CAMECO CORP
Form 6-K
March 31, 2008

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549
FORM 6-K
Report of Foreign Private Issuer
Pursuant to Rule 13a-16 or 15d-16 Under
the Securities Exchange Act of 1934
For the month of March, 2008
Cameco Corporation
(Commission file No. 1-14228)
2121 11th Street West
Saskatoon, Saskatchewan, Canada S7M 1J3
(Address of Principal Executive Offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.
Form 20-F o Form 40-F þ

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.
Yes o No þ

If Yes is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b):

Exhibit Index

Exhibit No.	Description	Page No.
1.	Kumtor Technical Report dated March 28, 2008	

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: March 31, 2008

Cameco Corporation

By: *Gary M.S. Chad*
Gary M.S. Chad, Q.C.
Senior Vice-President, Governance,
Law and Corporate Secretary

TECHNICAL REPORT
On the
2007 YEAR-END MINERAL RESERVES
AND RESOURCES
KUMTOR GOLD MINE
KYRGYZ REPUBLIC
for
CENTERRA GOLD INC.
and
CAMECO CORPORATION

Iain Bruce, P. Eng.
BGC Engineering Inc.
Dan Redmond, P. Geo.
Centerra Gold Inc.
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Strathcona Mineral Services Limited

March 28, 2008
Toronto, Canada

Strathcona Mineral Services Limited

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1. SUMMARY

1.1 Kumtor Gold Project

The Kumtor gold project in the Kyrgyz Republic originated in 1992 when Cameco Corporation (Cameco), while pursuing uranium prospects in the Kyrgyz Republic, was presented with an opportunity to follow up on the discovery of gold at Kumtor in 1978 and subsequent extensive exploration work by the USSR Ministry of Geology when the Kyrgyz Republic was part of the former Soviet Union. Centerra Gold Inc. (Centerra), which became a separate public company in 2004, holds a 100% interest in the Kumtor project through its subsidiary, Kumtor Gold Company. Since achieving commercial production in late 1997, the Kumtor gold project has produced 6.2 million ounces of gold at average cash costs of US$233 per ounce for the eleven-year period. The project mineral reserves as of December 31, 2007 are the basis for a life-of-mine plan that provides an additional seven years of operating life to 2014.

1.2 Arrangements with the Kyrgyz Republic

In December 1992, Cameco signed an initial agreement with the Government of the Kyrgyz Republic (the Government) giving Cameco the exclusive right to evaluate and develop the Kumtor project. In December 1993, Kilborn Western Inc. (Kilborn), (now SNC-Lavalin Inc.), completed a feasibility study on the project, which was amended in 1994 and 1995 (Kilborn Feasibility Study). A final project development agreement was concluded with the Government in May 1994 under which Cameco, through its wholly-owned subsidiary Kumtor Mountain Corporation (KMC), acquired a one-third interest in Kumtor Gold Company (KGC), the project owner. The remaining interest was held by Kyrgyzaltyn JSC (Kyrgyzaltyn), a Kyrgyz joint stock company whose shares are 100% owned by the Government.

Project construction began in late 1994 and was financed by Cameco and an international group of banks and lending agencies. The mine achieved commercial production in the second quarter of 1997, after incurring capital expenditures of $452 million (all amounts in U.S. dollars). Kumtor Operating Company (KOC), then a wholly-owned subsidiary of Cameco, was granted responsibility to operate and manage the project for a ten-year period to May 2007 for which KOC received

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a management fee. This period has since been extended to the life of the concession pursuant to the Kumtor restructuring described below.
In December 2003 Cameco, Cameco Gold Inc. (Cameco Gold), Kyrgyzaltyn and Centerra entered into the Kumtor Restructuring Agreement, under which Kyrgyzaltyn, Cameco Gold and KMC agreed to sell to Centerra all of their respective shares in KGC. This restructuring was concluded in June 2004. On June 30, 2004 Centerra completed its initial public offering (IPO) and commenced trading on the Toronto Stock Exchange. As a result of the restructuring, Cameco Gold and KMC hold a majority shareholding interest in Centerra of 52.7%, while Kyrgyzaltyn holds 15.7% of the Centerra shares.
On August 30, 2007, Centerra, Cameco and the Government entered into framework agreements on certain outstanding issues regarding the Kumtor project. The framework agreements (the agreement with Centerra entitled the Agreement on New Terms) are subject to the satisfaction of certain conditions, including approval of the Parliament of the Kyrgyz Republic, the Centerra and Cameco boards of directors, and the negotiation and signing of final agreements among Centerra, Cameco and the Government. The closing of the transactions contemplated by the framework agreements has been postponed several times following requests by the Government, with the deadline for completion now being April 30, 2008. The Agreement on New Terms provides, among other items, for the existing tax regime to be replaced with a simplified new tax rate for the project, applied to gross proceeds from products sold, at the rate of 11% in 2008, 12% in 2009 and 13% thereafter. In addition, the existing concession area described in **Section 4** will be enlarged to include all of the territory covered by the current Kumtor exploration license.
On the satisfaction of the conditions to completion, Cameco will transfer 32.3 million shares of Centerra to the Government; 17.3 million of such shares will be held in escrow to be released within four years, subject to earlier release in certain circumstances. Centerra has entered into an agreement with Cameco to issue 10 million treasury shares of Centerra to Cameco after the transfer of shares by Cameco to the Government. After completion of the transactions, the Government will own 29.3% of Centerra, Cameco will own 40.5% and the balance of 30.2% will be held by public shareholders.

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Certain of the existing agreements relating to the Kumtor Project described in **Section 2.1** below, including the Investment Agreement and Concession Agreement, are required to be amended to reflect the terms of the Agreement on New Terms.

1.3 Property Location and Description

The Kumtor mine is located in the Kyrgyz Republic, one of the independent successor states of the former Soviet Union, some 350 kilometres to the southeast of the Kyrgyz capital of Bishkek and about 60 kilometres to the north of the international boundary with the Peoples Republic of China, in the Tien Shan Mountains, at 41º 52 N and 78º 11 E. The mill site is situated in alpine terrain at an elevation above 4000 metres, with the wall of the Central pit extending above 4400 metres. The climate is dry and continental with a mean annual temperature of minus 8°C. Local valleys are filled with active glaciers, and the mine area is in permafrost that extends down to elevation 3900 metres.

Mining takes place on the Concession Area, a 750-hectare parcel of land centred on the Kumtor gold deposit to which KGC has been granted the exclusive rights to all minerals. As a result of the recent expansion of the mineral resources and reserves, KGC has applied for two additional mining concession areas situated to the northeast and to the southwest of the Concession Area, respectively. To facilitate the initiation of mining at the Southwest deposit, in production since 2005 and located outside of the Concession Area, KGC was granted a temporary concession covering the Southwest deposit (the Southwest Mining Licence), with an expiry date of December 31, 2008, by which time mining of the Southwest deposit will be complete. Additionally, the Government has granted a mining licence for the Sarytor deposit (the Sarytor Area Geological Allotment) expiring on December 31, 2013.

The Concession Area is surrounded by the Exploration Licence of 26 400 hectares, also centred on the Kumtor gold deposit, in which KGC was granted the exclusive right to develop any mineral resources. This includes the right to be granted any additional mining concessions within the Exploration Licence on the same terms and conditions as those specified for the Concession Area. The Exploration Licence cannot be renewed beyond its current expiry date of December 18, 2009, but a new licence may be applied for. Partial or complete conversion into a mining lease is possible at any time during the currency of the licence. The current Exploration

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Licence is expected to be converted into a mining concession upon the Agreement on New Terms coming into force.

1.4 Kumtor Geology and Mineralization

The Kumtor and satellite gold deposits occur in the southern Tien Shan metallogenic belt, a Hercynian fault and thrust belt in Central Asia that extends from Uzbekistan in the west through Tajikistan and the Kyrgyz Republic into northwestern China and hosts a number of important gold deposits, among them Muruntau, Zarmitan and Jilau.
The mine geology in the Kumtor area is dominated by several major thrust slices with each thrust sheet containing older rocks than the sheet it structurally overlies. The slice hosting the gold mineralization is composed of Vendian meta-sediments (youngest Proterozoic or oldest Palaeozoic) that are strongly folded and schistose. In most areas, the Kumtor Fault Zone (KFZ), a dark-grey to black, graphitic gouge and schist zone, forms the footwall of this structural segment. The KFZ strikes northeasterly, dips to the southeast at moderate angles and has a width of up to several hundred metres. The adjacent rocks in its hanging wall are strongly affected by shearing and faulting for a distance of up to several hundred metres. The rocks in the structural footwall of the KFZ are Cambro-Ordovician limestone and phyllite, thrust over Tertiary sediments of possible continental derivation which in turn rest, with apparent profound unconformity, on Carboniferous clastic sediments.
The structural geology at Kumtor has evolved through four main deformation events that span the time from pre-Carboniferous to Tertiary. The recent improvement in understanding of the structural geology has facilitated the awareness for some of the geotechnical issues affecting the Central pit.
Gold mineralization occurs where the Vendian sediments have been hydrothermally altered and mineralized, an event that has been dated as late Carboniferous to early Permian. Gold mineralization has been observed over a strike distance of more than twelve kilometres, with the Central deposit being the most important accumulation. Other known occurrences along the mineralized trend are the Southwest deposit (now essentially mined out), and the Sarytor deposit, for which a mineral reserve has been estimated for the first time at the end

of 2007. Additional centres of mineralization are known from the Northeast, Akbel and Bordoo areas, but no mineral resources can yet be estimated.
Mineralization took place in four main pulses with the mineralization being most intense, and the gold grade being the highest, where the metasomatic activity was continuous through phases two and three. Substantial volumes affected by such activity are represented by the Stockwork Zone of the Central deposit, the most important to date, and by the SB Zone, that will replace the Stockwork Zone in the future. Native gold and gold-bearing minerals occur as very fine inclusions in pyrite, with an average size of only 10 microns, which accounts for the partly refractory nature of the Kumtor ore. However, the fine grain size of the gold also renders assaying of this mineralization relatively reliable, with only a small nugget effect. Post-ore faults, in addition to being of geotechnical significance, often carry significant quantities of graphite, and other carbonaceous components which constitute the source for the preg-robbing character of some of the mineralization.

1.5 Geotechnical Issues

1.5.1 Central Open Pit

Operations at the Kumtor pit have been negatively affected as a result of two substantial failures of the high wall that forms the northeastern limit of the Kumtor pit. A failure on July 8, 2002 claimed a life, resulted in the temporary suspension of operations, and led to a shortfall in 2002 production because the high-grade Stockwork Zone was rendered temporarily inaccessible. A program of structural mapping and geotechnical drilling with assistance from SRK Consulting (UK) Ltd. (SRK UK) commenced shortly afterwards. Based on the advice of Centerra s geotechnical consultant, Golder Associates Ltd. (Golder), and following further technical investigation, KOC revised the structural model in the area of the high wall and reformulated the slope design criteria for the final pit. As of December 31, 2005, the entire area affected by the 2002 failure had been mined out.
A second failure of similar magnitude occurred on July 13, 2006, in an area above the Stockwork Zone that was planned to be mined in 2006 and 2007. Due to safety concerns, mining from the area was deferred, and mill feed from this area was partly replaced with low-grade ore stockpiles resulting in a significant and negative impact on production. Mining of the high wall affected by the failure was again postponed and has not yet resumed.

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Following the second ground wall movement, Golder and SRK UK continued to assess the causes of the pit wall failure and provided guidance with respect to remedial and long-term pit slope design criteria that would reduce the possibility of a recurrence. This work has provided insight into why the high wall failures occurred. Large shallow wedges are interpreted to have formed the failure plane, and water seeping from the overlying Lysiii glacier into the pit wall, reducing the extent of the original permafrost regime, has also played a role.

Based on recommendations by Golder and SRK UK, the high wall for the year-end 2007 mineral reserve estimate and life-of-mine plan has now been designed with slope angles that range from 28° to 32°. The new slope design will mine out the known wedges to prevent exposure of the next set of wedges. The authors of this report note, however, that the factor of safety for this slope remains uncertain since the extent of thawing in the pit wall, and the degree of water saturation, remain unknown until the additional appropriate investigations can be undertaken.

In addition to the flattening of the high wall, more ice is scheduled to be removed from the toe of the remaining Lysii Glaciers starting in 2008, and any melt water from the glacier should be directed away from the pit so that the pit wall is no longer affected. A hydrological investigation is required to determine whether rock dewatering of the high wall is required and how it can be achieved. If all of these remedial measures are undertaken, the authors of this report judge the possibility of a recurrence of the high wall failing to be low enough as to accept the inclusion of the affected ore tonnage in the current statement of mineral reserves. There is, however, a risk that some or all of the reserves in question, 7.8 million tonnes with an average gold grade of 3.7 g/t and an incremental strip ratio of 29 to one, may not be recoverable without a further substantial flattening of the high wall.

Geologic mapping has also led to an improved understanding of the structural geology along the east wall of the Central pit, and has resulted in the flattening of the overall slope angle of the south east section of the Central pit. Previous slope instability has been attributed to changing foliation attitudes between two structural domains, 3b and 3c as they interact with discontinuities caused by cleavage and thrust faults. The new flatter wall angles reflect these conditions.

The southwestern part of the Kumtor pit will exploit the high-grade SB Zone in the years 2008 to 2010. The southeastern edge of the pit is determined by the necessity

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to leave a buffer with the adjacent Davidov glacier and cannot be moved out beyond the current design. Slope angles therefore are the only factor determining the depth of the Central pit in this area, and thus the amount of ore to be recovered from the SB Zone.
Glacial till consisting of cobbles, gravels, sands, silts and traces of clay deposited by the Davidov glacier has been exposed along the southeast wall of the part of the Central pit adjacent to the Davidov glacier . The till is frozen in the existing pit face, but drilling has indicated that further push backs will encounter unfrozen, water-saturated till. Dewatering tests undertaken to date indicate that the till can be depressurized to allow push back of the overall slope at an approximate angle of 30°. The rock slope below the till in areas with a slope azimuth of 115° to 165° has a design angle of 20° in its current water-saturated state. The current pit design assumes that the rock slopes below the till can also be depressurized, so that slopes of 30° to 32° can be safely achieved in rock. Depressurization tests have not yet been undertaken but the rock is fractured and is likely amenable to depressurization by horizontal drains or wells.
If depressurization of the till and of the underlying rocks cannot be achieved, the flatter slope angle would lead to a reduction of the mineral reserves mineable by open pit by approximately ten million tonnes with an average gold grade of 4.9 g/t. However, about 1.4 million tonnes with an undiluted grade of 21 g/t, which are part of this tonnage in question, would be added to the inferred resources scheduled for underground exploration and possible later mining by underground mining methods. The pit design, on which the December 31, 2007 mineral reserves are based, uses the steeper set of design angles which anticipate successful depressurization of both the till and the underlying rocks.
The mineral reserves with exposure to geotechnical risk total nearly 18 million tonnes with an average gold grade of 4.4 g/t. The authors of this report agree with the inclusion of this tonnage in the year-end 2007 reserve estimate under the assumption that Centerra will undertake the required remedial actions. To reflect the additional risk in this part of the Kumtor reserve, the entire tonnage in question has been included in the probable reserve class, even if their resource counterpart was originally in the measured category.

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1.5.2 Tailings Facility

Movements in the tailings dam foundation caused by creep in ice-rich silts were first identified in 1998. Excavation of the ice-rich soil and replacement with compacted fill to form a shear key has now arrested or significantly reduced the rate of movement. The monitoring data supplied by KOC and interpreted by Golder and the Kyrgyz Institute of Rock Mechanics, to date, support the effectiveness of the stabilizing shear key.

The tailings facility at the end of 2007 contained nearly 48 million tonnes of tailings and, in its current configuration, can accommodate the mine production until the end of 2008. Permits have been received to raise the tailings dam by three metres, which will allow continuation of the use of the facility to the end of 2010 at the planned production rate. Another three metres of additional dam height would extend the life of the facility to last to the end of the current estimate of the mineral reserves. The cumulative capital costs for the step-by-step increase of the capacity of the tailings facility to accommodate the mineral reserves are estimated at $27.6 million.

The current design of the dam and the stabilizing toe berm allow the storage of some 12 million tonnes beyond what the current mineral reserves. To accommodate the additional tonnage, the main dam would have to be raised, a small saddle dam built on the north end, and the lower diversion ditch relocated. Raising the main dam by another five metres would not be a geotechnical concern and would increase the overall capacity of the facility by approximately 12 million in addition to the 20 million tonnes or more than two years of mill production.

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1.6 Mining Operations

Mining and processing operations have had to overcome the challenges of operating in a remote part of the Kyrgyz Republic and also in a dry cold climate at an altitude above 4000 metres. The Central deposit is mined in a large open pit where total material mined in 2007 was nearly 80 million tonnes, or 220 000 tonnes per day. Additionally, 35 million tonnes were mined in 2007 from the Southwest pit, or 96 000 tonnes per day. The overall waste to ore ratio in 2007 was 21.4. Unit mining costs have been very low until 2005, primarily because of favourable topography that allow short haul distances for the disposal of waste and delivery of ore to the process plant, but have increased in the past two years, in line with the general global experience of large open-pit mines.

Ore treatment has been at the rate of 5.6 million tonnes per year or 15 300 tonnes per day in the past five years. The fine-grained nature of the gold mineralization within sulphides has resulted in a flow sheet whereby a sulphide flotation concentrate is subjected to very fine grinding prior to cyanide leaching of the gold in a conventional carbon-in-leach circuit. A small amount of additional gold is recovered from the flotation tailings in a CIL circuit, and overall gold recovery has averaged 79.5% since commencement of operations, but has been only 73% in the past two years, due to the lower head grades of 2.3 g/t.

Gold production during the eleven-year period 1997-2007 from the milling of nearly 60 million tonnes of ore grading 4.1 grams of gold per tonne (g/t) has been 191 tonnes or 6.2 million ounces.

Citizens of the Kyrgyz Republic represent 97% of the total workforce of 2052 employees as of the end of 2007, and this high proportion demonstrates the successful adaptation of the Kyrgyz citizens to the employment opportunities at Kumtor and to the training programs offered at the operation. The benefits of drawing a high proportion of the workforce from within the Kyrgyz Republic have included very good operating cost performance, in a unique and challenging location.

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1.7 Mineral Resources and Reserves, Year-End 2007

The mineral reserves and resources for the Kumtor gold mine have been estimated by Dan Redmond, P. Geo., Manager of Reserves and Resources of Centerra as of December 31, 2007.

Kumtor Mineral Reserves and Resources at December 31, 2007

			Contained Gold	
Category	**Tonnes (000 s)**	**Gold (g/t)**	Ounces (000 s)	Tonnes
Mineral Reserves Mineable by Open Pit				
Stockpiles	3 594	1.4	158	5
Proven in situ	6 294	5.3	1 065	33
Probable in situ	28 546	4.0	3 679	114
Total	**38 434**	**4.0**	**4 902**	**153**
Additional Mineral Resources Considered for Open-Pit Mining				
Measured	18 770	3.2	1 931	60
Indicated	19 323	2.8	1 741	54
Measured & Indicated	**38 093**	**3.0**	**3 672**	**114**
Inferred	778	1.8	46	1
Additional Mineral Resources Considered for Underground Mining				
Inferred	2 796	20.0	1 797	56

Mineral resources have no demonstrated economic viability. Additionally, inferred mineral resources have a large degree of uncertainty as to their existence and as to whether they can be mined legally or economically, It cannot be assumed that all or any part of the inferred resources can be upgraded to a higher resource category.

The mineral reserves are reported assuming a gold price of $550 per ounce and at a gold cut-off grade of 1.0 g/t compared to a cut-off grade of 1.3 g/t used for the year-end 2006 estimate. The new, lower cut-off grade recognizes the fact that, particularly in 2008 and 2009, low-grade material from existing stockpiles will augment ore from open-pit mining to provide the plant with the tonnage it is designed to treat. The additional mineral resources considered for mining by open pit are also reported at a gold cut-off grade of 1.0 g/t, but are in an optimized pit shell that is uneconomic at the gold price of $550 per ounce used for the mineral

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reserve estimate. The additional mineral resources considered for underground mining have been estimated using a cut-off grade of 7 g/t of gold.
The estimates of mineral reserves and resources have been de