2005 RESOURCE ESTIMATE OF THE WEST BEAR URANIUM DEPOSIT

HIDDEN BAY PROJECT

Wollaston Lake Area, Saskatchewan

Mineral Claim: S-106424 NTS 76H/16

January 20, 2006

Prepared for:

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SUMMARY

The West Bear Uranium Deposit is located on the southern block of the Hidden Bay Project, in the Wollaston Lake area of northern Saskatchewan, approximately 340 km north of LaRonge, SK, and is 100% owned by UEX Corporation (UEX).

In January, 2005, UEX initiated a 101 hole - 2,793 m sonic drilling program on the West Bear Uranium Deposit, with the objective of determining a National Instrument 43-101 compliant resource estimate of the deposit. Cameco Corporation (Cameco) implemented the program under an exploration management agreement on the Hidden Bay Property with UEX.

Historically, core recovery was a significant problem that plagued Gulf Minerals (Gulf) during its drilling definition programs in 1977, 1978 and 1979. A review of the historic Gulf resource estimate, a single diamond drill hole in 2002, and a sonic drilling test of the deposit in 2004, suggested that the historic work did not accurately estimate the uranium content of the deposit. Due to its high core recovery and relative softness of the rock, sonic drilling was picked as the preferred drilling method at West Bear.

Based on the 2005 sonic drilling program, a new resource estimate was calculated. The West Bear Uranium Deposit is estimated to contain an indicated resource of **45,600 tonnes averaging 1.385% U₃O₈, 0.34% nickel, 0.11% cobalt, and 0.50% arsenic, for a total uranium content of 1,391,000 pounds of U₃O₈** using a geostatistical-block model technique and the GEMCOM software package. A second estimate, completed as a check using the inverse-distance squared technique, yielded very similar tonnage and grade results. This new resource estimate represents a three-fold increase in uranium grade and a slight increase in total pounds of uranium from the historic 1980 Gulf Minerals resource estimate (that estimate was not compliant with NI 43-101 requirements). It should be noted that only $2/3^{rds}$ of the strike length of the mineralized area outlined by Gulf, and included as part of the historic resource, was tested during the 2005 program.

The boundaries of the deposit for the resource estimate were defined using a cut-off grade of $0.15\% U_3O_8$ and a grade-thickness parameter of $0.45 m\% U_3O_8$, except where the requirements of an open pit mining scenario would necessitate the removal of such mineralized material.

The West Bear Uranium Deposit is flat lying and has been defined over a strike length of 300 m. It ranges in width from 5-25 m, in thickness from 0.1-10.5 m, and has lithology, structure, alteration, and chemical features that closely resemble those at Cameco's Cigar Lake Deposit. Polymetallic mineralization is observed within the uranium mineralization, with higher concentrations of nickel, cobalt, and arsenic concentrated along the east end of the mineralized zone, as defined by the 2005 sonic drilling program.

A number of historic Gulf Minerals holes indicate that uranium mineralization likely extends up to 150 m east beyond the boundaries of the West Bear Uranium Deposit. This eastern area has the potential to significantly increase total pounds of uranium contained in the deposit, and should be a high priority target to be tested during the winter of 2006.

The resource estimate presented in this report was based exclusively on the assay and drilling results of the 2005 sonic drilling program, as the core recovery of the historic holes was considered highly suspect. As a result, assay samples collected from the historic holes are not considered to be truly representative of the West Bear Uranium Deposit.

Sonic holes were drilled on fences spaced 25 m apart, except over a single 50 m strike interval, where fences were spaced 12.5 m apart. The spacing of holes along each drill fence was 5 m. Additional infill drilling between the current 25 m spaced drill fences is not recommended, as the deposit has been sufficiently defined to permit advancement of the project to a pre-feasibility stage.

The authors of this report believe that there is a possibility that the bulk density of the deposit may be slightly understated and that the total uranium content of the deposit may be slightly higher than presented herein. It is highly unlikely that the bulk density of the deposit is actually lower than the values presented in this report. Several extremely low dry bulk density values were obtained from core samples sent for laboratory analysis. These low samples densities were included as part of the data used to determine this resource estimate. It appears that the integrity of some bulk density samples may have been degraded between the specific gravity measurement stage and the bulk density stage, based on sample descriptions completed during the bulk density testing.

A review of the quality assurance/quality control data indicates that the accuracy and precision of the original analytical results was good and that the data set was valid for use in this resource estimate. The quality assurance/quality control program consisted of the monitoring of laboratory duplicates, the precision of results of SRC-made laboratory standards, and duplicate analysis of 10% of all sample population plus all samples exceeding 1% U₃O₈ at two other laboratory facilities.

Cameco Corporation owns approximately 21.78% of the common shares of UEX Corporation, and as result, Cameco officers and employees are considered potential insiders of UEX Corporation. This includes the Qualified Person responsible for the completion of this resource estimate. The BC Securities Commission granted UEX an exemption to NI 43-101 requirements regarding the reporting of a material resource estimate by a non-independent Qualified Person based on the fact that the Qualified Person will not benefit as a result of any findings in this resource estimate.

A series of recommendations for future work are included in this report that would lead to the commencement of a pre-feasibility study by 2007. These recommendations include the completion of a 70 hole – 2,100 m sonic drill program to define the eastern extent of the deposit, the commencement of metallurgical test work, recommendations to improve the quality of dry bulk density determinations, continuation of the environmental baseline study initiated in 2005, diamond drilling to attempt to locate additional deposits in the area, scouting of a road route to connect the West Bear area to provincial road #905, and investigating the possibility of finding a nickel smelter that would accommodate and process nickel-cobalt-arsenide concentrates. The processing of such concentrates could help to minimize potential acid mine leaching concerns and possibly become a revenue source for UEX.

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Mineral Claim S-106424 NTS 76H/16

1.0 INTRODUCTION

1.1 <u>Terms of Reference</u>

UEX Corporation was formed in 2001 under agreement between Cameco Corporation and Pioneer Metals Corporation. UEX securities began trading on the Toronto Stock Exchange in July, 2002. Currently UEX holds portfolio of 19 projects either 100% owned, joint ventured, or under option totaling approximately 390,000 hectares (962,000 acres) located in the eastern, western, and northern perimeters of the Athabasca Basin of northern Saskatchewan.

The Hidden Bay Project is 100% owned by UEX Corporation. Exploration activities on the Hidden Bay Project are managed by Cameco Corporation through a management contract negotiated between the two companies at the formation of UEX in 2001.

The West Bear Uranium Deposit is located within the boundaries of the Hidden Bay Project. As part of Cameco's duties as manager of the Hidden Bay Project, a review of the historical work on the West Bear Deposit was completed in 2003. This review led Cameco technical personnel to the conclusion the uranium content of the West Bear deposit may have been understated, as the drilling method employed by a previous property owner did not accurately sample the deposit. In the winter of 2005, sonic drilling was completed on the West Bear Deposit to more accurately determine the limits of uranium mineralization and to determine the uranium content of the deposit.

Consistent with Cameco's responsibilities under the management contract, this report has been prepared for UEX and outlines the findings of the 2005 winter sonic drilling program on the West Bear Deposit. Included in the report is a new and National Instrument 43-101 compliant resource estimate of the West Bear Deposit based on this new information. An assessment of the economic viability of mining the West Bear Deposit is not included in this report.

1.2 <u>Purpose of this Report</u>

The purpose of this report is to outline a new indicated resource estimate of the West Bear Uranium deposit to be used as the basis of a pre-feasibility study to be undertaken by UEX in the future.

1.3 <u>Sources of Information</u>

All technical and geological information used in the resource estimate prepared herein was collected, prepared, and analyzed by a team of Cameco geologists and geological technicians during the 2005 winter sonic drilling program. Cameco personnel involved in the core logging and sampling during the program are outlined in the list below:

Dennis Michayluk, P. Geo.	Geologist	Primary core logger and sampler
Gary Witt,	Geologist-in-training	Core logger and sampler
Gavin Otto	Geologist	Core logger and sampler
Cory Kos	Geologist-in-training	Core logger and sampler
Andrew Hilchey	Geologist-in-training	Core logger and sampler
Morgan McLeod	Technician	Geotechnical observations and sampling
Gerald Marcoux	Technician	Geotechnical observations and sampling
Jason Joseyounen	Technician	Geotechnical observations and sampling
Roger Lemaitre, P.Eng., P.Geo.	Project Geologist	Project planning, daily supervision, core logging, sampling, data analysis, resource estimate

Assay, specific gravity, and dry bulk density data was provided by the Saskatchewan Research Council Geoanalytical Laboratory in Saskatoon, SK, the Saskatchewan Research Council Analytical Laboratory in Saskatoon, SK, and Loring Laboratories of Calgary, AB.

Historic work on the West Bear Deposit completed by Gulf Minerals was obtained by reviewing Gulf technical project reports (Boyd et al, 1980). The historic resource estimate reported by Gulf and referred to in this document has not been determined in accordance to National Instrument 43-101 requirements.

Data from the Gulf Minerals holes was not used during the calculation of the resource estimate or to determine the actual boundaries of the deposit. The Gulf data was only used as a rough guide as to where historic work encountered mineralization to identify areas that required the more accurate sonic drilling technique to be implemented.

1.4 Involvement of the Qualified Person

The Qualified person responsible for the preparation of this technical report, the resource estimate and the collection of the data during the field program is Roger Lemaitre, P.Eng., P.Geo. Mr. Lemaitre was actively involved in the field program as the Project Geologist for the program. As Project Geologist, since 2002, Mr. Lemaitre was responsible for the planning of drill holes, and supervised the members of the project team. Mr. Lemaitre was on-site for the entire 2005 Hidden Bay exploration program and directly supervised the geological team on a daily basis. Mr. Lemaitre also completed the logging and sampling of three drill holes during the program.

Mr. Dennis Michayluk, P.Geo., was the primary field geologist responsible for the execution of the field program and was responsible for logging the core and collecting the samples for the vast majority of holes completed during the 2005 program. Mr. Michayluk was responsible for the organization of all data from the field program and for interpreting the data from the quality control/quality assurance program. Although Mr. Michayluk helped in the preparation of this report and in data interpretation, he is not a Qualified Person on this particular report.

2.0 RELIANCE ON OTHER EXPERTS

Readers of this report are cautioned to consider the following:

Previous Resource Estimates and Technical Reports

The authors of this report do not take responsibility for the accuracy or quality of the Gulf Minerals technical work or for the reliability of the Gulf Minerals historic resource estimate that is referred to in this document, as the historic estimate has not been determined in accordance to the National Instrument 43-101 requirements.

3.0 PROPERTY DESCRIPTION AND LOCATION

3.1 Area Location

The Hidden Bay project area is located in the Wollaston Lake area of northern Saskatchewan on NTS 64/L and 74 H/16, approximately 340 km northeast of LaRonge (Figure 3.1). The approximate limits of the property are latitude 57°50' N to 58°25' N and longitude 103°35' W to 104°10' W. Access to the property is by highway # 905.

The West Bear deposit is present at the southern portion of the Hidden Bay Property in NTS 74 H/16. Access to the area is via a 13 km skidder road that originates from highway #905 at kilometre 209.

3.2 <u>Mineral Dispositions and Tenure</u>

The Hidden Bay project consists of 42 mineral dispositions (Figure 3.2) and is 100% owned by UEX Corporation with the exception of Mineral Lease ML5424, which is held in a joint venture which is 75.002% owned by UEX. At the time of the writing of this report, Cameco Corporation held approximately 21.78% of the outstanding shares of UEX Corporation.

Annual assessment requirements to keep the property in good standing for the 57,424 hectare property total \$1,254,484. The disposition status is shown in Table 3.1.

The dispositions are not contiguous. Two continuous blocks known as the "North Block" and "South Block" are separated by a distance of approximately 4 km (Figure 3.2). The West Bear Deposit is located within the South Block of the Hidden Bay Property on mineral claim S-106424, a claim 100% owned by UEX.





				Annual		Next
Group	Disposition	Recording	Area (ha)	Α	ssessment	Assessement
	•	Date		R	equirement	Due
Ungrouped	S-107119	12/01/1977	128	\$	3,200	2026
Claims	S-107122	12/01/1977	1754	\$	43,850	2026
	S-107121	12/01/1977	2273	\$	56,825	2026
	S-106951	12/01/1977	1615	\$	40,375	2021
	S-101664	10/08/2004	153	\$	1,836	2006
	CBS 6788	12/01/1977	4755	\$	118,875	2023
	CBS 6789	12/01/1977	4125	\$	103,125	2023
	S-105173	5/28/1996	178	\$	4,450	2007
GC 45516						
	S-106958	12/01/1977	1050	\$	26,250	2021
	CBS 7256	05/08/1987	1369	\$	34,225	2006
	S-106957	12/01/1977	529	\$	13,225	2021
	S-106964	12/01/1977	713	\$	17,825	2022
	S-106959	12/01/1977	722	\$	18,050	2022
GC 45556						
	S-106966	02/05/2002	1483		17,796	2010
	S-106962	12/01/1977	4486		112,150	2006
0.0. (5555	S-106967	02/05/2002	1622	\$	19,464	2006
GC 45557				•		
	S-106976	02/05/2002	660	\$	7,920	2008
	S-106979	02/05/2002	490	\$	5,880	2008
	S-106977	02/05/2002	797	\$	9,564	2009
00 45505	S-106978	02/05/2002	800	\$	9,600	2008
GC 45585	S-105328	8/21/1995	332	¢	8,300	2007
	S-105328 S-106424	12/01/1977	300	φ \$	7,500	2007
	S-106969	02/05/2002	1270	φ \$	15,240	2000
	S-105327	8/21/1995	988	\$	24,700	2010
	S-106970	02/05/2002	444		5,328	2010
	S-106975	02/05/2002	770	\$	9,240	2010
	S-106972	02/05/2002	361	\$	4,332	2010
	S-106973	02/05/2002	327	\$	3,924	2010
	S-106974	02/05/2002	450	\$	5,400	2010
	S-106971	02/05/2002	1806	\$	21,672	2010
	S-107702	12/30/2004	853		10,236	2009
GC 45588					,	
	S-106961	12/01/1977	398	\$	9,950	2023
	CBS 6807	12/01/1977	4510		112,750	2009
	S-106955	12/01/1977	258	\$	6,450	2022
	CBS 6805	12/01/1977	4710	\$	117,750	2013
GC 45589						
	S-106965	02/05/2002	758	\$	9,096	2010
	S-105174	5/28/1996	1932		48,300	2010
	CBS 6804	12/01/1977	4345		108,625	2006
	CBS 6760	12/01/1977	1242		31,050	2006
	CBS 7253	05/12/1986	400		10,000	2006
	S-104252	04/11/1994	380		9,500	2008
	S-106968	02/05/2002	888		10,656	2010
Total			57,424	\$	1,254,484	

 Table 3.1 - Disposition Status - Hidden Bay Property

UEX does not currently hold any surface rights for any portions of the property.

3.3 <u>Mineral Deposits and Occurrences</u>

The Hidden Bay Property hosts three known uranium deposits, the West Bear Deposit, the subject of this report, and the Raven and Horseshoe Deposits located 4 km south of the Cameco's Rabbit Lake Mill and the northern property boundary (Figure 3.2). The West Bear Deposit is located approximately 40 km south of the Rabbit Lake Mill and the northern property boundary and 3 km from the nearest outside property boundary in the south block.

The property also hosts two known significant uranium occurrences. The Pebble Hill Occurrence is located in the southern block of the property approximately 1 km west of the West Bear Uranium Deposit. The North Shore Occurrence is located approximately 1.5 km northwest of the West Bear Uranium Deposit. Several areas of the Hidden Bay property have yielded anomalous radioactivity or weak uranium mineralization in individual drill holes. These include two areas along the Telephone Lake Trend, one area in the Shamus Lake area, and in several scattered locations in the Wolf Lake area.

3.4 Legal Surveying

The entire length of the property boundary of the Hidden Bay Project has not been surveyed. The northeastern boundary is coincident with the boundaries of the surface lease of Cameco's Rabbit Lake Operation, a boundary that has been surveyed.

A historic legal survey was undertaken by Eldorado Mines on the western boundary of the key West Bear claim number S-106424 (the mineral claim that contains the West Bear Deposit) with Mineral Lease ML5424. The West Bear Deposit is located at the centre of S-106424 approximately 1 km east of the surveyed boundary. UEX Corporation owns 100% of S-106424 and a vested 75.002% interest in ML5424 through a joint venture arrangement.

3.5 <u>Other Property Interests</u>

To the knowledge of the author, there are no underlying interests ownership or royalties on the property. Cameco has retained a first right of refusal to provide financing required by UEX for the development of a mine on this property, as well as the first right to mill ore from the Hidden Bay assets at the nearby Rabbit Lake operation. Cameco also has the right on behalf of UEX to market UEX's share of any uranium production from the Hidden Bay Property.

3.6 <u>Liabilities, Permits and Future Work</u>

The authors are not aware at the time of the writing of this report of any known environmental liabilities on the Hidden Bay Property.

The necessary permits required to undertake the recommended work program outlined in Section 19 have not yet been received. In Saskatchewan, permits for typical exploration programs must be obtained on an annual basis.

Permits for surface exploration work will be required from two provincial regulators, the Conservation Officer of Saskatchewan Environment, and from the Saskatchewan Watershed Authority for water use. These permits take approximately three to four weeks to obtain from the regulators upon receipt of the applications. The process is relatively simple and straight forward, and there have never been any difficulties in obtaining permits for this type of work in this area in the past.

Should UEX decide in the future to develop the West Bear Deposit, additional clearances will have to be obtained from the Canadian Nuclear Safety Commission (CNSC), a federal government department. While obtaining permits from the CNSC is more difficult and requires more time, effort and scientific investigations, recent permit clearances were received by Cogema for development of the Sue E Pit (immediately adjacent to the Hidden Bay Project on the McClean Lake Operation lands) and by Cameco for the development of the Cigar Lake Mine.

4.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

The West Bear area is accessible via a 13 km long winter skidder road that originates at kilometre 209 on provincial road #905A between the town of South End and the Rabbit Lake Operation (approximately 340 km north of the town of LaRonge, SK). Access in the summer along the skidder road is possible via all-terrain vehicle with a determined effort.

Alternative access is possible via float-equipped aircraft based in either Points North Landing or LaRonge to Young Lake, a small lake located 1 km southwest of the West Bear Uranium Deposit.

Highway #905 traverses much of the north-south extent of the eastern end of the Hidden Bay Property. The Athabasca Seasonal Road, which originates at Highway #905 and passes through Points North Landing, cuts from east to west across much of the northern block of the property. Points North Landing is a trucking base and airport facility that can accommodate wheel, float, and ski-equipped fixed wing aircraft and is located approximately 20 km west of the property boundary.

The northern boundary Hidden Bay Property is located immediately adjacent to two existing uranium mining and milling operations, Cameco's Rabbit Lake Operation, and Cogema's McClean Lake Operation (see Figure 3.2). An electrical power line runs parallel to the Athabasca Seasonal Road and along Highway #905 from the Rabbit Lake Operation to the Minor Bay Lodge, located at kilometre 219, approximately 10 km north of the start of the 13 km skidder road that accesses the West Bear area. However, it is unclear at this time whether or not the power lines have the capacity to supply a new mining operation at West Bear or whether the power grid could support the additional requirements.

There are no existing mine workings, tailings ponds, or waste deposits on the Hidden Bay Property. No studies have been completed to determine potential tailings storage areas, potential waste disposal areas, or mill sites. However, given the size of the deposit is not sufficient to warrant the building of a new uranium mill, such sites would not be required.

The climate is typical of much of northern Saskatchewan. The average daily temperatures range from as high as 15.0° C at the peak of July (with extremes to 30° C) to as low as -24° C in winter, with extremes as low as -45° C. Annual precipitation levels are 552 mm, divided equally between rain and snow and distributed roughly equally throughout the year. Average annual peak snow depth is 53 cm (Environment Canada Website, 2005).

The topography and physiography of the West Bear area is very typical of many areas of the Canadian Shield. The area consists of a mixture of peak bogs, moderate-relief glacial sand hills, and lakes. Most of the deposit area is covered by peat moss and ranges from 0-3 m above the water table. The eastern end of the deposit is covered by a grassy wet swamp. This area is surrounded by moderate relief glacial tills and eskers comprised of sand and moderate-sized boulders.

If this project were to proceed to a mining stage, operations could be carried out year round, as observed by the historic and current uranium mining operations in the area. Due to the long history of mining in the Wollaston Lake area, sufficient water supplies and mining labour would likely be available to UEX for work in the West Bear area.

5.0 HISTORY

Attention was first focused on the Athabasca Sandstone of northern Saskatchewan in 1967 when New Continental Oil Limited flew an airborne radiometric survey over the basin. Five permits were optioned in the Wollaston Lake area from New Continental Oil in 1968 by Gulf Oil Canada Limited (later Gulf Minerals Canada Limited) who began

investigating anomalies by prospecting, mapping, geophysical reconnaissance surveys and diamond drilling. The initial uranium discovery in the Wollaston Lake area was made in 1968 at Rabbit Lake.

The Rabbit Lake discovery led to extensive exploration on the Gulf Minerals Canada Limited (GMCL) permits, which included the current Hidden Bay Property and the location of the West Bear Deposit. From 1969 until 1980, several deposits, including the Collins A, Collins B, Collins D, Eagle North and Eagle South deposits were discovered on the adjacent Rabbit Lake property and the Raven-Horseshoe and West Bear deposits on what is today the Hidden Bay property.

In 1976, GMCL entered into an agreement with Noranda Exploration and Saskatchewan Mining and Development Corporation (SMDC) where each party could earn a 1/3 interest in the claim that ultimately hosted with West Bear Deposit. Subsequently, both Noranda and SMDC relinquished their ownership in the claim hosting the deposit.

Eldorado Resources Limited acquired Gulf Minerals Canada Limited in October 1982. Eldorado then merged with the Saskatchewan Mining Development Corporation in 1988 to form Cameco Corporation. Previously, the Hidden Bay property was a part all the lands comprising the historic Rabbit Lake property. Cameco divided the Rabbit Lake property into two parts, one being the current Rabbit Lake mining property covering all of the leases and active mining operations, and the second all lands outside the current active operations. The second part became known as the Hidden Bay property. Cameco transferred title of the Hidden Bay properties to UEX through an agreement reached with Pioneer Metals Corporation in 2001. Cameco retained 100% ownership of the lands occupied by the current Rabbit Lake mining operation.

Exploration on the current lands comprising the Hidden Bay project began in the early 1970s. A total of 204,976 metres were drilled in 1,381 diamond drill holes between 1972 and 1998 and 16,818 metres were completed in 929 reverse circulation drill holes (Rhys, 2001).

Historic resources estimates were established by Gulf Minerals for the Raven-Horseshoe Deposits (Healey et al, 1988) and West Bear Uranium Deposit (Boyd et al, 1980) and are shown in Table 5.1. These resource estimates were determined prior to the establishment of National Instrument 43-101 *Standards for Disclosure for Mineral Properties* guidelines and the Canadian Institute of Mining, Metallurgy and Petroleum's (CIM) *Standards on Mineral Resources and Reserves Definitions and Guidelines*, adopted August 20, 2000. The authors are unable to comment on how the methodology of the historic resource estimates presented below compare to the present CIM and National Instrument 43-101 requirements.

Zone	Tonnes	Grade U ₃ O ₈	Contained Pounds U ₃ O ₈
Raven Deposit	3,063,000	0.14%	9,453,800
Horseshoe Deposit	3,617,287	0.17%	13,556,900
West Bear Deposit	130,545	0.44%	1,268,000

Note: Resource estimated completed by Gulf Minerals and are not in compliance with NI 43-101 requirements

5.1 **Previous Work on the West Bear Deposit**

This summary of the previous work on the property will focus exclusively on the West Bear Uranium Deposit and surrounding area. As the property is large and has a long history of work outside the areas of interest that is not related to the West Bear Deposit, this information will not be included in this report.

Ground-based exploration in the West Bear area was first undertaken in the early 1970's by Gulf Minerals following up the New Continental Oil airborne radiometric surveys.

In 1974, Scintrex conducted a detailed airborne electromagnetic, spectrometer, and magnetic survey over the West Bear area and defined a number of geophysical anomalies. From 1974 through 1976, Gulf undertook a series of prospecting and ground geophysical programs following up these geophysical anomalies. Diamond drilling on the geophysical anomalies was undertaken in a systematic manner.

In April 1977, a strong electromagnetic conductor originally defined by the Scintrex survey, was drill tested by a single 60[°] angled hole, WB-01. This hole failed to recover core from surface to a depth of 28.3 ft. However, down-hole radiometric probing indicated the presence of significant radioactive intervals within this unrecovered zone. Follow-up vertical hole WB-03 was drilled to re-test the unrecovered interval in WB-01 and confirmed the radiometric intervals encountered in the original hole. Additional diamond drilling through the summer of 1977 resulted in the discovery and partial definition of the West Bear Uranium Deposit. The entire 1977 program consisted of 41 diamond drill holes totalling 1,906 m.

The diamond drilling program was plagued by extremely poor core recoveries. Thus, in 1978 and 1979, Gulf decided to define the remainder of the deposit using reverse circulation drilling (RCD). A total of 106 vertical RCD holes were completed in 1978 and an additional 23 holes in 1979 for a total meterage of 4,259 m. Of the 170 combined diamond drilling and RCD holes drilled into the deposit by Gulf, a total of 96 holes encountered uranium mineralization exceeding 0.03% U₃O₈. The Gulf reports do not comment on the quality of the cuttings recovered using the RCD drilling technique.

Gulf drilled 11 short diamond drill holes in the West Bear area in 1980 to test for extensions of the deposit without success. Eldorado completed four diamond drill holes in the deposit area in 1982 and failed to find extensions to the uranium mineralization.

No further work was completed in the West Bear area until 2002, when UEX successfully drilled one single diamond drill hole into the deposit, WBE-017, as part of a larger regional diamond drilling program. Hole WBE-017 encountered uranium mineralization at the unconformity that averaged 1.686% U_3O_8 over 9.00 m, significantly higher grade than expected.

In February 2004, UEX Corporation initiated a sonic drill program to test the West Bear Deposit with the objective of working towards an updated resource estimate. The drill program was designed to evaluate core recovery and confirm grades of select Gulf Mineral holes within the West Bear deposit. An attempt was made to twin three historic mineralized Gulf holes, one an RCD hole and two diamond drill holes. A total of 84 m was drilled. Only one of the three attempted holes was successfully completed.

The successfully completed hole encountered the West Bear Deposit over the appropriate interval as expected. However, the grade of the intersection was significantly lower than the historic Gulf hole.

One hole was abandoned within the mineralized zone when the drilling contractor broke off the rod string. The hole encountered mineralization 3 m vertically above the Gulf-defined upper boundary of the deposit and was substantially higher grade that the parent hole.

The third hole was abandoned just above the expected top of the mineralized hole when the sonic drill head suffered a major breakdown. The results of the 2004 sonic program confirmed Cameco's hypothesis that the Gulf RCD and diamond drilling programs failed to properly define both the actual boundaries and uranium content of the West Bear Deposit. Cameco subsequently recommended to UEX that a new deposit definition drilling program was required using the sonic drilling technology. The results of this proposed program are the subject of this report.

5.2 <u>Previous Production</u>

There has been no previous uranium production from the Hidden Bay Property.

6.0 <u>GEOLOGICAL SETTING</u>

6.1 <u>Regional Geology</u>

The Hidden Bay project area is underlain by deformed and metamorphosed supracrustal rocks of the Aphebian Wollaston Lithostructural Domain of the Churchill Province (Lewry, et al 1978). The Wollaston Group is in turn partially covered by flat-lying, unconformable sandstones and conglomerates of the Helikian Athabasca Group (Figure 3.2). An irregular contact between these two groups transects the length of the property in a north-north-easterly direction.

Four lithostratigraphic units make up the Wollaston Group (Lewry and Sibbald, 1980):

- (i) A locally present, coarse clastic unit comprising mainly mature quartzitic to arkosic metasediments.
- (ii) A dominantly pelitic unit, commonly graphitic, containing interlayers of quartzitic semipelites and calc-silicates.
- (iii) A thick unit of calcareous and non-calcareous arkose, interlayered with subordinate calc-silicate and pelite.
- (iv) An upper amphibole-quartzite unit containing interlayered calcareous sediments and graphitic pelites (Hidden Bay assemblage)

6.2 Project Geology

On the Hidden Bay Project, the lowermost coarse-grained clastic unit of the Wollaston Domain has not been recognized. The other units flank and generally overlie the Archean-age McClean Lake and Collins Bay Domes, two granitic and typically massive bodies that are found on the west and north ends of the property, respectively.

Two deformational events are readily recognized in this area. Earliest deformation is manifested as wide-spread northeast-trending, layer-parallel foliation and gneissosity, though this is somewhat disrupted where the Wollaston Group sediments wrap around the McClean Lake and Collins Bay Domes. A second deformational phase is evident in the form of small to large-scale folding that has on a local scale significantly disrupted the ubiquitous northeast trending, steep southeast-dipping package.

There are two prominent fault directions in this area. Northeast-trending reverse faults generally follow the lay of the fabric and are best developed within graphitic horizons. Fault movement post-dates the Athabasca sandstone and cumulative vertical displacement is locally in excess of 100 metres (Rhys, 2001). Prominent northeast-trending faults in this area include the Rabbit Lake, Collins Bay, Telephone Lake, and Tent-Seal faults. North-trending faults in this area are generally steep-dipping and are believed to be related to the Tabernor fault system (Studer, 1984). Ahenakew, Dragon Lake, and Pow Peninsula faults are some of the more prominent north-trending faults

An intense paleoweathering profile was developed on the basement rocks prior to the deposition of the overlying Athabasca Group. This paleoweathering profile has been partly preserved (sometimes in excess of 75 m) and is characterized by kaolinite-rich upper levels and illite/chlorite-rich lower levels. Red hematite staining is pervasive throughout the upper portion of the profile but may be modified by superimposed reduction that has removed hematite and added chlorite (Ramaekers, 1983).

The bedrock is generally overlain by extensive unconsolidated Quaternary glacial and periglacial deposits consisting of ground moraine, esker, outwash, aeolian, lacustrine deposits which effectively mask much of the bedrock.

6.3 Local Geology of West Bear Deposit Area

The West Bear area is covered by approximately 15-30 m of Athabasca Group sandstone that overlies the Wollaston Group metasediments. The western fold closure of a regional scale doubly plunging open anticline occurs in the basement rocks of the Wollaston Group between the Mitchell Lake and Higgins Lake area. This east-west elongated doubly plunging feature is well defined by airborne electromagnetic and magnetic surveys, as the folding pattern is imaged by a very strong conductor package.

Coring the anticlinal feature is a thick series of quartzite and arkosic units that may be members of the lowermost Wollaston Group. Rimming the quartzite-arkose package is a series of pelitic to semipelitic gneisses, some of which are graphite-bearing. A prominent graphitic package, known as the West Bear Graphitic Unit is located between the quartzite-arkose and pelitic assemblages, and is the conductive source imaged in the airborne electromagnetic surveys.

Along the southern and northern limbs of the anticlinal feature, brittle thrust faults have overprinted the West Bear Graphitic Unit (Graphitic Unit). The West Bear Deposit is located at the unconformity expression of the West Bear thrust fault within the Graphitic Unit along the south limb of the anticline, 1 km east of the western fold closure.

North-south striking lineaments are observed in the regional magnetic data and are believed to be Tabernor Faults, as they are observed displacing conductors in a sinistral manner. Tabernor Faults are known to have been periodically active from the early Proterozoic through to the Silurian. One such north-south magnetic lineament is observed striking adjacent to the eastern end of the West Bear Deposit. Weaker northeast trending magnetic features are observed in the magnetic data west of the West Bear Deposit. The source of these features may be faults or possibly weakly magnetic glacial drift originating from basement rock sources.

In the West Bear Deposit area, the basement stratigraphy dips at $5-20^{\circ}$ to the south. The West Bear Thrust Fault is hosted within the West Bear Graphitic Unit and appears to be conformable to the unit in the on-strike direction to the east over a distance of approximately 1.5 km, and 1 km to the south in the down-dip direction. Structurally overlying the graphitic package is a pelitic to semi-pelitic package, sometime containing lenses of graphitic-bearing pelite. Structurally underlying the Graphitic Unit is a series of semi-pelitic to arkosic package that may be transitional to the arkose-quartzite assemblage. Pegmatite dykes are observed cross-cutting all basement lithologies but are overprinted by the West Bear Thrust Fault.

The Athabasca Group in the immediate West Bear Deposit area consists of approximately 60% subangular to subrounded polymictic quartzite boulder conglomerate, and 40% granular sandstone. Much of the conglomerate outside the alteration zone surrounding the deposit appears to be framework-supported and often contains authigenic specular hematite grains in the interstices.

Despite the strong evidence of brittle structure observed in the drill holes positioned within, along strike, and down-dip of the West Bear Deposit, no significant vertical offset is observed of the unconformity in the West Bear area. The West Bear fault is clearly a re-activated Hudsonian structure, with well developed healed brittle-ductile structural features observed being cross-cut by later brittle gouges. This is best observed in UEX diamond drill holes WBE-030, 31, and 32 drilled in 2003. The shallow-dipping nature of the brittle-ductile fault indicates that is was likely a thrust fault, and would have significantly displaced the hangingwall basement lithology in a vertical direction. Thus, the authors believe that the West Bear Fault was likely a thrust fault with significant vertical displacement prior to the deposition of the Athabasca Group. This offset was likely eroded to a level base prior to the deposition of the Athabasca Group.

The lack of vertical offset of the unconformity indicates that the re-activation of the West Bear Fault was likely due to strike-slip movement, or to dilation as the result of the development of tension cracks. The large amount of gouge and structurally-enhanced graphitic brittle features favour the strike-slip interpretation.

One hypothesis to explain the strike-slip interpretation is related to the perceived Tabernor feature located immediately east of the deposit, hereby named the Stevenson Fault. The area within and west of the Stevenson Fault, west of Line 22+50E is strongly clay altered and shows evidence of strong brittle structural enhancement of graphite and thickness of the Graphitic Unit. The areas east of L22+50E is unaltered and the West Bear Graphitic unit is very thin, with minor brittle structural overprinting. The historic Gulf and UEX drilling on the west side of the West Bear Deposit at L16E area shows a vertical displacement of at least 10 m immediately west of the last mineralized drill fence. This suggests the presence of a fault, possibly oriented parallel to the northeast-trending magnetic features described previously.

It seems likely that strike-slip movement occurred along the Graphitic Unit as the result of sinistral movement along the Stevenson Fault and the possible west-bounding fault after the deposition of the Athabasca Group.

In the immediate West Bear Deposit area, the Graphitic Unit contains an average of 20% graphite, with sections up to 60% graphite locally. The unit is also intersects the unconformity over an unusually wide area, ranging up to 150 m in lateral extent across the unconformity only 200 m east of the 2005 sonic drill holes (see Figure 16.1).

7.0 **DEPOSIT TYPES**

7.1 Uranium Potential

Most of the economic and sub-economic deposits in this area are spatially associated with the unconformity between Athabasca Group sandstones and typically graphitic gneisses of the basal Wollaston Group. Historically, the most favourable area has been considered a 20 to 30 km wide, northeast-trending zone that broadly overlies the western margin of the Wollaston Domain. The Hidden Bay project lies within this corridor.

The targets for the Hidden Bay exploration program are:

- (i) unconformity-related uranium deposits of the Cigar Lake, Key Lake or McArthur River style,
- (ii) basement-hosted uranium deposits in and around fault zones, extensional fracture-filling of Eagle Point style, or
- (iii) basement-hosted, fault zone-related uranium deposits within calcareous sediments of Rabbit Lake style.

The exploration target of this report is the West Bear Deposit, an unconformity-style uranium deposit that most closely resembles the Cigar Lake Deposit in terms of alteration, location, and style of mineralization, and the lack of displacement of the unconformity.

7.2 Non-Uranium Potential

Non-uranium occurrences of base metals, molybdenum and associated precious metals have been found in the Wollaston, Mudjatik and Virgin River domains outside of the Athabasca Basin. Similar types of occurrences undoubtedly occur within the limits of the Athabasca Basin but no significant occurrences, other than metals associated with uranium deposits, have been reported. High rare earth values have been obtained within Athabasca Group rocks but, to date, no significant occurrence has been publicly reported.

8.0 MINERALIZATION

Unconformity mineralization has now been defined by the 2005 UEX sonic drilling program over a strike length of 300 m. Uranium mineralization remains open along strike to the east, as historic Gulf Minerals holes indicate that an area 150 m long immediately east of, along strike and continuous with the UEX sonic holes may also be mineralized, as this area was included as part of the original Gulf resource estimate. Limited potential does remain to expand the uranium mineralization north and south of selected cross sections within the area tested by UEX's sonic drill holes.

Over the 300 m of defined strike length (as defined by the UEX sonic holes), the width of mineralization ranges from less than 5 m to just over 25 m. Thickness of the mineralization ranges from mere centimetres to as much as 10.5 m.

The cross sectional shape of the mineralized zone varies significantly from cross section to cross section along the strike length of the deposit, with highly variable thickness and widths observed (see Appendix C).

One 'donut hole' is observed in the mineralization on L16+75E. On this section, there are two small mineralized pods that do not meet the cut-off criteria. These pods are interpreted to be continuous with mineralization on the adjacent sections to the east and west.

The mineralization is hosted within both Athabasca Sandstone and basement graphitic and nongraphitic pelites at the unconformity and appears to be one continuous body. Mineralization consists of sooty black pitchblende found as disseminations, blebs, and replacements of host rock minerals in both the sandstone and basement rocks. Minor yellow secondary uranium minerals such as uranophane and other gummite minerals are observed as disseminations and blebs in selected drill holes. Selected higher-grade holes contain intervals of semi-massive pitchblende up to 3 m in core length.

From hole to hole on any given drill fence, the mineralized zone tends to have sharp boundaries. Instead of pinching or thinning out, the deposit tends to terminate completely between holes. Holes that are located immediately adjacent to holes containing high grade and thick intervals of uranium mineralization are often not even weakly mineralized, despite the fact that the two holes are merely 5 m apart.

A high-grade core is observed over a 100 m strike length between L17+37.5E to L18+37.5E. Within this area, uranium mineralization is found to have the largest widths and core lengths. The resource estimate that will be presented herein, suggests that approximately 70% of the deposit's contained uranium, as currently defined, is located within this interval.

Nickel-cobalt-arsenic mineralization is found within the sooty pitchblende mineralization. While weak Ni-Co-As is observed throughout the West Bear Deposit, high grade nickel-cobaltarsenic is concentrated east of L18+50E, with sectional grades observed ranging up to 4% nickel. Ni-Co-As is found in the form of gerdorsffite, rammelsburgite, and cobaltite and is preferentially concentrated within the base of the uranium mineralized zone, particularly within the basement lithologies.

The West Bear Deposit is hosted within a very intensely clay-altered zone that obliterates primary and secondary fabrics within both the sandstone and basement rocks. In most areas, rocks are altered to massive clay and it is very difficult to determine the rock protolith. Occasional quartz cobbles are preserved within the clay-altered sandstone lithologies. Graphite is preserved in the strongly clay-altered Graphitic Unit. However, strongly clay altered pelitic and pegmatitic rocks are difficult to distinguish from altered sandstone.

Hematitic alteration is observed within both sandstone and basement lithologies associated with mineralization. The location of the strong hematization varies within the deposit from west to east along strike. Strong hematization is observed in the sandstone lithologies vertically above the uranium mineralization at the west end of the deposit. The hematization appears to migrate into the basement lithologies on progressive cross sections stepping to the east.

9.0 <u>EXPLORATION</u>

UEX Corporation has conducted a series of exploration programs on the Hidden Bay Project since 2002. Exploration activities have been conducted elsewhere on the Hidden Bay Property in the West Bear, Pebble Hill, Rhino Lake, Telephone Lake, Raven-Horseshoe, Shamus Lake, and Kewen Lake areas.

In the winter of 2005, exploration activities included the following:

- Definition of the West Bear Deposit with sonic drilling
- Diamond drilling of the Pebble Hill Occurrence and area
- Diamond drilling of the Ni-Co-As area east of the West Bear Deposit
- Diamond drilling of the SP-148 area in the North Telephone Lake area
- VTEM surveys of the West Rabbit Lake Fault, Rhino-Dwyer, Telephone-Shamus and Post-Landing areas.

As the subject of this report is exclusively the results of the sonic drilling program of the West Bear Deposit, the results of the exploration activities of these other areas will not be discussed, as they are located between 1-50 km from the subject area. These other activities are part of an exploration report under preparation by Cameco for distribution in 2006.

9.1 <u>Results of the Sonic Drilling Program</u>

A total of 97 successfully completed and 4 unsuccessfully completed sonic drill holes were drilled to define the West Bear Uranium Deposit between L16+00E and L19+50E (holes UEX-004 through UEX-101A). All but 34 of these holes encountered unconformity-type uranium mineralization.

Holes were drilled on fences parallel to a surveyed ground established grid. Individual drill fences contained five to eight drill holes in order to define the cross-strike extent (or

width) of the mineralized zone. Drill fences were spaced at 25 m intervals, except between L18+00E and L18+50E, where fences were located 12.5 m apart.

All drill holes and key areas of the ground grid were surveyed by the Qualified Person using a Sokia Stratus differential GPS system, capable of determining the position of survey points to within 12 mm in a horizontal direction and less than 15 mm in the vertical direction. A high degree of reproducibility, precision, and accuracy were demonstrated in repeated measurements of individual points.

All samples collected for assay were shipped to the Saskatchewan Research Council's Geoanalytical Laboratory in Saskatoon, SK, for analysis, one of the few laboratories in North America capable of analyzing uranium core samples, particularly those with higher uranium concentrations. Details of the sampling methodology, approach, preparation, analysis, security, and data verification are presented in Sections 12 and 13.

9.2 <u>Interpretation of the Exploration Information</u>

The 2005 sonic drilling program confirmed the presence of the West Bear Uranium Deposit over a strike length of 300 m. The deposit remains open along strike to the east, where historical Gulf Minerals drill holes suggest that extensions to the mineralization may be possible.

The drilling suggests that the mineralization is continuous both along strike and from hole to hole across strike on each drill fence. Only one drill fence contains mineralization that is of a concentration and thickness that fails to meet the cut-off criteria used by the Qualified Person to complete the resource estimate presented herein.

A three-dimensional model of the West Bear deposit as defined by the 2005 sonic drilling program was constructed using GEMCOM software version 5.5.1. The boundaries of the deposit were determined using the Qualified Person's geological experience and using a combination of two distinct cut-off criteria determined by Cameco's Engineering and Projects group in April, 2005. The three-dimensional model was used in the calculation of the resource estimate presented in the pages below.

9.3 <u>Parties Responsible for the Work Program</u>

The sonic drilling program and subsequent geological interpretation was completed exclusively by Cameco Corporation under a property management agreement with UEX Corporation. Under this agreement, Cameco is responsible for conducting all exploration activities on the Hidden Bay Project on behalf of UEX Corporation in a consultant to client-like relationship. UEX is responsible for funding exploration activities.

Cameco does not have any direct interest in the Hidden Bay Property, nor has any agreement in place to acquire such an interest. Cameco does have an equity interest in UEX as discussed in Section 17.0.

Sonic drilling services were supplied under a service contract by SDS Drilling, a division of Boart-Longyear under a contract with UEX Corporation.

9.4 <u>Reliability of the Data</u>

It is the authors' opinion that the reliability of the data collected during the sonic drilling program is very good, as the sonic drilling technique was successful at obtaining over 95% core recovery during the program. This high degree of core recovery has not been previously achieved during any previous drilling campaign on the West Bear Deposit. Thus, samples collected for laboratory analysis from the sonic core are considered by the authors to be representative of the mineralization intersected in the drill core.

Previous drilling campaigns using diamond drilling and reverse circulation drilling techniques by Gulf were plagued by poor core/cuttings recovery. As the historical resource estimate by Gulf was calculated using assay samples collected from poorly recovered core, the estimate is considered to be suspect by the authors of this report.

One concern of the authors is the reliability of the bulk density data used in the resource report, a concern described in detail previously in Section 16.4.2. The authors believe that the bulk density of the deposit may be understated. The reader is referred to Section 16.4.2 for a more detailed description of reliability of the bulk density data.

10.0 DRILLING

The sonic drilling program was contracted to SDS Drilling, part of the Environmental and Geotechnical Division of Boart-Longyear Inc.

SDS employed a custom-built heavy-duty sonic rig, one of the largest sonic rigs available for contracting services. The rig was mounted on one Knodwell tracked vehicle, with supporting equipment such as drill steel, and fuel mounted on another tracked vehicle. When the sonic rig is in operation, the two Knodwells line-up back to back to form one large operating platform.

The reader is referred to <u>http://www.boartlongyear.com/html/drilling_services/sonic_services.php</u> for a more detailed description on the mechanics of sonic drilling and how the equipment operates.

A sonic rig's ability to penetrate sands, clays, and gravels is dependent on the special sonic drill head. The head contains two eccentric weights that are driven by high-speed hydraulic motors. The eccentric weights cause the generation of high-frequency vibrations that are transferred from the sonic head directly down the drilling rods to the drill bit. The vibration causes the first micro-layer of soil surrounding the drill bit to be held in suspension. This process reduces the friction of the drill rod and borehole interface so that the rods and sampling tools can rapidly penetrate the ground by using the slow 60-180 rpm rotation of the drill rods.

As the 10 ft rod is driven into the ground, the sample is driven through the annulus of the bit, and the sample is collected in a sample barrel. Once the barrel is completely filled with the sample, the rod string is pulled up to surface and the sample is recovered from the sample barrel into two

5 ft long plastic sausage tubes with critical information such as the hole number and top and bottom of the sample depth recorded on the plastic tube in felt marker.

The special aspect of SDS's heavy-duty sonic rig is its ability to employ an external casing to keep the hole open when the sample barrel and rod string is removed from the hole during sample retrieval. Sonic drilling and casing is performed using the following steps.

- 1. The drill string is advanced 10 ft to fill the sample tube.
- 2. With the drill string in the hole, the sonic head is detached and a larger diameter casing is attached. The casing is reamed over the drill string until it reaches approximately 30 cm from the bottom of the hole.
- 3. The casing is detached from the sonic head and the re-attached to the drill string. The drill string is pulled out of the hole and the sample recovered into the sausage-like tubes.
- 4. The drill string is replaced in the hole and drilling starts once again at Step #1.

The advantage of sonic drilling is the technique's ability to achieve very high rates of recovery in when drilling soft materials such as sand, clay, and gravel. The massive clay alteration that hosts the West Bear Uranium Deposit is a prime candidate for sonic drilling. Core recovery of over 95% was achieved in most of the drill holes.

The core size recovered by the SDS sonic rig was 5.5 inches in diameter. The outer diameter of the casing was 6.5 inches in diameter

Once the core was placed by the contractor into the 5 ft long sausage bags, a Cameco geological technician or geologist recovered the core immediately and brought it to the core shack. This was often done using a snowmobile and trailer sled, as the core shack was up to 200 m away from the rig at any given time.

At the core shack, the core was properly sequenced and placed into a core box, with the upper and lower core footages marked on wooden blocks placed at either end of the core.

Over the entire drilling program, a total of 101 holes (including 4 re-drilled holes) were drilled for a total of 2,793.3 m. Four holes had to be re-drilled when the drill steel or casing broke in the hole and could not be recovered.

Two holes, UEX-011 and 012, could not be sonic drilled through the mineralized zone, when the drillers claimed that the rig could not penetrate the hard ground in those holes. These two holes were extended beyond the bottom of the mineralized zone using a diamond drill rig.

10.1 <u>Results of the Sonic Drilling Program and True Thickness</u>

Analytical results from the sampling completed on the sonic core can be observed in Appendix D and in Table 11.2. The core lengths of the individual mineralized intersections are believed to be indicative of the true thicknesses of the mineralized

zones, as the deposit is flat lying, and in the shape of a ribbon. All sonic drill holes were drilled at -90° (vertical).

11.0 SAMPLING METHOD, APPROACH

11.1 Core Handling and Logging

Once the core was placed in the core box and proper footages marked at the top and bottom of the interval (as outlined in Section 11.0), the core was then measured to determine core recovery and then scanned for radioactivity using an SPP-2 Scintillometre.

Any radiometric peaks greater than 1,000 cps on the SPP-2 were considered to be weakly uranium mineralized and the corresponding peaks were marked in red on the core box adjacent to the mineralized interval. The level of radioactivity detected by the scintillometre was used as a guide for sampling the core for subsequent laboratory analysis. Peaks in the range of 1,000 to 3,000 cps were considered weakly mineralized, peaks between 3,000 and 6,000 cps were considered weak to moderately mineralized, and peaks between 6,000 and 9,000 cps were considered to be strongly mineralized. Peaks exceeding 10,000 cps were considered to be very strongly mineralized.

As numerous holes encountered uranium mineralization, the drill rods and casing were routinely scanned using the SPP2 Scintillometre to ensure there was no cross-contamination of uranium between holes.

Once the core was scanned, the geologist logged the drill core recording lithologies and mineralized boundaries. The geologist and technicians used Palm handheld digital assistants (PDAs) equipped with 'Smartlist to go v2.602' software and a customized data application to record geological and geotechnical data. Data was transferred from the PDAs to computer and imported into 'DH Logger' software, a drill hole logging and database software program. Drill hole summaries are found in Appendix B.

11.2 <u>Down-Hole Radiometric Logging</u>

A down-hole radiometric probe was used to detect radioactivity in each sonic drill hole. Cameco uses in-hole probe instruments that are capable of determining, to a high degree of accuracy, the concentration of uranium intersected in-situ within a borehole. These probes are able to detect the presence of radioactivity caused by the atomic decay of uranium. Using correlation formulas programmed into Cameco-in-house spreadsheets, the concentration of uranium in-situ can be determined.

The probes are calibrated before each drill program at the Saskatchewan Research Council's test pit facility in Saskatoon, SK. The development of this technology has been in part developed by Cameco and is standard practice at all of Cameco's mining operations, where radiometric probes and scanners are used routinely to estimate uranium grades in both drill holes and broken muck.

Table 11.2 - Mineralized Intersections - West Bear Deposit2005 Sonic Delineation Drilling ProgramHidden Bay Project

Hole		ar Grid Coo		Length	From	То	Length	U308	As	Co	Ni	%*Thick
UEX-004	Easting 18+25.0	15+25.0	Elevation 412.08	(m) 27.4	19.30	20.60	1.30	(wt%) 0.211	(wt%) 0.581	(wt%) 0.178	(wt%) 0.214	(m%U3O8 0.274
UEX-005	18+25.0	15+20.0	412.56	28.7	15.00	21.00	6.00	3.626	1.761	0.585	0.618	21.756
UEX-006 UEX-007	18+25.0 18+25.0	15+15.0 15+10.0	412.60 412.54	28.3 22.6	<u>17.70</u> 15.70	20.40 16.70	2.70	4.113 0.181	1.818 0.039	0.526	0.760	<u>11.105</u> 0.181
UEX-007	18+25.0	15+05.0	412.54	22.0	15.70	10.70	1.00	unminera		0.002	0.014	0.101
UEX-009	18+25.0	15+30.0	412.31	29.0				unminera	alized			
UEX-010 UEX-011	18+00.0 18+00.0	15+20.0 15+15.0	411.30 411.29	22.9 18.3	20.70	22.40	1.70	unminera	alized N/A	N/A	N/A	0.304
UEX-011 UEX-012	18+00.0	15+10.0	411.29	16.8	16.30	23.50	7.20	0.179	N/A	N/A	N/A	3.456
UEX-013	18+00.0	15+05.0	413.28	22.9	13.20	21.00	7.80	1.287	0.544	0.047	0.141	10.039
UEX-014	18+00.0	15+00.0	411.63	22.9	15.30	19.60	4.30	0.420	0.205	0.011	0.076	1.806
UEX-015 UEX-016	<u>18+00.0</u> 18+12.5	<u>14+95.0</u> 15+25.0	412.00 412.63	18.6 23.6				unminera unminera				
UEX-017	18+12.5	15+20.0	412.16	23.2	15.20	19.10	3.90	3.167	1.337	0.567	0.371	12.351
UEX-018	18+12.5	15+15.0	409.66	25.0	15.40	21.30	5.90	1.267	0.147	0.020	0.104	7.475
UEX-019 UEX-020	18+12.5 18+12.5	<u>15+10.0</u> 15+05.0	410.20 410.81	23.8 16.8	16.70	18.60	1.90	0.199 unminera	0.018 alized	0.007	0.019	0.378
UEX-021	18+37.5	15+25.0	411.96	21.7	17.30	19.50	2.20	0.270	0.069	0.014	0.051	0.594
UEX-022	18+37.5	15+20.0	412.16	22.9	19.50	21.10	1.60	1.308	0.298	0.089	0.147	2.093
UEX-023 UEX-024	<u>18+37.5</u> 18+37.5	<u>15+15.0</u> 15+10.0	412.00 411.61	25.9 26.3	<u>17.50</u> 18.60	18.20 22.30	0.70	0.484	0.192	0.035	0.181	0.339 1.506
UEX-024	18+37.5	15+05.0	410.84	20.0	10.00	22.00	5.70	unminera		0.017	0.001	1.000
UEX-026	17+75.0	15+10.0	412.87	29.5	13.80	23.90	10.10	4.927	0.785	0.085	0.146	49.763
UEX-027 UEX-028	17+75.0	15+05.0	412.72	29.0	<u>13.70</u> 16.50	23.80	10.10	0.826	0.114	0.016	0.035	8.343
UEX-028 UEX-029	<u>17+75.0</u> 17+75.0	<u>15+00.0</u> 14+95.0	413.00 413.24	30.8 25.9	19.90	23.50 26.10	7.00	0.731 1.498	0.307	0.048	0.089	5.117 9.288
UEX-030	17+75.0	14+90.0	412.44	27.4	10100	20110	0.20	unminera		0.1.01	0.200	0.200
UEX-031	17+75.0	15+15.0	412.55	28.3	16.60	24.10	7.50	2.869	0.733	0.145	0.364	21.518
UEX-032 UEX-033	17+75.0 17+50.0	<u>15+20.0</u> 15+05.0	412.81 413.11	30.0 29.0	22.00 18.00	23.00 22.90	<u>1.00</u> 4.90	0.215	0.794	0.085	0.228	0.215 1.921
UEX-034	17+50.0	15+00.0	412.84	29.0	16.20	25.80	9.60	0.392	0.211	0.007	0.012	8.467
UEX-035	17+50.0	14+95.0	412.38	29.0	18.60	26.20	7.60	2.144	0.356	0.077	0.270	16.294
UEX-036	17+50.0	14+90.0	411.78	29.0	16.80	21.20	4.40	0.539	0.120	0.005	0.020	2.372
UEX-037 UEX-038	<u>18+50.0</u> 18+50.0	<u>15+20.0</u> 15+15.0	412.30 412.23	29.0 32.0	<u>18.60</u> 20.00	20.30 20.40	<u>1.70</u> 0.40	0.155 0.421	0.583	0.079	0.051	0.264 0.168
UEX-039	18+50.0	15+10.0	412.32	29.0	20.10	23.00	2.90	0.511	0.194	0.021	0.222	1.482
UEX-040	18+50.0	15+05.0	413.07	29.0	21.10	21.30	0.20	0.240	17.500	6.670	7.420	0.048
UEX-041 UEX-042	18+50.0 18+75.0	<u>15+00.0</u> 15+15.0	412.06 411.75	28.3 28.5	18.60	21.50	2.90	unminera 0.318	0.519	0.171	0.810	0.922
UEX-042	18+75.0	15+10.0	411.10	32.0	21.80	23.00	1.20	0.558	18.712	3.058	14.066	0.670
UEX-044	18+75.0	15+05.0		29.0	20.40	20.90	0.50	0.110	0.690	0.276	1.210	0.055
UEX-045 UEX-046	<u>18+75.0</u> 18+75.0	<u>15+00.0</u> 15+20.0	411.46 412.45	28.3 28.3	19.80	22.70	2.90	unminera 0.270	0.184	0.048	0.178	0.783
UEX-046 UEX-047	18+75.0	15+20.0	412.43	20.3	19.00	22.70	2.90	unminera		0.040	0.176	0.765
UEX-048	19+00.0	15+20.0	411.31	25.9				unminera	alized			
UEX-049	19+00.0	15+15.0	411.30	29.0	21.00	25.00	4.00	0.165	0.154	0.077	0.291	0.660
UEX-050 UEX-051	<u>19+00.0</u> 19+00.0	<u>15+10.0</u> 15+05.0	411.30 411.42	30.5 29.6	<u>19.80</u> 21.00	24.60 22.10	4.80	3.278 0.242	1.269 0.091	0.277	1.062 0.304	15.734 0.266
UEX-052	19+00.0	15+00.0	411.10	30.5	22.10	22.90	0.80	0.626	0.335	0.075	1.475	0.501
UEX-053A	19+25.0	15+19.4		30.6	18.60	24.50	5.90	0.676	0.148	0.055	0.167	3.988
UEX-054 UEX-055	<u>19+25.0</u> 19+25.0	<u>15+15.0</u> 15+10.0	411.18 411.36	29.0 29.3	20.90 24.20	21.20 24.50	0.30	0.498	0.063	0.047	0.193 3.510	0.149 0.157
UEX-056	19+25.0	15+05.0	411.40	29.0	19.80	20.30	0.50	0.469	14.500	0.584	11.700	0.235
UEX-057	19+25.0	15+00.0	410.99	29.0	19.30	19.50	0.20	0.338	0.042	0.009	0.254	0.068
UEX-058 UEX-059	<u>19+25.0</u> 19+25.0	<u>15+25.0</u> 15+30.0	411.13 411.98	30.0 29.0	18.60	21.10	2.50	2.545 unminera	0.284	0.081	0.281	6.363
UEX-059	19+25.0	14+95.0	411.58	29.0	20.50	22.90	2.40	0.196	0.084	0.018	0.116	0.470
UEX-061	19+50.0	15+30.0	411.11	29.0				unminera	alized			
UEX-062	19+50.0	15+25.0	413.49	29.0				unminera				
UEX-063 UEX-064	<u>19+50.0</u> 19+50.0	<u>15+20.0</u> 15+15.0	411.76 409.49	29.0 28.7	19.80	20.90	1.10	unminera 1.127	1.742	0.126	0.667	1.240
UEX-065	19+50.0	15+10.0	411.72	29.5	17.70	19.80	2.10	0.681	0.434	0.068	0.219	1.430
UEX-066	19+50.0	15+05.0	411.35	29.0				unminera				
UEX-067 UEX-068	<u>19+50.0</u> 18+50.0	<u>15+35.0</u> 15+25.0	411.67 412.18	29.0 29.0				unminera unminera				
UEX-069	17+50.0	15+10.0	411.84	29.0	23.60	23.70	0.10	0.756	0.220	0.116	0.386	0.076
UEX-070	17+50.0	14+85.0	411.38	29.8	22.20	23.30	1.10	0.208	0.237	0.023	0.081	0.229
UEX-071 UEX-072	17+25.0 17+25.0	<u>15+00.0</u> 14+95.0	412.96 414.36	28.9 28.3				unminera unminera				
UEX-072	17+25.0	14+95.0	414.30	28.5	13.00	20.90	7.90	0.239	0.034	0.005	0.019	1.888
UEX-074	17+25.0	14+85.0	413.58	29.7	16.30	26.30	10.00	1.171	0.141	0.026	0.088	11.710
UEX-075 UEX-076	<u>17+25.0</u> 17+25.0	14+80.0 14+75.0	414.16 414.49	29.0 29.2	21.30	24.80	3.50	0.336 unminera	0.179	0.029	0.064	1.176
UEX-076 UEX-077	17+25.0	14+75.0	414.49	29.2				unminera				
UEX-078	17+00.0	14+85.0	414.20	30.0	-			ralized - Sa	amples Lo		-	
UEX-079	17+00.0	14+80.0	413.73	29.7	21.10	26.90	5.80	0.246	0.122	0.027	0.123	1.427
UEX-080 UEX-081	<u>17+00.0</u> 17+00.0	<u>14+75.0</u> 14+70.0	413.64 413.57	30.2 25.9	22.30 21.50	26.00 22.00	3.70 0.50	<u>1.222</u> 0.144	0.118	0.021	0.082	4.521 0.072
UEX-082	16+75.0	14+70.0	416.49	30.8	25.80	25.90	0.30	0.388	0.143	0.012	0.031	0.072
UEX-083	16+75.0	14+80.0		29.9	21.00	22.00	1.00	0.185	0.087	0.010	0.052	0.185
UEX-084 UEX-085	<u>16+75.0</u> 16+75.0	<u>14+75.0</u> 14+70.0	416.13 414.34	29.0 28.0				unminera unminera				
UEX-085	16+75.0	14+70.0	414.54	28.0	18.90	19.40	0.50	0.313	0.027	0.005	0.027	0.157
UEX-087A	16+50.0	14+85.0	416.32	29.6	23.90	24.00	0.10	0.185	0.118	0.002	0.006	0.019
UEX-088	16+50.0	14+80.0		32.6	18.50	29.00	10.50	0.690	0.173	0.080	0.196	7.245
UEX-089 UEX-090	<u>16+50.0</u> 16+50.0	<u>14+75.0</u> 14+70.0		32.0 32.6	<u>19.80</u> 24.90	29.00 25.90	9.20	0.901	0.155	0.045	0.139	8.289 0.265
UEX-091	16+50.0	14+65.0	416.54	31.7				unminera	alized			
UEX-092	16+50.0	14+60.0		32.0	10.00	00.00	0.40	unminera		0.040	0.001	0.004
UEX-093 UEX-094	<u>16+25.0</u> 16+25.0	<u>14+75.0</u> 14+70.0		30.2 35.0	<u>19.90</u> 24.50	29.30 30.50	<u>9.40</u> 6.00	0.943	0.044	0.010	0.021	8.864 2.844
UEX-094	16+25.0	14+70.0		32.0	24.50	26.00	0.40	0.474	0.099	0.033	0.095	0.052
UEX-096	16+25.0	14+60.0	419.04	29.7	-			unminera	alized			
UEX-097	16+25.0	14+80.0		32.0	25.90	27.00	1.10	0.366	0.018	0.012	0.052	0.403
UEX-098 UEX-099	<u>16+00.0</u> 16+00.0	<u>14+70.0</u> 14+65.0		32.0 32.0				unminera unminera				
UEX-100	16+00.0	14+60.0	416.83	32.0				unminera	alized			
UEX-101	16+00.0	14+55.0		25.9				unminera				
UEX-101A		14+55.0	416.08	32.0 2793.3				unminera	uizeu			

- denotes hole that was completed using diamond drilling - probe value reported

In addition, the probing equipment was tested using a known low-grade radioactive source in the field before and after the probing of each hole to ensure that the equipment was functioning properly before and after the in-hole probing occurs.

A Mount Sopris Model 4MGB-1000 Side Mounted 300 m winch or Model 4MGXII 700 m winch and MGX Logger interface was used to log each hole. Mount Sopris HLP2375 gamma probes (#707 and 356) were the tools used to radiometrically log all nonmineralized holes. RADAQ-equivalent STD flux probe (#259) and HF probes (#152 and 121) were used to probe all mineralized holes.

Data acquired from the down-hole probes by a computer recovery program and the radiometric values were dead time corrected. Cameco's GRLOG program or proprietary calculation spreadsheet prepared by Cameco's Mining Resources and Methods department was used to estimate the preliminary equivalent uranium grade of each mineralized intersection.

Prior to the commencement of the 2005 program, the project team selected the STD flux probe #259 as the appropriate tool for determining the preliminary equivalent grade of each hole, based on the expected grades from historical work. It was determined after the receipt of the first set of assay data from the SRC that the STD flux probe data from holes UEX-004 through 043 was substantially underestimating the uranium concentration of each hole. The STD flux probe is the optimal tool for estimated uranium concentrations ranging from 1-3% U₃O₈. During this program, individual chemical assay values were found to range up to 19% U₃O₈ and it is believed that the STD flux probe was subjected to a phenomena known as "saturation" where the detector tube is unable to record the correct number of distinctive radiometric disintegration events due to the high volume of disintegration events impacting the tube during the sample recording interval. Thus, from hole UEX-044 through 101A, the HF flux tool was used to estimate uranium concentrations in each hole with significantly better success.

The importance of determining the uranium concentration in-situ is two-fold. First, it allowed the project team to immediately fence mineralized holes located at the margin of the deposit with unplanned holes. It also allowed the project team to determine, with reasonable accuracy, the footwall and hangingwall boundaries of the mineralized zone in each hole.

11.3 <u>Core Sampling Procedures</u>

A total of 857 samples were collected from the sonic core for laboratory analysis. Samples were collected continuously from unmineralized core located above the mineralized zone, through the mineralized core, to a specified distance below the mineralized zone in each mineralized hole. The sample collection procedures are described below.

Once the core was logged, assay samples were collected from each mineralized interval. Sample intervals were marked out on the core box using a china marker, pencil crayon or felt marker. Assay sample lengths were sometimes variable in order to respect the visible (and sometimes probe-determined) boundaries of uranium mineralization and/or geology. In the vast majority of cases, sample lengths were 0.5 m long, but sometimes ranged from 0.5 to 1 m. Selected sample intervals were smaller than 50 cm due to the presence of narrow zones of mineralization, and in a few select cases where lost core constituted part of the interval.

Assay samples of 0.5 to 1 m core length were taken of core suspected to contain sulphides and/or arsenides. These zones were visually distinguishable, as they were comprised of sooty grey/black clay with little or background radioactivity.

Samples were also collected from the non-mineralized core bracketing both the up-hole and down-hole sides of mineralized intervals to confirm the actual location of the boundaries of each mineralized zone.

The top and bottom boundary of each sample interval was marked in pencil on the core box prior to collecting the sample. After samples were collected, thin aluminum tags with scribed sample numbers would be stapled to the sides of the box denoting the start and end of each interval. These aluminum tags were used in order to leave a permanent record of where samples were collected.

Due to the large diameter of the core (5 ½ inch), the sample interval was split using a hammer and chisel, with approximately one third of the core collected for assay analysis using a common masonry trowel. The remaining core was left in the core box as a permanent record of the hole. To minimize the potential for cross-sample contamination from the sampling equipment in each hole, all background samples were collected first, followed by weakly mineralized samples, and any high-grade sections were collected last. After each sample interval, the trowel and chisel used would be washed down with a wet paper towel to prevent contamination between samples.

Each assay sample was placed in a 14" x 25" individually numbered plastic sample bag. Only one-third of the core was collected for assay instead of the normal practice of collecting $\frac{1}{2}$ of the core. If one-half of the core diameter were collected, the volume of the resulting sample would have exceeded the capacity of a single sample bag. Please note that the one-third volume collected from the 5 $\frac{1}{2}$ diameter sonic core is equivalent to the volume NQ-sized core, provided that the NQ core was not split prior to sampling. The project team wanted to avoid a situation where the technician would have been required to blend and homogenize sample material from more than one sample bag prior to analysis.

After the assay sample was collected, a representative sample was taken from the portion of the core left in the box from each sample interval for the determination of specific gravity and bulk density measurements. The representative sample constituted of a 10-20 cm length sample acquired from splitting a portion of the core remaining in the box and was initially placed into either a small zip lock freezer bag, or an 8" x 13" plastic sample bag. The numbering convention used for the specific gravity samples was identical to those used for the assay samples.

11.4 Core Recovery and Sample Quality

Recovery of the core routinely in each hole ranged between 95-100%, the highest known recovery of core from any of the previous UEX and Gulf drilling programs at West Bear.

Sample quality is considered to be very good, as core recovery rates were very high and a continuous core was produced in each hole with very limited potential for cross-contamination. Previous programs used RCD drilling or diamond drilling to acquire samples. RCD drilling requires that a 5 ft interval of material be ejected into 5 gallon pails as a semi-homogenized powdered material, making it difficult to determine at a centimeter-scale, the boundaries of mineralized zones. Diamond drilling uses water that contacts the core. Uranium can be mobilized by the water to contaminate adjacent unmineralized core, or can be flushed away. Uranium at West Bear is known to be concentrated in the clay-portion of the core, the first material to be fluidized during diamond drilling operations. Contamination or flushing away of uranium-bearing clay would reduce the reliability of the core for sampling.

As the sonic program does not use fluids to clear the bit face during drilling and obtains a continuous core, the Cameco believes there is unlikely to be any drilling, sampling, or recovery factor concerns with respect to the sampling or drilling program that would impact the accuracy and reliability of the results.

11.5 <u>Chain of Custody of the Samples</u>

Once the interval was sampled, the bags were either wrapped closed and sealed with masking tape or were folded and sealed by stapling. The sealed samples were then placed in a plastic five-gallon plastic pails and sealed shut using a plastic lid. Tamper-proof tags were not placed on the pails to alert the laboratory of potential trouble prior to receiving the samples, as both Cameco and federal shipping requirements for the transportation of radioactive materials require the ability of regulators to inspect any material designated for shipping. In addition, the sheer volume of pure uranium required to tamper or salt the sonic samples is prohibitive and is very difficult to obtain, as uranium is a controlled substance.

Each individual pail was weighed, with the corresponding weight marked clearly on the outside of each pail to determine the radiometric activity and transportation indexes necessary to permit shipment of radioactive substances by road to the laboratory according to international *transportation of dangerous goods* regulations. Prior to shipment the pails were temporarily stored outside the core shack located at the drill then periodically transported to Cameco's Rabbit Lake Mine warehouse for shipment to Saskatoon. Once at the Rabbit Lake warehouse, the samples were packaged into a container and loaded onto a semi trailer and transported to Cameco's Cleveland Street warehouse. At the Cleveland Street warehouse, the container hosting samples were unloaded from the truck and collected by SRC personnel and transported to the laboratory in an SRC-operated van.

After sampling, the core boxes containing the remaining split core not sent for analysis were removed from the core shack and stored at a permanent location at the West Bear Temporary work camp.

11.6 <u>Sample List and Composite Grades</u>

A list of all of the samples, assay data, and composite grades, can be found organized according to drill hole in Appendix D.

All reported lengths in the sample and composite list are considered core length. However, as the deposit is flat lying and the holes were drilled vertically, the core length is considered to be representative of the true thickness of each mineralized sample and zone.

Composite grades were calculated for each mineralized zone in order to determine the boundaries of the mineralized zone for the geological interpretation, and subsequent resource estimate. Individual samples included in the composite interval were weighted by both sample length and specific gravity. The criteria as to whether a sample was included in the composite interval and whether the composite was to be included within the geographical boundaries of the deposit for the subsequent resource evaluation were as follows:

- The grade of the sample had to exceed 0.15% U₃O₈. The decision to use this cutoff grade was determined by Cameco's Engineering and Projects group based on a rough estimate of the in-situ value of uranium required to mine and process the mineralized material.
- The grade thickness product, or GT (wt% U₃O₈ x thickness in metres of mineralized zone) had to exceed 0.45 m% U₃O₈. This criteria was also determined by Cameco's Engineering and Projects group based on the rough estimate of in-situ value of uranium required to mine and process the mineralized material. This GT was considered the minimum uranium content required to allow for a decision to change the pit outline to incorporate a mineralized hole located at the boundary of the deposit. The incorporation of such a hole would require the removal of all of the overlying material and all material located in the wedge between the sloping wall of the pit (as would be modified by incorporating the hole) and the vertical projection of the mineralized hole.
- Any uranium-bearing material located vertically above and contiguous with a mineralized zone that met the 0.15% U₃O₈ grade and 0.45 m% U₃O₈ GT criteria that exceeded 0.10% U₃O₈ was included as part of the composite interval on an incremental basis, as this material would have to be removed during pit excavation but the in-situ value of uranium would likely cover any transportation and milling costs incurred. All such material would require milling and processing under current Canadian Nuclear Safety Commission special waste requirements.

Nickel and cobalt have not been historically recovered during the processing of uranium ores in the Athabasca Basin, as these elements are tied up in arsenide or arsenic-bearing complexes, and pose an environmental liability to the mill owner. Thus, the in-situ value of concentration of nickel and cobalt were not considered when determining cut-off grade.

12.0 SAMPLE PREPARATION, ANALYSIS, AND SECURITY

A description of the core handling, sample preparation, security, and sample handling procedures employed by Cameco Corporation staff while the samples were in their possession has been documented in detail in Section 12.0 of this report. Procedures employed by the SRC staff are outlined in Appendix E and are summarized below.

At no time was any employee, officer, director or associate of UEX Corporation, the issuer, involved in any aspect of sample preparation. All sampling was completed by employees of Cameco Corporation and sample preparation was conducted by employees of the Saskatchewan Research Council. The readers are reminded of Cameco's ownership position in UEX, as outlined in Section 17.0.

12.1 Laboratory Analytical Procedures

The samples were analysed at the Saskatchewan Research Council's (SRC) Geoanalytical Laboratory located in Saskatoon, Saskatchewan. All samples were subjected to assay analysis for U_3O_8 , Ni, Co, As, Pb. Some samples were analyzed for Cu. A total of 857 samples were sent for analysis. Certificates of analysis with the assay results can be found in Appendix F.

Samples are crushed and ground until $\ge 60\%$ of the material is < 2 mm size. A 100-150 g split is then ground (agate grind) until $\ge 90\%$ is minus 106 µm.

Samples analyzed for U_3O_8 were prepared by digestion in an aqua regia solution (HNO₃/HCl acids in particular proportions). The resulting pregnant solution was then analyzed by fluorimetry. Fluorimetric procedures for uranium are based on the fact that, if fused with the right flux and then cooled, uranium will fluoresce when excited by ultraviolet radiation. The fluorescence can be quantitatively recorded by a photoelectric cell.

Lead, cobalt, nickel, and arsenic are digested in a combination of HNO₃ and HCl acids and the resulting solution analysis using the ICP technique.

The reader is referred to the SRC's website and Appendix E for more details regarding the analytical techniques and sample handling procedures.

12.2 <u>Laboratory Standards</u>

The SRC employ a number of certified standards when processing assays. The certified standards were purchased by the SRC from the Canada Centre for Mineral and Energy Technology as a part of the Canadian Certified Reference Materials Project in Ottawa.

For additional information on the certified reference standards used by the SRC, the reader is referred to <u>http://www.naweb.iaea.org/nahu/nmrm/nmrm2003/producer/canmet.htm</u>.

The Uranium Ore standards used by the SRC are outlined in Table 12.2.

Name	% U ₃ O ₈	Acceptable Range	Finish
BL-1	0.026	0.024 - 0.028	Fluorimetric
BL-1	0.026	0.022 - 0.030	ICP
BL-4a	0.147	0.143 - 0.151	ICP
BL-2a	0.502	0.494 - 0.510	ICP
BL-3	1.21	1.19 – 1.23	ICP
BL-5	8.36	8.26 - 8.46	ICP

 Table 12.2 – Uranium Ore Standards Used by the SRC

Other individual certified standards used were MP-1A for zinc ore (with elevated As (0.84%) and Cu (1.84%)) and SU-1A for nickel ore (with elevated Co (0.04%), Cu (0.96) and Ni (1.23%)).

As there is no individual Canadian Certified Reference Material for a combination of U, Ni, Co, As, Cu, Zn, and Pb, the SRC uses a combination of the standards during its internal analysis, analyzing each standard independently of each other. The SRC reports internal standards as one entry in the Certificate of Analysis in the following format: CG509/MP1A/SU1A/BL4A. The format is interpreted as follows, CG509 was used for all trace geochemistry, MP1A was the standard used for the Cu and As assays, SU1A was used for Ni, Cu and Co assays and BL4A was used for the U assay.

12.3 <u>Quality Control/Quality Assurance Measures</u>

After the results of all of the laboratory analyses were received, an assessment of the quality of the assay data was undertaken. Three different check procedures were undertaken to assess the quality, accuracy, and precision of the analytical data received from the SRC.

The first check procedure was to compare the analytical results of the SRC internal duplicate assay samples (otherwise known as sample repeats) against the original sample results reported by the lab. Cameco requires that the SRC report in all the Certificates of Analysis the results of all internal sample repeats or internal duplicate analysis that the lab uses for their internal quality control and assurance procedures. Significant variations in the lab's internal duplicate result from the original result would indicate that the sample data for that batch of samples is not reproducible.

As part of this process, a graph plotting the analytical values of the original analysis versus the duplicate analysis were constructed for each analyzed element. These results

are presented in Appendix F. The project team considers that the acceptable variance of the duplicate from the original to be within 10% of the original analysis.

The second check procedure used by the project team was to evaluate the accuracy of the lab by comparing and observing the variation in the reported analytical results of the lab's internal standards from batch to batch for U_3O_8 , As, Ni, Co, Cu, and Pb. Cameco also requires that the lab report on the Certificates of Analysis the individual results of the analysis of the lab's internal and certified laboratory standards used in their quality control and assurance program in the Certificates of Analysis. The explanation of the lab standard reporting procedure and certified 'true' value are presented in Appendix E, along with the given acceptable range of variation. The results from the standards that were run were plotted with respect to its corresponding batch run. The maximum allowable variance was 10% of the certified value. If any standard did not meet the variance criteria, the SRC was asked to rerun the entire sample batch.

The third check procedure was to have all samples exceeding $1\% U_3O_8$ and 10 percent of the sample population representing a wide range of grades analyzed at two additional analytical facilities. The first facility was the SRC's Delayed Neutron Counting (DNC) facility located in Saskatoon. The second facility was Calgary's Loring Laboratories.

Analytical results were scrutinized by comparing each facility's results against each other. The acceptable variance between each facility was 10% for all samples. Samples outside the variance were re-run at two facilities until the project team was convinced that the actual concentration was reported accurately and precisely by both facilities.

Uranium values from the SRC DNC facility were reported in mg/kg U instead of wt% U_3O_8 . In order to convert the uranium values to wt% U_3O_8 , the reported values were divided by a conversion factor of 10,000 then multiplied by another conversion factor of 1.17924. The wt% values for all other reported elements were calculated by dividing by the reported result by a conversion factor 10,000.

Cameco was unable to insert sample blanks and control samples into the sample runs, as there is no certified uranium blank or control standard available commercially. The distribution of uranium-bearing substances is highly regulated, especially at ore-grade concentrations and precludes it from being used as a portion of a control sample.

While this is normally a standard practice for all other commodities to insert blanks and control standards, this is not routinely completed by Cameco due to regulatory issues. Cameco employs the methodologies outlined above, as a means of verifying individual assay values.

12.4 <u>Authors' Opinion on Sampling, Preparation, Security, and Procedures</u>

In the authors' opinion, the procedures employed by the project team during sampling, shipping, sample security, and analytical procedures comply with industry standard practices, with the exception of sample pail sealing, and the use of internal blanks and control standards. These exceptions were required by federal regulations regarding the

transportation of radioactive materials, and by the tightly regulated distribution of uranium as a controlled substance.

The authors believe that the samples were collected properly, are representative of the material intersected in the holes and hence are representative of the West Bear Uranium Deposit. It is also the authors' opinion that the samples have undergone as rigorous a quality control program as is possible given the restricted nature of uranium to be used as control blanks and standards.

13.0 DATA VERIFICATION

Four types of data were collected during the 2005 West Bear Sonic Drilling program. The first was sample analytical data, the second was specific gravity and bulk density data, the third was GPS Survey data, and the fourth was core logging and depth measurements.

Sample analytical data was verified by the authors using the data verification procedures outlined in Section 12.0, confirmed in Section 12.4, and presented in Appendix G. The analytical data presented in Appendix D is considered by the Qualified Person to be valid and can be used in the resource estimation.

Specific gravity data and bulk density data were verified by Dave Quirt, of the SRC, who was responsible for completing the specific gravity and bulk density analysis. In the case of specific gravity, this was completed by comparing the results of a re-analysis of 40 of the original 841 samples that were submitted for analysis. For bulk density measurements, data verification was not possible as the sample is destroyed during the analytical process.

Hole location and grid locations were determined in WGS 84 UTM Zone 13 coordinates using a Sokkia Stratus GPS survey system and the Sokkia Spectrum post-processing software that is capable of determining the location of a point on the earth's surface to within 12 mm in the horizontal direction and 15 mm in the vertical direction. Many hole and grid locations were surveyed several times over the field program to assess the reproducibility of the data. Once the project team was property trained, consistent reproducible results within the manufacturer's error window were obtained repeatedly.

Core logging and depth measurements were checked continuously by both the Qualified Person and Mr. Michayluk, the principal field geologist, during the execution of the field program.

14.0 ADJACENT PROPERTIES

Information regarding the mineralization on adjacent properties is not relevant to the resource estimate presented in this report and will not be discussed, except where noted in Section 7.0.
15.0 MINERAL PROCESSING AND METALLURGICAL TESTING

To the knowledge of the authors' there has not been any mineral processing and metallurgical testing completed on the West Bear Deposit. There has certainly not been any testing completed by Cameco or UEX.

Any testing that could have been completed by Gulf (if done without the authors' knowledge) would have to be considered suspect, as the testing would have been completed on samples obtained from core with very poor recoveries, particularly of the clay fraction which hosts the majority of the uranium resource.

The authors' recommend that UEX complete a mineral processing and metallurgical test of the West Bear Deposit in 2006. The testing should only use core recovered in the planned 2006 program, as the Ni-Co-As minerals were observed to be strongly oxidized during July, 2005, only 3-5 months after the drilling of the 2005 sonic holes. Oxidation of the mineralized material could incorrectly and adversely affect the results of such testing.

16.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

An estimate of the uranium resources was completed upon the termination of the 2005 sonic drilling program. This new resource estimate utilizes exclusively the data from the 2005 program. Historic information from the three hole sonic program drilled by UEX in 2004, the one diamond drill hole drilled by UEX into the deposit in 2002, and all information from the Gulf Minerals programs were not used during the calculation of this new estimate.

The quality of the core recovery obtained during these previous programs were suspect, thus, any core samples collected from such drill holes is not considered by the authors to be representative of the deposit. As such, this information was not included in the data for the resource estimate. The core recovery from the 2005 sonic program was excellent and is considered to be highly representative of the deposit, and is considered by the authors to be the only valid database for the resource estimate.

The resource estimate was completed by a geostatistical-block model method using the GEMCOM Software program version 5.5.1.

The West Bear Uranium Deposit, as currently defined between L16+00E and L19+50E, is estimated to contain an indicated resource of 45,600 tonnes averaging $1.385\% U_3O_8$ using the geostatistical-block model method. Total contained uranium is estimated to be 1,391,000 pounds U_3O_8 . The deposit is also estimated to contain 0.34% Ni, 0.11% Co, and 0.50% As. This resource estimate is classified according to and complies with the Canadian Institute of Mining, Metallurgy and Petroleum's (CIM) *Standards on Mineral Resources and Reserves Definitions and Guidelines*, adopted August 20, 2000, and modified in November, 2004, and National Instrument 43-101 *Standards for Disclosure for Mineral Projects* guidelines.

The percentage of nickel, cobalt and arsenic reported in the West Bear Uranium Deposit is not consider part of the resource, as the economic properties of these elements cannot be determined by the Qualified Person. The recovery of nickel, cobalt, and arsenic has not occurred historically at any of the milling operations located in the Athabasca Basin of Saskatchewan. Thus, it is unlikely that UEX would receive credit for any such elements in a toll milling arrangement. In fact, these elements could pose a liability or penalty under such an arrangement. There are no existing or historic toll milling agreements available for review that would allow the determination of the economic impact of the presences of nickel, cobalt, and arsenic in the West Bear Uranium Deposit. The percentage content of these elements is included for information purposes only, in light of the considerations presented above.

As discussed previously, the deposit remains open for expansion to the east from L19+50E to L21+00E, as historic Gulf Minerals holes indicate the presence of uranium in this area that was included in the historic Gulf Minerals resource estimate. This area is not included in the resource estimate presented in this report.

Despite the tight spacing of drill holes, the Qualified Person believes that the resource should be classified as an indicated resource instead of a measured resource for two reasons. One is the difficulty in establishing the correct bulk density factors (outlined in Section 16.4.2), and the second is the high degree of variation in the cross sectional profile of the deposit from section to section.

A second resource estimate was performed using another technique as a check on the accuracy of the original geostatistical-block model estimate. An estimate using the inverse distance squared-block model technique estimated indicated resources in the same area to be 45,600 tonnes at $1.429\% U_3O_8$, 0.33% Ni, 0.10% Co, and 0.53% As for a total contain uranium content of 1,437,000 pounds U_3O_8 .

The Qualified Person believes that the indicated resource calculated using the geostatisticalblock model technique is the most accurate estimate and should be used for external reporting.

Details on the assumptions, parameters, methodology and factors that could affect the reported resource estimate are presented in the following pages.

16.1 <u>The Qualified Person</u>

The resource estimate presented in this report was completed by Roger Lemaitre, P.Eng,. P.Geo. Mr. Lemaitre is a Professional Engineer and Professional Geologist registered in the Province of Saskatchewan. Mr. Lemaitre is currently the Manager of Regional Exploration, Saskatchewan, for Cameco Corporation and was the Project Geologist responsible for all exploration on the Hidden Bay Project on behalf of UEX Corporation from 2002 through 2005. Mr. Lemaitre is the Qualified Person for this report.

Mr. Lemaitre has been responsible for completing several resource estimates on other properties in the past including two NI 43-101 compliant resource estimates of the McIlvenna Bay Cu-Zn Deposit for Foran Mining Corporation, as well as internal estimates for Cameco, Foran Mining, and Cominco Ltd.

Due to Cameco's 21.78% ownership of the common shares of UEX Corporation, all Cameco officers and some employees, including the Qualified Person, Mr. Lemaitre, are considered potential insiders of UEX Corporation, and according to the tests outlined in NI 43-101 are not considered to be technically independent of UEX Corporation. During the summer of 2005, UEX Corporation submitted a request to the BC Securities Commission that that Cameco employees working on the West Bear Resource Estimate be granted an exemption to NI 43-101 requirements that only non-independent qualified persons be permitted to report material resource changes.

The situation is very similar to the scenario where a major issuer is permitted to report resource estimates to a junior issuer in a joint venture relationship, even if the major issuer owns securities in the junior issuer. In this particular case, as the Qualified Person will neither gain or lose financial either through Cameco or UEX should a positive or negative result be obtained, the BC Securities Commission, the lead regulator of UEX Corporation, granted this exemption.

For further information, the reader is referred to the BC Securities Commission ruling found in Appendix A.

16.2 <u>Effects of External Factors</u>

In the opinion of the authors at the time of the writing of this report, there are no known environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that may materially affect this estimate of mineral resources.

Permitting and mining of uranium in Saskatchewan is regulated by both federal and provincial government agencies. While permitting is a rigorous and lengthy process, companies are able to negotiate the process in a reasonable period of time with reasonable requirements imposed by the regulators. Both governments have recently issued permits for the construction of two new mining developments within the last two years. Cameco's Cigar Lake Mine, and Cogema's development of the Sue E Pit on their McClean Lake Mine property have both been recently approved by the regulators.

The Canadian Nuclear Safety Commission (CNSC) has recently become concerned regarding the trace amounts of selenium and molybdenum that is being discharged by milling operations that originated from uranium ore, as they could have impact on fish biology. It is likely that any permit issued by CNSC would include a study of selenium and molybdenum concerns. The content of selenium and molybdenum of the West Bear Deposit has not been estimated as part of this report.

A December, 2005 Supreme Court of Canada decision regarding the duty of governments to consult aboriginal groups with respect to access to traditional land entitlements now means that governments must inform aboriginal groups when there is a possibility that access to an area by First Nations people for hunting, trapping, and fishing may be affected by non-aboriginal groups. This includes new mining development, which could impact on the permitting process in terms of the length of time required to obtain permits.

Uranium price fluctuations will have a minimal impact on the resource estimate, unless prices fall well below the US\$20/lb U_3O_8 mark. Most of the known uranium mineralization is included within the boundaries of the deposit used during this estimate. Continued increases in uranium price could lower cut-off grade and permit the mining of mineralized material that is located laterally north or south of the current deposit boundary within the currently known weakly mineralized holes. This would have a very limited impact on the overall resource estimate. Only minor amounts of uranium mineralization are located outside the current boundaries of the mineralized zone used in the resource estimate, and the inclusion of such mineralization in periods of escalating uranium prices would have an extremely small impact on the resource estimate. The cut-off grade was determined in April 2005, when the spot uranium price was approximately US\$24.00/lb U₃O₈.

16.3 <u>Mining, Metallurgical, Infrastructure and Other Factors</u>

Given the fact that the West Bear Uranium Deposit is located at very shallow depths between 18-30 m below surface, the deposit is envisioned to be mined using open pit techniques. All assumptions that have been made during this resource estimate envision and take into consideration that the deposit would be exploited via open pit.

As discussed in Section 15.0, metallurgical testing has not been completed on the West Bear Uranium Deposit. Metallurgical testing is recommended to be completed in 2006 as part of a pre-feasibility study. The high concentrations of nickel and cobalt arsenides in the uranium mineralization in the eastern area of the deposit may be a small problem, as they could be potential penalty elements in a custom-milling situation. However, the known down-dip extent of nickel-cobalt-arsenic mineralization does extend below the deposit and could have economic potential if UEX were able to successfully market an arsenic-rich nickel-cobalt concentrate to a nickel smelter facility.

The West Bear Deposit is located 41 km straight-line distance to Cameco's Rabbit Lake Uranium Mill (approximately 54 km via road) and 49 km from Cogema's McClean Lake Uranium Mill (approximately 72 km via road). Approximately 13 km of road would have to be constructed from the deposit to existing provincial road #905 that connects to both the Rabbit Lake and McClean Lake facilities.

Electrical power lines are located along the provincial road. However, it is unclear at this time whether or not the power lines have the capacity to supply a mining operation at West Bear or whether the power grid could support the additional requirements.

The West Bear Deposit is hosted within a strongly clay-altered package of Athabasca Sandstone and Proterozoic basement rocks. The competency of the rocks is such that it is expected that the mineralization could be removed using shovels instead of using explosives. This may be a significant cost savings during a potential mining phase. Materials testing should be completed on the mineralization and adjacent rock to confirm the suitability of the deposit to mining with shovels. The West Bear Deposit is located within a grassy to muskeg swamp area and is covered by up to 12 m of fine saturated sand. The height of the water table at the eastern end of the deposit is at the ground surface. Water inflow into a pit structure, through cracks in the clay may be a potential source of difficulty during any mining of the deposit. Studies need to be undertaken to understand whether this risk is present, and if so, identify mitigation measures that may need to be taken.

Nickel-cobalt arsenide minerals are found within veins and fault gouges, immediately below, and down-dip of the West Bear Deposit, particularly within the eastern end of the deposit as it is currently defined. Diamond drilling to the east of the deposit area has indicated the presence of additional arsenide minerals 25-50 m below the surface. Arsenide minerals in such fault gouges could be the source of long-term acid mine leaching if exposed in the wall of an open pit. Feasibility studies will have to consider this factor and the potential need for moderate to long-term water treatment of pit water during and after mining is completed.

As discussed in Section 3.5, Cameco has a first right of refusal to provide financing required by UEX for the development of a mine on the Hidden Bay Project, including the West Bear Uranium Deposit, as well as the first right to mill ore at the nearby Rabbit Lake Ooperation. Cameco also has the right to market UEX's share of any uranium production from the Hidden Bay Property.

16.4 <u>The Geostatistical-Block Model Resource Estimate</u>

The West Bear Uranium Deposit is estimated to contain an indicated resource of 45,600 tonnes averaging $1.385\% U_3O_8$ using a geostatistical-block modeling technique. The deposit also contains 0.34% Ni, 0.11% Co, and 0.50% As. These three elements are not considered to be part of any resource at this time. This estimate is considered to be the most accurate estimate and should be used all in reporting to external agencies and the public. The other estimate presented in this report was completed as a test of the accuracy of this technique.

The resource estimate was calculated using GEMCOM software version 5.5.1 on a threedimensional computer model of the deposit.

The key assumptions, parameters, and methodology used to determine the geostatisticalblock model estimate are presented in the following pages.

16.4.1 Cut-Off Grade and Boundaries of the Deposit

As discussed in Section 11.6, uranium mineralization had to exceed $0.15\% U_3O_8$ and have a grade thickness product of $0.45 \text{ m}\% U_3O_8$ to be included as part of the deposit for the resource evaluation.

Cross sections were constructed of each drill fence. The boundaries of the uranium mineralization were determined using the composite grades calculated in spreadsheets and the technique outlined in Section 11.6. For mineralized holes

that did not meet cut-off criteria, the upper and lower boundaries of uranium mineralization (if present) were still determined to allow for proper geological interpretation of the cross sectional profile of the mineralized body on each drill fence shown in Appendix C. This means that the shape of the mineralized zone used in the 3-D model on each cross section may not be exactly as that depicted in the cross sections, as modifications were necessary to honor the cut-off grade criteria.

Three different scenarios were used to determine the lateral boundaries of the 3-D resource model, each of which conformed to cut-off criteria.

In situations where the lateral deposit boundary should lie between a mineralized hole that exceeded cut-off criteria (hereby called an 'ore-grade' mineralized hole) and an unmineralized hole, the lateral boundary was the same as that shown on the cross sections, approximately one-half the distance between the two holes.

In situations where the lateral deposit boundary should lie between an 'ore-grade' mineralized hole and a weakly mineralized hole that did not meet the cut-off criteria for both grade and grade thickness, the boundary of the model was set at one-half the distance between the two holes.

In situations where the lateral deposit boundary should lie between an 'ore-grade' mineralized hole and a weakly mineralized hole that did not meet the grade-thickness criteria but did meet the grade criteria (this would still be a hole not included within the resource boundary), the lateral boundary was not set at the midway point between the holes. Instead, the necessary thickness of mineralization required to meet the grade-thickness criteria was determined. This calculated thickness was used to determine the lateral boundary by measuring the point on the cross section closest to the weakly mineralized hole where the deposit was determed to be the calculated thickness.

Once the cross sectional outlines of deposit were determined for resource estimate, GEMCOM software was used to create a 3-D model of the mineralized zone for the subsequent resource evaluation.

Uranium mineralization was encountered in three holes on L16+75E. However, the mineralization in each hole failed to meet the cut-off criteria. Thus, during the creation of the 3-D model, mineralization from this section could not be included as part of the resource. This gap in the mineralization was mitigated by interpreting the shape of the mineralized body at L16+67.5E and L16+87.5E based on the shape of the mineralization on L16+50E, L16+75E, and L17+00E. Mineralization was deemed between L16+67.5E and L16+87.5E to not meet cut-off criteria and this section was removed from the 3-D model.

Exceptions

In five drill holes, conditions required that the qualified person make a determination of the deposit boundaries based on interpretation of information other than strictly the cut-off criteria. The rationale for allowing such variations is outlined below.

Holes UEX-011 and UEX-012 could not be completed to the bottom of the mineralized intervals by the sonic drilling contractor and were abandoned in mineralization. These two holes were extended through the mineralized zone by the use of a diamond drill. During the extension in both cases, there was zero recovery of core from the point of abandonment to well below the bottom of the mineralized zone. Down-hole radiometric probing was completed to estimate the uranium grade and boundaries of the mineralized zone. This is a practice that is commonly done by Cameco at other exploration projects and at our minesites with a very high degree of accuracy.

Thus, the boundaries of the mineralized zone in UEX-011 and UEX-012 were estimated by radiometric probing. These boundaries were used in the construction of the interpretive cross sections and the 3-D solid model. However, as samples for laboratory analysis could not be collected from these holes, block grades were interpolated into the area of these holes from adjacent holes. Radiometric grades determined from these holes were not used as part of the dataset used during the geostatistical, kriging, and interpolation processes due to the different sizes of the sample intervals and the fact that the grades may have been underestimated by the probe data, as discussed in Section 11.2.

The assay samples for hole UEX-078 were lost by the SRC somewhere within their laboratory, while the samples were in their possession. Shipping records, highlighted by the *Transportation of Dangerous Goods* forms, confirm that these samples were received by the SRC. Samples from holes UEX-075, UEX-079, and UEX-080, sampled prior to and after the drilling and sampling of UEX-078, were received and analyzed by the SRC. Holes UEX-075, 078, 079, and 080 were shipped together with samples from several other holes. The Sample Analysis Order form included in the shipment listed the UEX-078 samples. The fact that the SRC failed to inform Cameco of the missing samples upon the arrival of the shipment, as is common practice, suggests that they did receive the samples but misplaced them somewhere within their system.

Probe-determined grades and core logging from UEX-078 indicate the presence of uranium mineralization that meets cut-off criteria. Thus, the boundaries of the deposit were estimated from the probe data and used in the construction of the 3-D sold model. As with UEX-011 and 012, block grades were interpolated from other samples into the area that hosts hole UEX-078.

Hole UEX-079 contained an outlier of mineralization from 22.20-26.90 m in the footwall of an upper interval of mineralization located between 21.10-22.20 m.

While the upper interval did meet cut-off criteria, the outlier did not. As mineralization in adjacent holes UEX-078 and UEX-80 extended to depths of 28.03 m and 26.00 m respectively, this outlier was included as part of the mineralized interval. This inclusion considered the consequences of mining via open pit. If the pit is extended to the base of the mineralization of the two holes located 5 m on either side and adjacent to UEX-079, then all of the material represented by UEX-079 from 22.20-26.90 m would be mined as well, and thus warranted inclusion in the 3-D deposit model and resource calculations.

In hole UEX-053A, mineralization was encountered from 16.80-24.50 m. However, a 1.4 m interval of lost core (one of only two observed in the entire program and the only one in mineralization) was encountered from 17.20-18.60 m, where no sampling was possible. The 40 cm wide interval from 16.80-17.20 m assayed $0.735\% U_3O_8$, meeting cut-off criteria. Even though the sample above the lost core interval would likely have carried the lost interval even if it were barren, a conservative decision was made to set the top of the mineralized interval at 18.60 m, at the base of the section of lost core.

16.4.2 Density

A representative core sample of each analytical sample collected during the 2005 sonic drill program was sent to the Saskatchewan Research Council (SRC) for the determination of specific gravity to be used during the resource evaluation. From this suite of 857 samples, a subset of 62 samples was also submitted to determine the dry bulk density using industry standard techniques at the SRC Laboratories.

A problem has been encountered in the attempts to determine the most accurate dry bulk density of the deposit from these samples.

The values of dry bulk densities reported by the SRC ranged from 1.39 to 3.62 g/cm³ (see Appendix H). Ten of the sixty-two samples reported values lower than 1.80 g/cm³, a value that is perceived by the Qualified Person to be too low given the nature of the rock submitted for analysis. These low values were attributed to samples that were very porous or contained cracks, according to the physical descriptions supplied by the SRC.

Analysis of the dry bulk density data determined that there was no conceivable correlation between the dry bulk density values and the specific gravity determinations. In many other deposit evaluations, a mathematical relationship can be established between bulk density and specific gravity. Several attempts were made to calculate a dry bulk density from assay data, specific gravity data, and a combination of both. These attempts were compared to the results of the measured bulk densities that were believed to be reasonable. No correlation could be established between the measured and calculated dry bulk densities.

As these samples were placed in sealed Ziploc bags for shipment to the SRC, it is unlikely that significant moisture loss occurred during the transportation of the samples to the laboratory. During sample collection in the field, none of the samples were observed to be porous, nor did they contain cracks as observed the SRC during the dry density determinations. It seems likely that the volume and moisture content of the samples was compromised between the specific gravity determinations and the dry bulk density determinations, based on the differences in sample descriptions.

As this was the only data available, the resource estimate presented herein uses the dry bulk density determinations as reported by the SRC. The average bulk density of the deposit calculated during the resource estimate and included in this report is 2.032 g/cm^3 .

The density of individual blocks in the block model were determined from the 62 samples using an inverse-distance squared interpolation technique, as no spatial relationships could be determined from the semi-variogram analysis.

The Qualified Person believes that there is a possibility that the bulk density of the deposit may be slightly understated and that the total uranium content of the deposit may be slightly higher than presented herein. The Qualified Person believes that this increase in density is probably no more than 10% higher than reported. The Qualified Person believes that it is unlikely that the bulk density of the deposit is actually lower than the values presented in this report.

16.4.3 The Block Model

The project within GEMCOM is based in the UTM WGS 84 Zone 13 metric coordinate system to allow for precision GPS surveying to be used to accurately locate 2005 West Bear Grid and sonic holes and historic drill holes. The location of these entities in WGS 84 coordinates can be observed in Figure 16.1.

The ground grid was originally established perpendicular to the strike of the deposit, as known prior to the sonic drill program. Grid lines have an azimuth of 346° .

A block model space was generated in GEMCOM using the tools within the software package. The model was rotated 14^0 counter clockwise to allow the Y-axis of the block model to be parallel to the grid lines, which aided the analysis of the accuracy of the subsequent block interpolation. The X-axis was parallel to the base lines and the Z-axis was in the vertical direction.

Blocks are 1 m long in the X-direction, 0.5 m wide in the Y-direction and 0.5 m tall in the Z direction. The small size of the blocks was required for two principle reasons. First, the deposit exhibits highly variable geometry particularly along strike, and the smaller blocks help to more accurately estimate the volume of the solid with the needling algorithm.

Secondly, the deposit is generally less that 5 m thick with highly variable assays along individual composite intervals. Drill holes and assays are very closely spaced, as holes are located merely 5 m apart on individual drill fences, with 5-20 assays hosted each hole in intervals 0.5-1.0 m apart. The smaller blocks sizes make it possible for the values in the individual interpolated block grades to closely match the assay grades from samples located within the same geographical space as particular blocks.

16.4.4 Data Selection, Statistical and Semi-Variogram Analysis

The results of all uranium, nickel, cobalt, and arsenic assay values that were collected from within the West Bear Uranium Deposit were extracted from the assay database and analyzed using statistical techniques. This included samples from weakly uranium mineralized intervals that were not included as part of the 3-D computer deposit model, as shown on the cross sections in Appendix C.

Grade histograms were constructed for each element. For all four elements, the distribution of the grade was found to be or be very close to lognormal, as shown in Appendix I. Bulk density values were found to have a normal distribution.

Semi-variogram analysis was performed on the assays of all four elements and bulk density values. Transformation of the assay values was not required, as the range-sill plots of the analysis showed reasonable trends that could be effectively modeled without transformations, as shown in Appendix I. Bulk density values did not show any spatial relationships despite the many attempts that were made varying azimuth, lag distance, and offset distances.

A summary of the results of the semi-variogram analysis is presented in Table 16.4.1. Based on these results, variograms were prepared and included within the kriging profiles used for the interpolation of grades.

16.4.5 Block Interpolation and Final Resource Reporting

The grade of each assay element for each block was estimated by interpolating grades from assays using kriging and the geostatistical parameters outlined in the previous sections. Interpolation was completed using the kriging, variogram, and interpolation algorithms residing in the GEMCOM software package.

It was observed during the initial interpolation attempts that two stages of interpolation were necessary. The area between L18+00E and L18+50E (hereby named the core area) was interpolated separately from the other areas of the deposit. This was due to the tighter 12.5 m spacing on the drill fences in the core area, whereas drill fences over the rest of the deposit were at 25 m spacings.

Initial attempts to complete the interpolation in one stage found that many block grades that were generated within in the core area could not be reconciled with true assay values from samples hosted spatially with the blocks. This discrepancy

was likely due to the fact that block grades were being over-influenced by samples located two drill fences (25 m) away instead of dominantly the adjacent fences located with a 12.5 m distance.

Attempts to reduce the size of the search ellipsoid and complete a single stage interpolation were unsuccessful, as the size required to reconcile block and assay grades prevented the complete interpolation of all blocks within the 3-D solid.

Thus, a two-stage interpolation was adapted, with a smaller search radius used within the core area and a larger radius used outside the area. The same assay dataset was used during both stages of the interpolation. A summary of the interpolation parameters used during both stages is outlined in Table 16.4.2.

Based on the larger spacing between sample points and the lack of spatial correlation, the dry bulk density values were interpolated for each block in one stage using a larger search radius and the inverse-distance squared technique.

Grades were interpolated for any block that contained at least 1% of its volume within the 3-D solid deposit model.

Upon the completion of the grade interpolation, a resource was estimated using the GEMCOM resource calculation algorithm. The final contribution of individual blocks located only partially within the 3-D solid model was limited to the percentage of the block lying within the solid, as determined by the GEMCOM needling algorithm. A 12x12 regular needle grid was employed, with needle axis oriented parallel to the Y-axis direction (at an azimuth of 346⁰). The resource was reported on a section-by-section basis.

Table 16.4.3 outlines the results of the geostatistical-block model resource estimate.

16.5 <u>The Inverse-Distance Squared Resource Estimate</u>

To check the accuracy of the geostatistical-block model resource estimate, a second estimate was completed using an inverse-distance squared kriging and interpolation technique. In this technique, individual block grades are estimated relative to the square of the relative distance of the block from the locations of assay samples within a selected search ellipse.

Using the inverse-distance square technique, the West Bear Uranium Deposit is estimated have an indicated resource of 45,600 tonnes averaging $1.429\% U_3O_8$, for a total contained uranium content of 1,437,000 pounds U_3O_8 . The deposit was also estimated to contain 0.33% Ni, 0.10% Co, and 0.53% As. These three elements are not considered to be a part of any resource for the same reasons described in Section 16.4.

The results of the inverse-distance squared resource estimate lend confidence to that accuracy of the geostatistical-block model estimate presented in this report.



Accor	Direction	Offset		Nested	Interpreta	Variogram Parameters				
Assay Element	(True		Lag (m)	Model 1		Model 2			Rotation about Z-	Range in Z-Axis
Liement	Azimuth)	Distance (m)		Туре	Value	Туре	Range	Sill	Axis	Direction (m)
U ₃ O ₈	60	6.25	12.50	Nugget Effect	1.21	Spherical	84.72	0.48	16	5
	346	3.00	5.00	Nugget Effect	1.34	Spherical	21.92	0.51	(060 true az)	
Ni	60	6.25	12.50	Nugget Effect	1.50	Spherical	72.27	1.06	16	2
	346	3.00	1.00	Nugget Effect	0.23	Spherical	16.94	2.85	(060 true az)	
Co	60	6.25	12.50	Nugget Effect	2.31	Spherical	47.25	0.69	14	2
	346	3.00	1.00	Nugget Effect	0.15	Spherical	21.65	4.61	(060 true az)	
As	85	6.25	12.50	Nugget Effect	2.43	Spherical	83.52	0.46	350	2
	346	2.50	2.50	Nugget Effect	0.66	Spherical	13.87	2.35	(060 true az)	
Bulk Density	60	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	346	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

 Table 16.4.1 - Results of the Semi-Variogram Analysis - West Bear Uranium Deposit Assays

	Interpolation Between L18+00E and L18+50E							Interpolation in All Other Areas								
Assay	# Samples to				Search Ellipse			# Sam	ples to	Search Ellipse						
Element	Interpolate Block		Rotation Search Radii		ii	Tuna	Interpolate Block		Rotation		Search Radii		Tourse			
	Min	Max	Angle	Туре	X	Y	Z	Туре	Min	Max	Angle	Туре	X	Y	Z	Туре
U ₃ O ₈	2	6	16	ZXZ	8	3	2	Ellipse	2	6	16	ZXZ	15	3	2	Ellipse
Ni	2	12	16	ZXZ	8	3	2	Ellipse	2	12	16	ZXZ	15	3	2	Ellipse
Co	2	12	14	ZXZ	8	3	2	Ellipse	2	12	14	ZXZ	15	3	2	Ellipse
As	2	12	350	ZXZ	8	3	2	Ellipse	2	12	350	ZXZ	15	3	2	Ellipse
Bulk Density	2	12	16	ZXZ	20	20	5	Ellipse	2	12	16	ZXZ	20	20	5	Ellipse

 Table 16.4.2 - Parameters Used During the Block Grade Interpolation

Table 16.4.3 - West Bear Resource Estimate

Hidden Bay Project As of December 30, 2005

Geostatisical - Block Model Technique

	Ind	licated Resour	rces		Non-Resource	ce - Other Me	etal Content
SECTION	Volume	Density	Tonnage	U_3O_8	Ni	Со	As
SECTION	(m ³)	tonnes/(m ³)	(tonnes)	(wt%)	(wt%)	(wt%)	(wt%)
WB1950E	98.036	1.926	188.8	1.019	0.56	0.12	0.87
WB1938E	338.110	1.895	640.8	1.053	0.47	0.10	0.51
WB1925E	509.561	1.985	1,011.6	1.172	0.22	0.06	0.17
WB1913E	613.484	1.970	1,208.3	1.435	0.47	0.13	0.37
WB1900E	656.067	2.021	1,325.8	1.814	0.75	0.18	0.62
WB1888E	563.423	2.015	1,135.6	1.549	2.28	0.44	2.17
WB1875E	443.074	1.982	878.1	0.429	4.41	0.84	4.80
WB1863E	292.769	2.023	592.4	0.332	2.58	0.86	5.30
WB1850E	213.210	1.963	418.6	0.362	0.71	0.40	0.65
WB1838E	472.824	1.973	932.7	1.036	0.19	0.13	0.27
WB1825E	520.047	2.069	1,076.2	3.183	0.58	0.50	1.33
WB1813E	699.254	2.050	1,433.8	1.820	0.19	0.17	0.35
WB1800E	1,158.866	2.049	2,374.6	1.508	0.15	0.05	0.40
WB1788E	1,798.624	2.089	3,758.0	2.134	0.13	0.06	0.48
WB1775E	2,315.747	2.083	4,824.8	2.363	0.15	0.07	0.48
WB1763E	1,926.405	2.071	3,988.9	1.649	0.12	0.05	0.30
WB1750E	1,572.643	2.039	3,207.2	1.168	0.12	0.03	0.16
WB1738E	1,508.111	2.018	3,042.8	1.109	0.08	0.02	0.08
WB1725E	1,339.370	2.019	2,703.7	0.767	0.06	0.02	0.10
WB1713E	1,035.873	1.979	2,050.2	0.736	0.06	0.02	0.11
WB1700E	685.491	1.968	1,348.9	0.619	0.08	0.02	0.12
WB1688E	132.191	1.915	253.1	0.488	0.07	0.01	0.08
WB1675E	0.000	0.000	0.0	0.000	0.00	0.00	0.00
WB1663E	277.315	2.026	561.9	0.811	0.11	0.04	0.17
WB1650E	1,105.012	2.036	2,249.8	0.795	0.17	0.06	0.15
WB1638E	1,152.828	2.033	2,344.2	0.840	0.10	0.04	0.07
WB1625E	883.374	2.033	1,795.9	0.936	0.05	0.02	0.06
WB1613E	106.174	2.002	212.6	1.413	0.03	0.01	0.05
WB1600E	0.000	0.000	0.0	0.000	0.00	0.00	0.00
Total	22,417.883	2.032	45,560	1.385	0.34	0.11	0.50

Total Metal Content

1,391,400 lbs U3O8	
339,200 lbs Ni	
106,400 lbs Co	
498,600 lbs As	

Denotes part of the indicated resource estimate

Denotes part of other metals not considered part of the resource estimate

Table 16.5 - West Bear Resource Estimate

Hidden Bay Project As of December 30, 2005 Inverse Distance Squared Technique

	Ind	icated Resour	ces		Non-Resour	ce - Other Me	etal Content
SECTION	Volume	Density	Tonnage	U ₃ O ₈	Ni	Со	As
SECTION	(m^3)	tonnes/(m ³)	(tonnes)	(wt%)	(wt%)	(wt%)	(wt%)
WB1950E	98.036	1.927	188.9	0.970	0.50	0.11	0.77
WB1938E	338.110	1.991	673.2	1.093	0.35	0.09	0.47
WB1925E	509.561	1.992	1,014.8	1.136	0.23	0.07	0.16
WB1913E	613.484	2.011	1,233.5	1.552	0.65	0.15	0.50
WB1900E	656.067	2.031	1,332.3	2.235	0.87	0.22	0.71
WB1888E	563.423	2.016	1,135.8	1.852	2.17	0.48	3.08
WB1875E	443.074	1.970	872.7	0.370	3.52	0.75	5.27
WB1863E	292.769	1.976	578.6	0.348	2.56	0.67	4.07
WB1850E	213.210	1.941	413.9	0.390	0.86	0.56	1.82
WB1838E	472.824	1.976	934.1	1.105	0.24	0.16	0.32
WB1825E	520.047	2.046	1,063.9	3.132	0.56	0.48	1.21
WB1813E	699.254	2.024	1,415.6	1.712	0.17	0.15	0.35
WB1800E	1,158.866	2.035	2,357.8	1.520	0.18	0.06	0.46
WB1788E	1,798.624	2.078	3,737.1	2.438	0.16	0.06	0.51
WB1775E	2,315.747	2.084	4,825.7	2.396	0.15	0.07	0.50
WB1763E	1,926.405	2.051	3,951.2	1.557	0.11	0.04	0.28
WB1750E	1,572.643	2.040	3,208.2	1.254	0.10	0.03	0.16
WB1738E	1,508.111	2.028	3,058.6	1.033	0.07	0.02	0.10
WB1725E	1,339.370	2.030	2,719.1	0.767	0.05	0.02	0.10
WB1713E	1,035.873	2.024	2,096.9	0.719	0.07	0.02	0.11
WB1700E	685.491	1.999	1,370.0	0.664	0.09	0.02	0.11
WB1688E	132.191	1.938	256.2	0.753	0.08	0.02	0.09
WB1675E	0.000	0.000	0.0	0.000	0.00	0.00	0.00
WB1663E	277.315	2.026	561.9	0.833	0.15	0.06	0.15
WB1650E	1,105.012	2.035	2,248.7	0.804	0.17	0.06	0.15
WB1638E	1,152.828	2.037	2,348.5	0.904	0.09	0.03	0.08
WB1625E	883.374	2.033	1,796.2	0.959	0.05	0.02	0.06
WB1613E	106.174	2.010	213.4	1.049	0.04	0.02	0.06
Total	22,417.883	2.034	45,610.0	1.429	0.33	0.10	0.53

Total Metal Content

1,436,900 lbs U3O8 327,500 lbs Ni 105,100 lbs Co 532,900 lbs As



Denotes part of the indicated resource estimate

Denotes part of other metals not considered part of the resource estimate

Differences between the results of the two methodologies were very small and well within the error range expected of such estimates. Variance of the results of inversedistance squared method from the geostatistical method was 3.3% for total contained pounds of U₃O₈ and 3.17% for uranium grade.

The resource estimate was calculated using GEMCOM software version 5.5.1 on a threedimensional computer model of the deposit.

The key assumptions, parameters, and methodology used to determine the inversedistance squared resource estimate closely follow those presented in Section 16.4. In fact, the parameters outlined in Sections 16.4.1 through 16.4.3 were exactly the same parameters used during this estimate. As spatial geostatistics is not employed during the inverse-distance squared technique, semi-variogram analysis of the data and the construction of variograms for interpolation were not completed. The exact same assay dataset used in the geostatistical estimate was used for the interpolation in the inversedistance squared estimate.

The same 3-D deposit model was used for both the geostatistical and inverse-distance squared estimates.

Only one stage was required to complete the interpolation of individual block grades in this estimate, instead of the two phases required for the geostatistical estimate presented in Section 16.4.5. A minimum of two and a maximum of twelve assay values were required to estimate a grade for any individual block for all grade elements and bulk density values. Search radii dimensions for all grade parameters and density were 20 m in the X-direction, 20 m in the Y-direction, and 5 m in the Z-direction. A counter clockwise rotation of 16^{0} (true azimuth of 060^{0}) of the X-Y axis around the Z-axis was imposed on the search parameters, with the exception of Co, where a 350^{0} rotation (086^{0} true azimuth) was imposed.

Table 16.5 outlines the results of the inverse-distance squared resource estimate.

17.0 OTHER RELEVANT DATA AND INFORMATION

At the time of the writing of this report, the Qualified Person is aware of the following information that is necessary to inform the reader to make this technical report understandable and not misleading.

Cameco Corporation's Significant Ownership of UEX Corporation

As of the time of the writing of this report, Cameco Corporation owned 21.78% of the common shares of UEX Corporation. As a result of the ownership position, Cameco officers and employees are considered potential insiders of UEX Corporation. By extension, the Qualified Person responsible for the completion of resource estimate and this report is not considered by

the tests outlined in NI 43-101 to be technically independent of UEX Corporation. During the summer of 2005, UEX Corporation submitted a request to the BC Securities Commission that Cameco employees working on the West Bear Resource Estimate be granted an exemption to NI 43-101 requirements that only non-independent qualified persons be permitted to report material resource changes.

The situation is very similar to the scenario where a major issuer is permitted to report resource estimates to a junior issuer in a joint venture relationship, even if the major issuer owns securities in the junior issuer. In this particular case, as the Qualified Person will neither gain or lose financially either through Cameco or UEX should a positive or negative result be obtained, the BC Securities Commission, the lead regulator of UEX Corporation, granted this exemption.

For further information, the reader is referred to the BC Securities Commission ruling found in Appendix A.

18.0 INTERPRETATION AND CONCLUSIONS

The West Bear Uranium Deposit is located on the southern block of the Hidden Bay Project, in the Wollaston Lake area of northern Saskatchewan, and is 100% owned by UEX Corporation.

The lithology, structural, alteration, and chemical characteristics of the West Bear Uranium Deposit closely resembles Cameco's Cigar Lake Deposit, currently under development. The alteration is hosted at the unconformity of the Athabasca Groups sandstone, at and near the unconformity expression of a very strongly graphitic pelite package. Despite the strong evidence for post-Athabasca brittle fault structures, no significant offset of the unconformity is observed in the area of the West Bear Uranium Deposit. Super intense clay alteration is pervasive, affecting both the sandstone and basement rocks, often obscuring the protoliths of the lithological units. Uranium mineralization is hosted within this strong alteration package. High concentrations of nickel, cobalt, and arsenic are observed throughout the deposit, but are most intensely concentrated along the east end of the mineralized zone, as defined by the 2005 sonic drilling program.

The West Bear Uranium Deposit is estimated to contain an indicated resource of 45,600 tonnes averaging $1.385\% U_3O_8$, for a total uranium content of 1,391,000 pounds of U_3O_8 . The deposit also contains 0.34% nickel, 0.11% cobalt, and 0.50% arsenic. However, the nickel, cobalt, and arsenic are not considered to be a resource. No other classification of resources is presented in this report. This estimate was calculated using a geostatistical-block model technique within the GEMCOM software package. Confidence in this estimate is buoyed by the results of a second estimate, reported herein, that was calculated using the inverse-distance squared technique yielding very similar results. This resource estimate represents a three-fold increase in uranium grade from Gulf Minerals (NI 43-101 non-compliant) historic resource estimate, and a slight increase in total pounds of uranium, despite the fact that only $2/3^{rds}$ of the strike length of the mineralized area outlined in the historic resource was tested by the 2005 drilling program.

The West Bear Uranium Deposit is flat lying and has been defined over a strike length of 300 m, ranges in width from 5-25 m, and in thickness from 0.1-10.5 m.

Two criteria were used in determining the boundaries of the deposit for the resource estimate. A cut-off grade of $0.15\% U_3O_8$ and a grade-thickness parameter of $0.45 \text{ m}\% U_3O_8$ were the hurdles necessary for mineralization to be incorporated into the resource estimate. These parameters were determined with consultation of Cameco's Engineering Projects group in April, 2005, when the spot uranium price was US\$24.00/lb U_3O_8 . The Qualified Person does not believe that increases to the spot price would have any significant affect on the overall resource, as the mineralization has reasonably sharp boundaries and only a minor amount of known mineralization occurs outside these boundaries within the area defined by the 2005 sonic holes.

Minor deviations were permitted from this cut-off criteria in select situations where uranium mineralization would be have to be extracted in an open pit mining scenario to allow for access material that met the cut-off criteria.

This resource estimate was based exclusively on the assay and drilling results of the 2005 sonic drilling program. The results of historic drilling in 2002 and 2004 by UEX Corporation, and in 1977-1979 by Gulf Minerals was not included in the dataset, as the core recovery of holes completed during this period was highly suspect and not considered by the authors of this report to be representative of the West Bear Uranium Deposit.

The 2005 sonic drilling program consisted of 101 holes totaling 2,793 m and covered a strike length of 350 m. Holes were drilled on fences spaced 25 m apart, except between L18+00E and L18+50E, where fences were spaced 12.5 m apart. The spacing of holes along each drill fence was 5 m. The density of drilling and sampling supports the classification of this resource as indicated. In many other projects, the drilling density at West Bear would support a measured resource. However, given the high degree of variation of the shape/width of the deposit from section to section, even between sections only 12.5 m apart, it is the Qualified Person's opinion that the indicated category is appropriate.

Additional infill drilling between the 25 m spaced drill fences is not recommended, as the deposit has been sufficiently defined to permit advancement of the project to a pre-feasibility stage. Additional infill drilling would increase confidence in the shape of the deposit but would not likely significantly change the estimate of resources.

Historic Gulf Minerals holes, located east of the easternmost 2005 sonic drill holes, indicate that uranium mineralization likely extends up to 150 m east beyond the boundaries of the West Bear Uranium Deposit, as it is currently defined. This eastern area has the potential to significantly increase total pounds of uranium contained in the deposit and is recommended for additional sonic drilling in the winter of 2006.

The determination of an accurate dry bulk density factor for the deposit, or for individual samples was not entirely successful during the sampling program. Despite following proper sampling protocol it appears that several samples yielded dry bulk density values that are considered to be unreasonably low. It appears that the density sample integrity may have been impacted between the specific gravity measurement stage and the bulk density stage based on sample descriptions completed during the bulk density testing.

The authors of this report believes that there is a possibility that the bulk density of the deposit may be slightly understated and that the total uranium content of the deposit may be slightly higher than presented herein. The authors believe that it is unlikely that the bulk density of the deposit is actually lower than the values presented in this report.

The location of all drill holes and stations along the ground grid were surveyed using a high precision Sokia Stratus Differential GPS survey system with post-processing correction capability. Repeated surveying of key points has shown that the survey results are highly reproducible and very accurately define the locations of each hole.

A rigorous quality control/quality assurance program was implemented during the campaign. As there is no commercially available uranium standard, it was not possible to insert blind standards into the sample stream. The quality control/quality assurance program consisted of the monitoring of laboratory duplicates, the precision of results of SRC-made laboratory standards, and duplicate analysis of 10% of all samples plus re-analysis of all samples exceeding 1% U_3O_8 at two other laboratory facilities. Analysis of the results check data has shown that the accuracy and precision of the original analytical results was good and that the data set was valid for use in this resource estimate.

As of the time of the writing of this report, Cameco Corporation owned 21.78% of the common shares of UEX Corporation. As a result of the ownership position, Cameco officers and employees are considered potential insiders of UEX Corporation, including the Qualified Person responsible for the completion of this resource estimate. As the Qualified Person will not benefit as a result of any findings in this resource estimate, the BC Securities Commission has granted UEX an exemption to NI 43-101 requirements that only non-independent qualified persons be permitted to report material resource changes.

The objective of the 2005 sonic drilling program was to complete a resource estimate of the entire West Bear Uranium Deposit. Several mechanical breakdowns during the drilling program caused significant delays that prevented the completion of the planned 120 hole drilling campaign. Additional time was also spent drilling two unplanned infill drill fences to evaluate the variations in grade and thickness of the deposit over short distances along strike. As a result, the eastern on-strike boundary of the West Bear Uranium Deposit was not defined during the 2005 program. The drilling program tested what was believed to be the highest grade and thicknest portions of the West Bear Uranium Deposit. Additional drilling will be required in the eastern area of the deposit and an updated resource estimate determined in 2006.

19.0 <u>RECOMMENDATIONS</u>

Given the recent increase in the uranium price, and the fact that a significant increase in the estimated grade and quantity of uranium has been defined at the West Bear Uranium Deposit during the 2005 sonic drilling program, a pre-feasibility study of the deposit is warranted. This study should be initiated by 2007.

In order to advance to the pre-feasibility stage, it is recommended that UEX complete the following tasks in 2006.

- Sonic drill testing of the eastern area, where the West Bear Uranium Deposit remains open along strike. Historic work by Gulf Minerals indicates that uranium mineralization is present over a strike length of 150 m to the east of the easternmost 2005 sonic drill holes. This area represents a high priority target for 2006, as it has the highest potential to expand the resource base in advance of a pre-feasibility study. Additional targets are outlined along the north and west margins of the deposit. A program of 70 holes totaling 2,100 m would probably be required to test these targets. The cost of such a program is estimated at \$886,000 and is outlined in more detail in Table 19.1.
- Accurate determination of the dry bulk density of the deposit. Samples submitted for bulk density analysis should be massed shortly after drilling, prior to the shipment to the laboratory for analysis. This would allow for the determination of the mass of the water lost during the drying process, and combined with assay grade and specific gravity information, would allow for a calculated dry bulk density to be determined and compared to the measured bulk density results.
- Mineralized core should be sent in airtight sealed containers shortly after drilling for metallurgical testing. Holes will be required from mineralization at the west end, east end, and core areas of the deposit, and may require the re-drilling of at least two holes within the confines of the 2005 program. Sealing of the samples in airtight containers is considered very important, as oxidation is observed in the nickel-cobalt-arsenide minerals very shortly after exposure to the atmosphere. A site visit by the project team less than 3 months following the end of the sonic program observed very strong oxidation of these arsenide minerals. Such oxidation could have an impact on the metallurgical test results. UEX should consult a qualified mining/metallurgical engineer to design an appropriate program, as this is beyond the scope of this report. The Qualified Person does not have any experience with metallurgical test work.
- UEX should continue the Environmental Baseline Study initiated in the summer of 2005. Efforts should also focus on the groundwater flow regime in the vicinity of the deposit to determine if this could be a potential problem in an open pit environment. This may include groundwater packer tests on holes in the deposit area. A determination of water quality and the potential requirement to treat ingress water from a potential open pit prior to discharge to the environment should also be investigated. UEX should consult their environmental consultant for details on the necessary technical details of the program, and the associated costs of such a program.
- UEX should scout out an appropriate roadway from the deposit to provincial road #905, to determine infrastructure costs for the pre-feasibility study.
- Additional diamond drilling should be completed in the West Bear area in an attempt to find or define additional mineralized bodies that could impact on the economics of mining operations.
- UEX should make inquiries to various nickel smelter facilities to determine whether a nickel-cobalt arsenide concentrate can be processed for a profit or on a break-even basis. The presence of such compounds in veins within the wall rock of a potential open pit

could pose a future acid mine leach problem that may most easily be mitigated by the removal of such veins by mining. In addition, significant nickel-cobalt-arsenic is known to exist east of and down-dip of the eastern end of the West Bear Deposit as defined by UEX's 2003-2005 diamond drilling program, and could be a potential source of future revenue for UEX.

Table 19.1

Recommended 2006 Sonic Drill Program

70 holes totaling 2,100 m

Direct Contractor Costs	\$ 525,000
Fuel Costs	\$ 55,000
Camp Costs	\$ 2,000
Mob/Demob	\$ 75,000
Personnel Costs	\$ 108,000
Analytical Costs	\$ 80,000
Permiting Costs	\$ 1,000
Report Writing	\$ 40,000
Total	\$ 886,000

REFERENCES

- Bajc, A.F., 1998, A comparative analysis of enzyme leach and mobile metal ion selective extractions; case studies from glaciated terrain, northern Ontario, Journal of Geochemical Exploration, v. 61, pp 113-148.
- Boyd, J. A., et al., 1980, *Uranium ore reserves estimates, West Bear deposit, Saskatchewan.* Gulf Minerals Canada Ltd., internal report.
- Earle, S. A. M. & Sopuck, V.J., 1989, *Regional lithogeochemistry of the eastern part of the Athabasca Basin U province, Saskatchewan, Canada*: U Resources and Geology of North America. IAEA-TECTDOC-500, pp 263-296.
- Goldak, D, 2003, *Report on the 2002 Geophysical Activities, Raven-Horseshoe and Telephone Lake Grids, Mineral Dispositions S-106961, S-106962, and S-106981, NTS 64 L/4 and 64 L/5*, Assessment Report submitted to Saskatchewan Industry and Resources, Cameco Corporation, 11 p.
- Healey, C. M., and Ward, D. M., 1988, *Cameco statement of ore reserves and mineral resources*. Cameco Corporation, internal report.
- Jones, B. E., 1980, *The geology of the Collins Bay uranium deposit*; C.I.M.M. Bulletin, v.73, pp 84-90.
- Lewry, J. F., Sibbald, T. I. I., and Rees, C. J., 1978, Metamorphic patterns and their relation to tectonism and plutonism in the Churchill Province in Northern Saskatchewan: Metamorphism in the Canadian Shield, Geological Survey, Dept. of Minerals, p 27.
- Lewry, J.F & Sibbald, T.I.I., 1980, *Thermotectonic evolution of the Churchill Province in Northern Saskatchewan*: Tectonophysics, v.68, pp 45-82.
- Mann, A.W., Birrell, R.D., Mann, A.T., Humphreys, D.B., and Perdix, J.L., 1998, *Application of the mobile metal ion technique to routine geochemical exploration*, Journal of Geochemical Exploration, v. 61, pp 87-102.
- Rhys, D. A., 2001, *Geological Report on the Hidden Bay Property, Wollaston Lake Area, Northern Saskatchewan*, report prepared for UEX Corporation by Panterra Geoservices Inc., 84 p.
- Studer, D., 1984, *Centre block compilation and economic geology, Project 565*, Eldorado Resources Ltd., internal report.
- Wamtech Pty. Ltd and XRAL Laboratories, 1996, *MMI Operations Manual for Mobile Metal* Ion Geochemical Soil Surveys, Version 4.98, commercial manual.

DATE AND SIGNATURE PAGE - STATEMENT OF QUALIFICATIONS

I, Roger Lemaitre, of the town of Warman, in the Province of Saskatchewan, do certify as follows:

- 1. I am a geologist employed by Cameco Corporation of Saskatoon, Saskatchewan with an office at 2121 11th Street West, Saskatoon.
- I have held the position of Manager, Regional Exploration, Saskatchewan with Cameco Corporation since September, 2005. Previously, I held the positions of Project Geologist with Cameco Corporation from 2002 to 2005, Geologist with Cameco Corporation from 2001 to 2002, Project Geologist from 1998 to 2001 with M'Ore Exploration Services, Project Geologist from 1997 to 1998 with Slam Exploration Ltd., and the position of Geologist with Cominco Ltd. from 1994 to 1996.
- 3. I have practiced my profession since 1989.
- 4. I am a graduate of Queen's University at Kingston with a B.Sc.(Applied) degree in Geological Engineering MINEX option (1992).
- 5. I am a graduate of McGill University with an M.Sc.(Applied) degree in Geology Mineral Resources and Exploration Program (1994).
- 6. I am a licensed Professional Engineer in good standing, registered in the Province of Saskatchewan. I am also a licensed Professional Geologist in good standing in the Province of Saskatchewan.
- 7. I am considered a "Qualified Person" for the purposes of the Canadian Securities Administrator/TSX National Instrument 43-101 – Standards for Disclosure for Mineral Exploration and Development and Mining Properties regulations, revised May, 2000. I have read the Instrument and this report has been prepared in compliance with the Instrument and Form 43-101F. I am considered not considered an "Independent Qualified Person" according to the tests outlined in the Instrument. My employer, Cameco Corporation, owns approximately 21.8% of the outstanding equity in the issuer, UEX Corporation.
- 8. I do not own stock in either Cameco Corporation or UEX Corporation. I do own a small number of stock options of Cameco Corporation.
- 9. From October, 2002 to September, 2005 as Project Leader, and as a member of the project team since January, 2002, I have had unrestricted access to the subject property and all of the exploration data obtained upon which this report is based. I have personally been at the property worksite for the vast majority of the duration of the exploration activities included in this report.
- 10. All information contained in this report was supplied from either the work program completed under my direct supervision or through Cameco Corporation and its predecessors via internal reports regarding their previous work on the property. To the best of my knowledge, the quality of the information and data presented in this report is presented in a fair and accurate manner and discloses all technical and scientific information that is required to be disclosed to make this technical report not misleading.
- 11. As of January 20, 2006, I am not aware of any material fact or material change that is not reflected in the report, or aware of any omission to disclose that makes this report misleading.
- 12. Permission is granted to UEX Corporation to publish this report, dated January 15, 2006, for corporate purposes, for disclosure requirements to appropriate securities regulators and/or exchanges, and the raising of funds. No portion of this report may be altered or reproduced without the consent of Cameco Corporation and the authors.

Dated at Saskatoon, Saskatchewan this 20th day of January, 2006

Roger Lemaitre, P.Eng., P.Geo. Manager, Regional Exploration, Saskatchewan Cameco Corporation Appendices