg	1916	1916	1980s
Urals	Uralelectromed	1934	1934	1997
Siberia	Novosibirsk	1941	1941	1941
Central	Shelkovsky	1941	1941	1992
Siberia	Krastsvetmet	1943	1959*	1990s
Central	Moscow	1946	2001**	2002
Central	Prioksky	1989	1989	1991
Far Eastern	Kolyma	1997	1997	1998

Source: The Gokhran of Russia, Russian refiners. * Krastsvetmet: a refinery to produce refined bars was opened in 1959; 400 oz bars only manufactured in significant quantities since the 1990s. ** Moscow: had operated a small "experimental" refinery prior to 2001.

Although most of the refiners have been active for more than 60 years, Novosibirsk (Siberia) refined most of the USSR's gold from the 1940s until 1990.

It has only been since the 1990s that refiners, such as Prioksky (Central). Krastsvetmet (Siberia) and Kolyma (Far Eastern), have emerged as major refiners and manufacturers of 400 oz bars.

Prioksky (Central) was established in 1989.

HISTORICAL INFORMATION

At the time of the Russian Revolution in 1917 and until 1922, the refining of gold was concentrated at the national mint in St Petersburg (known as the **Leningrad Mint** during the USSR period).

In 1923, gold refining and the production of bars was transferred to Moscow to a small refining "laboratory", administered by the PCF USSR to cast and assay gold that was mined, purchased or confiscated. As the number of "gold trains" brought substantial quantities of gold from throughout the country, there was a need to establish a major refinery.

Known as the "Refinery Plant of PCF Russia", it was established in the Ismaylovo area of Moscow in 1925, producing gold bars marked with its own official stamp in 1926.

By the 1930s, the refinery had received international recognition, when the "**State Refinery, Moscow**" was listed as an acceptable manufacturer of London Good Delivery 400 oz bars (subject to assay by a London assayer) in a document, dated 7 January 1937, issued by the London Gold Market.

In July 1941, during the Great Patriotic War (1941-1945), the State Refinery, Moscow was dismantled and transferred to **Novosibirsk** (3,000 km east of Moscow) in Siberia. By October of that year, it was operational and over the next 49 years until 1990 the Novosibirsk refinery

Kolyma (Far Eastern) was established in 1997.

dominated the refining of gold mined throughout the USSR. Not only from mines in Russia but also from mines in Kazakhstan, Kyrgyzstan, Uzbekistan and other USSR republics.

In 1989, an official decision was taken in Moscow to close down the Novosibirsk refinery in 1990 and transfer its refining and other equipment to the newly-established **Prioksky Plant of Non-Ferrous Metals** (300 km east of Moscow). However, although much of the Novosibirsk equipment was transferred, the Novosibirsk refinery was re-established within six months and remains a major refiner.

Refining gold at Uralelectromed (Urals).

GOLD PRODUCTION - BY EACH REFINER

REFINING OF GOLD MINE PRODUCTION

Since the 1990s, **Krastsvetmet** (Siberia) has grown to become the largest refiner, accounting for approximately 50% of gold mine production in recent years.

Federal District	Refiner	Gold Mine Production – Kilograms							% Split
		2002	2003	2004	2005	2006	2007	2008	2008
Siberia	Krastsvetmet	53,087	59,334	67,531	68,271	72,163	74,445	77,384	**47**
Far Eastern	Kolyma	34,917	27,838	24,700	25,648	19,978	17,037	33,456	**20**
Central	Prioksky	33,214	32,506	37,912	32,030	28,246	22,186	25,721	**16**
Siberia	Novosibirsk	32,049	32,610	23,662	20,713	18,658	20,964	18,400	**11**
Urals	Uralelectromed	3,174	2,442	2,598	3,552	6,078	5,963	6,428	**4**
Urals	Ekaterinburg	879	1,068	1,138	791	1,747	3,070	2,068	**1**
Central	Moscow	298	412	205	18	365	761	228	**< 1**
Central	Shelkovsky	999	985	827	767	160	155	66	**< 1**
-	Other	748	870	307	274	224	210	-	**-**
Total		**158,645**	**158,065**	**158,880**	**152,064**	**147,619**	**144,791**	**163,751**	**100**

Source: The Gokhran of Russia

REFINING OF OLD FABRICATED GOLD SCRAP

Over the period 2002–2008, the annual amount of identified old fabricated gold scrap has grown from 2.5 tonnes (2002) to 8.1 tonnes (2008).

Federal District	Refiner	Identified Old Fabricated Gold Scrap – Kilograms*							% Split
		2002	2003	2004	2005	2006	2007	2008	2008
Urals	Ekaterinburg	n.a.	n.a.	263	102	139	168	2,065	**25**
Central	Shelkovsky	653	2,408	520	704	627	997	1,232	**15**
Siberia	Krastsvetmet	n.a.	n.a.	945	1,063	1,441	1,214	1,082	**13**
Central	Prioksky	798	2,501	532	380	299	901	993	**12**
Central	Moscow	n.a.	999	1,147	1,088	1,160	876	949	**12**
Urals	Uralelectromed	290	483	684	594	580	718	716	**9**
Siberia	Novosibirsk	112	177	162	149	187	139	251	**3**
Far Eastern	Kolyma	-	-	-	-	-	-	-	**-**
-	Other	912	1,282	613	811	547	854	852	**11**
Total		**2,549**	**6,835**	**4,866**	**4,882**	**4,980**	**5,867**	**8,140**	**100**

Source: The Gokhran of Russia. * Gold belonging to banks, processed on a give-and-take basis (production of small bars not included).

TOTAL GOLD REFINING

Refiners also refine gold produced as a by-product of other mining, which has increased from 9.7 tonnes (2002) to 12.5 tonnes (2008).

In total, the identified amount of gold refined from all sources has grown by 8% from 171 tonnes (2002) to 184 tonnes (2008).

Category	Gold Refining – Tonnes							% Split
	2002	2003	2004	2005	2006	2007	2008	2008
Gold Mines	158.6	158.1	158.9	152.1	147.6	144.8	163.8	89
By-Product of Other Mining*	9.7	12.0	10.4	11.1	11.7	12.1	12.5	7
Sub-Total	**168.3**	**170.1**	**169.3**	**163.2**	**159.3**	**156.9**	**176.3**	**96**
Old Fabricated Scrap	2.5	6.8	4.9	4.9	5.0	5.9	8.1	4
Total	**170.8**	**176.9**	**174.2**	**168.1**	**164.3**	**172.8**	**184.4**	**100**

Source: The Gokhran of Russia. * Mainly from copper, nickel and silver mining.

Shelkovsky (Central) opened a new gold refinery in 1996.

Moscow (Central) opened a new gold refinery in 2001.

RANGE OF GOLD PRODUCTS AND SERVICES

Apart from gold refining and the manufacture of bars, the extent to which the refiners manufacture other gold products varies.

Category	Krastsvetmet	Novosibirsk	Kolyma	Moscow
	Siberia	Siberia	Far Eastern	Central
Refining	X	X	X	X
Bars	X	X	X	X
Jewellery industry	X	X	X	X
Electronics industry	-	-	-	X
Decorative industry	-	-	-	X
Dental industry	-	-	-	X
Gold blanks and minting services	-	-	-	X
Other industrial products and services	-	X	-	X

Category	Prioksky	Shelkovsky	Ekaterinburg	Uralelectromed
	Central	Central	Urals	Urals
Refining	X	X	X	X
Bars	X	X	X	X
Jewellery industry	X	-	X	-
Electronics industry	X	-	X	-
Decorative industry	-	-	-	-
Dental industry	-	-	X	-
Gold blanks and minting services	-	-	X	-
Other industrial products and services	-	-	X	-

Source: The Gokhran of Russia, Russian refiners

Moscow (Central) and **Ekaterinburg** (Urals), which were important manufacturers of gold alloys and products to serve the jewellery, electronics, dental and other gold consuming industries during the USSR period, continue to produce these products.

Krastsvetmet (Siberia), which established a "Jewellery Manufacture" unit in 1994, has become Russia's second largest jewellery manufacturer. It produced 7.5 tonnes of precious metal jewellery, mainly in 14 carat gold, in 2008.

Krastsvetmet (Siberia) is the second largest gold jewellery manufacturer in the Russian Federation.

Moscow (Central) manufactures approximately 4,500 different precious metal products for the jewellery, electronics, decorative and other industries.

APPENDIX

GOLD REFINING METHODS

Wet chemical parting, electrolysis and solvent extraction are widely used in the refining of gold.

Refining Method	Krastsvetmet	Novosibirsk	Moscow	Prioksky
	Siberia	Siberia	Central	Central
Pyrometallurgical chlorination	-	-	-	X
Wet chemical chlorination: aqua regia	-	-	-	-
Wet chemical chlorination: chlorine gas	X	-	-	X
Electrolysis	X	X	-	X
Wet chemical parting	-	X	X	-
Solvent extraction	-	X	X	X
Blast furnace smelting	-	-	-	-
Electric furnace smelting	-	X	-	-

Refining Method	Shelkovsky	Ekaterinburg	Uralelectromed	Kolyma
	Central	Urals	Urals	Far Eastern
Pyrometallurgical chlorination	-	X	-	X
Wet chemical chlorination: aqua regia	X	-	-	-
Wet chemical chlorination: chlorine gas	-	-	-	-
Electrolysis	X	X	-	-
Wet chemical parting	X	X	X	X
Solvent extraction	X	X	-	X
Blast furnace smelting	-	-	-	-
Electric furnace smelting	X	X	-	-

Source: Russian refiners

GOLD REFINING CAPACITY

The 8 refiners, in total, have a capacity to produce more than 900 tonnes of refined gold each year.

Refiner	Federal District	Approximate Refining Capacity
		Tonnes
Novosibirsk	Siberia	300
Krastsvetmet	Siberia	250
Prioksky	Central	230
Kolyma	Far Eastern	70
Shelkovsky	Central	30 - 50
Moscow	Central	>10
Ekaterinburg	Urals	>10
Uralelectromed	Urals	>10
Total		**>900**

Source: Russian Refiners

Refining gold at Novosibirsk (Siberia).

APPENDIX

GOLD-BEARING MATERIALS TREATED

Includes the following:

Material	Krastsvetmet	Novosibirsk	Moscow	Prioksky
	Siberia	Siberia	Central	Central
Semi-refined bullion	X	X	X	X
Mine doré: predominantly gold	X	X	X	X
Mine doré: predominantly silver	X	X	-	X
Electrolytic slimes: derived from copper	X	X	-	-
Electrolytic slimes: derived from silver	X	X	-	X
Precipitated gold slimes	X	X	X	X
Loaded carbon	-	X	-	-
Scrap				
Old jewellery	X	X	X	X
Jewellery manufacturers scrap	X	X	X	X
Electronic scrap	X	X	-	X
Dental scrap	X	X	-	X
Old coins and medals	X	X	X	X
Slag and other refining scrap	X	X	X	X

Material	Shelkovsky	Ekaterinburg	Uralelectromed	Kolyma
	Central	Urals	Urals	Far Eastern
Semi-refined bullion	X	X	-	X
Mine doré: predominantly gold	X	X	-	X
Mine doré: predominantly silver	X	X	-	X
Electrolytic slimes: derived from copper	X	X	X	-
Electrolytic slimes: derived from silver	X	X	-	X
Precipitated gold slimes	X	X	-	X
Loaded carbon	X	-	-	-
Scrap				
Old jewellery	X	X	-	-
Jewellery manufacturers scrap	X	X	-	-
Electronic scrap	X	X	X	-
Dental scrap	X	-	-	-
Old coins and medals	X	X	-	-
Slag and other refining scrap	X	X	-	-

Source: Russian refiners

Newly-mined gold doré bars for refining at Krastsvetmet (Siberia).

Ekaterinburg (Urals) in 1922, when it was known as the "National Refinery Plant".

Krastsvetmet (Siberia) in 1946, when it focused on the refining of platinum group metals.

Novosibirsk (Siberia) in the 1970s, when it refined almost all gold mined in the USSR.

RUSSIAN GOLD BARS

MANUFACTURED BY LBMA-ACCREDITED GOLD REFINERS FOR THE INTERNATIONAL MARKET

RUSSIA

FOCUS

Range of Gold Bars
Quantity of Bars Manufactured
Official Stamps

400 oz Bars

Authorized Dimensions
Fineness
Quality Marks
Serial Numbering System
Examples of Bars
Historical Manufacture

Small Cast and Minted Bars

Authorized Dimensions
Launch Dates of Current Range
Customized Bars
Serial Numbering Systems
Examples of Bars
Historical Manufacture

Trading Gold in the Russian Federation

Dealing Licences
Export Licences
Duty and VAT
Gold Investment

Appendices

Small Cast Bars – Technical Descriptions
Minted Bars – Technical Descriptions
Kilobars – Authorised Markings in Russian and English
400 oz Bars – Interpreting the Quality Marks

Prioksky
Central

Russian refiners have issued gold bars under their own names since 1996.

The Novosibirsk refinery in Siberia has manufactured London Good Delivery 400 oz bars since 1941.

RANGE OF GOLD BARS

In total, the 8 LBMA-accredited refiners in the Russian Federation issue a current range of 81 bars for the Russian and international market: 400 oz bars (8), small cast bars (35) and minted bars (38).

The current range of bars has been launched progressively since 1996.

CAST									
Federal District	**Refiner**	**Troy Ounce**	**Gram Weight**						**Total**
Siberia	Krastsvetmet	400	1000	500	250	100	-	-	5
Siberia	Novosibirsk	400	1000	500	250	100	50	20	7
Central	Moscow	400	1000	500	250	100	50	20	7
Central	Prioksky	400	1000	500	250	100	-	-	5
Central	Shelkovsky	400	1000	500	250	100	-	-	5
Urals	Ekaterinburg	400	1000	500	250	100	50	20	7
Far Eastern	Kolyma	400	1000	500	250	100	50	-	6
Urals	Uralelectromed	400	-	-	-	-	-	-	1
Totals		**8**	**7**	**7**	**7**	**7**	**4**	**3**	**43**

MINTED											
Federal District	**Refiner**	**Troy Ounce**	**Gram Weight**								**Total**
Siberia	Krastsvetmet	-	-	-	100	50	20	10	5	1	6
Siberia	Novosibirsk	-	-	-	100	50	20	10	5	-	5
Central	Moscow	-	-	-	-	50	20	10	5	1	5
Central	Prioksky	-	-	250	100	50	20	10	5	1	7
Urals	Ekaterinburg	1000	500	250	100	50	20	10	5	1	9
Far Eastern	Kolyma	-	-	250	100	50	20	10	5	-	6
Central	Shelkovsky	-	-	-	-	-	-	-	-	-	-
Urals	Uralelectromed	-	-	-	-	-	-	-	-	-	-
Totals		**1**	**1**	**3**	**5**	**6**	**6**	**6**	**6**	**4**	**38**

Source: Russian refiners

Prioksky (Central) has manufactured small bars since 1994.

QUANTITY OF BARS MANUFACTURED

Novosibirsk (Siberia) has manufactured small bars since 1967.

SMALL BARS – MANUFACTURED BY EACH REFINER

Official statistics record that the manufacture of small cast and minted bars (1000 g and less) has increased significantly in recent years, growing from 6.2 tonnes (2002) to 22.1 tonnes (2008).

Dealers attribute the growth mainly to more Russian jewellery fabrication over the period (smaller fabricators using more kilobars) and to more investors taking physical delivery of bars, despite the payment of 18% VAT.

While there are no available statistics as regards the split between small cast and minted bars, refiners advise that the bulk of the tonnage is in the form of small cast bars, notably kilobars.

Although the market share of individual refiners can vary from year to year, Novosibirsk (Siberia) accounted for 33%, Prioksky (Central) for 24% and Krasnoyarsk (Siberia) for 17% of the small bar market in 2008.

Federal District	Refiner	Manufacture of Small Cast and Minted Bars Kilograms							
		2002	2003	2004	2005	2006	2007	2008	2008 % Split
Siberia	Novosibirsk	1,597	1,879	940	609	975	7,705	7,346	33
Central	Prioksky	867	718	418	2,324	3,653	2,316	5,199	24
Siberia	Krastsvetmet	2,552	2,659	5,674	8,523	4,822	1,395	3,664	17
Central	Moscow	865	1,583	969	632	1,220	5,655	1,887	8
Central	Shelkovsky	-	1,945	6,462	9,149	4,263	5,060	1,802	8
Urals	Ekaterinburg	319	357	346	317	2,767	1,226	1,534	7
Far Eastern	Kolyma	-	-	-	-	-	98	170	1
Urals	Uralelektromed	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	529	2
Totals		**6,200**	**9,141**	**14,809**	**21,553**	**17,701**	**23,455**	**22,133**	**100**

Source: The Gokhran of Russia

Importance of Small Bars

In recent years, usage of gold to manufacture small cast and minted bars, as a percentage of gold mine production, has ranged between 4% (2002) and 16% (2007).

Most of the residual gold mine production is reported to have been converted into 400 oz bars for use by large fabricators and for official reserves.

Year	Gold Mine Production	Small Cast and Minted Bars	
	Tonnes	Tonnes	% of Gold Mine Production
2002	158.6	6,2	4
2003	158.1	9.1	6
2004	158.9	14.8	11
2005	152.1	21.6	14
2006	147.6	17.7	12
2007	144.8	23.5	16
2008	163.8	22.1	13

Source: The Gokhran of Russia

Krastsvetmet
Siberia

The kilobar is the most popular small bar.

OFFICIAL STAMPS

REFINERS

Krastsvetmet
Siberia

Novosibirsk
Siberia

Moscow
Central

Prioksky
Central

Shelkovsky
Central

Ekaterinburg
Urals

Uralelectromed
Urals

Kolyma
Far Eastern

The application of refiner stamps has been authorized since 1996.

NATIONAL

The stamp in Russian is applied to
400 oz bars and most small bars.

The stamp in English is applied to
small bars, when required.

The “national” official stamp has been in use since 1996.

400 OZ BARS

AUTHORISED DIMENSIONS

Russian refiners manufacture 400 oz bars to the same approximate dimensions.

Top surface: 254 x 88 mm
Base surface: 229 x 59 mm
Thickness: 35 mm

The current authorized dimensions were introduced in the early 1970s.

They are approximate, as a "400 oz" London Good Delivery bar is permitted to contain a weight, ranging between 350 oz and 430 oz of fine gold (equivalent to about 10.9 kg and 13.4 kg of fine gold).

The reason why Russian refiners manufacture 400 oz bars in the same dimensions is the result of 400 oz bars having previously been issued as standard USSR/Russian "State Refinery" bars from at least the 1940s until 1996. As there was no reference to the refiner, the same dimensions were adopted by all refiners.

Uralelectromed
Urals

Russian 400 oz bars are manufactured to the same dimensions.

FINENESS

Most 400 oz bars are manufactured to a fineness of 999.9. The minimum authorized fineness is 999.5.

Federal District	Refiner	Weight	Fineness
Siberia	Krastsvetmet	400 oz	999.9, 999.8
Siberia	Novosibirsk	400 oz	999.9, 999.8
Central	Moscow	400 oz	999.9
Central	Prioksky	400 oz	999.9
Central	Shelkovsky	400 oz	999.9
Urals	Ekaterinburg	400 oz	999.9, 999.8, 999.5
Urals	Uralelectromed	400 oz	999.9
Far Eastern	Kolyma	400 oz	999.9, 999.8

Source: Russian refiners.

Quality marks have been applied to 400 oz bars since the early 1970s.

Most 400 oz bars have a fineness of 999.9.

QUALITY MARKS

Russian 400 oz bars are renowned for bearing a "quality mark" that indicates the maximum content of other metals contained within each bar.

The table below records the 4 "quality marks" and the maximum authorized content of silver, platinum and palladium for each mark. The marks were first applied to USSR 400 oz bars in the early 1970s.

An Appendix to this section "400 oz Bars – Interpreting the Quality Marks" refers to the maximum authorized content of 14 other metals.

Apart from underlining the high quality of Russian 400 oz bars, the marks enable fabricators to more easily take into account small amounts of other metals that might affect their own manufacturing process.

Kolyma
Far Eastern

Russian refiners normally pack 400 oz bars in a secure "two bar" container that was developed by The Gokhran of Russia.

Quality Mark	Gold Purity	Maximum Percentages (%) of Other Metals				
	%	Silver	Platinum	Palladium	Other	Overall
-1	99.99	0.005	0.0005	0.0005	See Appendix	**0.01**
-2	99.99	0.005	0.001	0.003	See Appendix	**0.01**
-3	99.98	0.015	0.005	0.005	See Appendix	**0.02**
-4	99.95	0.035	0.005	0.016	See Appendix	**0.05**

Source: Russian Federation National Standards (GOST) document: 28058-89 (1998).

SERIAL NUMBERING SYSTEM

Russian refiners adopt the same serial numbering system for 400 oz bars.

1 or 2 Cyrillic letters plus 4 numbers are applied to each bar. The first 1 or 2 letters identify the refiner. The next letter (allocated by the refiner) normally changes at the beginning of each year or after 9,999 bars have been made using this letter.

Most refiners started stamping a year date on 400 oz bars in 1997-1998.

The standard serial numbering system for 400 oz bars is 2 or 3 letters plus 4 numbers.

Federal District	Refiner	Cyrillic Letters Identifying Refiner	Examples of Subsequent Letters Used	System First Applied to 400 oz Bars	Year Date First Stamped on 400 oz Bar*
Siberia	Krastsvetmet	Кр	Ц, А, Б, В, Р, Ш	1997	1997
Siberia	Novosibirsk	Н	Y, К	1990	1996
Central	Moscow	З	С	2002	2002
Central	Prioksky	П	Е, Г, П	1991	1997
Central	Shelkovsky	Щ	А, Б	1996	1996
Urals	Ekaterinburg	Е	А, Г	1990	1998
Urals	Uralelectromed	У	А	1997	1997
Far Eastern	Kolyma	К	А, Б	1998	1998

Source: The Gokhran of Russia, Russian refiners. *Estimated.

Example: "НК 7890" plus "2008" on a 400 oz bar issued by Novosibirsk (Siberia) means that the bar was manufactured in 2008, the 7,890th since the batch letter "К" was allocated.

EXAMPLES OF 400 OZ BARS

Krastsvetmet
Siberia

Novosibirsk
Siberia

Prioksky
Central

Kolyma
Far Eastern

HISTORICAL MANUFACTURE

1930s - 1990

During the USSR period (from at least the 1930s until 1990), almost all bars manufactured by Russia's refiners were **400 oz** bars, issued as London Good Delivery (LGD) for the international market or for use by the USSR's large State-owned factories that manufactured jewellery and industrial products that required gold.

400 oz bar manufactured by Novosibirsk (Siberia) during the USSR period.

In the late 1930s, it is known that 400 oz bars had an official stamp that included a reference to "МОСКВА" (Moscow).

From 1947, according to The Gokhran of Russia, a standard official stamp, which included only a reference to the USSR ("СССР") and the hammer and sickle symbol (without referring to the refinery's location), was applied to all 400 oz bars manufactured within the USSR.

The official stamp, depicting a hammer and sickle, that was applied to 400 oz bars from 1947 until 1996-1997.

It can be noted that for 49 years, from 1941 until 1990, almost all 400 oz bars issued by the USSR as LGD bars for the international market, were manufactured by **Novosibirsk** (Siberia).

Only a relatively small number of LGD bars is understood to have been manufactured by other refiners over this period, notably by **Ekaterinburg** (Urals) since the early 1980s.

1991 - 1996

Following the establishment of the Russian Federation in 1991, 400 oz bars continued to be marked with the standard USSR official stamp until 1996.

During this period, **Prioksky** (Central) was a major manufacturer of LGD bars (refining 90% of USSR gold mine production in 1991), although other refiners are also known to have manufactured 400 oz bars that may have been exported as LGD bars, notably Krastsvetmet (Siberia), Novosibirsk (Siberia), Shelkovsky (Central) and Ekaterinburg (Urals).

1996 - 1999

In 1996, the new "Russia" official stamp was developed, adopted progressively by all refiners in 1996-1997. Refiners also started applying their own official stamps to 400 oz bars in 1996-1997.

As it took until 1999 for the first 5 Russian refiners to go through the lengthy process of accreditation under their own names to the London Bullion Market Association (LBMA), it can be noted that the 400 oz bars manufactured by Russian refiners during this interim period continued to be accepted as London Good Delivery by the LBMA, as the quality of Russian 400 oz bars was monitored by **The Gokhran of Russia**.

400 oz bar manufactured by the State Refinery, Moscow in the late 1930s.

SMALL CAST AND MINTED BARS

AUTHORIZED DIMENSIONS

Since 2000, the dimensions of 6 small cast bars (1000 g and less) and 8 minted bars (500 g and less) have been regulated in accordance with the Russian Federation National Standards (GOST) document, P 51572-2000:

Cast: 1000 g, 500 g, 250 g, 100 g, 50 g, 20 g
Minted: 500 g, 250 g, 100 g, 50 g , 20 g, 10 g, 5 g, 1 g

As the dimensions can fall within maximum and minimum parameters, and the weights within a specified tolerance, as recorded in the table below, the dimensions of small bars issued by refiners can vary:

Weight in Grams	Authorized Minimum/Maximum Dimensions mm	
	Length	Width
CAST		
1000	105.0 – 116.0	48.0 – 52.0
500	80.0 – 86.0	35.0 – 38.0
250	52.0 – 64.0	29.0 – 32.0
100	40.0 – 43.0	20.0 – 23.0
50	30.5 – 32.0	16.0 – 17.0
20	23.5 – 27.0	11.5 – 13.0
MINTED		
500	98.5 – 102.0	58.5 – 60.0
250	79.0 – 81.0	46.5 – 48.0
100	54.0 – 56.0	31.0 - 33.0
50	36.0 – 48.0	21.0 – 28.0
20	29.0 – 33.0	15.0 – 19.0
10	24.0 – 29.0	13.5 – 17.0
5	22.0 – 25.0	13.0 – 15.0
1	12.0 – 15.0	7.0 – 9.0

Source: Russian Federation National Standards (GOST) document: 51572 – 2000.

Russian small cast and minted bars are normally manufactured to a **fineness** of 999.9.

Novosibirsk
Siberia

Assaying laboratory.

Prioksky
Central

Small bars are produced within a range of authorized dimensions.

Krastsvetmet
Siberia

The authorized dimensions are recorded in a National Standards document.

Krastsvetmet
Siberia

Russian refiners normally issue a certificate for each cast and minted bar.

LAUNCH DATES OF CURRENT RANGE

From 1996, refiners started to issue small cast and minted bars that incorporated the national "Russia" official stamp and the refiner's official stamp.

Their availability coincided with the public being allowed in 1996 to own gold bars for the first time since the 1920s.

SMALL CAST BARS		
Federal District	**Gold Refiner**	**Launch Year**
Siberia	Novosibirsk	1996
Central	Prioksky	1996
Central	Shelkovsky	1996
Urals	Ekaterinburg	1996
Siberia	Krastsvetmet	1997
Central	Moscow	2000
Far Eastern	Kolyma	2009
Urals	Uralelectromed	-

MINTED BARS		
Federal District	**Gold Refiner**	**Launch Year**
Siberia	Krastsvetmet	1996
Central	Prioksky	1996
Urals	Ekaterinburg	1996
Siberia	Novosibirsk	1999
Central	Moscow	2000
Far Eastern	Kolyma	2002
Central	Shelkovsky	-
Urals	Uralelectromed	-

Source: Russian refiners

Krastsvetmet
Siberia

Small cast bars have been widely manufactured since 1996.

Kolyma (Far Eastern) has manufactured minted bars since 2002.

CUSTOMIZED BARS

It can be noted that, although the dimensions of small bars issued by refiners are regulated, refiners are permitted to manufacture customized cast and minted bars with **different dimensions** for external entities, such as banks, if required.

In total, customized bars have been manufactured for more than 30 banks since 1995.

Federal District	Gold Refiner	First Manufactured	Number of Known Banks Ordering Customized Bars
Siberia	Krastsvetmet	1990s*	>10
Urals	Ekaterinburg	1995	8
Central	Prioksky	1998	3
Siberia	Novosibirsk	1999	3
Central	Shelkovsky	2000	3
Central	Moscow	2000s	Several
Far Eastern	Kolyma	2005	1
Urals	Uralelectromed	-	-

Source: Russian refiners. * Estimated.

Moscow
Central

Customized small bars have been issued by more than 30 Russian banks since 1996.

SERIAL NUMBERING SYSTEMS

While refiners are required to record a serial number on each small cast or minted bar, they are permitted to apply their own serial numbering systems.

Some systems incorporate manufacturing-related information.

For example, Krastsvetmet (Siberia) system for small cast bars, the first 4 numbers represent the batch number, while the last 2 numbers represent the serial number within the batch.

Refiners apply their own serial numbering systems to small bars.

SMALL CAST BARS

Federal District	Refiner	Additional Letters and Numbers	Example		System First Applied*
			System	Weight	
Central	Prioksky	2 letters Plus 4 numbers	ВГ 8170	1000 g	1994
Siberia	Novosibirsk	2 letters Plus 4 numbers	ВВ 7922	1000 g	1996
Central	Shelkovsky	4 numbers	2384	1000 g	1996
Siberia	Krastsvetmet	6 numbers	140507	1000 g	1997
Urals	Ekaterinburg	2 letters Plus 4 numbers	ЕГ 6681	1000 g	1997
Central	Moscow	1 or 2 letters Plus 4 or 5 numbers	M1-1584	500 g	2007
Far Eastern	Kolyma	6 numbers	046742	1000 g	2009

MINTED BARS

Federal District	Refiner	Additional Letters and Numbers	Example		System First Applied*
			System	Weight	
Central	Prioksky	2 letters Plus 4 numbers	MC 1674	50 g	1994
Siberia	Krastsvetmet	7 numbers	2021018	50 g	1996
Urals	Ekaterinburg	2 letters Plus 4 numbers	EB 2540	50 g	1997
Siberia	Novosibirsk	2 letters Plus 4 numbers#	CP 6472	50 g	1999
Central	Moscow	6 or 7 numbers	4-003260	50 g	2000
Far Eastern	Kolyma	6 numbers	065243	50 g	2002

Source: Russian refiners. * Refers to current systems. # Novosibirsk: serial numbering system recorded on reverse side.

Kolyma (Far Eastern) has manufactured small cast bars since 2009.

EXAMPLES OF SMALL CAST BARS

1000 g

Novosibirsk
Siberia

500 g

Krastsvetmet
Siberia

1000 g

Ekaterinburg
Urals

250 g

Kolyma
Far Eastern

100 g

Prioksky
Central

50 g

250 g

Moscow
Central

EXAMPLES OF MINTED BARS

100 g

Prioksky
Central

50 g

Moscow
Central

20 g

Krastsvetmet
Siberia

10 g

Novosibirsk
Siberia

5 g

Moscow
Central

1 g

Krastsvetmet
Siberia

Novosibirsk (Siberia) packs small bars in wooden boxes.

HISTORICAL MANUFACTURE

1967 – 1990

As the USSR's gold exports and its large gold-related factories relied on large 400 oz bars, and the private ownership of gold bars was prohibited, it is reported that few small bars were manufactured by refiners during the USSR period.

Novosibirsk (Siberia) reports that it manufactured a range of standard small bars between 1967 and 1990, marked with the USSR official stamp.

Cast: 1000 g, 500 g, 250 g, 100 g, 50 g, 20 g, 10 g
Minted: 20 g, 10 g

The plant is also known to have manufactured customized kilobars in the 1980s for export by The Bank of Foreign Economic Affairs of the USSR (known earlier as The Bank for Foreign Trade).

Moscow (Central) reports that it manufactured kilobars, marked with the USSR stamp, between 1988 and 1990.

1991 – 1996

Following the establishment of the Russian Federation in 1991, **Prioksky** (Central) is known to have manufactured a range of 2 small cast bars and 7 minted bars, marked with official USSR stamps, over the period 1994-1996.

Cast: 1000 g, 500 g
Minted: 250 g, 100 g, 50 g, 20 g, 10 g, 5 g, 1 g

Novosibirsk (Siberia) is the only known refiner to have manufactured small bars during the USSR period.

Minted bars, 20 g and 10 g, manufactured during the USSR period.

Customized kilobars were manufactured for The Bank of Foreign Economic Affairs of the USSR in the 1980s.

TRADING GOLD IN THE RUSSIAN FEDERATION

DEALING LICENCES

Since December 1996, the Central Bank of the Russian Federation has issued licences to 201 Credit Institutions to conduct operations in precious metals.

Although many licences have been issued, around 10 commercial banks are reported to be major participants in the wholesale gold market, notably:

Government-related banks: VTB, Sberbank, Gazprombank.
Private banks: Lanta, MDM, Nomos, Rosbank, Promsviazbank, Standard Bank, Uralsib, Zenit.

The headquarters of these banks are located in Moscow.

VTB, operating under this name since 2007, was originally established in 1990 as Vneshtorgbank (National Bank of Russia) to take over many of the functions of The Bank for Foreign Economic Affairs of the USSR.

Standard Bank, whose international headquarters are located in South Africa, is the only 100% foreign-owned bank that has a licence to deal in precious metals in the Russian Federation (since 2004). Its branch office in Moscow had previously received a full banking licence in 2003.

The Central Bank has issued 201 precious metals licenses to "Credit Institutions" since 1996.

EXPORTS

Since 1997, after VTB lost its monopoly to export Russia's gold bars, other banks have been permitted to act as exporters. Licences to export specified quantities are issued by the Ministry of Industry and Trade.

Moscow
Central

DUTY AND VAT

Gold bars can be imported by banks, but are subject to 20% import duty.

Where bars are physically delivered to industrial customers and investors, 18% VAT is applied.

Gold bars are subject to 18% VAT if physically delivered to the customer.

GOLD INVESTMENT

Although many banks offer gold investment products to investors, this section focuses on Sberbank of Russia (Savings Bank of the Russian Federation) in order to give some indication of the size and growth of the gold investment market in recent years.

Sberbank, established in 1841, is wholly owned by the Government. It is the largest credit institution with more than 20,000 retail outlets throughout the Russian Federation.

Metal Accounts

In 2005, Sberbank started to offer Metal Accounts to enable Russian investors to buy and sell gold (as well as silver, platinum and palladium) easily and more profitably.

The advantage is that 18% VAT is not applied to metal account transactions, as the gold is not deliverable.

The gold metal accounts also do not rely on newly-mined Russian gold, as they are normally not backed by gold bars held in Russia, but by a gold hedging programme with international counterparties.

Imported gold bars are subject to 20% duty.

By the end of 2008, the number of precious metal accounts operated by Sberbank customers had grown to 300,000, having increased by 170,000 during 2008.

The exact quantity of gold held in the accounts at that time is not specified, but the total amount of precious metals was recorded as having been 55 tonnes in “gold equivalent”.

Sberbank offers a gold investment service through its 20,000 branches.

Gold Bars

Sberbank has retailed a range of small bars through its branch network since 1997, including the following:

Cast: 1000 g, 500 g, 250 g
Minted: 100 g, 50 g, 20 g, 10 g, 5 g, 1 g

In 2008, Sberbank alone is reported to have sold 6 tonnes of gold bars that were subject to 18% VAT and physically delivered to investors.

Retailing to Investors by Other Banks

It can be noted that, although Sberbank is the largest gold retailing bank in the Russian Federation, it is only one of several banks that offer metal accounts and one of many banks that offer small gold bars for physical delivery.

Sberbank’s Metal Account programme, launched in 2005, has attracted more than 300,000 precious metals investors.

APPENDIX

SMALL CAST BARS

TECHNICAL DESCRIPTIONS

Federal District	Refiner	Weight	Type	Fineness	Shape	Dimensions* mm	First Issued#
Siberia	Novosibirsk	1000 g	Cast	999.9	Rectangular	113 x 51 x 10	1996
Central	Shelkovsky	1000 g	Cast	999.9	Rectangular	107 x 50 x 11.5	1996
Central	Prioksky	1000 g	Cast	999.9	Rectangular	114 x 51 x 10	1996
Urals	Ekaterinburg	1000 g	Cast	999.9	Rectangular	110.5 x 50	1996
Siberia	Krastsvetmet	1000 g	Cast	999.9	Rectangular	108.4 x 48.9 x 11.2	1997
Central	Moscow	1000 g	Cast	999.9	Rectangular	109.5 x 50 x 10.5	2000
Far Eastern	Kolyma	1000 g	Cast	999.9	Rectangular	109 x 50 x 17.4	2009
Siberia	Novosibirsk	500 g	Cast	999.9	Rectangular	83.5 x 37 x 10	1996
Central	Shelkovsky	500 g	Cast	999.9	Rectangular	82.5 x 35 x 10.5	1996
Central	Prioksky	500 g	Cast	999.9	Rectangular	82 x 36 x 10	1996
Urals	Ekaterinburg	500 g	Cast	999.9	Rectangular	83 x 36.5	1996
Siberia	Krastsvetmet	500 g	Cast	999.9	Rectangular	82.5 x 36.2 x 10	1997
Central	Moscow	500 g	Cast	999.9	Rectangular	81.5 x 36 x 9.7	2000
Far Eastern	Kolyma	500 g	Cast	999.9	Rectangular	81 x 36 x 16.3	2009
Siberia	Novosibirsk	250 g	Cast	999.9	Rectangular	60 x 29 x 8	1996
Central	Shelkovsky	250 g	Cast	999.9	Rectangular	53.5 x 30.5 x 10.5	1996
Central	Prioksky	250 g	Cast	999.9	Rectangular	64 x 32 x 7	1996
Urals	Ekaterinburg	250 g	Cast	999.9	Rectangular	58 x 30.5	1996
Siberia	Krastsvetmet	250 g	Cast	999.9	Rectangular	53.9 x 31.2 x 9.1	1997
Central	Moscow	250 g	Cast	999.9	Rectangular	57.6 x 30 x 8.2	2000
Far Eastern	Kolyma	250 g	Cast	999.9	Rectangular	58 x 31 x 13.2	2009
Siberia	Novosibirsk	100 g	Cast	999.9	Rectangular	40 x 21 x 7	1996
Central	Shelkovsky	100 g	Cast	999.9	Rectangular	40.5 x 20.5 x 7.2	1996
Central	Prioksky	100 g	Cast	999.9	Rectangular	42 x 23 x 6	1996
Urals	Ekaterinburg	100 g	Cast	999.9	Rectangular	41.5 x 21.5	1996
Siberia	Krastsvetmet	100 g	Cast	999.9	Rectangular	41.8 x 22 x 7	1997
Central	Moscow	100 g	Cast	999.9	Rectangular	41.7 x 21.8 x 7	2000
Far Eastern	Kolyma	100 g	Cast	999.9	Rectangular	41 x 22 x 7	2009
Siberia	Novosibirsk	50 g	Cast	999.9	Rectangular	31.2 x 16.5 x 4	1996
Urals	Ekaterinburg	50 g	Cast	999.9	Rectangular	31 x 16.5	1996
Central	Moscow	50 g	Cast	999.9	Rectangular	31 x 16.5 x 6.2	2000
Far Eastern	Kolyma	50 g	Cast	999.9	Rectangular	31.5 x 16.5 x 4	2009
Siberia	Novosibirsk	20 g	Cast	999.9	Rectangular	25 x 11.6 x 3.5	1996
Urals	Ekaterinburg	20 g	Cast	999.9	Rectangular	25 x 12	1996
Central	Moscow	20 g	Cast	999.9	Rectangular	25 x 13 x 5	2000

Source: Russian refiners. # First issued with the refiner's own official stamp. * Dimensions are approximate as cast bars have uneven surfaces. Some refiners have rounded down their dimensions to the nearest mm.

The current range of 35 small cast bars has been issued progressively since 1996.

APPENDIX

MINTED BARS

TECHNICAL DESCRIPTIONS

Federal District	Refiner	Weight	Type	Fineness	Shape	Dimensions* mm	First Issued#
Urals	Ekaterinburg	1000 g	Minted	999.9	Rectangular	119 x 70	1996
Urals	Ekaterinburg	500 g	Minted	999.9	Rectangular	100 x 59.5	1996
Central	Prioksky	250 g	Minted	999.9	Rectangular	79 x 47 x 4	1996
Urals	Ekaterinburg	250 g	Minted	999.9	Rectangular	80 x 47	1996
Far Eastern	Kolyma	250 g	Minted	999.9	Rectangular	79 x 47 x 4	2002
Siberia	Krastsvetmet	100 g	Minted	999.9	Rectangular	55 x 32 x 3.4	1996
Central	Prioksky	100 g	Minted	999.9	Rectangular	54 x 31 x 3	1996
Urals	Ekaterinburg	100 g	Minted	999.9	Rectangular	55 x 32	1996
Siberia	Novosibirsk	100 g	Minted	999.9	Rectangular	56.3 x 32.1 x 2.96	1999
Far Eastern	Kolyma	100 g	Minted	999.9	Rectangular	54 x 31 x 3	2002
Siberia	Krastsvetmet	50 g	Minted	999.9	Rectangular	40.2 x 25.1 x 3.1	1996
Central	Prioksky	50 g	Minted	999.9	Rectangular	36 x 21 x 4	1996
Urals	Ekaterinburg	50 g	Minted	999.9	Rectangular	42 x 24.5	1996
Siberia	Novosibirsk	50 g	Minted	999.9	Rectangular	48 x 28 x 2.9	1999
Central	Moscow	50 g	Minted	999.9	Rectangular	36.2 x 21.1 x 4	2000
Far Eastern	Kolyma	50 g	Minted	999.9	Rectangular	36 x 21 x 4	2002
Siberia	Krastsvetmet	20 g	Minted	999.9	Rectangular	32.1 x 18.7 x 2	1996
Central	Prioksky	20 g	Minted	999.9	Rectangular	33 x 19 x 2	1996
Urals	Ekaterinburg	20 g	Minted	999.9	Rectangular	31 x 17	1996
Siberia	Novosibirsk	20 g	Minted	999.9	Rectangular	32 x 18 x 1.8	1999
Central	Moscow	20 g	Minted	999.9	Rectangular	30 x 16.1 x 2.2	2000
Far Eastern	Kolyma	20 g	Minted	999.9	Rectangular	29 x 15 x 3	2002
Siberia	Krastsvetmet	10 g	Minted	999.9	Rectangular	25.1 x 15.1 x 1.6	1996
Central	Prioksky	10 g	Minted	999.9	Rectangular	29 x 17 x 1	1996
Urals	Ekaterinburg	10 g	Minted	999.9	Rectangular	26.5 x 15	1996
Siberia	Novosibirsk	10 g	Minted	999.9	Rectangular	24 x 14 x 1.6	1999
Central	Moscow	10 g	Minted	999.9	Rectangular	26 x 14.5 x 1.42	2000
Far Eastern	Kolyma	10 g	Minted	999.9	Rectangular	24 x 14 x 2	2002
Siberia	Krastsvetmet	5 g	Minted	999.9	Rectangular	23.1 x 14.1 x 1.0	1996
Central	Prioksky	5 g	Minted	999.9	Rectangular	25 x 15 x 1	1996
Urals	Ekaterinburg	5 g	Minted	999.9	Rectangular	23.5 x 14	1996
Siberia	Novosibirsk	5 g	Minted	999.9	Rectangular	22 x 13 x 0.9	1999
Central	Moscow	5 g	Minted	999.9	Rectangular	22.7 x 14.1 x 0.9	2000
Far Eastern	Kolyma	5 g	Minted	999.9	Rectangular	22 x 13 x 1	2002
Siberia	Krastsvetmet	1 g	Minted	999.9	Rectangular	13.1 x 8.1 x 0.7	1996
Central	Prioksky	1 g	Minted	999.9	Rectangular	15 x 9 x 0.5	1996
Urals	Ekaterinburg	1 g	Minted	999.9	Rectangular	13.5 x 8	1996
Central	Moscow	1 g	Minted	999.9	Rectangular	14.2 x 8.9 x 0.85	2007

Source: Russian refiners. # First issued with the refiner's own official stamp. * Dimensions: some refiners have rounded down the dimensions to the nearest mm.

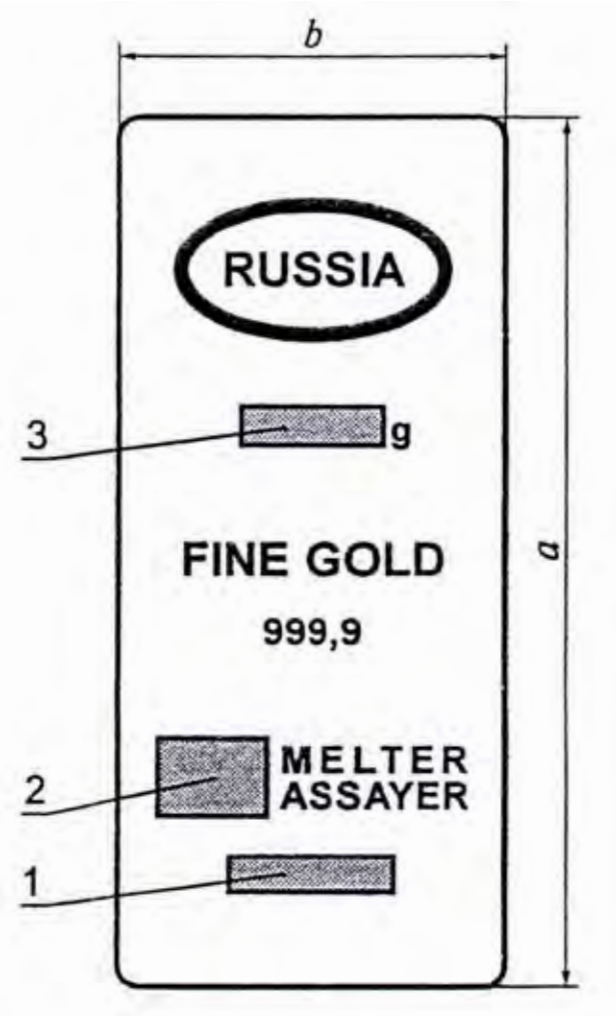
The current range of 38 minted bars has been issued progressively since 1996.

APPENDIX

KILOBARS

AUTHORIZED MARKINGS IN RUSSIAN AND ENGLISH

Since 2000, the markings on kilobars have been regulated in accordance with the Russian Federation National Standards (GOST) document: P 51572-2000.



References

3. Weight in grams.

2. Official stamp of the refiner.

1. Fineness.

The length (a) and the width (b) must fall within authorized dimensions.

Length: 105.0 – 116.0 mm

Width: 38.0 – 46.0 mm

APPENDIX

400 OZ BARS

INTERPRETING THE QUALITY MARKS

The table below indicates, for each of the 4 quality marks that are stamped on 400 oz bars, the maximum authorized content of 17 other metals when the bar has a gold purity of 99.99%, 99.98% or 99.95%.

Quality Mark	Gold Purity	Maximum Percentages (%)				
	%	Silver	Platinum	Palladium	Copper	Lead
ЗлА-1	99.99	0.005	0.0005	0.0005	0.0005	0.0005
ЗлА-2	99.99	0.005	0.001	0.003	0.001	0.001
ЗлА-3	99.98	0.015	0.005	0.005	0.005	0.005
ЗлА-4	99.95	0.035	0.005	0.010	-	-

Quality Mark	Iron	Zinc	Bismuth	Tin	Manganese	Silicon
ЗлА-1	0.0005	0.0005	0.0005	0.0005	0.001	0.001
ЗлА-2	0.001	0.001	0.001	0.001	0.0005	0.003
ЗлА-3	0.001	0.001	0.001	0.001	0.0005 -	
ЗлА-4	-	-	-	-	-	-

Quality Mark	Magnesium	Chromium	Nickel	Antimony	Rhodium	Overall
ЗлА-1	0.001	0.0005	0.0005	0.0005	0.0005	**0.01**
ЗлА-2	0.003	0.0005	0.0005	0.001	0.001	**0.01**
ЗлА-3	-	0.0005	0.0005	0.001	0.001	**0.02**
ЗлА-4	-	-	-	-	0.002	**0.05**

Source: Russian Federation National Standards (GOST) document: 28058-89 (1998).

Uralelectromed
Urals

The quality marks, for which Russian refiners are renowned, have been applied to 400 oz bars since the early 1970s.

ADDENDUM

SILVER, PLATINUM AND PALLADIUM BARS

MANUFACTURED IN THE RUSSIAN FEDERATION

RUSSIA

FOCUS

SILVER

Accredited Refiners
Range of Silver Bars
Silver Exports
Silver Prices

PLATINUM

Accredited Refiners
Range of Platinum Bars
Platinum Exports
Platinum Prices

PALLADIUM

Accredited Refiners
Range of Palladium Bars
Palladium Exports
Palladium Prices

Krastsvetmet (Siberia) refines more than 90% of platinum and palladium mined in the Russian Federation.

The Russian Federation is also a leading producer of silver, platinum and palladium for the international market.

WORLD MINE PRODUCTION AND RUSSIAN EXPORTS IN 2008

Category	World Mine Production	Russian Exports	Russian Mine Production
	Tonnes*	Tonnes#	World Ranking*
Silver	21,178.0	1,136.0	7
Platinum	191.3	10.8	2
Palladium	198.5	155.0	1

Sources: * GFMS Ltd – London. # The Gokhran of Russia.

SILVER

ACCREDITED REFINERS

There are 7 silver refiners in the Russian Federation that are accredited to the **London Bullion Market Association** (LBMA).

Federal District	Silver Refiner	Accreditation Date
Siberia	Novosibirsk	28 April 1999
Central	Shelkovsky	28 April 1999
Urals	Ekaterinburg	28 April 1999
Siberia	Krastsvetmet	2 June 1999
Central	Prioksky	24 June 1999
Urals	Uralelectromed	24 August 2004
Far Eastern	Kolyma	1 September 2006

Source: London Bullion Market Association

Novosibirsk
Siberia

The Russian Federation is the 7th largest silver producing country.

Novosibirsk
Siberia

London Good Delivery silver bar.

London Good Delivery (LGD) silver bar:

- Minimum weight: 750 oz (approximately 23 kg).
- Maximum weight: 1,100 oz (approximately 34 kg).
- Minimum fineness: 999.0 parts silver in 1,000 parts.

RANGE OF SILVER BARS

LBMA-Accredited Refiners

The 7 refiners produce Good Delivery silver bars in weights ranging between 28 kg and 32 kg. The silver purity is usually 99.99%.

Federal District	Silver Refiner	Fineness	Gram Weight
Siberia	Krastsvetmet	999.9	28 – 32 kg
Siberia	Novosibirsk	999.9, 999.8, 999.0	28 – 32 kg, 50 g – 32 kg
		999.9	1000, 500, 250, 100, 50, 20, 10, 5, 1
Central	Prioksky	999.9	28 – 32 kg
Central	Shelkovsky	999.9	28 – 32 kg, 1000, 500, 250, 100
Urals	Ekaterinburg	999.9, 999.8, 999.0	28 – 32 kg
		999.9	1000, 500, 250, 100, 50, 20, 10, 5, 1
Urals	Uralelectromed	999.9, 999.8	28 – 31 kg
Far Eastern	Kolyma	999.9	28 – 32 kg

Source: Russian refiners

Moscow (Central), as a non-accredited silver refiner, also manufactures a range of silver bars.

Kolyma
Far Eastern

SILVER EXPORTS

In recent years, annual silver exports have ranged between 764 tonnes (2003) and 1,136 tonnes (2008).

Year	Exports*	Indicative Value of Exports#		Exchange Rate
	Tonnes	US Dollars Millions	Roubles Billions	Rouble Per US Dollar
2003	764	120	3.7	30.69
2004	1,144	245	7.1	28.81
2005	1,020	240	6.8	28.28
2006	950	353	9.6	27.19
2007	780	336	8.6	25.58
2008	1,136	548	13.6	24.85

Source: The Gokhran of Russia. * Exports: includes bars, powders, granules, semi-finished products and other forms (excludes finished products, such as jewellery). # GIR estimates based on annual average London US dollar silver prices and IMF rouble /dollar exchange rates.

Novosibirsk
Siberia

Refining silver.

SILVER PRICES

The rouble silver price per troy ounce is normally closely related to the international US dollar price at the prevailing rouble/US dollar exchange rate.

Over the period 2000-2008, the annual average rouble price increased by more than 180%.

Year	SILVER				Exchange Rate
	US Dollar*		Rouble		Rouble
	Average	% +/-	Average	% +/-	Per US Dollar
2000	**4.95**	- 5.2	**139**	+ 7.8	28.13
2001	**4.37**	- 11.7	**127**	- 8.6	29.17
2002	**4.60**	+ 5.3	**144**	+ 13.4	31.35
2003	**4.88**	+ 6.1	**150**	+ 4.2	30.69
2004	**6.66**	+ 36.5	**192**	+ 28.0	28.81
2005	**7.31**	+ 9.8	**207**	+ 7.8	28.28
2006	**11.55**	+ 58.0	**314**	+ 51.7	27.19
2007	**13.38**	+ 15.8	**342**	+ 8.9	25.58
2008	**14.99**	+ 12.0	**373**	+ 9.1	24.85

Sources: London Silver Fixing Prices – data source: www.lbma.org.uk * Records the p.m. (afternoon) fixing price. Rouble prices are derived by converting the US dollar silver prices at the average annual US dollar/rouble exchange rates: IMF International Financial Statistics.

Krastsvetmet
Siberia

The Russian Federation exported 1,136 tonnes of silver in 2008.

Uralelectromed
Urals

PLATINUM

ACCREDITED REFINERS

There are two platinum refiners in the Russian Federation that are accredited to the **London Platinum and Palladium Market** (LPPM).

Federal District	Platinum Refiner	Accreditation Date
Siberia	Krastsvetmet	1 April 1996
Urals	Ekaterinburg	2000

Source: London Platinum and Palladium Market (LPPM)

Krastsvetmet
Siberia

The Russian Federation is the 2nd largest platinum producing country.

London/Zurich Good Delivery platinum plate or ingot:

- Minimum weight: 1 kg (32.151 oz).
- Maximum weight: 6 kg (192.904 oz).
- Minimum fineness: 99.95% platinum .

RANGE OF PLATINUM BARS

LPPM-Accredited Refiners

While both refiners manufacture Good Delivery bars in weights that range up to 5.5 kg, Ekaterinburg (Urals) also manufactures an extensive range of small bars, 500 g and less.

Federal District	Platinum Refiner	Fineness	Gram Weight
Siberia	Krastsvetmet	999.9	Not more than 5.5 kg
Urals	Ekaterinburg	999.9, 999.8, 999.5 999.0	5.5 kg
		999.8, 999.5	500, 250, 100, 50, 20, 10, 5

Krastsvetmet
Siberia

London/Zurich Good Delivery platinum bar.

Non-Accredited Refiners

Federal District	Platinum Refiner	Fineness	Gram Weight
Central	Prioksky	999.5 – 999.8 999.5 – 999.8	Not more than 5.5 kg 100, 50, 20, 10, 5
Siberia	Novosibirsk	999.9, 999.8, 999.5 999.0	5.5 kg
		999.8, 999.5	500, 250, 100, 50, 20, 10, 5

Source: Russian refiners

Moscow (Central) also manufactures a range of platinum bars.

Ekaterinburg
Urals

Ekaterinburg
Urals

PLATINUM EXPORTS

In recent years, annual platinum exports have ranged between 24.5 tonnes (2003) and 8.6 tonnes (2007).

Year	Exports* Tonnes	Indicative Value of Exports#		Exchange Rate
		US Dollars Millions	Roubles Billions	Rouble Per US Dollar
2003	24.5	545	16.7	30.69
2004	15.8	429	12.4	28.81
2005	17.0	490	13.9	28.28
2006	14.5	532	14.5	27.19
2007	8.6	361	9.2	25.58
2008	10.8	547	13.6	24.85

Source: The Gokhran of Russia. * Exports: includes bars, powders, granules, semi-finished products and other forms (excludes finished products, such as jewellery). # GIR estimates based on annual average London US dollar platinum prices and IMF rouble/dollar exchange rates.

Krastsvetmet
Siberia

Refining platinum.

PLATINUM PRICES

The rouble platinum price per troy ounce is normally closely related to the international US dollar price at the prevailing rouble/US dollar exchange rate.

Over the period 2000-2008, the annual average rouble price increased by more than 300%.

Year	PLATINUM				Exchange Rate
	US Dollar*		Rouble		Rouble
	Average	% +/-	Average	% +/-	Per US Dollar
2000	**544.23**	+ 44.4	**15,309**	+ 65.0	28.13
2001	**529.33**	- 2.7	**15,441**	+ 0.9	29.17
2002	**539.81**	+ 2.0	**16,923**	+ 9.6	31.35
2003	**691.87**	+ 28.2	**21,233**	+ 25.5	30.69
2004	**845.21**	+ 22.2	**24,351**	+ 14.7	28.81
2005	**896.89**	+ 6.1	**25,364**	+ 4.2	28.28
2006	**1,141.67**	+ 27.3	**31,042**	+ 22.4	27.19
2007	**1,304.79**	+ 14.3	**33,377**	+ 7.5	25.58
2008	**1,576.40**	+ 20.8	**39,174**	+ 17.4	24.85

Sources: London Platinum Fixing Prices – London Platinum and Palladium Market: www.lppm.org.uk. * Records the p.m. (afternoon) fixing price. Rouble prices are derived by converting the US dollar platinum prices at the average annual US dollar/rouble exchange rates: IMF International Financial Statistics.

Platinum bar in the process of manufacture at Krastsvetmet (Siberia).

The Russian Federation exported 10.8 tonnes of platinum in 2008.

Certificate of accreditation to the London Platinum and Palladium Market.

PALLADIUM

ACCREDITED REFINERS

There are two palladium refiners in the Russian Federation that are accredited to the **London Platinum and Palladium Market** (LPPM).

Federal District	Palladium Refiner	Accreditation Date
Siberia	Krastsvetmet	1 April 1996
Urals	Ekaterinburg	7 May 2001

Source: London Platinum and Palladium Market (LPPM)

Krastsvetmet
Siberia

The Russian Federation is the world's largest palladium producing country.

London/Zurich Good Delivery palladium plate or ingot:

- Minimum weight: 1 kg (32.151 oz).
- Maximum weight: 6 kg (192.904 oz).
- Minimum fineness: 99.95% palladium.

RANGE OF PALLADIUM BARS

LPPM-Accredited Refiners

While both refiners manufacture Good Delivery bars in weights that range up to 3.5 kg, Ekaterinburg (Urals) also manufactures an extensive range of small bars, 500 g and less.

Federal District	Palladium Refiner	Fineness	Gram Weight
Siberia	Krastsvetmet	999.8	Not more than 3.5 kg
Urals	Ekaterinburg	999.8, 999.5, 999.0	3.5 kg
		999.5	500, 250, 100, 50, 20, 10

Krastsvetmet
Siberia

London/Zurich Good Delivery palladium bar.

Non-Accredited Refiners

Federal District	Palladium Refiner	Fineness	Gram Weight
Central	Prioksky	999.5 – 999.8 999.5 – 999.8	Not more than 5.5 kg 100, 50, 20, 10, 5
Siberia	Novosibirsk	999.8, 999.5, 999.0	3.5 kg
		999.5	500, 250, 100, 50, 20, 10

Source: Russian refiners

Moscow (Central) also manufactures a range of palladium bars.

Ekaterinburg
Urals

Ekaterinburg
Urals

PALLADIUM EXPORTS

In recent years, annual palladium exports have ranged between 75 tonnes (2003) and 155 tonnes (2008).

Year	Exports*	Indicative Value of Exports#		Exchange Rate
	Tonnes	US Dollars Millions	Roubles Billions	Rouble Per US Dollar
2003	75.0	483	14.8	30.69
2004	132.5	981	28.3	28.81
2005	126.8	822	23.2	28.28
2006	103.4	1,065	29.0	27.19
2007	132.9	1,515	38.7	25.58
2008	155.0	1,755	43.6	24.85

Source: The Gokhran of Russia. * Exports: includes bars, powders, granules, semi-finished products and other forms (excludes finished products, such as jewellery). # GIR estimates based on annual average London US dollar palladium prices and IMF rouble/dollar exchange rates.

Krastsvetmet
Siberia

Refining palladium.

PALLADIUM PRICES

The rouble palladium price per troy ounce is normally closely related to the international US dollar price at the prevailing rouble/US dollar exchange rate.

Over the period 2000-2008, the annual average rouble price fell by more than 50%.

Year	PALLADIUM				Exchange Rate
	US Dollar		Rouble		Rouble
	Average*	% +/-	Average	% +/-	Per US Dollar
2000	**681.10**	+ 90.3	**19,159**	+ 117.4	28.13
2001	**603.69**	- 11.4	**17,610**	- 8.1	29.17
2002	**336.61**	- 44.2	**10,553**	- 40.1	31.35
2003	**200.29**	- 40.5	**6,147**	- 41.8	30.69
2004	**230.19**	+ 14.9	**6,632**	+ 7.9	28.81
2005	**201.66**	- 12.4	**5,703**	- 14.0	28.28
2006	**320.43**	+ 58.9	**8,712**	+ 52.8	27.19
2007	**354.66**	+ 10.7	**9,072**	+ 4.1	25.58
2008	**352.19**	- 0.7	**8,752**	- 3.5	24.85

Sources: London Palladium Fixing Prices – London Platinum and Palladium Market: www.lppm.org.uk. * Records the p.m. (afternoon) fixing price. Rouble prices are derived by converting the US dollar palladium prices at the average annual US dollar/rouble exchange rates: IMF International Financial Statistics.

Krastsvetmet
Siberia

The Russian Federation exported 155 tonnes of palladium in 2008.

Certificate of accreditation to the London Platinum and Palladium Market.

SUPPLEMENTS

RUSSIAN GOLD REFINERS

RUSSIA

FOCUS

Siberia	The Gulidov Krasnoyarsk Non-Ferrous Metals Plant (Krastsvetmet)
Siberia	Novosibirsk Refinery Plant
Central	Moscow Special Alloys Processing Plant (MZSS)
Central	Prioksky Non-Ferrous Metals Plant
Central	Shelkovsky Plant of Secondary Precious Metals
Urals	Ekaterinburg Non-Ferrous Metal Processing Plant
Urals	Uralelectromed
Far Eastern	Kolyma Refinery

The supplements were published separately on www.goldbarsworldwide.com between June and September 2009.

Kolyma (Far Eastern), founded in 1997, is the most recently established gold refiner in the Russian Federation.

OJSC THE GULIDOV KRASNOYARSK NON-FERROUS METALS PLANT

KRASTSVETMET

KRASNOYARSK, SIBERIA
RUSSIAN FEDERATION

LOCATION

The Gulidov Krasnoyarsk Non-Ferrous Metals Plant, the largest gold (and platinum group metals) refiner and bar manufacturer in the Russian Federation, has its headquarters and gold refinery in the city of Krasnoyarsk in Siberia.

Krasnoyarsk (which means "beautiful bank of a river") is Siberia's second largest city. It is situated across the banks of the Yenisey river, about 3,500 km east of Moscow.

The company, whose abbreviated name is **Krastsvetmet**, manufactures London Good Delivery 400 oz bars and a standard range of 4 small cast bars and 6 minted bars:

Cast: 400 oz, 1000 g, 500 g, 250 g, 100 g
Minted: 100 g, 50 g, 20 g, 10 g, 5 g, 1 g

ACCREDITATION

1999 London Bullion Market Association (LBMA)
2007 Dubai Multi Commodities Centre

* Although the Krasnoyarsk Plant was accredited to the LBMA under its own name in 1999, it had previously manufactured London Good Delivery 400 oz bars as a USSR/ Russian State Refinery.

BACKGROUND

The company was established in 1943 during the Great Patriotic War (1941-1945) to focus on the refining of platinum group metals.

Although a gold refinery was opened in 1959, its annual gold output over the next 35 years was relatively low, normally less than 10 tonnes.

Since the mid-1990s, however, when Russian refiners were permitted to act independently and compete for business, the company has expanded rapidly, not least to become the largest refiner of newly-mined gold in the Russian Federation. In recent years, its share has been around 50%.

The company, which became an Open Joint Stock Company (OJSC) in 1994, is wholly owned by the Krasnoyarsk Region Administration of the Russian Federation. Its OJSC status means that it is controlled by a Board of Directors and can operate with much flexibility.

It has operated under several names: Krasnoyarsk Refinery Plant (1943-1967), Krasnoyarsk Non-Ferrous Metals Plant (1967-1999) and The Gulidov Krasnoyarsk Non-Ferrous Metals Plant (since 1999). Vladimir Gulidov, commemorated in the name, was a former Director General who had worked at the company for 33 years until 1999.

Krastsvetmet was founded during the Great Patriotic War in 1943.

The company is the largest gold refiner in the Russian Federation.

Krastsvetmet has been accredited to the LBMA under its own name since 1999.

Apart from gold refining, the recycling of scrap and the manufacture of bars, the company focuses on gold products for the jewellery industry.

This has included the establishment of a "Jewellery Manufacture" unit to produce gold, platinum and palladium jewellery. Opened in 1994, it has grown to become Russia's second largest gold jewellery manufacturer, producing more than 7 tonnes of carat gold jewellery (mainly 14 carat chains and bracelets) in 2008 for the Russian and international market.

Krastsvetmet has refined gold since 1959.

GOLD REFINING

The company has the capacity to refine mine doré (gold and silver), electrolytic slimes (derived from copper and silver), precipitated gold slimes, loaded carbon and most forms of scrap gold. Newly-mined gold is obtained mainly from the Siberian, Far Eastern and Urals regions.

Gold refining methods include wet chemical chlorination (chlorine gas) and precipitation.

The company is also renowned as the refiner of more than 90% of platinum and palladium mined in the Russian Federation and as the manufacturer of an extensive range of platinum group metal products for the international market. It has operated a substantial Research and Development Department since 1965.

Apart from Krasnoyarsk, representative offices have been established in Moscow (1995) and Ekaterinburg (2008).

Annual gold refining capacity: around 250 tonnes.

Number of employees: 2,763. The plant operates on a 24-hour basis in three shifts, 7 days per week.

TECHNICAL DESCRIPTION – CURRENT BARS

Weight	Type	Fineness	Shape	Dimensions mm	First Issued*	Serial Number System	System Introduced
400 oz	Cast	999.9, 999.8	Rectangular	254 x 88 x 35 229 x 59 (base)	1997	3 letters Plus 4 numbers Plus year date	1997 1997
1000 g	Cast	999.9	Rectangular	108.4 x 48.0 – 48.9 x 10.6 – 11.2	1997	6 numbers	1997
500 g	Cast	999.9	Rectangular	82.3 – 82.5 x 36.1 – 36.2 X 9.7 – 10.0	1997	6 numbers	1997
250 g	Cast	999.9	Rectangular	53.0 – 53.9 x 30.6 – 31.2 X 8.7 – 9.1	1997	6 numbers	1997
100 g	Cast	999.9	Rectangular	41.0 x 41.8 – 21.0 – 22.0 X 6.4 – 7.0	1997	6 numbers	1997
100 g	Minted	999.9	Rectangular	55.0 x 32.0 x 3.4	1996	7 numbers	1996
50 g	Minted	999.9	Rectangular	40.20 x 25.15 x 3.10	1996	7 numbers	1996
20 g	Minted	999.9	Rectangular	32.11 x 18.70 x 2.07	1996	7 numbers	1996
10 g	Minted	999.9	Rectangular	25.15 x 15.16 x 1.65	1996	7 numbers	1996
5 g	Minted	999.9	Rectangular	23.15 x 14.12 x 1.00	1996	7 numbers	1996
1 g	Minted	999.9	Rectangular	13.12 x 8.13 x 0.77	1996	7 numbers	1996

Source: The Gulidov Krasnoyarsk Non-Ferrous Metals Plant. * First issued in current dimensions and with the company's official stamp.

The company, if requested, has the capacity to also manufacture other small bars: 50 g, 20 g (cast) and 250 g, 500 g, 1000 g (minted), as well as customized small cast and minted bars for external entities.

Serial Numbering Systems

400 oz: 3 letters in the Cyrillic alphabet: 1st and 2nd letters “Kp” stand for the Krasnoyarsk Plant. 3rd letter represents the batch reference, changed when 9,999 bars have been produced or at the beginning of each year. The 4 numbers range from 0001 up to 9999.

Small cast bars: The first 4 numbers refer to the batch number. The next 2 numbers refer to serial number of the bar in the batch.

Minted bars: The first 4 numbers refer to the batch number. The next 3 numbers refer to the serial number of the bar in the batch.

HISTORY OF GOLD BAR MANUFACTURE

Although the company’s gold refinery was established in 1959, few 400 oz bars were manufactured until the 1990s.

Since 1997, its 400 oz bars have been issued with the company’s own official stamp.

In 1996, the company started manufacturing minted bars, followed by small cast bars (1000 g and less) in 1997.

TRADE COMMUNICATION

The Gulidov Krasnoyarsk Non-Ferrous Metals Plant
1 Transportny Proyezd, Krasnoyarsk, 660027, Russia

Tel: +7-391-259 3101
Fax: +7-391-264 2903 or 6762
Email: ves@knfmp.ru
shulgin@knfmp.ru

Website: www.krastsvetmet.com
www.krastsvetmet.ru

OFFICIAL STAMPS

On 400 oz bars issued by Krastsvetmet since 1997, and on small bars since 1996.

РОССИЯ

RUSSIA

National stamp in Russian or English. In use since 1996.

Kilobars have been manufactured since 1997.

Minted bars have been manufactured since 1996.

EXAMPLES OF GOLD BARS

Small cast and minted bars from 1 g to 1000 g.

Krastsvetmet has manufactured 400 oz bars with its own official stamp since 1997.

Certificates are issued for each cast and minted bar.

GOLD JEWELLERY FABRICATION

Krastsvetmet is the second largest gold jewellery manufacturer in the Russian Federation.

In 2008, the company produced more than 7 tonnes, mainly in 14 carat, for the national and international market.

The “Jewellery Manufacture” unit, established in 1994, focuses on the fabrication of chains and bracelets.

PLATINUM GROUP METALS

London/Zurich Good Delivery
platinum bar

London/Zurich Good Delivery
palladium bar

Krastsvetmet refines more than 90% of platinum and palladium mined in the Russian Federation.

Krastsvetmet in 1946.

The company was originally established in 1943 to focus on the refining of platinum group metals.

КРАСЦВЕТМЕТ

This supplement is supported by
The Gokhran of Russia

OJSC NOVOSIBIRSK REFINERY PLANT

NOVOSIBIRSK, SIBERIA
RUSSIAN FEDERATION

LOCATION

The **Novosibirsk Refinery Plant**, Russia's legendary gold refining and bar manufacturing plant during the USSR period, has its headquarters and gold refinery in the city of Novosibirsk in Siberia.

Novosibirsk (which means "New Siberia") is Russia's third largest city and the capital of the Federal District of Siberia. It is located across the banks of the Ob river, approximately 3,000 km east of Moscow.

The plant, established in 1941, manufactures London Good Delivery 400 oz bars and a standard range of 6 small cast bars and 5 minted bars:

Cast: 400 oz, 1000 g, 500 g, 250 g, 100 g, 50 g, 20 g
Minted: 100 g, 50 g, 20 g, 10 g, 5 g

ACCREDITATION

1999* London Bullion Market Association (LBMA)

* Although the Novosibirsk Refinery Plant was accredited to the LBMA under this name in 1999, it had previously manufactured London Good Delivery 400 oz bars as a USSR/Russian State Refinery since 1941.

BACKGROUND

The company's origins date back to the Great Patriotic War (1941-1945), when Russian gold refining and bar manufacture in Moscow was transferred to Novosibirsk in 1941.

At the start of the war, the State Refinery in Moscow, whose 400 oz bars had been accepted by the London Gold Market since 1937, was the major gold refinery in the USSR. In July 1941, however, the plant was dismantled and by October had resumed operations at the Novosibirsk Refinery Plant's current site in Kirov Street.

Over the next 49 years, from 1941 until 1990, the plant manufactured almost all of the USSR's London Good Delivery 400 oz bars, producing at its peak more than 300 tonnes in a single year during the 1980s. It produced these bars from gold mined not only in Russia but also in other USSR republics, notably Uzbekistan, Kazakhstan and Kyrgyzstan.

In 1990, the company (then known as the "Novosibirsk Non-Ferrous Metals Plant") was officially closed down, when much of its equipment was transferred to the Prioksky Non-Ferrous Metals Plant, which had been established in 1989 in the Ryazan region, about 300 km east of Moscow.

However, the company was re-established in late 1990, mainly with new equipment, and since 1992 has been known as the Novosibirsk Refinery Plant.

The legendary Novosibirsk refinery was established during the Great Patriotic War in 1941.

For 49 years almost all of the USSR's London Good Delivery bars were manufactured at Novosibirsk.

The Novosibirsk refinery was accredited to the LBMA under its own name in 1999.

The company, which is wholly owned by the Government of the Russian Federation, became an Open Joint Stock Company (OJSC) in 2003. This status means that it is controlled by a Board of Directors and can operate with much flexibility.

Apart from gold refining, the recycling of scrap and the manufacture of bars, it focuses on gold products for the jewellery industry (mainly granules), while also providing gold in various forms for the electronics, dental and other industries.

Kilobars have been manufactured since 1967.

GOLD REFINING

The plant has the capacity to refine mine doré (gold and silver), electrolytic slimes (derived from copper and silver), precipitated gold slimes, loaded carbon and most forms of scrap gold. Newly-mined gold is obtained mainly from the Siberian and Far Eastern regions.

Gold refining methods include electro-chemical and wet chemical parting from impurities, and smelting in inductive electric furnaces.

The company also refines platinum group metals and silver, manufacturing a range of platinum, palladium and silver bars.

Annual gold refining capacity: around 300 tonnes.

Number of employees: 180

TECHNICAL DESCRIPTION – CURRENT BARS

Weight	Type	Fineness	Shape	Dimensions mm	First Issued*	Serial Number System	System Introduced
400 oz	Cast	999.9, 999.8	Rectangular	254 x 88 x 35 229 x 59 (base)	1996	2 letters Plus 4 numbers Plus year date	1990** 1996
1000 g	Cast	999.9	Rectangular	113 x 51 x 10	1996	2 letters Plus 4 numbers	1996
500 g	Cast	999.9	Rectangular	83.5 x 37 x 10	1996	2 letters Plus 4 numbers	1996
250 g	Cast	999.9	Rectangular	60 x 29 x 8	1996	2 letters Plus 4 numbers	1996
100 g	Cast	999.9	Rectangular	40 x 21 x 7	1996	2 letters Plus 4 numbers	1996
50 g	Cast	999.9	Rectangular	31.2 x 16.5 x 4	1996	2 letters Plus 4 numbers	1996
20 g	Cast	999.9	Rectangular	25 x 11.6 x 3.5	1996	2 letters Plus 4 numbers	1996
100 g	Minted	999.9	Rectangular	56.3 x 32.1 x 2.96	1999	2 letters Plus 4 numbers	1999
50 g	Minted	999.9	Rectangular	48 x 28 x 2.9	1999	2 letters Plus 4 numbers	1999
20 g	Minted	999.9	Rectangular	32 x 18 x 1.8	1999	2 letters Plus 4 numbers	1999
10 g	Minted	999.9	Rectangular	24 x 14 x 1.6	1999	2 letters Plus 4 numbers	1999
5 g	Minted	999.9	Rectangular	22 x 13 x 0.9	1999	2 letters Plus 4 numbers	1999

Source: Novosibirsk Refinery Plant. * Refers to the dates when the company's bars were first marked with its own official stamp. ** The "1990" date refers to the date of the company's re-establishment.

The company also has the capacity to produce cast bars of any weight, if requested.

It has manufactured customized cast and minted bars for banks since 1999.

Serial Numbering System

All bars: 2 letters in the Cyrillic alphabet and 4 numbers ranged from 0001 up to 9999.

400 oz bars: 1st letter is the "H " only, which stands for Novosibirsk Refinery Plant. 2nd letter is arbitrary, changed at the beginning of each year or when more than 9,999 bars have been produced.

1000 g and smaller bars: both letters are arbitrary. They change at the beginning of each year or when more than 9,999 bars have been produced.

On minted bars (from 5 g up to 100 g), the serial numbering system is stamped on the reverse side.

HISTORY OF GOLD BAR MANUFACTURE

The company has manufactured 400 oz bars continuously since 1941, apart from a brief period around 1990.

Between 1967 and 1990, a range of small bars, bearing the USSR ("CCCP") official stamp, were manufactured.

Cast: 1000 g, 500 g, 250 g, 100 g, 50 g, 20 g
Minted: 20 g, 10 g

In the 1980s, it is reported that customized kilobars were also manufactured for export by The Bank for Foreign Economic Affairs of the USSR (known earlier as The Bank for Foreign Trade).

In 1996, the current range of 7 cast bars, marked with Russia's national official stamp and the company's own official stamp, was issued.

In 1999, the range of 5 minted bars was issued.

TRADE COMMUNICATION

Headquarters

Novosibirsk Refinery Plant
103 Kirov Street, Novosibirsk 630008 Russia

Tel: +7-383-266 1057
Fax: +7-383-266 1071
Email: naz_nsk@mail.ru

OFFICIAL STAMPS

On all bars issued by the Novosibirsk Refinery Plant since 1996.

The national stamp in Russian or English. In use since 1996.

Assaying gold.

НОВОСИБИРСКИЙ АФФИНАЖНЫЙ ЗАВОД

EXAMPLES OF SMALL GOLD BARS

1000 g 500 g 50 g 10 g

Small bars, packed in wooden boxes, for transportation.

Novosibirsk has been the largest manufacturer of small gold bars (1000 g and less) in the Russian Federation in recent years.

LONDON GOOD DELIVERY 400 OZ BAR

Most 400 oz bars are manufactured to a fineness of 999.9.

Manufacturing 400 oz bars.

Gold granules for the jewellery industry.

HISTORICAL LONDON GOOD DELIVERY 400 OZ BAR

Manufactured at the Novosibirsk refinery during the USSR period.

Novosibirsk applied the USSR ("CCCP") official stamp to 400 oz bars from 1947 until 1996.

The Novosibirsk refinery in the 1970s.

During the USSR period, it manufactured London Good Delivery bars from gold mined not only in Russia but also in other USSR republics, notably Uzbekistan, Kazakhstan and Kyrgyzstan.

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FSUE MOSCOW SPECIAL ALLOYS PROCESSING PLANT

MZSS

MOSCOW, CENTRAL
RUSSIAN FEDERATION

LOCATION

The **Moscow Special Alloys Processing Plant**, a major supplier of gold products for the jewellery, electronics and decorative industries in the Russian Federation, has its headquarters and gold refinery in Moscow.

The company, whose abbreviated name is **MZSS**, manufactures London Good Delivery 400 oz bars and 11 smaller cast and minted bars:

Cast: 400 oz, 1000 g, 500 g, 250 g, 100 g, 50 g, 20 g
Minted: 50 g, 20 g, 10 g, 5 g, 1 g

MZSS was founded in 1946.

ACCREDITATION

2007 London Bullion Market Association

BACKGROUND

The Moscow Special Alloys Processing Plant, known by this name since 1959, traces its origins back to its establishment near Ploshad Ilyicha in Moscow in 1946.

Since 1965, it has been based at its large precious metals plant in Obrucheva Street on the outskirts of Moscow.

During the USSR period, the company was a major producer of gold products for the jewellery, electronics, decorative and other industries. It has continued to focus on these products, manufacturing approximately 4,500 different precious metal items and servicing more than 1,000 customers throughout the Russian Federation.

The company has operated as a Federal State Unitary Enterprise (FSUE) since 1999. It is owned by the Government of the Russian Federation and supervised by the Ministry of Finance.

The company opened its new gold refinery in 2001.

GOLD REFINING

Although MZSS had previously refined small quantities of gold, a significant gold refinery was established in 2001.

The company has the capacity to refine mine doré (predominantly gold), precipitated gold slimes and most forms of scrap (excluding electronic and dental scrap).

Gold refining methods include wet chemical parting and solvent extraction.

MZSS also manufactures a range of silver, platinum and palladium bars.

MZSS has been accredited to the LBMA under its own name since 2007.

Apart from Moscow, the company has had a representative office in Ekaterinburg since 2007.

Annual gold refining capacity: more than 10 tonnes.

Number of employees: 690

TECHNICAL DESCRIPTION – CURRENT BARS

Weight	Type	Fineness	Shape	Dimensions mm	First Issued*	Serial Number System	System Introduced
400 oz	Cast	999.9	Rectangular	254 x 88 x 35 229 x 88 (base)	2002	2 letters Plus 4 numbers Plus year date	2002 2002
1000 g	Cast	999.9	Rectangular	109.5 x 50 x 10.5	2000	2 letters Plus 5 numbers	2007
500 g	Cast	999.9	Rectangular	81.5 x 36 x 9.7	2000	1 letter Plus 5 numbers	2007
250 g	Cast	999.9	Rectangular	57.6 x 30 x 8.2	2000	1 letter Plus 5 numbers	2007
100 g	Cast	999.9	Rectangular	41.7 x 21.8 x 7	2000	1 letter Plus 5 numbers	2007
50 g	Cast	999.9	Rectangular	31 x 16.5 x 6.2	2000	1 letter Plus 5 numbers	2007
20 g	Cast	999.9	Rectangular	25 x 13 x 5	2000	1 letter Plus 5 numbers	2007
50 g	Minted	999.9	Rectangular	36.2 x 21.1 x 4	2000	7 numbers	2000
20 g	Minted	999.9	Rectangular	30 x 16.1 x 2.2	2000	7 numbers	2000
10 g	Minted	999.9	Rectangular	26 x 14.5 x 1.42	2000	7 numbers	2000
5 g	Minted	999.9	Rectangular	22.7 x 14.1 x 0.9	2000	7 numbers	2000
1 g	Minted	999.9	Rectangular	14.2 x 8.9 x 0.85	2007	6 numbers	2000

Source: Moscow Special Alloys Processing Plant. * In current dimensions and marked with the MZSS official stamp.

Serial Numbering System

400 oz: 2 letters in the Cyrillic alphabet: “3C” stands for the Moscow Plant. The 4 numbers represent the serial number. The year date is recorded separately.

Cast bars: 1000 g – 20 g: the letter “M” in the Cyrillic alphabet stands for MZSS. The next letter or number indicates the weight of the bar: 1000 g (M), 500 g (1), 250 g (2), 100 g (3), 50 g (4), 20 g (5). This is followed by a 5-digit serial number for 1,000 g bars and a 4-digit number for bars, 500 g to 20 g.

Minted bars: 7 numbers. The 1st number indicates the weight of the bar: 50 g (4), 20 g (3), 10 g (2), 5 g (1) and 1 g (5). This number is followed by a 6-digit serial number for bars, 50 g to 5 g, and a 5-digit number for the 1 g bar.

While the serial numbering systems are punched onto 400 oz and 1000 g bars, the other cast and minted bars have been marked with a laser since 2000.

The current range of small bars was launched in 2000.

HISTORY OF GOLD BAR MANUFACTURE

The company manufactured bars prior to the opening of its new refinery in 2001.

From 1988 until 1990, it is known that 1000 g cast bars were manufactured with the USSR official stamp.

In 2000, the current range of 1000 g, 500 g, 250 g, 100 g, 50 g and 20 g cast bars and 50 g, 20 g, 10 g and 5 g minted bars was launched.

In 2002, 400 oz bars were issued, followed by 1 g minted bars in 2007.

The company has also manufactured customized cast and minted bars for banks since 2002.

TRADE COMMUNICATION

Headquarters

The Moscow Special Alloys Processing Plant
31 Ul. Obrucheva, Moscow 117246, Russia

Tel: +7-495-334 9908
+7-495-334 7722
Fax: +7-495-334 9277
Email: mzss@asvt.ru

Website: www.mzss.ru

EXAMPLES OF GOLD BARS

Kilobars have been manufactured since 1988.

OFFICIAL STAMPS

On 400 oz bars issued by MZSS since 2002, and on small bars since 2000.

National stamp in Russian or English has been applied to bars since 2000.

MZSS has manufactured 400 oz bars, which incorporate its own official stamp, since 2002.

500 g

250 g

100 g

50 g

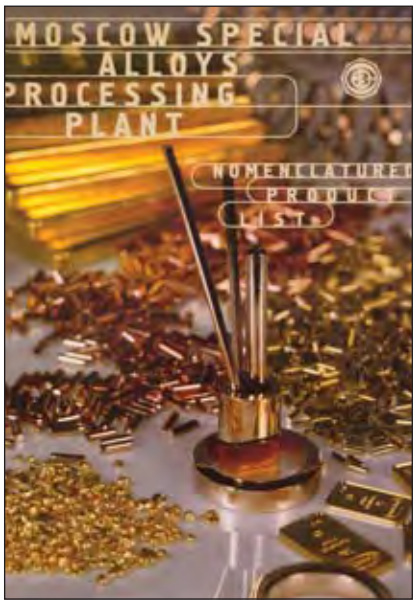
London Good Delivery 400 oz bar.

50 g 20 g 10 g 5 g

CUSTOMIZED BARS

Examples of customized minted bars for banks, manufactured since 2002.

MZSS established its large plant in Moscow in 1965.



MZSS manufactures approximately 4,500 different precious metal products, notably for the jewellery, electronics, decorative and dental industries.

MZSS is renowned as a major producer of gold leaf that adorns buildings throughout the Russian Federation.

Московский завод
по обработке специальных сплавов

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OJSC PRIOKSKY NON-FERROUS METALS PLANT

KASIMOV, RYAZAN REGION, CENTRAL RUSSIAN FEDERATION

LOCATION

The **Prioksky Non-Ferrous Metals Plant** has its headquarters and large gold refinery in the Prioksky District, near the city of Kasimov in the Ryazan region.

Kasimov, situated in the Meshchera National Nature Park on the bank of the Oka river, is about 300 km east of Moscow.

The company, established in 1989, manufactures London Good Delivery 400 oz bars, alongside a standard range of 4 small cast bars and 7 minted bars:

Cast: 400 oz, 1000 g, 500 g, 250 g, 100 g
Minted: 250 g, 100 g, 50 g, 20 g, 10 g, 5 g, 1 g

ACCREDITATION

1999* London Bullion Market Association (LBMA)

* Although the Prioksky refinery was accredited to the LBMA under its own name in 1999, it had previously manufactured London Good Delivery 400 oz bars as a USSR/Russian State Refinery between 1991 and 1997.

BACKGROUND

The company's large gold refinery was originally constructed to replace the Novosibirsk refining and bar manufacturing plant in Siberia. After the Novosibirsk plant was closed down in 1990, the Prioksky plant refined 90% of all gold mined in the USSR in 1991.

In 1996, Prioksky became a Federal State Unitary Enterprise (FSUE). Since 2003, it has operated as an Open Joint Stock Company (OJSC). Its OJSC status means that it is controlled by a Board of Directors and can act with much flexibility.

The company is wholly owned by the Federal Agency of Property Control on behalf of the Government of the Russian Federation.

Apart from gold refining, the recycling of scrap and the manufacture of bars, it manufactures finished gold products of high purity, as well as semi-finished gold products for the jewellery industry (granules, anodes, plates from alloys and powders).

GOLD REFINING

The company has the capacity to refine mine doré (gold and silver), electrolytic slimes (derived from silver), precipitated gold slimes and all forms of scrap gold. Newly-mined gold is obtained from the Urals, Siberian and Far Eastern regions.

Gold refining methods include pyrometallurgical chlorination, wet chemical chlorination (chlorine gas), electrolysis and solvent extraction.

The Prioksky Plant was established in 1989.

Its large refinery was originally constructed to refine the bulk of gold mined in the USSR.

The company has been accredited to the LBMA under its own name since 1999.

It also refines silver and platinum group metals, manufacturing an extensive range of silver, platinum and palladium bars.

Annual gold refining capacity: 260 tonnes.

Number of employees: 485

TECHNICAL DESCRIPTION – CURRENT BARS

Weight	Type	Fineness	Shape	Dimensions* mm	First Issued#	Serial Number System	System Introduced
400 oz	Cast	999.9, 999.8, 999.5	Rectangular	254 x 88 x 35 229 x 59 (base)	1997	2 letters Plus 4 numbers Plus year date	1991 1997
1000 g	Cast	999.9	Rectangular	114 x 51 x 10	1996	2 letters Plus 4 numbers	1994
500 g	Cast	999.9	Rectangular	82 x 36 x 10	1996	2 letters Plus 4 numbers	1994
250 g	Cast	999.9	Rectangular	64 x 32 x 7	1996	2 letters Plus 4 numbers	1994
100 g	Cast	999.9	Rectangular	42 x 23 x 6	1996	2 letters Plus 4 numbers	1994
250 g	Minted	999.9	Rectangular	79 x 47 x 4	1996	2 letters Plus 4 numbers	1994
100 g	Minted	999.9	Rectangular	54 x 31 x 3	1996	2 letters Plus 4 numbers	1994
50 g	Minted	999.9	Rectangular	36 x 21 x 4	1996	2 letters Plus 4 numbers	1994
20 g	Minted	999.9	Rectangular	33 x 19 x 2	1996	2 letters Plus 4 numbers	1994
10 g	Minted	999.9	Rectangular	29 x 17 x 1	1996	2 letters Plus 4 numbers	1994
5 g	Minted	999.9	Rectangular	25 x 15 x 1	1996	2 letters Plus 4 numbers	1994
1 g	Minted	999.9	Rectangular	15 x 9 x 0.5	1996	2 letters Plus 4 numbers	1994

Source: Prioksky Non-Ferrous Metals Plant. * Dimensions more than 1 mm are rounded. # First issued with the company's own official stamp.

Serial Numbering System

All bars: 2 letters in the Cyrillic alphabet and 4 numbers from 0001 to 9999.

400 oz: 1st letter "П" stands for the Prioksky Plant. 2nd letter is arbitrary, changed at the beginning of each year or when more than 9,999 are produced.

1000 g to 1 g: Both letters are arbitrary, changed at the beginning of each year or when more than 9,999 bars are produced.

Prioksky has manufactured small cast bars since 1994.

HISTORY OF GOLD BAR MANUFACTURE

The company has manufactured 400 oz bars since 1991.

In 1994, 1000 g, 500 g cast bars and 250 g, 100 g, 50 g, 20 g, 10 g, 5 g and 1 g minted bars were issued. The bars were marked with the USSRofficial stamp that incorporated a hammer and sickle.

In 1996, two additional cast bars were issued: 250 g and 100 g.

It has applied its own official stamp to its range of small bars (1000 g and less) since 1996, and to its 400 oz bars since 1997.

The company has also manufactured customized cast and minted bars for banks since 1998.

TRADE COMMUNICATION

Headquarters

OJSC Prioksky Non-Ferrous Metals Plant
Kasimov, Prioksky District, Ryazan region, 391303, Russia

Tel: +7 (49131) 319 99
Fax: +7 (49131) 205 49

Email: pzcm@zvetmet.ru
Website: www.zvetmet.ru

OFFICIAL STAMPS

On 400 oz bars issued by Prioksky since 1997, and on small bars since 1996.

РОССИЯ

RUSSIA

National stamp in Russian or English. In use since 1996.

EXAMPLES OF GOLD BARS

500 g

250 g

100 g

50 g

Manufacturing London Good Delivery 400 oz bars.

Although Prioksky has issued London Good Delivery (LGD) 400 oz bars under its own name since 1999, it had previously manufactured LGD bars as a USSR/State Refinery since 1991.

Small bars have recorded the official stamp of Prioksky since 1996.

Electrolysis of gold.

Prioksky is a major manufacturer of finished gold products of high purity, as well as semi-finished gold products for the jewellery industry.

Gold granules.

Construction of the large Prioksky plant was initiated in 1986.

In 1991, Prioksky refined 90% of all gold mined in the USSR.

Приокский завод цветных металлов

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OJSC SHELKOVSKY PLANT OF SECONDARY PRECIOUS METALS

SHELKOVO CITY, MOSCOW REGION, CENTRAL RUSSIAN FEDERATION

LOCATION

The **Shelkovsky Plant of Secondary Precious Metals** has its headquarters and gold refinery in Shelkovo city, 13 km north of Moscow.

The company manufactures London Good Delivery 400 oz bars and a standard range of 4 small cast bars:

Cast: 400 oz, 1000 g, 500 g, 250 g, 100 g

ACCREDITATION

1999* London Bullion Market Association (LBMA)

* Although the company was accredited to the LBMA under its own name in 1999, it had previously manufactured London Good Delivery 400 oz bars as a USSR/Russian refinery.

BACKGROUND

The Shelkovsky Plant of Secondary Precious Metals, known by this name since 1989, traces its origins back to 1941. It had previously been known as the Moscow Plant of Secondary Precious Metals.

The company, founded during the Great Patriotic War (1941-1945), was originally based in a church building in north east Moscow. It has operated from its large plant in Shelkovo city since 1990.

In 1996, it established a new gold refinery. In earlier years it had produced mainly non-standard gold bars for further refining at the Novosibirsk Refinery Plant in Siberia.

The company, which is wholly owned by the Government of the Russian Federation, became an Open Joint Stock Company (OJSC) in 2003. This status means that it is controlled by a Board of Directors and can operate with much flexibility.

Apart from gold refining, the recycling of scrap and the manufacture of bars, it focuses on gold products for the jewellery industry, mainly granules.

GOLD REFINING

The company has the capacity to refine mine doré (gold and silver), electrolytic slimes (copper and silver), precipitated gold slimes, loaded carbon and most forms of gold scrap.

Gold refining methods include wet chemical chlorination (aqua regia), electrolysis, wet chemical parting, solvent extraction and electric furnace smelting.

The company also refines silver, manufacturing a range of silver bars.

The Shelkovsky Plant traces its origins back to 1941 during the Great Patriotic War.

The company established a new gold refinery in 1996.

The Shelkovsky refinery has been accredited to the LBMA under its own name since 1999.

Apart from Shelkovo and Moscow, representative offices are located in Kazan and Samara (Volga) and Azov (Southern).

Annual gold refining capacity: 30 – 50 tonnes.

Number of employees: 400

TECHNICAL DESCRIPTION – CURRENT BARS

Weight	Type	Fineness	Shape	Dimensions mm	First Issued*	Serial Number System	System Introduced
400 oz	Cast	999.9	Rectangular	254 x 88 x 35 229 x 59 (base)	1996	2 letters Plus 4 numbers Plus year date	1996 1996
1000 g	Cast	999.9	Rectangular	107 x 50 x 11.5	1996	4 numbers	1996
500 g	Cast	999.9	Rectangular	82.5 x 35 x 10.5	1996	4 numbers	1996
250 g	Cast	999.9	Rectangular	53.5 x 30.5 x 10.5	1996	4 numbers	1996
100 g	Cast	999.9	Rectangular	40.5 x 20.5 x 7.2	1996	4 numbers	1996

Source: Shelkovsky Plant of Secondary Precious Metals. * First issued with the company's own official stamp.

Serial Numbering System

400 oz: 2 letters in the Cyrillic alphabet: 1st letter "Щ" stands for the Shelkovsky Plant. 2nd letter is arbitrary, changed when 9,999 bars have been produced or at the beginning of each year. The 4 numbers range from 0001 up to 9999. A year date was first applied in 1996.

HISTORY OF GOLD BAR MANUFACTURE

The company is known to have manufactured 400 oz bars with the USSR ("CCCP") official stamp between 1992 and 1997.

It has also applied its own official stamp to 400 oz bars since 1996, and to its range of 1000 g, 500 g, 250 g and 100 g cast bars, which were issued in the same year.

The company has manufactured customized cast bars for banks since 2000.

TRADE COMMUNICATION

Headquarters

Shelkovsky Plant of Secondary Precious Metals
103-A Zarechnaya Street, Shelkovo City, 141100 Russia

Tel: +7-495-526 4643
Fax: +7-495-256-289 90
Email: gupvdm@elnet.msk.ru

OFFICIAL STAMPS

On 400 oz bars and small bars issued by the Shelkovsky Plant since 1996.

National stamp in Russian and English. In use since 1996.

EXAMPLES OF GOLD BARS

Historical 400 oz bar.

The company marked 400 oz bars with the USSR “CCCP”) official stamp until 1997.

Kilobars have been manufactured since 1996.

The company manufactures an extensive range of precious metal powders.

Assaying laboratory.

London Good Delivery 28-32 kg silver bars manufactured by the Shelkovsky Plant.

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OJSC EKATERINBURG NON-FERROUS METALS PROCESSING PLANT

VERKHNYAYA PYSHMA, SVERDLOVSK REGION, URALS
RUSSIAN FEDERATION

LOCATION

The **Ekaterinburg Non-Ferrous Metals Processing Plant** has its headquarters and gold refinery in the town of Verkhnyaya Pyshma in the Sverdlovsk region of the Urals.

Verkhnyaya Pyshma is 10 km north of Ekaterinburg, the 4th largest city in the Russian Federation and the capital of the Sverdlovsk region.

Ekaterinburg, 1,900 km east of Moscow, was established by Tzar Peter the Great in 1723 when mineral deposits were discovered in the Urals. The naming of the city is associated with St Catherine, the patron saint of Russian mining and Peter's wife, who subsequently became the Empress Catherine I. During the USSR period, the city was known as Sverdlovsk.

The company manufactures London Good Delivery 400 oz bars, alongside a standard range of 6 small cast bars and 9 minted bars:

Cast: 400 oz, 1000 g, 500 g, 250 g, 100 g, 50 g, 20 g
Minted: 1000 g, 500 g, 250 g, 100 g, 50 g, 20 g, 10 g, 5 g, 1 g

ACCREDITATION

1999* London Bullion Market Association (LBMA)

* Although the Ekaterinburg refinery was accredited to the LBMA under its own name in 1999, it had previously manufactured London Good Delivery 400 oz bars as a USSR/Russian State refinery.

BACKGROUND

The company, established as an Open Joint Stock Company (OJSC) in 1993, was founded during the reign of Tzar Nicholas II in 1916.

The name, under which it has operated, has changed several times: National Refinery Plant (1916), Sverdlovsk Refinery Plant (1923), P/YA No 170 (1940), P/YA No A175 MVD (1954), Sverdlovsk NMP Plant (1963), Ekaterinburg Non-Ferrous Metals Processing Plant (1993).

Indesticoplaz Trading Limited, which is registered in Limasol, Cyprus, is the major shareholder (86.29%).

Apart from gold refining, the recycling of scrap and the manufacture of bars, the company also manufactures other gold products for the jewellery industry (rolled products, wire), electronics industry (contacts, foil, wire), dental industry (belts, wire) and other industrial industries (anodes, granules, flat belts).

The Ekaterinburg plant was founded during the reign of Tzar Nicholas II in 1916.

The company is the longest-established gold refiner in the Russian Federation.

The Ekaterinburg refinery has been accredited to the LBMA under its own name since 1999.

GOLD REFINING

The plant has the capacity to refine mine doré (predominantly gold or silver), electrolytic slimes (derived from copper or silver), precipitated gold slimes and scrap (jewellery, electronic, dental and old coins and medals).

Gold refining methods include wet chemical chlorination (aqua regia), electrolysis, wet chemical parting, solvent extraction and electric furnace smelting.

The company also refines silver and platinum group metals, manufacturing an extensive range of silver, platinum and palladium bars.

Annual gold refining capacity: more than 10 tonnes.

Number of employees: 565

Manufacturing London Good Delivery 400 oz bars.

TECHNICAL DESCRIPTION – CURRENT BARS

Weight	Type	Fineness	Shape	Dimensions mm	First Issued	Serial Number System	System Introduced
400 oz	Cast	999.9, 999.8, 999.5	Rectangular	254 x 88 x 35 229 x 59 (base)	1997	2 letters Plus 4 numbers Plus year date	1990 1998
1000 g	Cast	999.9	Rectangular	110.5 x 50	1996	2 letters Plus 4 numbers	1997
500 g	Cast	999.9	Rectangular	83 x 36.5	1996	2 letters Plus 4 numbers	1997
250 g	Cast	999.9	Rectangular	58 x 30.5	1996	2 letters Plus 4 numbers	1997
100 g	Cast	999.9	Rectangular	41.5 x 21.5	1996	2 letters Plus 4 numbers	1997
50 g	Cast	999.9	Rectangular	31 x 16.5	1996	2 letters Plus 4 numbers	1997
20 g	Cast	999.9	Rectangular	25 x 12	1996	2 letters Plus 4 numbers	1997
1000 g	Minted	999.9	Rectangular	119 x 70	1996	2 letters Plus 4 numbers	1997
500 g	Minted	999.9	Rectangular	100 x 59.5	1996	2 letters Plus 4 numbers	1997
250 g	Minted	999.9	Rectangular	80 x 47	1996	2 letters Plus 4 numbers	1997
100 g	Minted	999.9	Rectangular	55 x 32	1996	2 letters Plus 4 numbers	1997
50 g	Minted	999.9	Rectangular	42 x 24.5	1996	2 letters Plus 4 numbers	1997
20 g	Minted	999.9	Rectangular	31 x 17	1996	2 letters Plus 4 numbers	1997
10 g	Minted	999.9	Rectangular	26.5 x 15	1996	2 letters Plus 4 numbers	1997
5 g	Minted	999.9	Rectangular	23.5 x 14	1996	2 letters Plus 4 numbers	1997
1 g	Minted	999.9	Rectangular	13.5 x 8	1996	2 letters Plus 4 numbers	1997

Source: Ekaterinburg Non-Ferrous Metals Processing Plant

Serial Numbering System

All bars: 2 letters in the Cyrillic alphabet: 1st letter “E” stands for the Ekaterinburg Plant. 2nd letter represents the batch reference, changed when 9,999 bars have been produced or at the beginning of each year. The 4 numbers range from 0001 up to 9999. A year date on 400 oz bars was first applied in 1998.

HISTORY OF GOLD BAR MANUFACTURE

Although the company records that its gold refinery was established in 1916, its manufacture of 400 oz bars with the USSR official stamp is reported to have started in the 1980s.

In 1996, it issued an extensive range of 6 small cast bars (1000 g to 20 g) and 9 minted bars (1000 g to 1 g).

It has applied its own official stamp to its range of small bars (1000 g and less) since 1996, and to its 400 oz bar since 1997.

The company has also manufactured customized cast and minted bars for many banks since 1995.

TRADE COMMUNICATION

Headquarters

Ekaterinburg Non-Ferrous Metals Processing Plant
131 Lenin Street, Verhnyaya, Pyshma, Sverdlovsk region, 624096 Russia

Tel: 7-343-358 0739 or 358 0764
Fax: +7-343-358 0739 or 358 0702
Email: sedavnih@enfmpp.ru or ocm@mail.ur.ru

Website: www.ez-ocm.ru/eng/

OFFICIAL STAMPS

On 400 oz bars issued by Ekaterinburg since 1997, and on small bars since 1996.

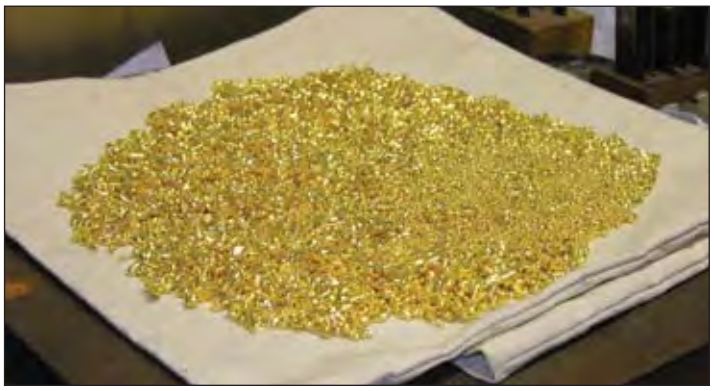
РОССИЯ

RUSSIA

National stamp in Russian or English. In use since 1996.

London Good Delivery 400 oz bars have been manufactured since the early 1980s.

Kilobars have been issued with the company's official stamp since 1996.



Apart from gold bars, the company manufactures an extensive range of gold products for the jewellery, electronics, dental and other industries.

London/Zurich Good Delivery **platinum** bar.

London/Zurich Good Delivery **palladium** bar.

The company has been accredited to the London Platinum and Palladium Market for platinum bars since 2000 and for palladium bars since 2001.

Employees at the plant, when it was known as the "National Refinery Plant", in 1922.

ОАО "Екатеринбургский завод по обработке цветных металлов"

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OJSC URALELECTROMED

**VERKHNYAYA PYSHMA, SVERDLOVSK REGION, URALS
RUSSIAN FEDERATION**

LOCATION

Uralelectromed, the largest copper smelting company in Russia, has its headquarters and gold refinery in Verkhnyaya Pyshma in the Sverdlovsk region of Urals.

Verkhnyaya Pyshma (1,900 km east of Moscow) is 10 km north of Ekaterinburg, the 4th largest city in the Russian Federation and the capital of the Sverdlovsk region.

The company manufactures London Good Delivery 400 oz bars.

Uralelectromed traces its origins back to 1934.

ACCREDITATION

2006 London Bullion Market Association (LBMA)

BACKGROUND

Uralelectromed, known by this name since 1975, had been established as the Pyshminsky Copper-Electrolyte Plant in 1934.

The company mines copper and other metals, including gold and platinum at the Nevianskiy mine in the Urals, as well as producing an extensive range of metal products and powders.

Historically, it is renowned for having produced 80% of the copper used for the manufacture of Russian shell cases and cartridges during the Great Patriotic War (1941-1945).

In 1999, Uralelectromed became the core company of the Ural Mining and Metallurgical Company (UMMC) that was founded as a new state enterprise in that year. The UMMC operates in 11 regions in Russia.

In 2002, the company became an Open Joint Stock Company (OJSC) within the UMMC.

The company established a new gold refinery in 1997.

GOLD REFINING

It has refined gold since the establishment of its gold refinery in 1997. The main gold-bearing materials treated are electrolytic slimes (derived from copper) and electronic scrap.

Gold refining methods include wet chemical parting.

The company also refines silver, manufacturing silver bars.

Annual gold refining capacity: more than 10 tonnes.

Number of employees: 350 (chemical-metallurgical plant), 11,500 (consolidated)

The Uralectromed refinery was accredited to the LBMA under its own name in 2006.

TECHNICAL DESCRIPTION – CURRENT BARS

Weight	Type	Fineness	Shape	Dimensions (mm)	First Issued	Serial Number System	System Introduced
400 oz	Cast	999.9	Rectangular	254 x 88 x 35 229 x 59 (base)	1997	2 letters Plus 4 numbers Plus year date	1997 1997

Source: Uralelectromed

Serial Numbering System

400 oz: 2 letters in the Cyrillic alphabet: 1st letter "У" stands for Uralelectromed. 2nd letter is arbitrary, changed when 9,999 bars have been produced or at the beginning of each year. The 4 numbers range from 0001 up to 9999. A year date has been applied since 1997.

HISTORY OF GOLD BAR MANUFACTURE

Although the company traces its origins back to 1934, it has manufactured 400 oz bars since 1997.

TRADE COMMUNICATION

Headquarters

OJSC Uralelectromed
1 Lenin Street, Verhnjaja Pyshma, Sverdlovsk region, 624091 Russia

Tel: +7-343-368 430 68
Fax: +7-343-368 983 33
Email: A.Batuev@elem.ru

Website: www.elem.ru

OFFICIAL STAMPS

On 400 oz bars issued by Uralelectromed since 1997.

The national stamp in Russian has been applied to the company's 400 oz bars since 1997.

London Good Delivery 400 oz bar.

The headquarters of Uralelectromed has been located in Lenin Street in Verkhnyaya Pyshma since 1978.

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OJSC KOLYMA REFINERY

KHASYN SETTLEMENT, MAGADAN REGION, FAR EAST RUSSIAN FEDERATION

LOCATION

Kolyma Refinery, established in 1997, has its headquarters and gold refinery in the Khasyn settlement in the Magadan region in Far Eastern Russia.

The Khasyn settlement, 30 km from the Sokol international airport and close to the Magadan-Yakutsk highway, is 80 km north of Magadan, a port city on the Sea of Okhotsk.

Magadan, 8,000 km east of Moscow, has a population of 110,000. It offers easy access to many gold mining areas in Far Eastern Russia.

The company manufactures London Good Delivery 400 oz bars and a standard range of 5 small cast bars and 6 minted bars:

Cast: 400 oz, 1000 g, 500 g, 250 g, 100 g, 50 g
Minted: 250 g, 100 g, 50 g, 20 g, 10 g, 5 g

ACCREDITATION

2004 London Bullion Market Association (LBMA)

BACKGROUND

The company was established as an Open Joint Stock Company (OJSC) in 1997 to take advantage of the growth in gold mining in Far Eastern Russia. The gold refinery became operational in 1998.

Over the period 2001-2004, a unit to manufacture minted gold bars and a unit to refine silver were built. The silver refinery has the capacity to refine all silver mined in Far Eastern Russia.

The company's major shareholders are the KUGI (Committee of Federal Property Control) of Magadan Region (64%) and the "Bank Rossiysky Credit" (35%).

Apart from gold refining and the manufacture of bars, the company also produces gold products for the jewellery industry, mainly granules.

GOLD REFINING

The refinery focuses on the refining of mine doré (predominantly gold or silver).

Gold refining methods include pyrometallurgical chlorination, wet chemical parting, gold precipitation and solvent extraction.

Annual gold refining capacity: 70 tonnes.

Number of employees: 190. The refinery operates on a 24-hour basis in two shifts, 7 days per week.

Kolyma Refinery was founded in 1997.

It has manufactured 400 oz bars since 1998.

The Kolyma refinery was accredited to the LBMA in 2004.

TECHNICAL DESCRIPTION – CURRENT BARS

Weight	Type	Fineness	Shape	Dimensions mm	First Issued	Serial Number System	System Introduced
400 oz	Cast	999.9, 999.8	Rectangular	259 x 93 x 37 233 x 63 (base)	1998	2 letters Plus 4 numbers Plus year date	1998 1998
1000 g	Cast	999.9	Rectangular	109 x 50 x 17.4	1999	6 numbers	2009
500 g	Cast	999.9	Rectangular	81 x 36 x 16.3	1999	6 numbers	2009
250 g	Cast	999.9	Rectangular	58 x 31 x 13.2	1999	6 numbers	2009
100 g	Cast	999.9	Rectangular	41 x 22 x 7	1999	6 numbers	2009
50 g	Cast	999.9	Rectangular	31.5 x 16.5 x 4	1999	6 numbers	2009
250 g	Minted	999.9	Rectangular	79 x 47 x 3.6	2002	6 numbers	2002
100 g	Minted	999.9	Rectangular	54 x 31 x 3.2	2002	6 numbers	2002
50 g	Minted	999.9	Rectangular	36 x 21 x 3.6	2002	6 numbers	2002
20 g	Minted	999.9	Rectangular	29 x 15 x 2.5	2002	6 numbers	2002
10 g	Minted	999.9	Rectangular	24 x 14 x 1.6	2002	6 numbers	2002
5 g	Minted	999.9	Rectangular	22 x 13 x 0.9	2002	6 numbers	2002

Source: Kolyma Refinery

Serial Numbering System

400 oz: 2 letters in the Cyrillic alphabet: 1st letter "K" stands for the Kolyma Refinery. 2nd letter is arbitrary, changed when 9,999 bars have been produced. The 4 numbers range from 0001 up to 9999. A year date has been applied since 1998.

Small cast and minted bars: 6 numbers only

HISTORY OF GOLD BAR MANUFACTURE

400 oz bars have been manufactured since 1998.

In 2002, the range of 6 minted bars was issued, followed by the range of 5 small cast bars in 2009.

The company has also manufactured customized bars for banks since 2005.

TRADE COMMUNICATION

Headquarters

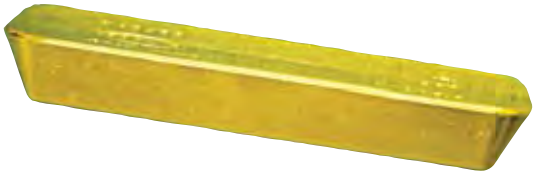
OJSC Kolyma Refinery
Khasyn Settlement, Magadan region, 686135, Russia

Tel: +7-41342 92901
Fax: +7-41342 92901
Email: refinery_98@mail.ru

OFFICIAL STAMPS

On bars issued by Kolyma Refinery since 1998.

The national stamp in Russian has been applied since 1998.



London Good Delivery 400 oz bar.

EXAMPLES OF GOLD BARS

London Good Delivery 400 oz bars have been issued since 2004.

Manufacturing 400 oz bars.

Certificate of accreditation to the LBMA.

1000 g

500 g

250 g

Small cast bars before being marked with official stamps.

The range was launched in 2009.

Minted bars have been manufactured since 2002.

The company manufactures gold products for the jewellery industry, mainly gold granules.

The Kolyma Refinery is the most recently established gold and silver refinery in the Russian Federation.

Mr Dmitry Medvedev, President of the Russian Federation, visited Kolyma Refinery in 2008.

This supplement is supported by
The Gokhran of Russia

THE INDUSTRY COLLECTION OF GOLD BARS WORLDWIDE

The **Industry Collection**, the world's largest collection of gold bars, was established in 1993 to support the promotion of gold worldwide.

The Founder was **N.M. Rothschild & Sons (Australia) Limited**, associated with N.M. Rothschild & Sons Limited, London. The Custodian and Official Location is **The Perth Mint**, wholly owned by the Government of Western Australia. The Curator is **Grendon International Research Pty Ltd**.

The collection contains over 1,000 standard, unusual, innovative and historical bars from 135 bar manufacturers and issuers in 35 countries.

Exhibitions have been held in the USA, Canada, Brazil, Dubai, Singapore, Thailand, Japan, Australia, Germany and the United Kingdom, where it was staged at the Bank of England Museum in London.

The Industry Collection includes over 80 current and historical kilobars manufactured by accredited gold refiners from around the world.

GRENDON
INTERNATIONAL
RESEARCH
GOLD
MARKET
CONSULTANT

Grendon International Research Pty Ltd (GIR), which focuses on the gold industry, was established in Australia in 1989.

Apart from acting as a consultant, GIR has published several books on gold, including The *Industry Catalogue of Gold Bars Worldwide*.

In 2007, it launched **www.goldbarsworldwide** to support the promotion of gold. The World Gold Council is the major sponsor.

Grendon International Research Pty Ltd
33 Alexandra Road, East Fremantle, WA 6158, Australia

Tel: +61-8-9319 2171 Fax: +61-8-9319 2154
Email: grendon@grendon.com.au

Australian Business Number (A.B.N.): 79 486 548 064

Gold Refiners and Bars in the Russian Federation

Project undertaken with the support of The Gokhran of Russia