
2021 Technical Report on the Horseshoe-Raven Project, Saskatchewan

UEX Corporation

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1 SUMMARY

1.1 *Introduction*

The Horseshoe-Raven Property is in the Wollaston Lake area of Northern Saskatchewan, approximately 695 kilometres north of Saskatoon, southwest of Wollaston Lake. The Project is located approximately 4 kilometres south of the uranium mill at Rabbit Lake, and 431 kilometres north of the town of La Ronge. The Horseshoe-Raven Property is 100 percent owned by UEX and is 4,486 hectares comprised of 1 mineral claim as of the effective date of the report, to which UEX has title.

The Horseshoe-Raven property is in the eastern Athabasca uranium district, adjacent to, and surrounding several current and past producing uranium deposits on the Rabbit Lake property of Cameco Corporation (“Cameco”), and the McClean Lake property operated by Orano Canada Inc. (“Orano”). The property is accessible year-round by Highway 905, a maintained all-weather gravel road, and by maintained access and mine roads to the Rabbit Lake and McClean Lake mining operations, which pass through the property. Infrastructure is well developed in the local area, with two operating uranium ore processing facilities, Rabbit Lake and McClean Lake, located 4 km northeast and 22 km northwest of the Horseshoe and Raven Deposits, respectively. The principal hydroelectric transmission lines that service both facilities also pass through the property, over the Horseshoe and Raven Deposits.

This technical report (“**2021 Technical Report**”) has been completed in conformance with the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines referred to in Companion Policy 43-101CP to National Instrument (NI) 43-101.

In 2011 a Preliminary Economic Assessment titled “Preliminary Assessment Technical Report on the Horseshoe and Raven Deposits, Hidden Bay Project, Saskatchewan, Canada”) the “**2011 PEA**”) was completed for the Horseshoe and Raven deposits. Due to the passage of time, the Company considers that the economic assessment of the 2011 PEA is no longer current and is no longer being relied upon by the Company. This 2021 Technical Report replaces the 2011 PEA with an updated estimate of mineral resources.

1.2 *Property Description and Ownership*

The Horseshoe-Raven Property is in the Wollaston Lake area of Northern Saskatchewan, approximately 695 kilometres north of Saskatoon, southwest of Wollaston Lake. The property measures approximately 4,486 hectares comprising 1 mineral claim as of the effective date of the report, to which UEX has title.

UEX holds a 100 percent interest, subject to standard royalties to the Government of Saskatchewan.

Access to the property is via Highway 905, a well-maintained gravel road accessible year-round which passes through the central portion of the Property and over the west end of the Raven Deposit. Year-round access is possible by truck. The

topography of the area is relatively flat characterized by undulating glacial moraine, outwash, and lacustrine plains.

1.3 History

The Horseshoe-Raven Property was initially explored in the late 1960's as part of the greater Rabbit Lake Property after the discovery of the Rabbit Lake Uranium Deposit in 1968.

Early exploration for uranium was conducted by Gulf Minerals Canada Limited (Gulf), and Conwest Exploration Company Limited (Conwest). Eldorado Nuclear Limited acquired Conwest in 1979 and Gulf in 1982 and amalgamated with Saskatchewan Mining and Development Corporation to form Cameco Corporation (Cameco) in 1988. Cameco transferred title to the Hidden Bay Property to UEX through an agreement reached with Pioneer Metals Corporation in 2001.

The Horseshoe-Raven Deposit was discovered in two stages, four years after the discovery of the Rabbit Lake Mine. In the fall of 1972 drill testing of a ground conductor became the discovery hole for the Raven Deposit. Subsequent drilling thru 1973 and 1974 outlined the deposit. During the final year of the Raven Deposit drilling, the discovery hole of the Horseshoe Deposit intersected ore grade mineralization to the east of the Raven Deposit while testing a geophysical anomaly similar to the Raven Deposit signature. Subsequent diamond drilling during the period of 1974 to mid-1975 succeeded in outlining the Horseshoe Deposit (Studer, 1984).

Noncompliant historical resources on the Hidden Bay property were estimated by Gulf for the Horseshoe, Raven and West Bear Deposits. New NI 43-101 compliant resources for all three of these deposits have been subsequently reported and are documented in Palmer (2007 and 2008), and Palmer and Fielder (2009).

In 2017 the Horseshoe-Raven Property was separated from the mineral claims that comprised the original Hidden Bay Property.

1.4 Geology and Mineralization

The Horseshoe-Raven Project is just east of the eastern margin of the Athabasca Basin. It is underlain by Paleoproterozoic metasedimentary gneiss and Archean granitic gneiss basement rocks of the Hearne Province. The basement rocks of the Project are within the Cree Lake zone of the Early Proterozoic Trans- Hudson orogenic belt. The Cree Lake zone is further subdivided into three transitional lithotectonic domains, of which the Horseshoe-Raven Property lies within one of them, the Wollaston Domain. Lithologies and foliation of the Wollaston Domain rocks of the Horseshoe-Raven Project trend northeast with predominantly moderate to steep southeast dips, although northwest dips occur as the result of the broad synform that is the host to uranium mineralization at Horseshoe and Raven.

The Wollaston Domain is composed of a mixed sequence of metamorphosed arkosic sandstones and pelitic to semi-pelitic gneisses that make up four successive lithostratigraphic units, of which the upper three are present in the deposit area:

- A basal pelitic gneiss composed of coarse, mature quartzitic to arkosic metasedimentary rocks.

-
- A meta-pelite, commonly graphitic and interlayered with quartzitic semi-pelite and calc-silicate.
 - A thick meta-arkose interlayered with minor calc-silicate and pelite.
 - Upper amphibole-quartzite interlayered with calcareous metasedimentary rocks and graphitic pelite, known as the Hidden Bay assemblage.

The Horseshoe and Raven Deposits are hosted by the Hidden Bay Assemblage, which occurs within a complex northeast trending D2 synclinorium that sits structurally above and south of the underlying meta-arkose unit of the Daly River subgroup. The synclinorium is cored by quartzite that is succeeded outward concentrically from the core of the folds by other components of the Hidden Bay Assemblage which include a mixed sequence of calc-arkose, additional quartzite, locally graphitic sillimanite-bearing pelitic schist and amphibolite

Lithologies in the Horseshoe and Raven areas outline several significant, upright open D2 (F2) folds in the local area. These folds have steep to moderate, southeasterly dipping axial planes and horizontal to shallow northeast plunging fold axes.

Mineralization at the Horseshoe Deposit has been defined over a strike length of approximately 800 m and occurs at depths between 100 m to 450 m below surface. Mineralization occurs in several stacked and shallow plunging shoots that generally follow the fold axis of a gently-folded arkose-quartzite package. Uranium mineralization is often best developed along the dilational zones developed between the bedding units.

The Raven Deposit is located 500 m southwest of the Horseshoe Deposit and has been defined over a strike 1000 m and ranges between 100 m and 300 m in depth. The bulk of the uranium mineralization occurs in two sub-horizontal tabular zones that are oriented parallel to the axial plane of the folded arkose-quartzite package.

1.5 Exploration and Drilling

After acquiring the Hidden Bay property in 2002, UEX continued to explore various targets on the Hidden Bay property, utilizing a combination of airborne and ground electromagnetic, magnetic, radiometric resistivity and gravity geophysical methods in more grassroots target areas to identify drilling targets, or direct follow-up drilling in areas where previous drilling had intersected alteration or mineralization.

UEX also initiated a re-evaluation of the Horseshoe and Raven deposits due to rising uranium prices. In 2005, drilling tested mineralization in selected areas of both deposits to test mineralization continuity between the widely spaced historical holes drilled by Gulf Minerals Canada Limited (“Gulf”). The success of that program led to subsequent drilling programs between 2006 and 2009 in which 376 diamond drill holes totalling 119,400 m were drilled at Horseshoe and 243 drill holes totalling 65,600 m were drilled at Raven. These programs not only established continuity of mineralization between the historical Gulf drilling but expanded the deposit footprints into areas not historically drilled by Gulf. These results were used in the most recent NI 43-101 technical report from July 15, 2009.

Additional drilling was completed in the summer of 2009 and 2011 bringing the total drillholes for Horseshoe to 404 (128,179.8 m) and 311 drillholes (82,205.8 m) for Raven. The results of these holes were incorporated into the existing database and used to update the resource estimates, which are discussed in this report.

1.6 Sample Preparation, Analyses and Security

All samples from 2005, 2006, 2007, 2008, 2009, and 2011 drilling programs were submitted by ground courier to the Saskatchewan Research Council (SRC) in Saskatoon. SRC is accredited to the ISO 17025 standard by the Standards Council of Canada for a number of specific test procedures, including U₃O₈ analysis and specific gravity.

Nathan Barsi, P.Geo. (APEGs#15012) from UEX Corporation undertook the analysis of analytical control data for the Horseshoe and Raven Deposits. In the opinion of the Qualified Person, the sample preparation, security and analytical procedures for all assay data are suitable for use in mineral resource estimation.

1.7 Data Verification

Exploration work completed by UEX in 2009 and 2011 was conducted using documented procedures and protocols involving extensive exploration data verifications and validation. During drilling, UEX geologists implemented industry standard best practices designed to ensure the reliability and trustworthiness of the exploration data.

In accordance with National Instrument 43-101 guidelines, Mr. Nathan Barsi, P. Geo (District Geologist), and Mr. Chris Hamel, P.Geo. (Vice President of Exploration) visited the site from June 9th to June 17th, 2021, to review and verify this historical work. All relevant information required for this technical report and resource model were reviewed by the Qualified Persons (core logging, sampling, database management) and the Qualified Persons are confident in the data provided within.

1.8 Metallurgy

Preliminary metallurgy was completed in 2009. Based on the test work process uranium recoveries are estimated to be 95%. Leach tests confirmed that the Horseshoe and Raven mineralization is easily leached under relatively mild atmospheric leach conditions.

In 2016, UEX conducted additional metallurgical testing of Horseshoe and Raven mineralization with the objective of evaluating the potential benefit of heap leach extraction in lieu of toll milling. The testing program was conducted SGS Lakefield Laboratories and was successful at demonstrating the potential of heap leaching. UEX commissioned a scoping study of the Horseshoe and Raven Deposits by JDS Mining in December 2016. UEX is encouraged by the results of the study and will be conducting further investigations into heap leaching at Horseshoe and Raven in the future. The results of scoping studies are not permitted to be disclosed under Canadian securities regulations

1.9 Mineral Resource and Mineral Reserve Estimates

The updated resource estimation work was completed by Mr. Nathan Barsi, P.Geo. (APEGS #15012) who is an appropriate Qualified Person as this term is defined in National Instrument 43-101. The mineral resource model prepared by UEX considers 715 core boreholes (210,385 m) drilled by UEX during the period of 2005, 2006, 2007, 2008, 2009, and 2011. The mineral resources reported herein were estimated using an inverse distance squared/block modelling approach informed from core borehole data constrained within uranium mineralization wireframes.

The geological model of the mineralization represents distinct irregularly shaped pods that are, mappable continuously from borehole to borehole. The lenses were defined using a traditional wireframe interpretation constructed from explicit modelling and sectional interpretation of the drilling data using a 0.02% U₃O₈ threshold as per the recommendations from the technical reports from Palmer and Fielder 2009, and Doerksen, et.al., 2011. Assays were composited to 1 m prior to construction of wireframes. Constructing a singular wireframe envelope for both deposits eliminated the 28 subzones for the Horseshoe Deposit and the 16 subzones from the Raven Deposit.

Upon completion of the wireframes the assay sample database was trimmed to samples that only fall within the mineralized wireframe. Basic statistics, histograms, and cumulative probability plots for each deposit were applied to determine appropriate capping grades. The Horseshoe Deposit grade was capped at 10% while Raven was capped at 1.88%.

The resource estimate followed the block size criteria set forth in the 2009 N.I. 43-101 Horseshoe-Raven Mineral Resource Technical Report as a starting point, with a block size of 5 by 5 by 2.5 metres for the mineralized wireframe. The blocks were visually checked by the authors in both 2D and 3D and it was deemed appropriate to use the existing block criteria as referenced above. Sub-cells, at 0.25 metres resolution, were used to respect the geology of the modelled wireframe. Sub-cells, were assigned the same grade as the parent cell. The block model was rotated on the Z-axis to honour the orientation of the mineralization

Grade estimation used an inverse distance weighting squared estimation algorithm and three passes informed by the capped and trimmed to the uranium wireframe assay values. Validation checks confirm that the block estimates are a reasonable representation of the informing data set.

The authors are satisfied that the geological modelling honours the current geological information and knowledge. The location of the samples and the assay data are sufficiently reliable to support resource evaluation. The sampling information was acquired by core drilling with pierce points between 7 and 30 m apart, but generally at 10 m across section and 25 m along strike. The authors are confident that it has modelled the overall spatial location of the uranium mineralization and that it is representative of the controls. Preliminary metallurgical data has been collected and has been disclosed above in the relevant section. The authors consider all block estimates within the mineralized lenses to satisfy the CIM classification criteria for an Indicated Mineral Resource.

Upon review of the current uranium prices, the authors consider that it is appropriate to report the Horseshoe and Raven Deposits mineral resources using the same cut-

off grade of 0.05 percent U₃O₈ as used during the 2009 resource. In the opinion of the authors, the resource evaluation reported in Table 1-1 is a reasonable representation of the Uranium mineralization at the Horseshoe and Raven Deposits

Table 1-1: Horseshoe and Raven Deposits Mineral Resource Estimates

Horseshoe Deposit Uranium Resource*				
Deposit	Category	Quantity (Tonnes)	Average Grade U₃O₈ (%)	Total lbs U₃O₈
Horseshoe	Indicated	4,982,500	0.215	23,594,000
Raven Deposit Uranium Resources*				
Deposit	Category	Quantity (Tonnes)	Average Grade U₃O₈ (%)	Total lbs U₃O₈
Raven	Indicated	5,370,000	0.117	13,832,400

*Mineral resources are not mineral reserves and have not demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into mineral reserve. All figures are rounded to reflect the relative accuracy of the estimates. Resources were estimated using a cut-off grade of 0.05% U₃O₈.

The mineral resource model is relatively sensitive to the selection of the reporting uranium cut-off grade. To illustrate this sensitivity, the quantities and grade estimates are presented in Table ii at various cut-off grades. The reader is cautioned that the figures presented in this table should not be misconstrued with a Mineral Resource Statement. The tables are only presented to show the sensitivity of the block model estimate to the selection of U₃O₈ cut-off grade.

Table 1-2: Global Block Model Quantities and Grade Estimates at Various U₃O₈ Cut-Off Grades

Horseshoe Grade Estimates			
Cut-Off	Indicated Blocks		
Grade	Volume / Quantity		Grade
U₃O₈	Volume	Tonnage	U₃O₈
(%)	(m³)	(tonnes)	(%)
None	4,495,127	11,147,916	0.109
0.01	4,113,990	10,202,696	0.119
0.02	3,415,704	8,470,945	0.140
0.05	2,009,077	4,982,512	0.215
0.10	1,196,033	2,966,088	0.313
0.15	866,315	2,148,462	0.386
0.20	628,722	1,559,230	0.466
0.25	468,775	1,162,562	0.548
0.30	372,190	923,032	0.620
0.35	300,907	746,250	0.689
0.40	238,923	592,530	0.771

Raven Grade Estimates			
Cut-Off	Indicated Blocks		
Grade	Volume / Quantity		Grade
U₃O₈	Volume	Tonnage	U₃O₈
(%)	(m³)	(tonnes)	(%)
None	5,174,176	12,831,957	0.064
0.01	5,013,261	12,432,888	0.066
0.02	4,117,590	10,211,623	0.077
0.05	2,165,334	5,370,028	0.117
0.10	867,706	2,151,912	0.186
0.15	439,339	1,089,560	0.250
0.20	244,018	605,165	0.312
0.25	149,652	371,138	0.368
0.30	93,338	231,479	0.424
0.35	60,029	148,873	0.481
0.40	40,251	99,822	0.534

The sensitivity analysis indicates that a large portion of the resource for the deposits are of a lower grade.

1.10 Recovery Methods

In 2016, UEX conducted additional metallurgical testing of Horseshoe and Raven uranium mineralization with the objective of evaluating the potential benefit of heap

leach extraction in lieu of toll milling. The testing program was conducted SGS Lakefield Laboratories and was successful at demonstrating the potential of heap leaching. UEX commissioned a scoping study of the Horseshoe and Raven Deposits by JDS Mining in December 2016. UEX is encouraged by the results of the study and will be conducting further investigations into heap leaching at Horseshoe and Raven in the future. The results of scoping studies are not permitted to be disclosed under Canadian securities regulations.

1.11 Other Relevant Data and Information

In 2011, the 2011 PEA was completed for the Horseshoe and Raven deposits. Due to the passage of time, the Company considers that the economic assessment of the 2011 PEA is no longer current and is no longer being relied upon by the Company. This 2021 Technical Report replaces the 2011 PEA in its entirety with an updated estimate of mineral resources.

1.12 Adjacent Properties

The Horseshoe-Raven Property is surrounded by mineral claims that are owned and operated by UEX Corporation, Cameco Corporation, IsoEnergy, and Scott Bell. These properties are primarily explored for uranium mineralization.

UEX has 100 percent ownership of the Hidden Bay Property, adjacent to the northern claims of the West Bear Property. The Hidden Bay Property is comprised of 46 claims totalling 51,847 hectares. The most recent activity on the property was drilling and geophysics in 2021. The 2021 drill program was 6 diamond drill boreholes (1,315 m) at the Uranium-Nickel sands target area. The geophysical surveys were on two grids at Dwyer Lake Grid, and at the Uranium-Nickel Sands target for a total of 103.1 km grid preparation, and 95.5 km HLEM geophysical survey.

Cameco Corporation is 100% owner of the 10,105 ha Rabbit Lake Property that is host to the past producing Rabbit Lake, Collins Bay A, Collins Bay B, and Collins Bay D mines, as well as the uranium deposits at Eagle Point. Infrastructure on the property is the underground mine at Eagle Point, the conventional mill, and necessary supporting camp and shop facilities, airport, haul road, above ground tails, and in-pit tails in the Rabbit Lake Pit. The Eagle Point mine and Rabbit Lake mill facility were placed on care and maintenance in 2016 and remain so at the time of writing this report. Indicated resources remaining at Eagle Point are 39.7 million lb U₃O₈ with 33.6 million lb U₃O₈ inferred, as reported on their website at <https://www.cameco.com/businesses/uranium-operations/suspended/rabbit-lake/reserves-resources>. The author cautions the reader that they are not able to comment whether Cameco's resource estimates for the Eagle Point Mine were completed under NI 43-101 and CIM Guidelines.

The Trident Project is located 4 kilometres southeast of the Raven and Horseshoe deposits and 8 km south of the Rabbit Lake mine and mill. Trident's five claims cover 15,874 hectares in two blocks that are adjacent to the southern boundary of the Horseshoe and Raven Claim. Scott Bell holds title to one claim of 32.5 ha that is adjacent the eastern boundary of the Horseshoe Raven claim.

1.13 Conclusions and Recommendations

The authors constructed singular wireframes for both the Horseshoe and Raven deposits honouring the recommendations of the authors of the previous 2009 technical report and 2011 PEA. Both reports highlighted that there was up to a 15% difference between interpolation methods when calculating mineral resources. This fact, coupled with recent historical drilling at the Horseshoe and Raven deposits necessitated the need for an updated mineral resource for each of the deposits. The updated resources result in the Horseshoe deposits combined indicated and inferred resources decreasing by ~ 1.5 percent, but the average grade increased by ~ 9% percent at a cut-off grade of 0.05% U₃O₈. The decrease in the combined indicated and inferred resources at the Horseshoe deposit is likely attributed to the 28 subzones used during the previous resource estimates being very thin and vein like in their original construction.

The singular wireframe constructed by the current authors was developed using the former authors' subzones for each deposit as a guide. The alternate section definition and the distribution of the drill holes and assays resulted in the majority of the subzones being truncated by the newly interpreted singular wireframes around the margin of the two deposits.

The Raven combined inferred and indicated resources increased by 0.1 percent along with the average grade increase at a cut-off of 0.05% U₃O₈. The recommendations in the 2011 PEA proposed additional drilling at Raven in 2011, which was completed to confirm continuity of mineralization. This very small increase in resources and corresponding slight increase in grade is attributed to the result of the 2011 drill program which proved deposit continuity and slightly modified the interpreted shape of the Raven deposit mineralization.

The authors completed a conventional inverse distance squared interpolation approach to estimate the updated mineral resource for the Horseshoe and Raven Deposits. Mineral resource estimates were constrained within geological defined wireframes based on available information.

The authors are confident in the modelling of the overall spatial location of the uranium mineralization and that it is representative of the Horseshoe and Raven Deposits. The authors consider all block estimates within the mineralized wireframe to satisfy the classification criteria for Indicated Mineral Resources.

Based on the geological setting, character of the uranium mineralization delineated, and exploration results to date, the authors do not recommend any future exploration work within the immediate vicinity of the Horseshoe and Raven Deposits on the Horseshoe-Raven Property.

The authors propose that new preliminary economic assessment study be initiated to determine the potential economics and viability of mining the Horseshoe and Raven Deposits. The new resource estimate presented in this 2021 Report could be used to prepare a new preliminary economic assessment that would determine whether the projects warrant advancement towards a pre-feasibility study. Completing the preliminary economic assessment is estimated to cost CAD \$150,000 - \$200,000.

In preparing a preliminary economic assessment, it is recommended that UEX undertake a check assay sampling program to supplement the summer 2009 to 2011

assay data, as the duplicate data couldn't be easily segregated and validated from the assay database. The qualified persons are confident that duplicate samples were taken but a new check assay sample program would eliminate any doubt of the validity of the data. It is recommended to take ~ 500 new check samples across both deposits as this would represent ~ 2% of the sample population to date. The majority of the costs associated with a new check sample program would be analytical costs as the sample pulps from the original assay samples maybe still available from the laboratory. If the samples are available, the estimated cost of a check sampling program would be CAD \$25,000. If the pulps are not available, the cost would increase by approximately 33% as new samples would have to be collected from the historical drill core the next time an exploration program is active at the Raven camp where the core is stored. This would cost approximately CAD\$35,000.

Preliminary metallurgy was completed for the 2011 Technical Report. Additional metallurgical work was completed in 2015 focusing on the viability of using uranium heap leach recovery, and the results of the 2015 testing was then used in a Scoping Study completed by JDS Mining in 2016. That study recommends that UEX advance the heap leach metallurgical testing to the next phase by completing additional compositing of representative samples from the Horseshoe and Raven deposits to continue developing the parameters for recovering the mineralized material in a sellable product. A recommend minimum of 6 tonnes of material is required for this work. The cost of completing this work would be approximately CAD\$2,350,000.

2 INTRODUCTION

The Horseshoe-Raven Property (the Property) is a development-stage project located in Saskatchewan, Canada. UEX Corporation (UEX) owns 100 percent of the Horseshoe-Raven Property and operates the Project. In 2011, the 2011 PEA was completed for the Horseshoe and Raven deposits. Due to the passage of time, the Company considers that the economic assessment of the 2011 PEA is no longer current and is no longer being relied upon by the Company. This 2021 Technical Report replaces the 2011 PEA in its entirety with an updated estimate of mineral resources.

UEX is a Canadian uranium exploration and development company. UEX is currently advancing its uranium deposits at Christie Lake, Horseshoe–Raven, and Shea Creek. UEX is advancing several advanced-stage projects through its 50% owned subsidiary, JCU (Canada) Exploration Company, Limited (“JCU”). JCU is minority owner of equity in three development-stage uranium projects: 1) 10% ownership of the Wheeler River Project with the Phoenix and Gryphon deposits, 2) 30.099% ownership of the Millennium Deposit, and 3) 33.81% ownership of the Kiggavik Project in Nunavut. Through their wholly owned subsidiary CoEX Metals, it is evaluating and advancing the West Bear Cobalt-Nickel Deposit, and Michael Lake Zone, both on the adjoining West Bear Property.

This technical report documents the updated Mineral Resource Estimate by UEX for the Horseshoe-Raven Project on the Horseshoe-Raven Property, Saskatchewan, Canada. It was prepared following the guidelines of the Canadian Securities Administrators’ National Instrument 43-101 and Form 43-101F1. The Mineral Resource Estimate reported herein was prepared in conformity with generally accepted *CIM Estimation of Mineral Resources and Mineral Reserves Best Practice* and *CIM Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines*.

2.1 Work Program

The Mineral Resource Estimate reported herein is an internal effort by UEX personnel that include the historical drill holes that were completed after the July 2009 Mineral Resource. The exploration database was compiled and maintained by UEX. The geological model and outlines for the uranium mineralization were constructed by the authors following the previous technical report’s recommendation (Palmer and Fielder, 2009) to create a singular wireframe for each deposit using a cut-off 0.02% U₃O₈. In the opinion of the authors, the geological model is a reasonable representation of the distribution of the targeted mineralization at the current level of sampling. The geostatistical analysis, and grade model were completed by the authors during the months of June 2021, through October 2021.

The Mineral Resource Estimate reported herein was prepared in conformity with the generally accepted *CIM Exploration Best Practices Guidelines* and *CIM Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines*. This technical report was prepared following the guidelines of the Canadian Securities Administrators’ National Instrument 43-101 and Form 43-101F1.

The technical report was assembled at UEX Regional Office in Saskatoon during the period of May 2021 thru November 2021.

2.2 Basis of Technical Report

This report is based on information collected by UEX during the 2009, 2011, and 2012 drilling campaigns performed between July 4 to September 17, 2009, January 16, 2011, to April 15, 2011, July 4 to October 20, 2011, and February 2 to February 27, 2012, and on historical information collected by UEX during exploration programs. UEX has no reason to doubt the reliability of the information. Other information was obtained from the public domain. This technical report is based on the following sources of information:

- Inspection of the Project area, including outcrop and drill core
- Historical Exploration data collected by UEX
- Additional information from public domain sources

2.3 Qualifications of UEX and UEX Team

Compilation of this technical report was completed by Christopher Hamel (APEGS#12985) and Nathan Barsi, P.Geo. (APEGS#15012) from UEX. The responsibility for the analytical control data analysis was assumed by Chris Hamel, P.Geo. (APEGS#12985) from UEX. All aspects of land status, dispositions, and claims were completed by Susan Biss (APEGS#24643). By virtue of their education, membership to a recognized professional association and relevant work experience, Mr. Hamel and Mr. Barsi are both considered to be a Qualified Person as defined by National Instrument 43-101.

2.4 Site Visit

Nathan Barsi, P. Geo, and Chris Hamel, P. Geo., visited the property from June 9 to 17, 2021 as Senior Geologist and Exploration Manager respectively. While there, they reviewed drill core and sections through both Horseshoe and Raven deposits, resurveyed historical drill collars for accuracy, observed local geology in outcrop, and checked on historical sampling intervals.

2.5 Key Definitions

For clarity, certain key entities that are referred to throughout this document are defined herewith.

UEX Corporation (“UEX” or the “Company”): Owner of the Horseshoe and Raven uranium deposits located in the Athabasca Basin of Northern Saskatchewan, and 50% owner of JCU (Canada) Exploration Company Limited (“JCU”). UEX owns an equity stake directly or indirectly through JCU in 31 uranium or cobalt mineral exploration projects in Canada.

2.6 Declaration

The authors' opinion contained herein and effective **November 16, 2021** is based on information collected by UEX throughout the course of UEX's exploration programs.

The information in turn reflects various technical and economic conditions at the time of writing this report. Given the nature of the mining business, these conditions can change significantly over relatively short periods of time. This 2021 Technical Report includes technical information that requires subsequent calculations to derive subtotals, totals, and weighted averages. Such calculations inherently involve a degree of rounding and consequently may introduce a margin of error. Where these occur, UEX does not consider them to be material.

3 RELIANCE ON OTHER EXPERTS

This report has been prepared by UEX Corporation. The information, conclusions, opinions, and estimates contained herein are based on:

- information available to UEX and the authors at the time of preparation of this report,
- assumptions, conditions, and qualifications as set forth in this 2021 Technical Report, and
- Data, reports, and other information supplied by Golder Associates Ltd. from the 2009 Resource Estimate and Technical Report

The mineral claim that comprises the Horseshoe-Raven Property was addressed in a legal title opinion dated September 7, 2021, prepared by Robertson Stromberg, a Saskatoon, Saskatchewan-based law firm. Robertson Stromberg concluded that the claim is in good standing and is owned by UEX, and that as of September 7, 2021, there were no encumbrances, charges, security interests, or instruments recorded against the claims.

at Appendix A contains copies of the mineral abstracts downloaded from the Province of Saskatchewan's Mineral Administration Registry Saskatchewan ("MARS") website for the Raven dispositions which show that all the dispositions remain 100% owned by UEX as of November 16, 2021.

4 PROPERTY DESCRIPTION AND LOCATION

The Horseshoe-Raven Property is in the Wollaston Lake area of Northern Saskatchewan, approximately 695 kilometres north of Saskatoon, southwest of Wollaston Lake. The Project is located within the eastern Athabasca, approximately 4 kilometres south of the uranium mill at Rabbit Lake, and 431 kilometres north of the town of La Ronge. The centre of the Property is located at approximately 103°46'00" degrees longitude west and 58°08'10" degrees latitude north (Figure 4-1).

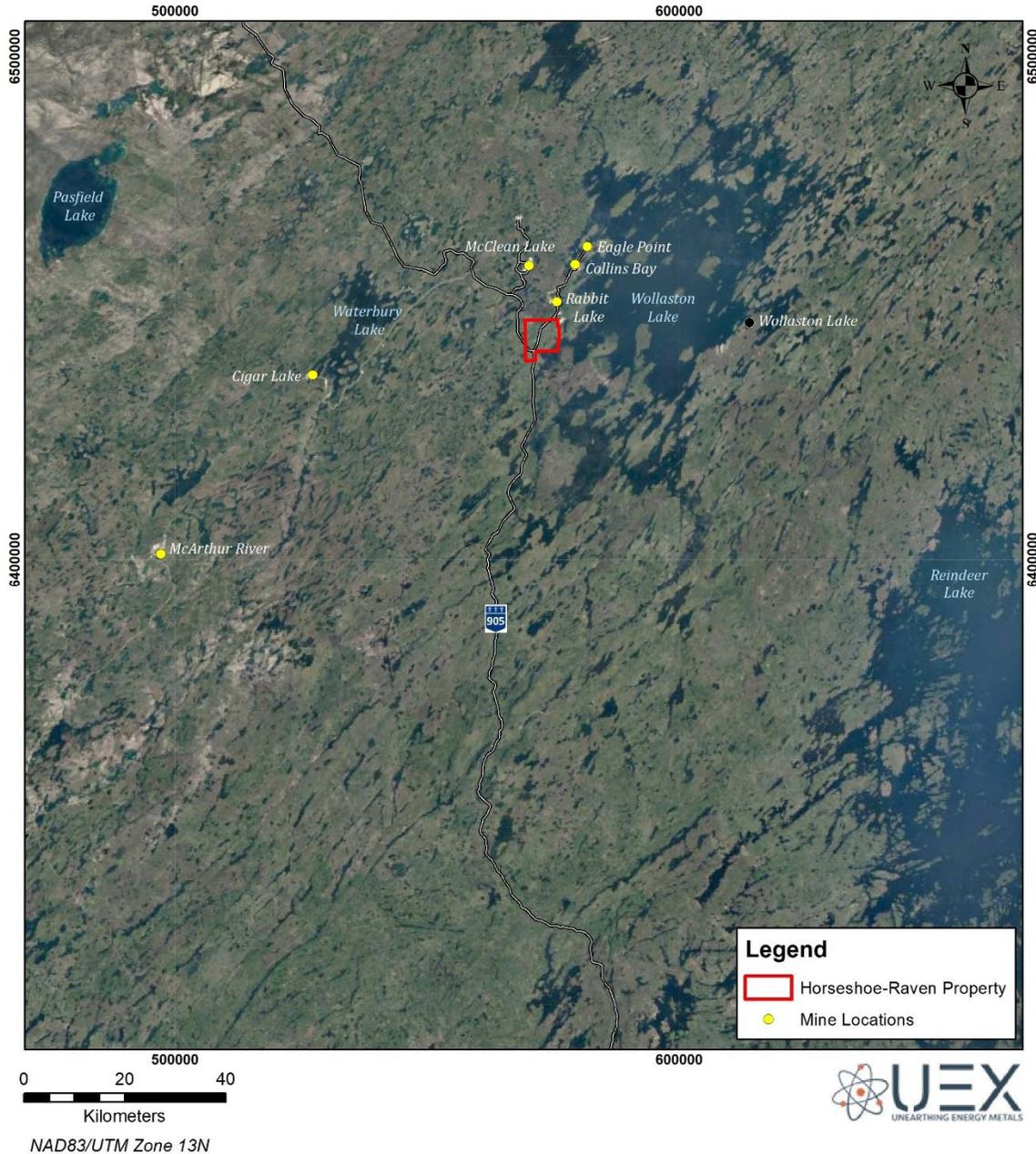


Figure 4-1: Location of the Horseshoe-Raven Property in Saskatchewan, Canada

4.1 Mineral Tenure

The Horseshoe-Raven Property is 100 percent owned by UEX and is 4,486 hectares comprised of 1 mineral claim as of the effective date of the report (Figure 4-2). The mineral rights exclude surface rights, which belong to the Government of Saskatchewan. Previously the Horseshoe-Raven claim was part of the Hidden Bay Property. In the first quarter of 2017 mineral claim S-106962 was separated from the Hidden Bay Property to form the Horseshoe-Raven Property.

Under Saskatchewan law, mineral claims or cells are map staked through an online registry. The map-designated coordinates of the cells are the legal limits of said claims, the physical limits can be verified by consulting the Government's Mineral Administration Registry Saskatchewan (MARS) website.

Annual assessment work and claim age is tabulated in Table 4-1. None of the dispositions are subject to any royalties, back in rights or encumbrances. No mining or waste disposal has occurred on the Horseshoe-Raven property and, consequently, the property is not subject to any liabilities due to previous mining activities. The only other encumbrances on the Horseshoe-Raven Property are the standard royalties to the Government of Saskatchewan.

Table 4-1: Mineral Tenure Information for the Horseshoe-Raven Property

Disposition Number	Record Date	Area (Ha)	Annual Assessment (\$/Ha)	Total Annual Assessment (\$)	Work Due / Lapse Date
S-106962	12/1/1977	4,486	25	\$112,150	2/28/2041
Total		4,486		\$112,150	

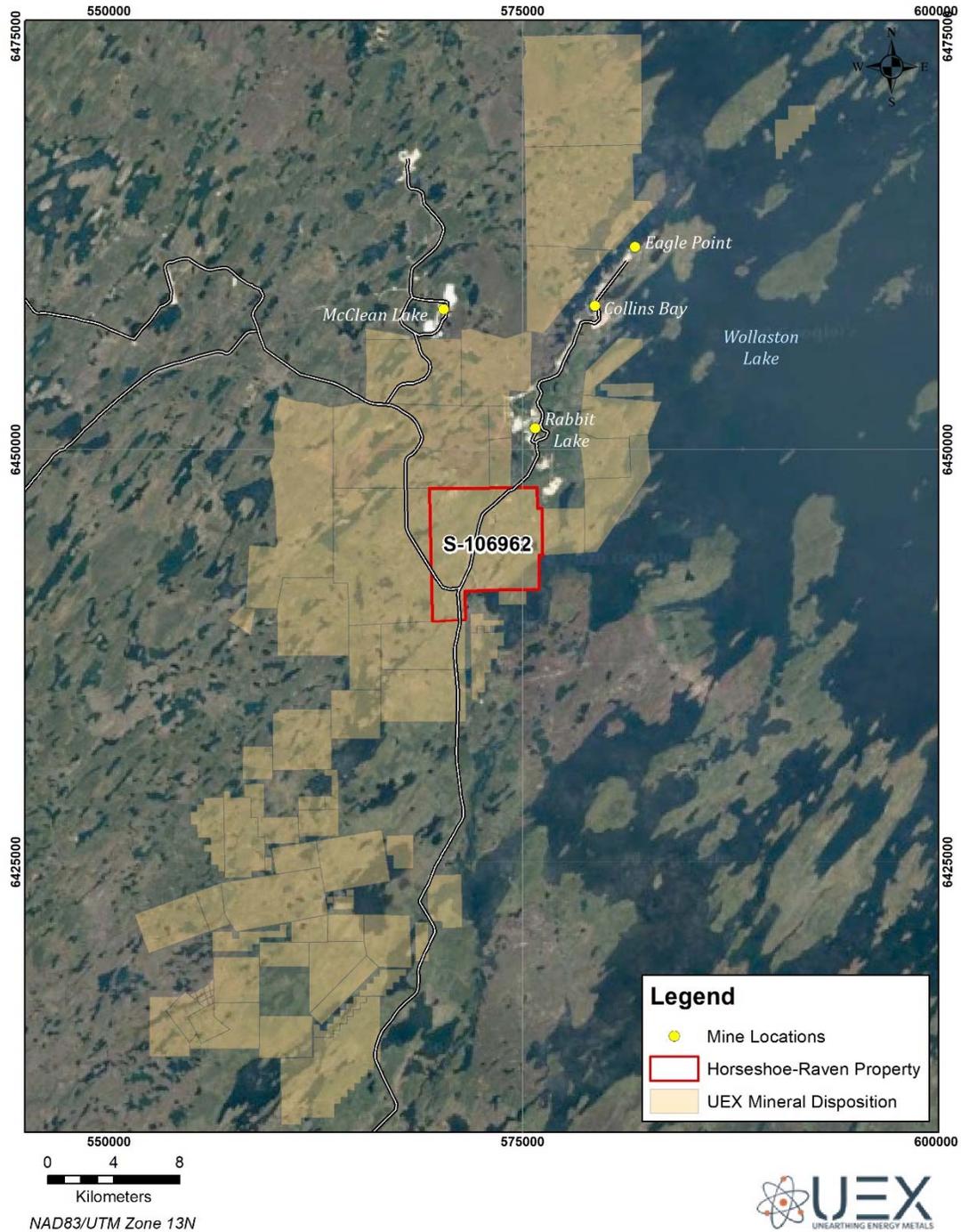


Figure 4-2: Land Tenure Map of the Horseshoe-Raven Property

4.2 Mining Rights in Saskatchewan

In Saskatchewan, mineral resources are owned by the crown and managed by the Saskatchewan Ministry of the Economy through the Crown Minerals Act and the Mineral Tenure Registry Regulations, 2012. Staking for mineral dispositions in Saskatchewan is conducted through the online staking system, Mineral Administration Registry Saskatchewan (“MARS”). The mineral disposition for the

Horseshoe-Raven Property was staked in 1977. Accordingly, ground staking methods were employed prior to the initiation of staking by the MARS system. These dispositions give the stakeholders the right to explore the lands within the disposition area for economic mineral deposits.

4.3 Underlying Agreements

On behalf of UEX, the mineral claim that comprises the Horseshoe-Raven Property were investigated as part of a title opinion on September 7, 2021, Robertson Stromberg, a Saskatoon, Saskatchewan-based law firm. Robertson Stromberg concluded that the claim is in good standing and are owned by UEX, and that as of September 7, 2021, there were no encumbrances, charges, security interests, or instruments recorded against the claims.

The Qualified Persons were able to conduct a review of the mineral title of the West Bear mineral dispositions online using the publicly accessible Province of Saskatchewan's Mineral Administration Registry Saskatchewan ("MARS"). Appendix A contains copies of the mineral abstracts downloaded from the MARS website for all the Horseshoe-Raven disposition which show that the disposition remains 100% owned by UEX as of November 16, 2021.

4.4 Permits and Authorization

Mineral exploration on land administered by the Ministry of Environment requires that surface disturbance permits be obtained before any work is performed. The Saskatchewan Mineral Exploration and Government Advisory Committee (SMEGAC) have developed the Mineral Exploration Guidelines for Saskatchewan to mitigate environmental impacts from industry activity and facilitate governmental approval for such activities (SMEGAC, 2016). Applications to conduct exploration work need only to address the relevant topics of those listed in the guidelines. The types of activities are listed under the guide's best management practices (BMP). Given the historical nature of the exploration data used for the basis of this report and the change over of staff at UEX, the qualified persons do not have any reason to believe that permits were not obtained for the historical work.

4.5 Environmental Considerations

The Horseshoe-Raven Property, with the Horseshoe and Raven Deposits, is a mineral exploration project. The exploration work completed thus far has been limited primarily to drilling, geophysical surveys, mineral resource estimates, a historical PEA, and the establishment of a work camp with a subsequent surface lease.

UEX is not aware of any environmental liabilities related to the Horseshoe-Raven Property other than the existence of some existing temporary structures at Raven Camp that will require removal in the future, at a negligible expense.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 *Accessibility*

The Horseshoe-Raven Property site is accessible by Highway 905, a well-maintained gravel road accessible year-round which passes through the central portion of the Property and over the west end of the Raven Deposit. Year-round access is possible by truck and ATV's. Helicopters can also land at camp if necessary.

5.2 *Local Resources and Infrastructure*

The closest infrastructures to the Project include several hydroelectric transmission lines that run along highway 905 and service the Rabbit Lake and McLean Lake mills. The powerlines are located through western end of the of the Project claim. All infrastructure currently on the Property is semi-permanent. A surface lease is currently in good standing until 2023. There is access to fresh water close to the Project.

La Ronge, Saskatchewan is approximately 441 kilometres south of the Project accessible by road and is the main source for groceries, fuel, materials, and medical services. Additional resources not available in La Ronge may be sourced from the cities of Prince Albert and Saskatoon. An airfield owned by the Points North Group of Companies is located 24 kilometres west northwest of the Raven camp and offers freighting services for exploration and mining activities in the eastern part of the Athabasca basin. They also offer shipment of products and services to Prince Albert and Saskatoon.

5.3 *Climate*

The Horseshoe-Raven Property is located within the Athabasca sedimentary basin region, coincident with the Athabasca Plain ecoregion and Boreal Shield Ecozone. The climate is characterized by short and cool summers with a maximum temperature of 30 degrees Celsius, and cold and long winters with a temperature low of negative 40 degrees Celsius. During the summer solstice the period of daylight lasts nearly 18.5 hours. Winter season can start in late October and continue until May.

Precipitation varies during the year reaching an average of 40 centimetres annually and is characterized by snowfall in the winter months and moderate rainfall in the summer months. Maximum precipitation occurs during the summer months of July to September.

Exploration activities can be carried out year-round, however it is generally accepted practice in the province to demobilize for spring break up.

5.4 *Physiography*

The Athabasca sedimentary basin region is characterized by variable uplands and low-lying terrain with many lakes and wetlands where peatlands and bogs are common. Vegetation is typical of the Boreal Forest, including areas dominated by black spruce forests and feather mosses. Within the forests, Jack pines commonly occur on thin-soiled uplands and tamaracks on poorly drained lowlands (Figure 5-1).

The Athabasca Plain ecoregion has developed on sedimentary rocks of the Athabasca Group. Bedrock rarely outcrops and is generally overlain by hummocky deposits of glacial till, glaciolacustrine, and glaciofluvial sediments. The topography of the area is relatively flat characterized by undulating glacial moraine, outwash, and lacustrine plains. The elevation range of the Athabasca Plain is from 485 to 640 metres. Drumlins, eskers, and meltwater channels have a typical local relief of 30 to 60 m and contribute to the rolling expression of the terrain dominated by sandy glacial sediment.

Over forty species of mammals are found in the ecozone and dominantly include caribou, moose, black bear, grey wolf, red fox, red squirrel, lynx, beaver, otter, snowshoe hare, marten, mink, and shrew. The bird species common to the ecozone include the raven, grey jay, spruce grouse, chickadee, woodpecker, bald eagle, osprey, and ptarmigan. Fish species common to the area include the lake trout, whitefish, northern pike, walleye, longnose sucker, white sucker, burbot, and arctic grayling.



Figure 5-1: Typical Landscape in the Horseshoe-Raven Property Area

6 HISTORY

6.1 *Property Ownership*

The reader is referred to UEX's November 12, 2008, NI 43-101 report entitled "Technical Report on the Geology of, and Drilling Results from, the Horseshoe and Raven Uranium Deposits, Hidden Bay Property, Northern Saskatchewan" by Rhys et al. (2008) for a comprehensive Ownership and Claims history description.

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 was made in 1968 at Rabbit Lake. The Rabbit Lake discovery led to extensive exploration on the Gulf Minerals Canada Limited (GMCL) permits. 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 Horseshoe-Raven and West Bear discoveries were made on what is today the Hidden Bay property. Jones (1980) documented the events leading to the discovery of the Collins Bay deposits that are closely associated with the Collins Bay thrust fault (Rhys, 2002).

Eldorado Resources Limited acquired GMCL in October 1982. Eldorado then merged with the Saskatchewan Mining Development Corporation (SMDC) in 1988 to form Cameco Corporation. Previously, the Hidden Bay property was part of the lands comprising the historic Rabbit Lake property. Cameco divided the Rabbit Lake property into two parts, one being the current mining property covering all the leases and active mining operations, and the second was all lands outside the current active operations. The second part became known as the Hidden Bay property. Cameco transferred the Hidden Bay properties to UEX through an agreement reached with Pioneer Metals Corporation in 2001. Cameco retained 100% ownership of the Rabbit Lake property lands occupied by the current mining operation. Cameco continued to oversee exploration for UEX on the Hidden Bay property between 2002 and 2005 under an exploration management service agreement. In the fall of 2005, UEX took over full operatorship.

Following the transfer of land from Cameco in 2002, UEX has acquired and added new dispositions to the Hidden Bay Property. UEX separated the Raven & Horseshoe area and the West Bear area into independent UEX properties known as the Horseshoe-Raven Property (circa Q1, 2017) and the West Bear Property (circa 2018).

6.2 *Exploration and Development History*

UEX and previous operators have employed a number of exploration techniques to explore the Hidden Bay Property since the late 1960's (Table 6-1 & Table 6-2). Geophysical techniques and surveys include airborne time domain surveys EM, magnetics, and radiometrics, while ground surveys have included VLF EM, HLEM, larger loop EM in a number of configurations, DC Resistivity, and gravity data

collection. Soil and radon sampling have also been performed, including track etch cups and radon in water surveys.

Due to its proximity to producing mines and the identification of several deposits, the Hidden Bay property has been subject to numerous exploration programs since discovery of the Rabbit Lake Deposit in 1968. A review of the details of all the programs conducted on the area of the property would be too exhaustive to be relevant to this report so, instead, the methods employed, significant discoveries made, and summary details of the different types of programs that were completed are outlined below. The reader is referred to compilation reports by Andrade (1983a, 1983b) and Studer (1984) for further details on work completed up until 1983 on the property and references to earlier work. Reports by Studer and Gudjurgis (1985), Studer (1986, 1987 and 1989), Studer and Nimeck (1989), Ogryzlo (1984, 1985, 1987a, 1987b, 1988), Forand and Nimeck (1992), Forand, Nimeck and Wasyluik (1994), Forand (1995 and 1999), Powell (1996), and Foster et al (1997) document work programs conducted between 1983 and 1998 and provide references to further work also conducted during those years. No exploration was carried out on the property between 1999 and 2002.

The Horseshoe-Raven Deposit was discovered in two stages, four years after the discovery of the Rabbit Lake Mine. In the fall of 1972 drill testing of a ground conductor became the discovery hole for the Raven Deposit. Subsequent drilling thru 1973 and 1974 outlined the deposit. During the final year of the Raven Deposit drilling, the discovery hole of the Horseshoe Deposit intersected ore grade mineralization to the east of the Raven Deposit while testing a geophysical anomaly similar to the Raven Deposit signature. Subsequent diamond drilling during the period of 1974 to mid-1975 succeeded in outlining the Horseshoe Deposit (Studer, 1984).

6.2.1 Early Uranium Exploration (1968 to 1999)

The location and methods of exploration applied on the Hidden Bay property have varied with the differing geological target models, exploration priorities and the new technologies developed since discovery of the Rabbit Lake Deposit in 1968. Initial exploration programs in the area were based on the basement-hosted Rabbit Lake Deposit model, which involved the search for the coincidence of gravity and magnetic lows associated with the large, intense alteration zone and associated faulting at that deposit. These programs employed a multiple parameter search methodology (Whitford, 1971), employing: (i) initial airborne gamma ray spectrometric, electromagnetic, gravity and magnetic surveys conducted in the late 1960s; (ii) ground geological and geophysical checks of the airborne radiometric anomalies; (iii) surface prospecting, scintillometer and geochemical reconnaissance surveys, including radon-in water surveys; and (iv) follow-up overburden and diamond drilling. Most of the Hidden Bay property was subject to these methods during the initial years of exploration, particularly in areas of exposed basement rocks to the southeast, where the potential for basement-hosted Rabbit Lake type deposits was deemed greatest. These methods were used extensively by Gulf up until 1976, when discoveries elsewhere in the Athabasca Basin, particularly the Key Lake Deposit, where the spatial association between a string of deposits developed at the intersection between the sub-Athabasca unconformity with graphitic gneiss-hosted faults were recognized. The recognition of the probable genetic role of graphitic gneiss and associated faults in deposit localization shifted the emphasis to the use of ground based electromagnetic ("EM") surveys, such as horizontal loop ("HLEM"), as the principal first pass geophysical survey in target areas. These EM surveys were

used to detect conductive graphitic lithologies beneath overburden and the Athabasca sandstone. EM surveys still form the principal geophysical exploration tool, although the technologies currently used differ from the initial programs (e.g., fixed and moving loop) and have led to the targeting of many programs that have ultimately resulted in many new discoveries in the region during follow-up drilling of anomalies.

Principal target areas for diamond drilling include systematic drilling of major faults with known associated mineralization, including the Rabbit Lake, Telephone, Seal, and Wolf Lake Faults, and concentrated areas of drilling in geologically and geochemically prospective areas (e.g., Vixen Lake-Dragon Lake). Most diamond drilling campaigns have been initially targeted based on ground geophysical surveys and follow-up to reverse circulation drilling anomalies. Reverse circulation drilling in 646 drill holes (9,062 m total) was conducted in several programs completed principally between 1976 and 1982 as a grid-based testing of overburden and sandstone covering portions of central and northern parts of the property. These programs aided in the definition of the location and depth of the Athabasca unconformity and allowed evaluation of geological and geochemical environments and located uranium anomalies in overburden and bedrock. (Rhys, 2002).

6.2.2 UEX Exploration (2002 – 2021)

Programs between 2002 and 2015 focused on a number of trends with the McClean South / Telephone Lake / Shamus Lake trend, Horseshoe-Raven, Seal Trend, Rabbit Lake Fault Trend, Vixen Lake Area, Dwyer Lake Area, and Wolf Lake Trend with diamond drilling, and in a number of cases ground and airborne geophysics.

6.3 Historical Mineral Resource Estimates

Noncompliant historical resources on the Hidden Bay property were estimated by Gulf for the Horseshoe, Raven and West Bear Deposits. New NI 43-101 compliant resources for all three of these deposits have been subsequently reported, and are documented Palmer (2007 and 2008), and Palmer and Fielder (2009).

The most recent NI 43-101 Mineral Resource by Palmer and Fielder (2009) is summarized below.

6.3.1 Horseshoe Mineral Resource

The mineral resource calculation utilized 376 diamond drill holes (119,400 metres from holes HU-001 to HU-358, HS-001 and HO-01 to HO-16) drilled between 2005 and 2009, which test the deposit at 7.5 metres to 30 metres drill centres. The updated resource comprises 5.120 million tonnes grading 0.203% U_3O_8 in the Indicated category, containing 22.895 million pounds of U_3O_8 and 0.287 million tonnes grading 0.166% U_3O_8 in the Inferred category, containing 1.049 million pounds of U_3O_8 at a cut-off of 0.05% U_3O_8 . The mineral resource estimate was calculated using a minimum cut-off grade of 0.02% U_3O_8 utilizing a geostatistical block-model technique with ordinary kriging methods and the Datamine Studio 3 (“Datamine”) software package. Over 95% of the resource is in the Indicated category at a 0.05% U_3O_8 cut-off. At a cut-off of 0.20% U_3O_8 , the average grade for the Indicated mineralization is 0.412% U_3O_8 with a tonnage of 1.567 million tonnes (Table 6-1).

Table 6-1: July 2009 Indicated and Inferred Mineral Resources (Capped) at the Horseshoe Deposit with Tonnes and Grade at Various U₃O₈ Cut-off Grades

Category	Cutoff	Tonnes	U ₃ O ₈ (%)	U ₃ O ₈ (lbs)
Indicated	0.02	7,042,400	0.157	24,427,000
	0.05	5,119,700	0.203	22,895,000
	0.10	3,464,800	0.266	20,302,000
	0.15	2,380,800	0.330	17,331,000
	0.20	1,567,000	0.412	14,219,000
	0.25	1,059,900	0.502	11,726,000
	0.30	722,600	0.609	9,696,000
	0.35	529,100	0.713	8,319,000
	0.40	414,600	0.807	7,377,000
Inferred	0.02	444,900	0.122	1,192,000
	0.05	287,000	0.166	1,049,000
	0.10	159,700	0.239	840,000
	0.15	106,800	0.298	702,000
	0.20	79,800	0.340	598,000
	0.25	53,500	0.398	469,000
	0.30	29,300	0.502	324,000
	0.35	15,500	0.665	227,000
	0.40	11,400	0.769	193,000

6.3.2 Raven Mineral Resource Estimate

The mineral resource estimate was based on 243 diamond drill holes (approximately 65,600 metres from holes RU-001 to RU-216, and RV-001 to RV-028) drilled between 2005 and 2009, with an approximate drill spacing of 7.5 to 30 metres. The mineral resource was estimated based on a geological model created by UEX which contained 16 mineralized subzones. The geological model was based on clay alteration and a grade cut-off of 0.02% U₃O₈. A 3D block model was created from the geological model which then had grades interpolated into them using the ordinary kriging estimation method. The software that was used to complete the mineral resource estimate was Datamine. During the mineral resource estimate, high grade assay outliers were identified for each subzone and capped accordingly to prevent high-grade spreading. The July 2009 Raven Mineral Resource Estimate contains 5.174 million tonnes grading 0.107% U₃O₈ in the Indicated category, containing 12.149 million pounds of U₃O₈ and 0.822 million tonnes grading 0.092% U₃O₈ in the Inferred category, containing 1.666 million pounds of U₃O₈ at a cut-off of 0.05% U₃O₈. At a 0.05% U₃O₈ cut-off, 88% of the tonnes are in the Indicated category (Table 6-2).

Table 6-2: July 2009 Indicated and Inferred Mineral Resources (Capped) at the Raven Deposit with Tonnes and Grade at Various U₃O₈ Cut-off Grades

Category	Cutoff	Tonnes	U ₃ O ₈ (%)	U ₃ O ₈ (lbs)
Indicated	0.02	9,646,100	0.073	15,544,000
	0.05	5,173,900	0.107	12,149,000
	0.10	1,893,400	0.170	7,113,000
	0.15	827,700	0.234	4,274,000
	0.20	424,000	0.294	2,752,000
	0.25	241,500	0.349	1,859,000
	0.30	139,100	0.406	1,244,000
	0.35	80,300	0.467	827,000
	0.40	48,400	0.529	565,000
Inferred	0.02	1,537,600	0.067	2,278,000
	0.05	822,200	0.092	1,666,000
	0.10	176,000	0.186	723,000
	0.15	96,000	0.239	506,000
	0.20	48,500	0.302	323,000
	0.25	25,700	0.370	209,000
	0.30	15,800	0.431	150,000
	0.35	11,700	0.468	121,000
	0.40	8,200	0.509	92,000

6.4 Historical Production

There has been no production completed on this property to date.

7 GEOLOGICAL SETTING AND MINERALIZATION

The reader is referred to UEX's November 12, 2008 NI 43-101 report entitled "Technical Report on the Geology of, and Drilling Results from, the Horseshoe and Raven Uranium Deposits, Hidden Bay Property, Northern Saskatchewan" by Rhys et al. (2008) for a comprehensive and very detailed description of geology and mineralization.

7.1 *Regional Geology*

The Horseshoe-Raven Project is just east of the eastern margin of the Athabasca Basin. It is underlain by Paleoproterozoic metasedimentary gneiss and Archean granitic gneiss basement rocks of the Hearne Province. (Figure 7-1).

The basement rocks of the Project are within the Cree Lake zone of the Early Proterozoic Trans- Hudson orogenic belt. The Cree Lake zone is composed of Archean gneiss and overlying Early Proterozoic or Archean supracrustal rocks (Bickford et al., 1994), both of which are affected by amphibolite to locally, granulite, facies metamorphism. The Cree Lake zone is further subdivided into three transitional lithotectonic domains, of which the Horseshoe-Raven Property lies within the Wollaston Domain. The central belt, the Mudjatik domain, is composed primarily of Archean granitic gneiss, often as domal bodies, which are separated by discontinuous zones of migmatitic, pelitic gneiss and mafic granulite (Lewry and Sibbald, 1980; Sibbald, 1983). The Wollaston Domain to the east is composed of a basal sequence of biotite-quartz-feldspar +/- graphite pelitic gneiss which overlies domes of Archean granitoid gneiss in the Mudjatik domain, and which is contiguous with pelitic gneiss sequences in the Mudjatik Domain (Wallis, 1971). The basal pelitic gneiss is structurally overlain successively by (i) massive to weakly foliated meta-arkose, and (ii) quartzite with interlayered amphibolite and calcareous meta-arkose (Wallis, 1971; Sibbald, 1983). The age of the Wollaston Group is poorly constrained. Zircons from various paragneiss units that yield ages between 2550-2700 Ma establish a maximum age of the group, but these dates may represent detrital zircons derived from an older source (Annesley et al., 1996). A minimum age is given by 1840-1850 Ma granitic sills and bodies that intrude the sequence (Figure 7-2).

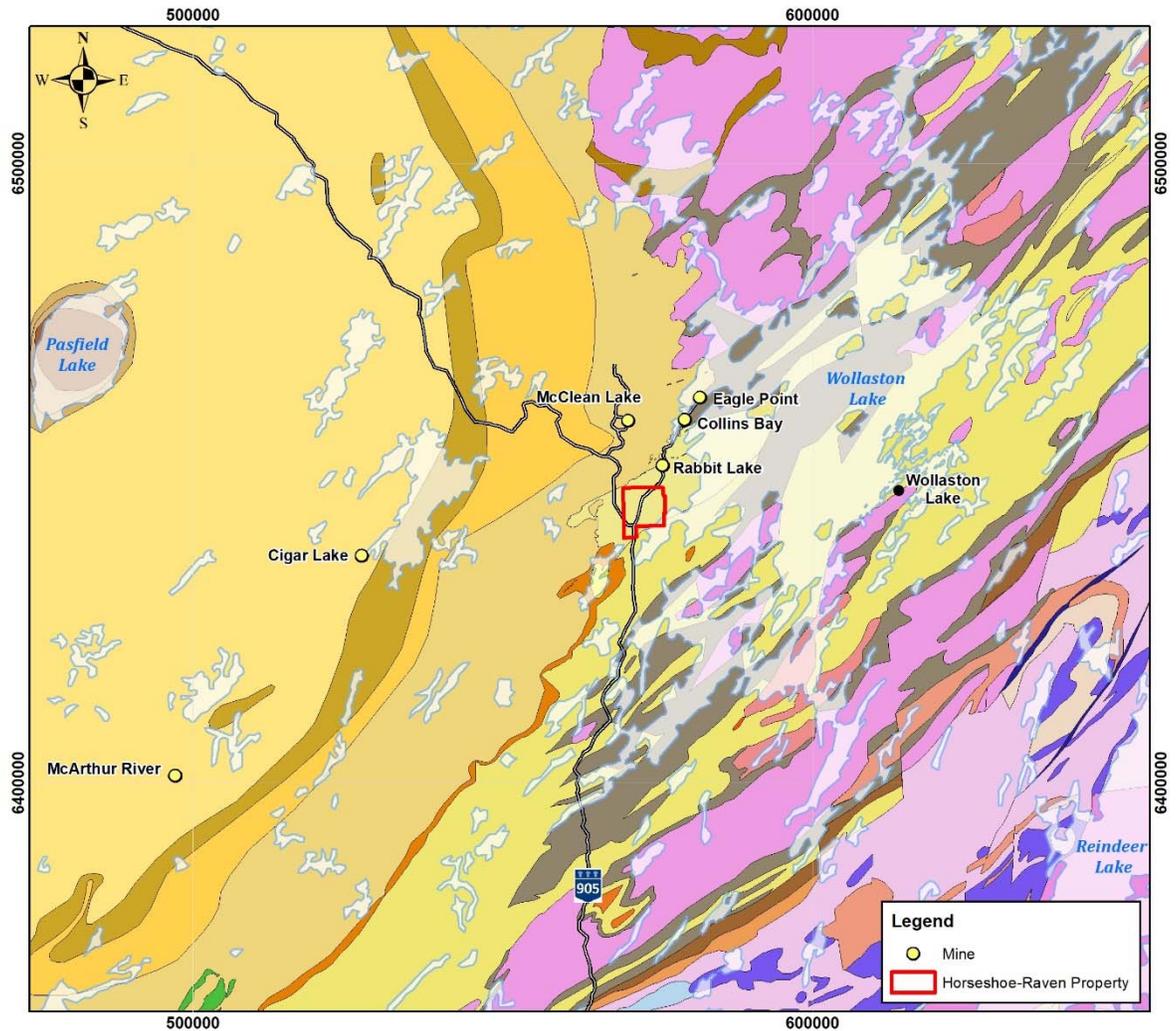
At least two major phases of syn-metamorphic deformation affect rocks in the Wollaston and Mudjatik domains. Early, layer-parallel gneissosity (S1) is widespread and is the first recognizable structural fabric in the area (Wallis, 1971). No associated major folds have been identified with this event, however (Sibbald, 1983). This early fabric is overprinted and transposed by northeast-trending penetrative foliation (S2) that is axial planar to upright, tight folds having variably northeast and southwest plunging axes (Wallis, 1971).

The Mudjatik and Wollaston domains are affected by amphibolite to locally granulite facies metamorphism (M1) that accompanied D1 deformation, defining the main thermotectonic pulse of the Hudsonian orogeny. U-Pb zircon and monazite age dating indicates Hudsonian peak metamorphism occurred between approximately 1830 and 1800 Ma in the Wollaston and Mudjatik domains (Annesley et al., 1996). It was accompanied by the intrusion of grey, commonly porphyritic granite sills, and by

subsequent anatectic K-feldspar-quartz-biotite pegmatite sills (Annesley et al., 1996). A second metamorphic pulse may have accompanied D2 deformation between 1775-1795 Ma.

To the west of the Horseshoe – Raven Project, the folded Archean to Early Proterozoic metamorphic sequence is unconformably overlain by flat-lying to gently inclined quartz-rich sandstone of the Athabasca Group. U-Pb dates of authigenic apatite cement and Rb-Sr dating of the paleoweathered zone at the base of the sandstone suggest a depositional age of between 1600-1700 Ma (Cumming et al., 1987).

Two dominant, post-metamorphic fault orientations occur in the region (Wallis, 1971). Concordant northeast-trending semi-brittle and brittle reverse faults occur throughout the region. North-south trending, sinistral strike slip faults which represent western splays and parallel structures of the major Tabbernor fault system are also common.



Athabasca Basin

- Diabase dykes
- Pebbly quartz arenite
- Quartz arenite with pebbly layers
- Quartzarenite, siltstone + mudstone
- Manitou Falls various conglomeratic
- Pebbly quartz arenite

- Quartzarenite, conglomerate, mudstone
- Clay-interclasts-rich quartz arenite

Wollaston

- Felsic gneiss
- Pelite, psammopelitic and psammitic gneiss
- Pelitic, psammopelitic gneiss

- Pelitic, psammopelitic gneiss
- Psammitic meta-arkosic gneiss

Proterozoic

- Wathaman granite
- Calcareous arkose
- Quartzite-pelite assemblage
- Peter L. Comp. deformed rocks

- Pelitic gneiss
- Thronjhemite-tonalite
- Needle Falls Gp basal assemblage
- Late Granitoids
- Late Granitoids
- Late granitoids
- Janice L. Fm: conglomerate
- Hidden Bay Assemblage: quartzite

Archean/Proterozoic

- Quartzofeldspathic gneiss
- Peter L. Comp. felsic plutons

Archean

- Garnet-feldspar gneiss
- Mylonitic gneiss
- Gabbro-diorite
- Felsic gneisses, mainly plutonic



NAD83/UTM Zone 13N



Figure 7-1: Regional Geology Setting

7.2 Geology of the Horseshoe-Raven property: Distribution of Lithologies

Lithologies and foliation of the Wollaston Domain rocks of the Horseshoe – Raven Project trend northeast with predominantly moderate to steep southeast dips, although northwest dips occur as the result of the broad synform that is the host to uranium mineralization at Horseshoe – Raven.

7.3 Pre-Athabasca lithologies on the Hidden Bay property: Wollaston Group

A consistent sequence of gneiss and schist is developed in the Wollaston Group outward from granitic domes in the region. Primary sedimentary structures have generally been obliterated by regional metamorphism, but rare compositional grading of graphite and biotite-garnet rich lamina that may represent relict graded bedding face away from the Collins Bay Dome and suggest that the sequence is upright. (Rhys, 2002).

7.3.1 Lower Pelitic Gneiss

Lowermost lithologies of the Wollaston Group in the property area comprise metapelitic gneiss and interlayered meta-arkose that surround, and directly overlie, the Collins Bay and McClean Lake domes (Sibbald, 1983). It is composed of biotite-quartz-feldspar +/- garnet +/- cordierite +/- graphite +/- sillimanite metapelitic gneiss and schist, with subordinate bands of graphite schist and calc-silicate units. Interlayers of fine to medium grained, weakly foliated biotite meta-arkose are often abundant. The lower pelitic sequence is variable in thickness; its apparent thickness in the area of the Horseshoe – Raven property is >1 km, and in some areas >3 km, although structural repetition due to internal folding may significantly accentuate that thickness. Although it may occur throughout the sequence, graphite gneiss is particularly abundant in lower parts of the unit, particularly in its basal 50 m, where gneiss containing >5% disseminated fine-grained, and foliated graphite is common. Discontinuous calcsilicate and carbonate units occur throughout the pelitic gneiss unit.

7.3.2 Meta-Arkose Unit

Massive to weakly foliated biotite-quartz-feldspar meta-arkose and calcareous meta-arkose overlies, and interfingers with the lower pelitic unit of the Wollaston Group (Sibbald, 1983). Thickness of the unit varies along strike; it has an apparent thickness of 1-4 km in the area of the property. The meta-arkose unit forms a northeast-trending aeromagnetic high due to the presence of disseminated magnetite and pyrrhotite.

Meta-arkose consists of granoblastic intergrowths of medium to fine grained plagioclase, microcline, quartz, biotite, and hornblende. Diopside, hornblende and calcite/dolomite are abundant in compositional layers locally, and disseminated pyrite, magnetite, pyrrhotite, and locally chalcopyrite are common accessory minerals. Alignment of biotite defines foliation. The unit is commonly homogenous and lacks well developed gneissosity, although gross compositional layering is common.

Meta-arkose is frequently replaced by pervasive pale green to pale pink or white albitepyroxene- amphibole-quartz alteration, previously termed “plagioclasite” (Sibbald, 1983; Appleyard, 1984). Large areas of stratabound to locally discordant, massive albite-rich lithologies occur in meta-arkose north of the Rabbit Lake fault near the Rabbit Lake pit and to the northeast and southwest for up to several

kilometers. This alteration style is often manifested in biotite meta-arkose as a series of coalescing, to pervasive irregular, anastomosing replacement veinlets and stringers of albite that are cored by diopside and hornblende (Appleyard, 1984). The veinlets coalesce to form massive domains of polygonal, granoblastic medium-grained albite with coarse disseminated grains and local stringers of diopside. The plagioclase may have formed due to metasomatic interaction of meta-arkose units with adjacent carbonate and possible evaporite units to the south during peak metamorphism (Appleyard, 1984). Plagioclase units show a spatial relationship to some uranium deposits (e.g. Rabbit Lake), but this may be an indirect relationship since the mineralization may instead be preferentially localized in calc-silicate and carbonate units to which the plagioclase is spatially related.

7.3.3 Carbonate and Calc-Silicate Units at the top of the Meta-Arkose Sequence

At the top of the meta-arkose sequence to the north of The Project at the Rabbit Lake deposit, and for several kilometers east and west along strike, impure dolomitic marble forms a continuous 20-180 m thick unit near the top of the meta-arkose sequence. The marble is pale grey to white or pink in color, and commonly contains disseminated, or compositional layers of pyroxene, amphibole, serpentine, scapolite, and graphite. Above the marble unit, several hundred meters of interlayered meta-arkose and calc-silicate cap the meta-arkose unit in the Rabbit Lake pit area and form a transition from the meta-arkose sequence to the overlying Hidden Bay assemblage. Dolomitic marble with associated calc-silicates is also present in the area of Horseshoe–Raven in the same stratigraphic position as at Rabbit Lake (Wallis, 1971).

7.3.4 Hidden Bay Assemblage

The Hidden Bay Assemblage (Wallis, 1971; quartzite-amphibolite unit of Sibbald, 1983) is the host rocks for the Horseshoe and Raven Deposits and forms the uppermost portions of the Wollaston Group. The unit is characterized by sillimanite quartzite, calcareous meta-arkose/quartzite, and amphibolite, with interlayered pelitic gneiss near its base. It occurs south of the Rabbit Lake deposit and is probably >1.5 km in true thickness (Sibbald, 1983). The Hidden Bay Assemblage in the study area is composed of, from bottom to top (Sibbald, 1983; Wallis, 1971): (i) a basal member of interlayered meta-arkose and pyroxene-amphibole-biotite +/- dolomite +/- scapolite calc-silicate, several hundred meters thick, the “hanging wall gneiss” of the Rabbit Lake pit (Hoeve and Sibbald, 1978), (ii) biotite-quartz-feldspar gneiss, in part graphitic, with interleaved biotite-sillimanite gneiss that is approximately 500 m thick, (iii) approximately 1 km or more of sillimanite-biotite-feldspar bearing massive, fine to medium grained quartzite interlayered with amphibolite that is up to several hundred meters thick near the base of the quartzite unit, and with pale green, laminated, diopside-bearing calcareous meta-arkose higher in the sequence (Figure 7-2).

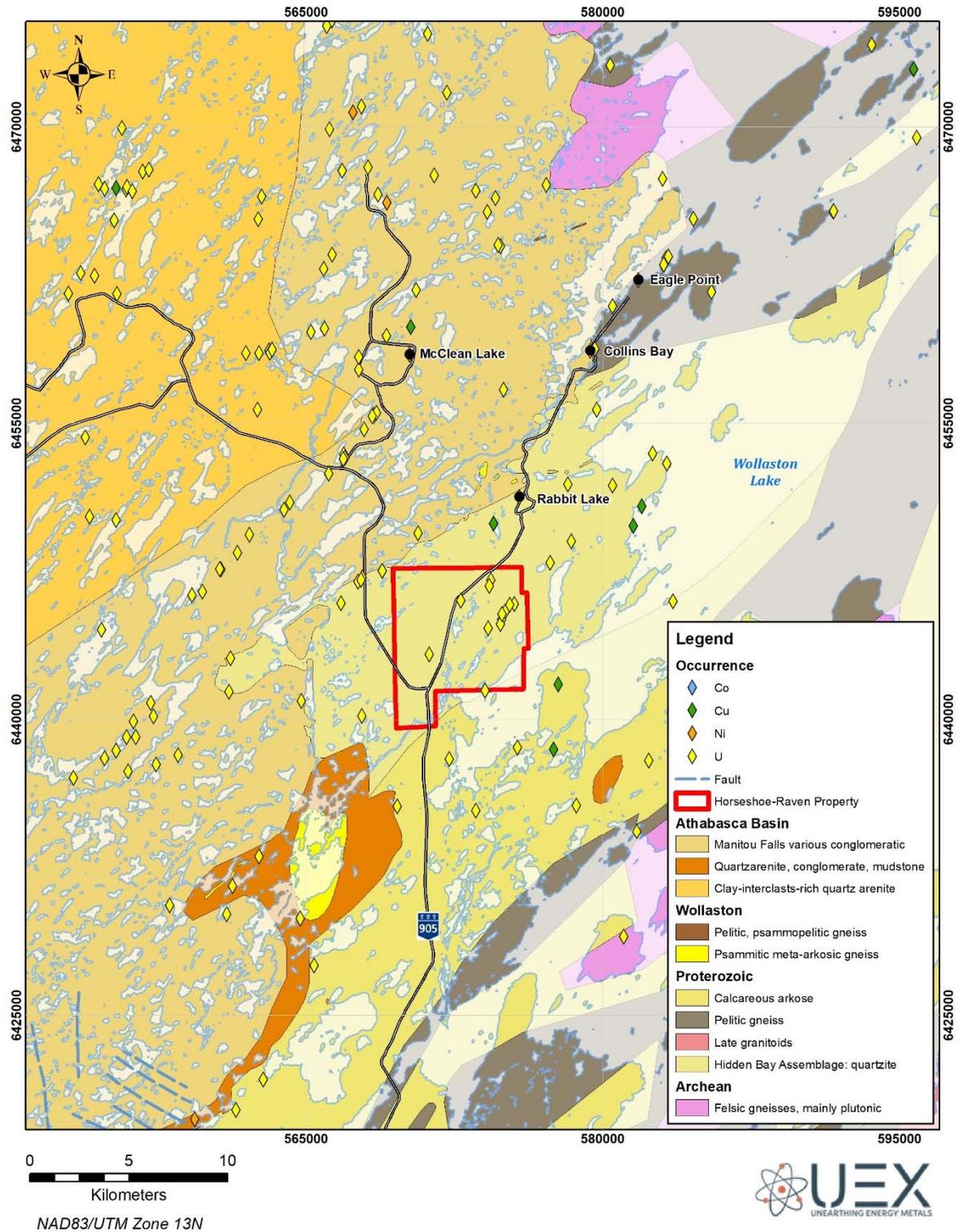


Figure 7-2: Horseshoe-Raven Property Local Geology

7.3.5 Granitic Rocks and Other Igneous Lithologies in the Region

Igneous rocks in the region include possible Archean domes and several generations of granite and pegmatite sills, dykes and stocks that intrude the Wollaston Group.

7.3.6 The Collins Bay and McClean Lake Domes: Possible Archean Basement

North of the Horseshoe–Raven Property the McClean Lake and Collins Bay domes mark the transition from the Wollaston to the Mudjatik domains. They are composed of massive, grey biotite granite to tonalite that is medium to fine grained and generally equigranular. K-feldspar and/or irregularly shaped to round, ragged quartz phenocrysts are locally present. 10-15% fine-grained biotite flakes and approximately 20- 25% quartz are ubiquitous. The intrusions may be foliated within 10 to 50 m of their contacts, with foliation defined by the alignment of biotite grains. Garnet is a local constituent, and sillimanite-rich patches and blebs are common near contacts. Regional aeromagnetic maps indicate spatial variations in the magnetic signature of the Collins Bay Dome that suggest the presence of more than one intrusive phase. The core of the dome forms a broad positive magnetic anomaly while parts of its margins are magnetically indistinguishable from the surrounding gneiss sequence. Annesley et al. (1995, 1996) report Archean U-Pb zircon ages for tonalitic gneiss on the margins of the McClean Lake dome.

7.3.7 Granite Sills and Dykes in the Wollaston Group

Sills of equigranular, medium-grained grey to white biotite granite occur throughout the Wollaston Group. They commonly form leucosomes and sills <10 m thick in pelitic gneiss, but they may obtain a thickness of more than 100 m. K-feldspar and pink to red garnet locally occur as phenocrysts. Samples collected from several granite sills in the area have yielded U-Pb zircon dates ranging between 1804 and 1815 Ma (T. Krogh in Annesley et al., 1995).

7.3.8 Granitic Gneiss in Quartzite of Hidden Bay Assemblage

South of the Horseshoe and Raven deposits, several sill-like bodies of biotite-bearing granitic or quartz monzonite gneiss that are up to several hundred meters thick occur in quartzite. These bodies have been dated at 2620 +/- 9 Ma by U-Pb zircon methods (Annesley and Madore, 1991). Their Archean age has prompted Annesley and Madore (1991) and Hubregtse and Duncan (1991) to interpret these lithologies as an Archean granite that forms the basement to the Wollaston Group. However, these bodies occur in the Hidden Bay Assemblage, the highest inferred stratigraphic level of the Wollaston Group, and would thus require both reinterpretation and revision of the entire Wollaston Group stratigraphy, and the presence of complex tectonic interleaving. Alternatively, (i) the granite gneiss may represent a recrystallized metasedimentary unit (Wallis, 1971), and thus the age may be from detrital zircons, (ii) the zircons may represent xenocrysts in a younger intrusion, or (iii) the granite bodies may intrude the Wollaston Group, and if so, provide a minimum Archean age for the group.

7.3.9 Pegmatite Sills and Dykes

Coarse-grained K-feldspar-quartz-biotite +/- tourmaline (schorl) +/- garnet pegmatite sills and dykes are common throughout the Wollaston group, especially in the lower portions of the sequence. Sills are typically 0.3 to 20 m wide. The largest pegmatite

body recognized to date in the area is 200 m thick and several hundred meters long; it occurs in lowermost parts of the Wollaston Group at the Eagle Point mine (Rhys, 1999), where it is host to much of the mineralization. At least four generations of pegmatite occur in the region, ranging from pre and syn-metamorphic, syn-D2 sills, to less abundant late dykes. Pegmatite bodies in the area are locally radioactive, and often contain minor quantities of U and Th-bearing minerals.

7.4 *Post-Metamorphic Sediments: Athabasca Sandstone*

East and north of the Horseshoe and Raven Property is the quartz sandstone and conglomerate of the Athabasca Group that unconformably overlies the metamorphosed basement rocks and, except where disrupted by faulting effects, dips gently to the west as the basin thickens. The eastern boundary of the basin is erosional but is in part influenced by post-Athabasca faulting. Several outliers occur in the Hidden Bay Property area (Ramaekers, 1983). U-Pb dates of 1650-1700 Ma obtained from apatite cement in the Athabasca Group by Cumming and Krstic (1992) provide a minimum age for the inception of sedimentation in the Athabasca Basin.

The Athabasca Group is composed mainly of orthoquartzite with a clay-rich matrix and a variable hematite content. Beds of quartz clast conglomerate occur frequently. Four marine transgressive sequences, overlying one thick fluvial regressive wedge (Manitou Falls Formation) are recognized in the Athabasca Group (Ramaekers, 1983). Diagenetic effects include quartz overgrowths on and minor pressure solution of the detrital quartz grains (Ramaekers, 1976). Some clay may be detrital, but clay minerals have replaced framework grains of biotite and feldspar. Diagenetic interstitial clays are usually composed of a mixture of dickite, illite and kaolinite (Hoeve and Quirt, 1985). Purple hematite impregnates the matrix through much of the sequence, often forming bands, and red and purple leisegang rings.

7.5 *Paleoweathering/Saprolite at the top of the Basement Rocks*

Widespread argillic alteration occurs in basement metamorphic rocks beneath the Athabasca sandstone that lies to the east and north of The Project. Thickness is variable, but typically ranges from 10-40 m. This is limited at The Project as the paleo-unconformity has been eroded and only the lower parts of the paleoweathering profile can be intermittently observed. The alteration is similar in geochemistry, mineralogy and zoning to that observed today in lateritic profiles, and consequently, has been commonly interpreted as a saprolitic (paleoweathering) profile related to pre-Athabasca erosion of the gneiss sequence (e.g. Hoeve and Sibbald, 1978). Alternatively, it could be related to the reaction of oxidized diagenetic fluids in the Athabasca sandstone with underlying basement rocks, or a superposition of both processes (D. Rhys et al., 2008). This sub-Athabasca alteration zone is referred to as "paleoweathering alteration" here, even though a post-Athabasca timing is possible. Argillic alteration associated with uranium mineralization is superimposed on this alteration.

The "paleoweathering" alteration often displays a vertical zonation in mineralogy and texture. At the top of the alteration profile, in basement rocks immediately beneath the unconformity, a white zone of intense kaolinite alteration is commonly developed within 0-5m below the unconformity, followed downward by a hematitic, oxidized red zone, containing kaolinite +/- illite, which in turn gradationally overlies a reduced green zone containing illite and Fe-Mg trichlorite which then grades into fresh rock at depth (Quirt, 1990). Graphite is often completely to partially depleted in the oxidized,

generally kaolinite-bearing red zone, and metamorphic minerals are clay altered with chlorite, illite and kaolinite.

7.6 Structural Setting of The Hidden Bay Property

7.6.1 Penetrative Deformation and Folding

Rocks on the Horseshoe-Raven property are affected by at least two significant phases of Hudsonian penetrative deformation (D1 and D2) that are manifested as widespread penetrative tectonic fabrics. No strain asymmetry (i.e. rotational shear strain) can be determined from drill core or outcrop observations of D1 or D2 planar and linear fabrics that would indicate the presence of syn-Hudsonian shear zones in the property area. Younger features include at one or more generations of phase of open folds (D3, D4?) and semi-brittle to brittle faults.

7.6.2 D1 Deformation

The earliest recognizable deformation is manifested by ubiquitous gneissic compositional layering (S1) and a parallel shape fabric defined by alignment of peak metamorphic minerals (Wallis, 1971; Sibbald, 1983). S1 foliation strikes northeast with moderate southeast dips, and is parallel to, and in part defined by lithologies including compositional layers and granitic leucosomes. S1 is defined by unstrained peak metamorphic minerals but is also overgrown by porphyroblasts of garnet and cordierite, which contain inclusion trails aligned parallel to S1 (Wallis, 1971; Rhys, 1998). These relationships suggest that M1 peak metamorphism was synchronous with, but outlasted, D1 deformation and the formation of S1 foliation (Wallis, 1971). No major folds associated with the S1 foliation were positively identified in the study area. However, tight to isoclinal minor F1 folds are common in drill core, suggesting the presence of larger F1 folds to which these are parasitic.

7.6.3 D2 Deformation

D2 deformation is manifested by megascopic and minor folds (F2 folds), which have significantly influenced the map patterns of lithologies in the area, and by the development of S2 foliation, which is axial planar to F2 folds of S1/gneissosity and lithologies. S2 is inhomogeneously developed and varies from an intense foliation that overprints and transposes S1 to a spaced cleavage that is only developed in the hinge zones of F2 folds. Where it is intense, S2 transposes S1, and consequently the two foliations are locally coplanar and indistinguishable. In some units, S2 also forms a spaced crenulation cleavage that is defined by re-oriented domains of S1 and by the alignment of new unstrained metamorphic minerals. S2 commonly wraps around garnet, cordierite, amphibole, and pyroxene porphyroblasts, and biotite and sillimanite porphyroblasts are commonly crenulated by minor F2 folds. These relationships indicate that D2 occurred after the earliest recognizable amphibolite grade (M1) metamorphic peak that accompanied the formation of S1. The presence of biotite porphyroblasts aligned parallel to S2 locally occurring in pressure shadows adjacent to garnet, cordierite, pyroxene and pyrite porphyroblasts and in D2 fold hinges, overgrowing earlier metamorphic assemblages and S1, suggests that a pulse of probable amphibolite-grade metamorphism (M2) accompanied D2. A mineral lineation (L2) may be developed at the intersection of S1 and S2, defined by the alignment of long axes of amphiboles, biotite, elliptical cordierite porphyroblasts, and sillimanite bundles. It is often parallel to F2 fold axes. (Rhys, 2002).

D2 fabrics and folds are developed inhomogeneously in both intensity and orientation. Near Wollaston Lake, minor F2 folds have subvertical to steep east-dipping dipping axial planes and fold axes generally plunge to the northeast. To the southwest, in the vicinity of the Horseshoe-Raven deposit, F2 axial planes and local S2 axial planar cleavage are generally shallower, and generally dip moderately to the east. This latter area is dominated by a series of inclined to overturned megascopic folds with southeasterly dipping axial planes that have wavelengths of 0.3-2 km and shallow northeast plunging fold axes that form the major map patterns in the Hidden Bay Assemblage. At a regional scale, D2 folds are noncylindrical and exhibit domal outlines and fold axes that have variable northeast and southwest plunges. Elliptical D2 folds are in part localized around granite domes, but variable fold axis plunges also occur in other areas. The parallelism of L2 elongation lineation with D2 fold axes suggests that significant stretching was accomplished parallel to the fold axes during folding, suggesting that the D2 folds may represent sheath-type folds. (Rhys, 2002).

7.7 Mineralization

Uranium mineralization in the Athabasca Basin is generally of Helikian age. Geochronological studies have determined that most deposits were formed in a restricted time interval between 1330 and 1380 Ma (Cumming and Krstic, 1992), and as early as 1590 Ma at the Millennium Deposit and 1521 Ma at the McArthur River Mine with ages of remobilization near 1350 Ma. The deposits generally occur at the unconformity between the lowermost Athabasca Group and the underlying crystalline basement rocks. They are commonly localized to the intersection of faults and the unconformity, or at a paleotopographic basement ridge.

Two major types of unconformity-related uranium orebody types have been identified in the Athabasca Basin. The first is polymetallic mineralization (uranium + Ni, Co, Cu, Mo, Zn, Pb, and As) mainly within the Athabasca Group sandstones, at the unconformity and locally upwards along steeply dipping faults (“perched mineralization”). Deposits of this type are associated with a paleotopographic ridge of basement rocks, often controlled by strike-slip faults (Cigar Lake Mine, Midwest Deposit). The second major type is a monomineralic mineralization (uranium oxides) structurally controlled by reverse faults affecting sandstone and basement (McArthur River Mine, Sue C Deposits).

Deposits within the Athabasca Basin are typically surrounded by alteration haloes that in the sandstones is dominated by silicification, hematization, precipitation of drusy quartz and argillization (illitization and chloritization) with massive quartz dissolution and intense fracturing; and in the basement, hydrothermal alteration consisting of illitization, chloritization and the development of dravite, which is superimposed upon and commonly obliterates the previous retrograde and regolithic alterations.

Post-Athabasca tectonic events have resulted in structural disruptions in the Athabasca Group and the Wollaston Group stratigraphy. These events are accompanied by hydrothermal alteration and associated uranium mineralization in both the Athabasca sandstone and basement. Primary targets for uranium mineralization are faulted graphitic zones in the metasedimentary basement that have been subjected to post-Athabasca reactivation, as well as in structurally disrupted sandstone and along the unconformity. Structural reactivation allowed for channeling of significant volumes of oxidized uraniferous fluids through a reduced environment, especially along, and proximal to packages of graphitic pelitic rocks. This allowed for

the deposition of uranium at an oxidization-reduction front. Within the project area these post-Athabasca events have a north-east, north, and north-west trend. (Rhys, 2002).

7.8 Local Geology of the Horseshoe and Raven Deposits

7.8.1 Host Lithologies to the Horseshoe and Raven Deposits

The Horseshoe and Raven Deposits are hosted by the Hidden Bay Assemblage, which occurs within a complex northeast-trending D2 synclinorium that sits structurally above and south of the underlying meta-arkose unit of the Daly River subgroup. The synclinorium is cored by quartzite that is succeeded outward concentrically from the core of the folds by other components of the Hidden Bay Assemblage which include a mixed sequence of calc-arkose, additional quartzite, locally graphitic sillimanite-bearing pelitic schist and amphibolite (Figure 7-2). While no Athabasca Sandstone is present above the Horseshoe and Raven Deposits since it has been eroded from the local area, sandstone outliers that occur to the southeast of the deposits and the local presence of paleoweathering in some drill holes south of the deposit area suggest that the sub-Athabasca unconformity was present just above the current surface.

7.8.2 Structural Setting - Metamorphic Structural Architecture

Lithologies in the Horseshoe and Raven areas outline several significant, upright open D2 (F2) folds in the local area (Figure 7-2). These folds have steep to moderate, southeasterly dipping axial planes and horizontal to shallow northeast plunging fold axes. A D2 timing is indicated since the folds affect both primary lithologic layering as well as lithology parallel S1 penetrative foliation. A spaced, vertical to southeast dipping S2 foliation is axial planar to the folds and locally crenulates older S1 foliation. No older, D1 folds were identified and, if they are present, they are similarly to be isoclinal and difficult to recognize but could have caused lateral and vertical thickness variations in host lithologies.

Principal folds in the immediate deposit areas include the Horseshoe anticline and adjacent Raven syncline. The Horseshoe anticline is cored by amphibolites south of the Raven Deposit and plunges to the northeast, where arkosic quartzite occurs in the hinge area in the Horseshoe Deposit (Figure 7-2). Similarly, to other D2 folds in the area, this fold is non-cylindrical and varies in plunge, shallowing to the northeast, where it plunges very shallowly to sub horizontally to the northeast in the Horseshoe Deposit area. The adjacent Raven syncline, with its axial trace 250 metres to 550 metres northwest of the Horseshoe anticline, has a nearly horizontal fold axis and is cored along its length by arkosic quartzite forming the top of the local metamorphic stratigraphy. Uranium mineralization in both the Horseshoe and Raven Deposits is elongate parallel to the trend and plunge of these folds and at Raven preferentially exploits the core of the syncline, while at Horseshoe, mineralization extends between these two folds obliquely crossing the folded sequence.

Few significant offsets of lithologies occur in the Horseshoe and Raven Deposit areas and outside of clay alteration zones associated with uranium mineralization, lithologies are competent and generally lack any significant faulting.

7.8.3 Mineralization

Based upon the recommendations of the authors of the 2009 report the Horseshoe and Raven deposits were wireframed using a cut-off of 0.02% U_3O_8 . The new wireframe shells encompass all of the subzones that were originally utilized for the 2009 report for both the Horseshoe and Raven deposits. Using a lower cut off for the wireframe has resulted in the subzones being contained within the newly modeled ore shell. The mineralization at the Horseshoe Deposit has been defined over a strike length of approximately 800 m and occurs at depths between 100 m to 450 m below surface. Mineralization occurs in several stacked and shallow plunging shoots that generally follow the fold axis of a gently-folded arkose-quartzite package. Uranium mineralization is often best developed along the dilational zones developed between the bedding units.

The Raven Deposit has been defined since 2005, by drilling for and by UEX, over a strike length of approximately 1000 metres. Mineralization is developed mainly at consistent depths of between 100 metres and 300 metres below surface and unlike Horseshoe, exhibits no significant plunge. The uranium mineralization is an elongate and east-northeast trending zone. Minor zones may extend upward to within a few tens of metres of surface, but these are not consistently present along the length of the deposit as it is currently defined by drilling. Mineralization is localized along the trace of the Raven syncline, particularly along the southeastern limb of the fold, and is developed extending downward from the base of the folded calc-arkose unit into the underlying quartzite and arkosic quartzite.

Similar to Horseshoe, mineralization at Raven occurs in hematitic altered areas which surround a steep to moderate southeast dipping zone of clay alteration which obliquely crosses the southeastern, dominantly shallow northwest dipping limb of the Raven syncline. The structural position of the mineralization is consequently the same as Horseshoe with respect to the folded metamorphic stratigraphy. The clay alteration zone also shallows in dip to the east through the deposit, although it does not attain the shallow dips of the eastern Horseshoe clay alteration zone. It may also be controlled by pre- or syn-alteration/mineralization faulting, as evidenced by clay gouge seams up dip from the projection of the principal clay zone. Potential for offset lithologies across the clay zone at Raven is not as pronounced as it is at Horseshoe, with lithologic contacts often showing little or no significant deflection across the trace of the clay zone.

Uranium mineralization in the Horseshoe and Raven Deposits occurs along an east-northeast trending zone of illite-Mg-chlorite clay alteration that is developed over at least 2.5 km strike length extending along the southeast flank of the Raven syncline. Mineralization in each deposit surrounds, or is developed along, the generally southeast dipping clay alteration zone in multiple, generally shallow dipping lenses of disseminated and vein-like pitchblende-uranophane-boltwoodite mineralization that are associated with red-brown hematite alteration.

The two deposits are separated by approximately 0.5 km, laterally between which clay alteration is continuous and often intense, but in which widely spaced historical holes have intersected only anomalous radioactivity.

8 DEPOSIT TYPES

The following section on uranium mineralization is modified from the 43-101 Technical Report on the Geology of, and Drilling Results from, the Horseshoe and Raven Uranium Deposits, Hidden Bay Property, Northern Saskatchewan (Rhys, 2008).

8.1 Athabasca Uranium Deposits

The Horseshoe–Raven property is within the eastern Athabasca uranium district, one of the most prolific uranium producing districts in the world. UEX's Raven and Horseshoe Deposits are situated on the Horseshoe – Raven Property that is adjacent to the Hidden Bay Property. There are a number of deposits in the area surrounding The Property. UEX's West Bear Property, to the south hosts both the West Bear Uranium Deposit and the West Bear Cobalt-Nickel Deposit. There are five past or currently producing mines to the north of the Horseshoe – Raven Project on the adjacent Rabbit Lake property (Rabbit Lake, A-zone, B-zone, D-zone, and Eagle Point). North of the adjacent Hidden Bay Property are the Sue and JEB deposits on the McClean Lake property (Jefferson et al., 2007). Production is on hiatus at the Rabbit Lake Property, and has ceased at the McClean Lake operation, with the mill currently processing ore from the Cigar Lake Operation.

These deposits named above collectively comprise different varieties of the unconformity associated uranium deposit type described by Jefferson et al. (2007), Ruzicka (1996) and previous workers. All are spatially related to the sub-Athabasca unconformity in the region, and are generally interpreted to result from interaction of oxidized diagenetic-hydrothermal fluids with either reduced basement rocks as is the case at Horseshoe-Raven, and/or with reduced hydrothermal fluids along faults extending upward toward the unconformity in underlying basement rocks beneath the unconformity (e.g. Hoeve and Quirt, 1985). The common occurrence of uranium mineralization in the area, and associated alteration that overprints the regional signature of the Athabasca sandstone, indicates a post-Athabasca (<1,700 Ma) timing for uranium mineralization in the region. U-Pb age dates obtained from uraninite mineralization in deposits throughout the Athabasca Basin support a principal phase of mineralization between 1,600-1,500 Ma with a potential second event between 1,460-1,350 Ma, and potential later periods of reworking indicated by younger ages (Fayek et al., 2002; Alexandre et al., 2003; Cumming and Krstic, 1992).

Uranium deposits in the area form three different, although commonly spatially related, types of unconformity type uranium deposits (Figure 8-1).

8.1.1 Sandstone-Hosted Deposits

Sandstone-hosted deposits developed at, or just above, the Athabasca unconformity in Athabasca sandstone along the trace of north-east trending faults. These deposits occur in sandstone in the footwall wedge to graphite-bearing graphitic gneiss overthrust on Athabasca sandstone (e.g. Collins Bay A, B and D-zones), or in gradational drops/humps in the unconformity above graphite-rich lithologies and faults (e.g. Sue A/B West Bear, McClean Lake). They are generally associated with non-calcareous graphitic and biotite gneiss. Mineralization occurs in pods and

disseminations in intense hematite-clay-chlorite alteration, locally overprinting spatially associated breccias and zones of intense clay alteration that sit directly above mineralization in sandstone. Common structural sites include bends and steps in fault systems, or 5-20 m humps in the unconformity that may reflect the interaction of graphitic shear zones with faults of different orientations. These deposits are sometimes called complex deposits due to the poly-mineralic nature of the ore (i.e. U +/- Ni, Co, As, Pb) and are characterized by assemblages of Ni and Ni-Co arsenides and sulpharsenides that accompany uranium mineralization.

8.1.2 Basement-Hosted Deposits

Basement-hosted deposits within or surrounding fault zones in predominantly non-calcareous gneiss. These deposits are exemplified by Eagle Point and Sue C/CQ, which are composed of veins, disseminations and pods that link, or replace faults in or near graphitic bearing gneiss. Veins frequently occur in extensional fractures that may link individual faults (Sue CQ, Telephone zone), or occur in en-echelon steps in faults (Eagle Point). Unlike unconformity deposits described above, these deposits typically lack arsenide and sulpharsenide minerals in mineralized zones. Mineralization is composed of discrete pitchblende veins, planar replacements of fine-grained nodular pitchblende + clays, or undulating pitchblende/uraninite-bearing redox fronts surrounding clay veins and faults. A variation on this deposit type occurs at Horseshoe-Raven, where uranium mineralization occurs in hematitic redox fronts and veins surrounding large, semi-tabular clay alteration zones that are cored by probable faults. Horseshoe and Raven differ however from other basement deposits in the region in that they lack spatially associated graphitic gneiss units or carbonaceous fault zones, and consequently the average grade of the deposits is lower than its peers in the Athabasca Basin, but still comparable to average uranium deposit grades worldwide.

Basement-hosted deposits associated with hydrothermal breccias in calcareous gneiss adjacent to northeast-trending faults. The only example of an orebody of this type in the area is the Rabbit Lake deposit, and the largest basement-hosted unconformity deposits in the Alligator River district of northern Australia are closely comparable. The Rabbit Lake deposit occurs perched above the Rabbit Lake Fault at its intersection with the North-South Fault, which is part of the Dragon Lake Tabbernor-type fault system. Mineralization occurs on the margins of a large hydrothermal, chlorite-matrix breccia body that affects dolomitic marble and adjacent lithologies, and that may have formed during dissolution collapse of the carbonate, forming a highly permeable zone. High-grade mineralization is superimposed on the northeastern margins of the breccia and associated silicification/dravitzation along the trace of the North-South Fault.

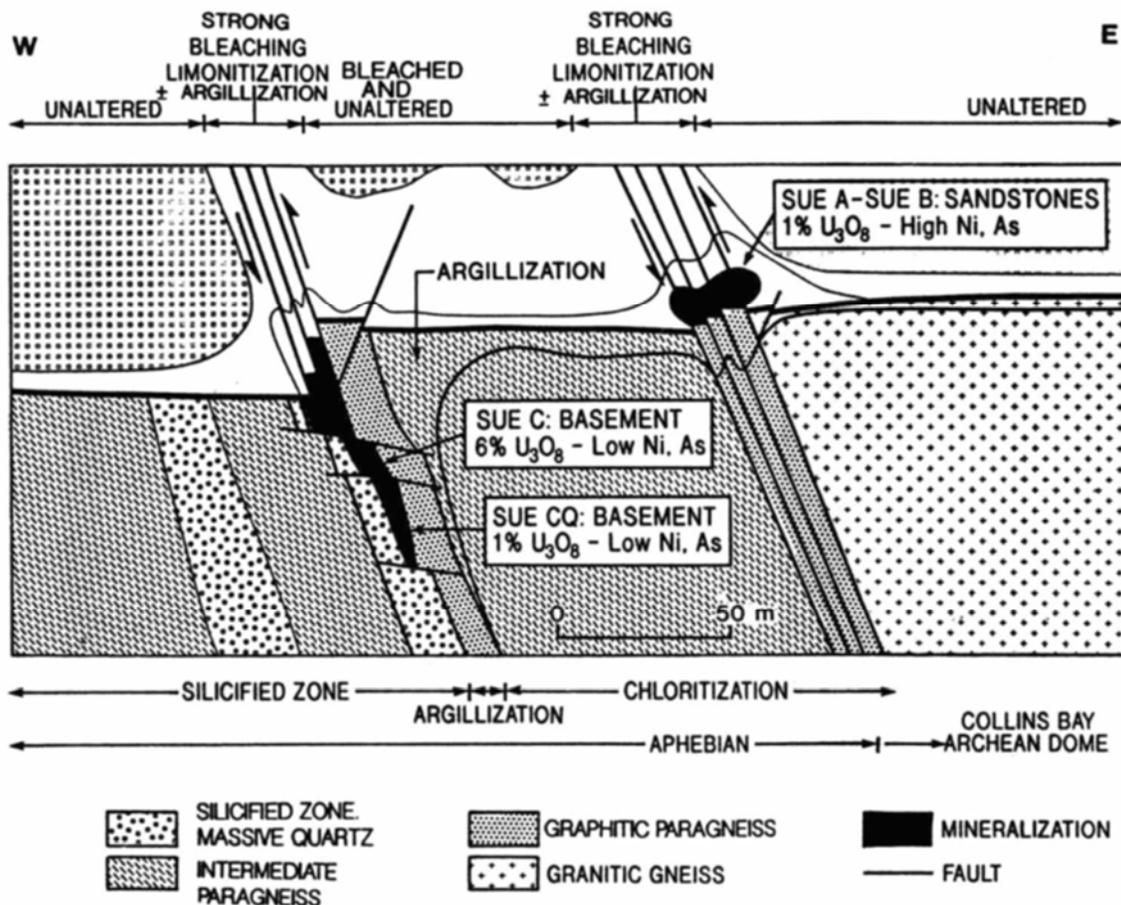


Figure 8-1 Types of Unconformity-Type Uranium Deposits

Schematic cross section through the Sue zones, McClean Lake property showing two different styles of uranium mineralization. View is to the north, from Baudemont et al., (1993). The diagram illustrates the spatial association of basement (B-type) and unconformity (A-type) mineralization on parallel mineralized trends, and the distribution of associated argillic alteration. Mineralization is developed in graphitic gneiss units that contain concordant faults.

8.1.3 Athabasca Uranium Deposit Distribution

Uranium deposits in the district frequently occur in deposit clusters that comprise one or more deposit types. For example, four major uranium deposits, the Collins Bay zones and the Eagle Point mine, occur along a 5.5 km strike length of the Collins Bay Fault system on the Rabbit Lake property. Other deposit clusters include the Sue, McClean Lake, and Dawn Lake deposits where deposits occur in at least two parallel trends, along which deposits may be strung out along parallel faulted graphite-bearing or calc-silicate units and spaced 100-700 m apart. The position of mineralization may also vary systematically with respect to the Athabasca unconformity across deposit groups in these areas, varying progressively from deposits developed at, or perched above the Athabasca unconformity, to deposits developed in basement rocks 10-200 m, or more below the unconformity that may occur along strike from the unconformity hosted mineralization (e.g. Sue C and Sue A/B; Eagle Point and the Collins Bay zones), accompanied by the disappearance of

Ni-As-Co minerals in the basement-hosted mineralized zones. The spatial coincidence of unconformity and basement-hosted deposits emphasizes the importance of testing both the unconformity and basement rocks where mineralization has only been historically discovered at the unconformity.

8.1.4 Alteration and Structural Controls

Deposits of all the styles described above are associated with, and generally enveloped by, intense zones of argillic alteration that are composed predominantly of illite, chlorite and kaolinite. The influence of alteration extends over a far greater area than the dimensions of the deposits themselves, and consequently the tracking of alteration distribution, mineral zonation and associated lithogeochemical changes is an important tool in vectoring exploration (Sopuck et al., 1983). In the Athabasca sandstone, alteration plumes may extend hundreds of meters above the unconformity-hosted uranium deposits, while in basement rocks alteration is generally more restricted to the vicinity of associated faults. Mineralization frequently occurs at redox fronts marked by zones of hematization, and a change from sulphide to oxide accessory mineral assemblages.

Two main end-members of unconformity-related deposits are both structurally controlled. These two endmembers depend on the location of oxidized basinal fluids and reduced basement fluids mixing (Jefferson et al., 2007; Figure 8-2):

- (i) Polymetallic, Egress style mineralization: Typically hosted by sandstone, in which fluid mixing has occurred at or above the unconformity. Often this style of mineralization is coincident with mineralization that is perched above the unconformity along steeply dipping faults, which can display a paleotopographic ridge of basement rock. Egress style mineralization is often polymetallic, and the uranium is associated with several accessory elements that include Ni, Co, Cu, Mo, Zn, Pb, and As.
- (ii) Monometallic, Ingress style mineralization: Typically, basement hosted (but can be seen within sandstone), in which fluid mixing occurred below the unconformity. This type of mineralization is often controlled by reverse faulting. Monometallic mineralization is defined by nearly exclusive uranium precipitation.

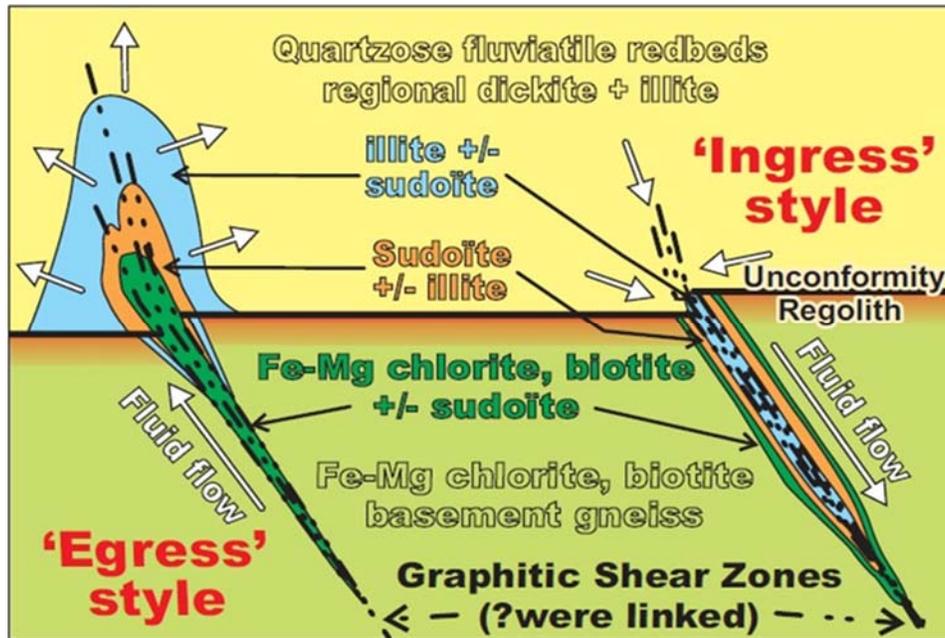


Figure 8-2 Unconformity Related Deposit Models, Jefferson et al., 2007

The alteration styles typically found as haloes around ore bodies can display different characteristics depending on sandstone or basement hosted mineralization. In sandstone, alteration is dominated by silicification (precipitation of drusy quartz), argillization (illitization and chloritization), hematization, abundant desilicification and intense fractured zones. In the basement, hydrothermal alteration can include strong hematization, limonitization, chloritization, illitization, and dravite which can obscure the textures and mineralogy of the protolith.

Uranium deposits in the area are generally associated with east and northeast trending, southerly dipping fault zones that are localized within, or cross graphitic gneiss and carbonate/calc-silicate units. Mineralization occurs in areas of enhanced structural permeability and/or low stress (dilatancy) along faults including fault junctions (e.g. Rabbit Lake), beneath brecciated sandstone under overthrust wedges (e.g. Collins Bay zones; McArthur River), at bends and en-echelon steps in the faults (e.g. B-zone), and at dilational jogs (e.g. Eagle Point). These structural sites are in turn influenced at a broader scale by the occurrence of pre-Athabasca bends and lobes in the granitic domes and their mantling gneiss units, and folds within the metamorphic sequence, both of which have controlled the distribution, continuity, and morphology of the faults. Mineralization is generally structurally late in the faulting history, and while basement-hosted mineralization is frequently localized along or adjacent to faults, both mineralization and its associated alteration may overprint fault rocks. The common position of deposits in fault zones and the morphology and orientation of vein systems suggest that mineralization occurred late during a period of north-west south-east shortening and fault activity in the region. The occurrence of the Rabbit Lake deposit at the intersection of a northerly trending Dragon Lake Tabbernor-type fault with the northeast trending Rabbit Lake Fault, and the development of clay-hematite alteration with local anomalous radioactivity along the Tabbernor faults in the local region, suggest that these faults may have also been active during the formation of deposits and contributed to fluid flow and localization of uranium deposits in the district.

9 EXPLORATION

A comprehensive summary of uranium exploration activity at the Horseshoe-Raven Property is detailed in the following published technical reports:

- Rhys, D. A., Horn, L., Baldwin, D., and Eriks, S. 2008. Technical Report on the Geology of, and Drilling Results from, the Horseshoe and Raven Uranium Deposits, Hidden Bay Property, Northern Saskatchewan.
- Palmer, K., and Fielder, B., 2009. Technical Report on the Hidden Bay Property, Saskatchewan, Canada, Including Updated Mineral Resource Estimates for Horseshoe and Raven Deposits. Report by Golder Associates Ltd to UEX Corporation.

9.1 *Historical Exploration (1960's – 2002)*

Historical exploration activity at Horseshoe–Raven as part of the Hidden Bay Property was focused on uranium mineralization after the discovery of uranium at Rabbit Lake in 1968. The Horseshoe and Raven Deposits were first drill defined between 1972 thru 1978 by diamond drilling. A total of 212 diamond drill boreholes (53,329 metres) were completed during this period for the estimation of a pre-NI 43-101 historical resource. Due to early nature of uranium exploration technology at the time the Gulf drilling data was not used in the Horseshoe and Raven Deposit Mineral Estimates, which are reported in Palmer (2008) and Palmer and Fielder (2009a, 2009b). Post 1978 exploration continued on the Hidden Bay Property though no additional work was done on the deposits themselves. From 1998 to 2002 no exploration was completed on the project.

9.2 *2002 – 2005 Exploration*

Exploration between 2002 and 2005 was completed by Cameco for UEX under the exploration management service agreement investigated various targets on the Hidden Bay property, with some activity focused on the Horseshoe – Raven area. This activity utilized a combination of airborne and ground electromagnetic, magnetic, radiometric, resistivity, and gravity geophysical methods in more grassroots areas of Hidden Bay to identify drill targets, or direct follow-up drilling in areas where previous drilling had intersected alteration or mineralization.

A widely spaced ground EM (Moving Loop) survey was conducted across the Horseshoe and Raven area in February – March 2002 by Quantec Geoscience Inc. of Porcupine, Ontario (Goldak and Powell, 2003). Like the RESOLVE survey, this identified EM targets in the local area mainly associated with graphitic gneiss to the south and west outside of the immediate area of the deposits. One hole was drilled at Raven in 2002 to test whether the folded graphitic gneiss unit was present below the Raven Deposit where it might act as a reductant to focusing mineralization along the steeply dipping clay alteration zone (Lemaitre and Herman, 2003). Graphitic gneiss was not intersected and may lie below the depths tested.

VTEM airborne electromagnetic surveys which were conducted between 2004 and 2006 over most of the property area by Geotech Ltd. of Aurora, Ontario (Irvine, 2004;

Cristall, 2005; Witherly, 2007; Cameron and Eriks, 2008b), and which cover the Horseshoe and Raven areas.

A RESOLVE airborne electromagnetic and magnetic survey was conducted over selected parts of the property by Fugro Airborne Surveys Corporation of Mississauga, Ontario, including Horseshoe-Raven and West Bear, during 2005 (Cameron and Eriks, 2008a). This outlined the distribution of folded graphitic gneiss, which occurs to the southwest of the Raven Deposit, and which could focus faulting that may control uranium mineralization.

Drilling was conducted at Horseshoe – Raven in 2004 and 2005 to test target areas beyond the local area of the Horseshoe and Raven. Subsequently UEX initiated a re-evaluation of the Horseshoe and Raven deposits due to rising uranium prices and drill tested mineralization in selected areas of both deposits to test the continuity of mineralization between the widely spaced historical holes drilled by Gulf Minerals Canada Limited.

Ground geochemical (soil) surveys, using conventional and partial extraction (MMI) techniques, reconnaissance surveys which were conducted to the south of the Horseshoe and Raven (Kos, 2004).

9.3 2006 – 2008 Exploration

A detailed direct current resistivity (induced polarization) survey was carried out over the Horseshoe and Raven Deposits as well as the surrounding area by Peter E. Walcott and Associates Limited between October and December 2006 (Walcott, A., and Walcott, P., 2008). The survey was conducted along sixteen lines at an azimuth of 160° spaced at 200 metres over and extending beyond areas of known uranium mineralization at Horseshoe and Raven. Measurements of apparent resistivity were made along these lines using the pole-dipole technique employing a 100-metre dipole and taking one half to one tenth separation readings at half spacing intervals.

Airborne radiometric and magnetic surveys were conducted in June 2008 by Geo Data Solutions Inc. of Laval, Quebec, which cover much of the Hidden Bay property. More detailed, northwest trending and 50 metres spaced flight lines were conducted over the Horseshoe and Raven Deposit areas to aid in the identification of magnetic and radiometric patterns that could reflect both near-surface projection of mineralization and/or prospective faults potentially hosting mineralization.

The success of the 2005 drilling led to subsequent drilling programs between 2006 and 2009 in which 376 diamond drill holes totalling 119,400 m were drilled at Horseshoe and 243 drill holes totalling 65,600 m were drilled at Raven. These programs established continuity of mineralization and expanded the deposit footprint into areas that historically had not been drilled.

9.4 2008 – Present

No additional exploration methods were applied to the property post 2008. Multiple drill campaigns were completed beyond 2008 that are more extensively discussed below in Section 10.

10 DRILLING

A comprehensive summary of uranium exploration drilling at the Horseshoe-Raven Property is detailed in the following published technical reports:

- Rhys, D. A., Horn, L., Baldwin, D., and Eriks, S. 2008. Technical Report on the Geology of, and Drilling Results from, the Horseshoe and Raven Uranium Deposits, Hidden Bay Property, Northern Saskatchewan.
- Palmer, K., and Fielder, B., 2009. Technical Report on the Hidden Bay Property, Saskatchewan, Canada, Including Updated Mineral Resource Estimates for Horseshoe and Raven Deposits. Report by Golder Associates Ltd to UEX Corporation.
- Doerksen, G., Melis, L., Liskowich, M., Murphy, B., Palmer, K., and Pilotto, D., 2011. Preliminary Assessment Technical Report on the Horseshoe and Raven Deposits, Hidden Bay Project Saskatchewan, Canada. Report by SRK Consulting (Canada) Inc. to UEX Corporation.

In the first quarter of 2017 the Horseshoe-Raven Property was separated out from the Hidden Bay property into a single claim.

Drilling on the Horseshoe-Raven Property dates to the 1970's and was undertaken in a number of campaigns until mid 2009 (Figure 10-1). All the historical drill holes targeted uranium mineralization and prospects. Between 1973 and 2009, a total of 951 diamond drilling boreholes (263,388 m) and 160 reverse circulation boreholes (2,118 m) were drilled through the Horseshoe-Raven Property by, Gulf, Eldorado, Cameco, and UEX, summarized in Table 10-1. From mid 2009 to 2012, UEX drilled 105 diamond drillholes for 28,315 metres.

Exploration/resource drilling completed at the Horseshoe and Raven Deposits post 2009 will be expanded upon below along with comments where necessary about the historical procedures that were followed on the project at that time.

A review of the procedures, described below, by Golder (Palmer and Fielder, 2009) with respect to the core sizes, procedures for logging and recording of core recoveries are considered standard industry practices and provide an acceptable basis for the geological and geotechnical interpretation of the deposits leading to the estimation of mineral resources and economic evaluation of the deposits. In the opinion of the Qualified Persons there is no reason to believe that the listed procedures were not followed. The Qualified Persons interviewed one of the geotechnicians that worked on the Horseshoe-Raven Project during this period to gain and understanding of the processes and procedures followed by the UEX field team during these programs, which corresponded to the procedures and descriptions outlined below. The Qualified Persons believe that the historical data is accurate for the purposes of this report.

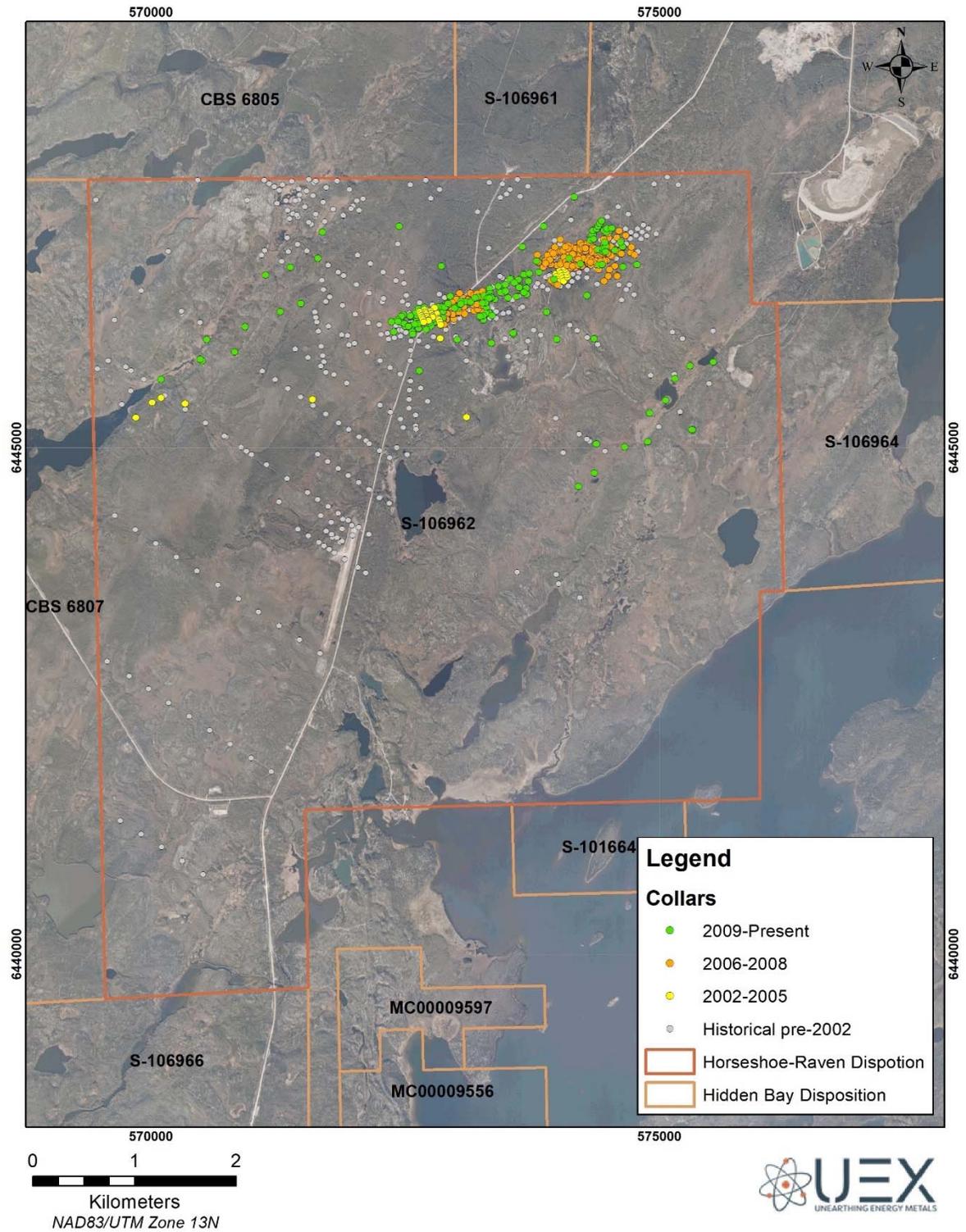


Figure 10-1: Horseshoe and Raven Drillhole Collars

Table 10-1: Summary of Drilling on the Horseshoe-Raven Property

Year	Total	Type			Total	Meters*			Company
		DDH	RC	Sonic		DDH	RC	Sonic	
1972	15	15			2,701	2,701			Gulf
1973	26	26			6,593	6,593			Gulf
1974	141	141			32,331	32,331			Gulf
1975	84	84			21,763	21,763			Gulf
1976	156	32	124		9,402	7,861	1,541		Gulf
1977	11	11			2,159	2,159			Gulf
1978	39	3	36		1,233	655	578		Gulf
1984	1	1			82	82			Eldorado
1985	7	7			542	542			Eldorado
2002	3	3			1,350	1,350			Cameco**
2003	1	1			314	314			Cameco**
2004	4	4			648	648			Cameco**
2005	44	44			12,811	12,811			UEX
2006	27	27			8,617	8,617			UEX
2007	210	210			67,777	67,777			UEX
2008	232	232			63,261	63,261			UEX
2009	110	110			33,923	33,923			UEX
2009***	19	19			5,406	5,406			UEX
2011	76	76			20,011	20,011			UEX
2012	10	10			2,898	2,898			UEX
Total	1,216	1,056	160		293,821	291,702	2,119		

* Rounded to the nearest metre

** Cameco Operated on behalf of UEX

***After cut-off for July 2009 Resource report

10.1 Historical Drilling (1972 – Mid-2009)

10.1.1 Historical Drilling by Gulf in the Horseshoe and Raven Area

After initial discovery of the Raven Deposit, Gulf drilled a total of 53,329 m in 212 diamond drill holes over the Horseshoe and Raven Deposits between 1972 and 1978 (note Table 10-1 tabulates totals for the whole property not just the deposit). These holes form the basis for the estimation of the non-compliant NI 43-101 historical resources. Drill hole spacing of the Gulf holes is variable across the deposits, but generally varies from 30 m to 90 m and averages approximately 60 m in areas of mineralization. Historical collar locations of the Gulf drill holes are presented in Figure 10-1. The Gulf drilling data was not used in the historical Horseshoe Mineral Resource and Raven Mineral Resource estimates by Palmer (2008), Palmer and Fielder (2009), or in this report.

Given the historically but noncompliant NI 43-101 resource Eldorado, Cameco, and mainly UEX drilled a total of 639 boreholes for a total of 189,325 metres through and

around the Horseshoe and Raven deposits. Some of these holes included regional tests to assess for other pods of mineralization given their favourable geology, structure, and geophysical signature. As of April 2009, these drill holes comprise the basis for the database for the 2009 Palmer and Fielder Horseshoe and Raven Mineral Resource estimates.

10.2 Historical Drilling (Mid-2009 – 2012)

During the summer of 2009 after the updated mineral resource estimate was published, 19 drillholes totalling 5,406 m were completed to test targets peripheral to the Horseshoe and Raven deposits for possible extension of mineralization and to assess nearby geophysical and geological targets (Table 10-2). Winter drilling in 2011 consisted of 13 drillholes for 3,553.6 m to test for additional uranium targets adjacent to the known Horseshoe and Raven deposits. Drilling in the summer of 2011 consisted of mainly definition and step-out drilling in the Raven deposit and several infill drillholes at the Horseshoe Deposit for a total of 16,457 m in 63 drillholes. Drilling in the winter of 2012 (Figure 10-2) targeted a regional conductor package south of the deposits with 10 holes for 2,898 metres.

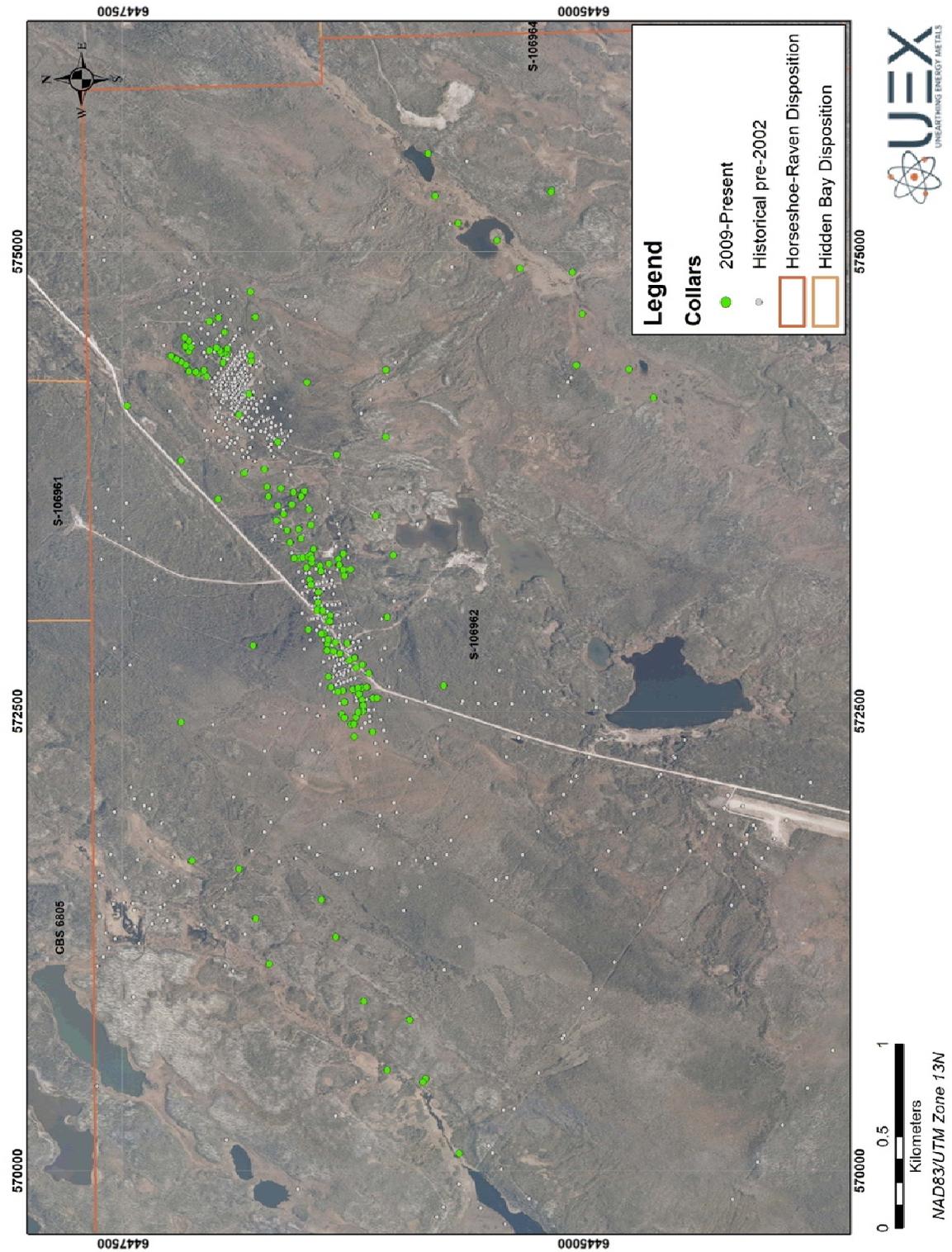


Figure 10-2: Recent Historical Drilling on the Horseshoe-Raven Property

Table 10-2: Summary of Drilling by UEX on the Horseshoe-Raven Project

Borehole ID	Azimuth	Dip	Length (metre)	Easting* (metre)	Northing* (metre)	Elevation (metre)	Year
HU-359	305	-45	300.0	573861.0	6447179.0	439.0	2009
HU-360	305	-45	300.0	574161.0	6447471.0	440.0	2009
HU-361	305	-77	270.0	574532.2	6447161.5	438.0	2009
HU-362	90	-45	291.0	574642.0	6446778.0	429.0	2009
HU-363	305	-63	639.0	574779.8	6446803.8	426.0	2009
HU-364	309	-46	537.0	574288.3	6446496.3	425.0	2009
HU-365	305	-45	399.0	573992.0	6446067.5	422.0	2009
HU-366	125	-45	324.0	574355.7	6446069.1	422.0	2009
HU-367	305	-65	489.5	574355.7	6446069.1	422.0	2009
RU-217	350	-65	81.0	573326.0	6446327.0	428.0	2009
RU-218	350	-90	72.0	573326.2	6446326.8	428.0	2009
RU-219	350	-65	81.0	573295.7	6446321.4	430.0	2009
RU-220	195	-90	72.0	573295.7	6446321.0	430.0	2009
RU-221	350	-65	81.0	573355.8	6446300.0	426.0	2009
RU-222	350	-90	72.0	573268.0	6446300.0	430.0	2009
RU-223	350	-72	411.0	573235.2	6446293.0	431.0	2009
RU-224	350	-58	549.0	573012.0	6446063.0	431.0	2009
RU-225	350	-51	222.0	572386.0	6446140.0	464.0	2009
RU-226	350	-74	219.0	572429.0	6446241.0	465.0	2009
VU-001	305	-52	400.0	571641.0	6446864.0	436.0	2009
VU-002	305	-45	366.0	571687.0	6447121.0	436.0	2009
VU-003	305	-60	549.0	571370.0	6446775.0	436.0	2009
VU-004	305	-61	391.0	571125.0	6446701.0	436.0	2009
HR-001	305	-48	299.0	573651.5	6446977.7	438.0	2011
HR-002	305	-47	300.0	572439.5	6447179.8	475.0	2011
HR-003	305	-47	299.0	571473.5	6446417.0	458.0	2011
HR-004	125	-45	388.0	571270.7	6446339.0	452.0	2011
HR-005	305	-49	90.6	575330.4	6445170.0	409.0	2011
HR-006	305	-45	309.0	575322.6	6445174.0	408.0	2011
HR-007	125	-45	313.0	570921.6	6446188.8	447.0	2011
HR-008	125	-50	67.0	570820.0	6445940.0	452.0	2011
HR-009	125	-60	69.0	570820.0	6445940.0	452.0	2011
HR-010	305	-60	122.0	570500.6	6445852.7	439.0	2011
HR-011	305	-75	464.0	570482.4	6445867.9	438.0	2011
HR-012	305	-70	411.0	570095.2	6445671.0	437.0	2011
HR-013	305	-70	422.0	570547.0	6446061.8	437.0	2011
HU-368	0	-60	270.0	573963.6	6446655.8	428.0	2011
HU-369	300	-60	231.0	574223.9	6446811.8	432.0	2011
HU-370	42	-61	381.0	574111.5	6446864.5	431.0	2011
HU-371	330	-80	393.0	574435.7	6446801.3	427.0	2011
HU-372	90	-57	402.0	574472.0	6446928.4	431.0	2011
HU-373	305	-90	30.0	573893.7	6446334.3	427.0	2011
RU-227	353	-90	321.0	573381.4	6446459.8	431.0	2011
RU-228	353	-60	291.0	573333.8	6446538.0	432.0	2011
RU-229	353	-60	270.0	573482.9	6446604.1	433.0	2011
RU-230	353	-60	222.0	573417.3	6446588.5	436.0	2011
RU-231	313	-60	219.0	573535.2	6446660.2	439.0	2011
RU-232	317	-60	291.0	573615.7	6446654.1	428.0	2011
RU-233	353	-50	291.0	573331.5	6446565.2	434.0	2011
RU-234	353	-60	291.0	573335.7	6446516.6	432.0	2011
RU-235	313	-60	282.0	573572.3	6446622.4	431.0	2011

Borehole ID	Azimuth	Dip	Length (metre)	Easting* (metre)	Northing* (metre)	Elevation (metre)	Year
RU-236	353	-60	294.0	573338.2	6446490.4	431.0	2011
RU-237	313	-60	336.0	573622.5	6446578.6	427.0	2011
RU-238	353	-60	282.0	573437.9	6446528.9	432.0	2011
RU-239	0	-60	270.0	573489.0	6446540.4	432.0	2011
RU-240	313	-60	328.0	573666.6	6446527.8	426.0	2011
RU-241	353	-60	330.0	573512.8	6446473.8	428.0	2011
RU-242	316	-70	317.0	573711.3	6446638.4	427.0	2011
RU-243	351	-73	270.0	573307.8	6446470.4	430.0	2011
RU-244	352	-65	249.0	573307.8	6446470.4	430.0	2011
RU-245	313	-60	252.0	573720.8	6446715.0	428.0	2011
RU-246	353	-60	252.0	573260.4	6446420.8	432.0	2011
RU-247	2	-56	162.0	573047.8	6446441.2	448.0	2011
RU-248	0	-54	261.0	573290.0	6446426.5	433.0	2011
RU-249	340	-61	150.0	572686.6	6446378.8	460.0	2011
RU-250	353	-64	222.0	573214.9	6446480.7	434.0	2011
RU-251	338	-73	339.0	572776.3	6446267.0	451.0	2011
RU-252	348	-68	222.0	673186.7	6446475.1	436.0	2011
RU-253	340	-62	339.0	572736.3	6446230.9	450.0	2011
RU-254	359	-86	300.0	573018.8	6446371.9	444.0	2011
RU-255	352	-59	351.0	572626.0	6446218.2	457.0	2011
RU-256	353	-84	300.0	572988.9	6446383.5	447.0	2011
RU-257	354	-67	180.0	572829.7	6446387.8	455.0	2011
RU-258	351	-73	297.0	573347.7	6446476.5	431.0	2011
RU-259	351	-60	282.0	573347.7	6446477.1	431.0	2011
RU-260	351	-56	321.0	572591.9	6446213.8	459.0	2011
RU-261	285	-50	306.0	572825.3	6446351.7	450.0	2011
RU-262	56	-57	351.0	572942.3	6446490.0	456.0	2011
RU-263	172	-58	201.0	572986.9	6446373.6	446.0	2011
RU-264	350	-70	150.0	573041.6	6446411.0	447.0	2011
RU-265	0	-74	159.0	573328.0	6446471.4	430.0	2011
RU-266	351	-90	54.0	572856.3	6446788.7	473.0	2011
RU-267	351	-90	45.0	572637.5	6445755.9	453.0	2011
RU-268	355	-59	347.0	572530.1	6446191.6	460.0	2011
RU-269	351	-90	201.0	573565.5	6446118.1	422.0	2011
RU-270	351	-90	30.0	573562.4	6446126.4	423.0	2011
RU-271	351	-90	201.0	573348.0	6446027.9	420.0	2011
RU-272	360	-64	342.0	572870.3	6446277.3	444.0	2011
RU-273	353	-85	282.0	573260.4	6446420.8	432.0	2011
RU-274	5	-77	276.0	573046.7	6446412.4	446.0	2011
RU-275	339	-75	309.0	572811.4	6446316.3	449.0	2011
RU-276	336	-83	291.0	572829.7	6446387.8	455.0	2011
RU-277	353	-77	318.0	572874.3	6446342.2	449.0	2011
RU-278	336	-67	216.0	572829.7	6446387.8	455.0	2011
RU-279	354	-67	210.0	572867.5	6446386.9	453.0	2011
RU-280	180	-86	318.0	572921.5	6446404.3	451.0	2011
RU-281	348	-75	237.0	572890.5	6446381.4	450.0	2011
RU-282	350	-72	318.0	572549.6	6446293.9	462.0	2011
RU-283	349	-77	204.0	572919.4	6446418.5	452.0	2011
HR-014	313.1	-72	288.0	574205.7	6444616.0	288.0	2012
HR-015	310.9	-72	288.0	574359.8	6444749.0	288.0	2012
HR-016	315.0	-72	291.0	574907.0	6445340.0	291.0	2012
HR-017	307.4	-72	291.0	575152.3	6445676.0	291.0	2012
HR-018	302.9	-74	291.0	575302.2	6445803.0	291.0	2012

Borehole ID	Azimuth	Dip	Length (metre)	Easting* (metre)	Northing* (metre)	Elevation (metre)	Year
HR-019	302.8	-72	291.0	575532.4	6445841.0	291.0	2012
HR-020	305.7	-72	291.0	575060.4	6445465.0	291.0	2012
HR-021	304.9	-72	286.5	574885.8	6445057.0	286.5	2012
HR-022	295.8	-72	289.4	574659.5	6445005.0	289.4	2012
HR-023	305.0	-70	291.0	574380.6	6445036.0	291.0	2012
Total			30,025**				

* The North American Datum of 1983, zone 13N.

** Rounded up

Representative uranium assay results from the drilling campaigns after the July 2009 Resource report are summarized in Table 10-3. These programs when drilled on the deposit confirmed continuity of mineralization or bounded mineralization down dip. Where mineralization was confirmed, it was determined that it would add incremental pounds to the deposits (Eriks and Hasegawa, 2014). All of the mineralized intercepts for the Horseshoe and Raven deposits are listed in Appendix B.

Table 10-3: Recent Historical Assay Results Mid-2009 to 2012

Borehole ID	From*	To*	Length*	U ₃ O ₈ **	Higher Grade Intervals Within Lower Grades Intersections			
					From	To	Length	U ₃ O ₈ **
HU-361	71.0	72.0	1.0	0.032	-	-	-	-
	120.0	124.0	4.0	0.076	-	-	-	-
	133.0	136.0	3.0	0.107	133.4	135.5	2.1	0.140
	220.5	223.0	2.5	0.034	-	-	-	-
HU-365	271.0	272.0	1.0	0.023	-	-	-	-
HU-368	176.0	188.0	12.0	0.177	184.0	188.0	4.0	0.279
	213.0	227.0	14.0	0.054	-	-	-	-
	232.0	233.0	1.0	0.123	-	-	-	-
	240.0	245.0	5.0	0.182	-	-	-	-
	259.5	263.0	3.5	0.072	-	-	-	-
HU-369	206.5	208.5	2.0	0.352	-	-	-	-
HU-370	318.0	319.0	1.0	0.104	-	-	-	-
	332.0	364.0	32.0	0.098	332.5	340.0	7.5	0.199
HU-371	273.5	285.0	11.5	0.055	-	-	-	-
	299.5	302.0	2.5	0.092	-	-	-	-
	319.0	330.0	11.0	0.495	321.0	325.0	4.0	1.143
					321.5	322.5	1.0	3.295
RU-219	45.0	48.0	3.0	0.035	46.0	47.0	1.0	0.087
RU-225	179.5	180.5	1.0	0.061	-	-	-	-
	183.4	192.6	9.2	0.062	187.2	191.6	4.4	0.107
RU-226	112.0	113.0	1.0	0.040	-	-	-	-
	138.4	143.0	4.6	0.120	-	-	-	-
RU-228	116.5	117.5	1.0	0.119	-	-	-	-
	156.0	158.5	2.5	0.081	-	-	-	-

Borehole ID	Higher Grade Intervals Within Lower Grades Intersections							
	From*	To*	Length*	U ₃ O ₈ **	From	To	Length	U ₃ O ₈ **
RU-234	170.0	171.5	1.5	0.081	-	-	-	-
	209.0	210.0	1.0	0.149	-	-	-	-
RU-237	217.6	218.9	1.3	1.053	-	-	-	-
RU-239	120.0	122.5	2.5	0.081	-	-	-	-
RU-243	108.0	125.5	17.5	0.274	111.0	114.5	3.5	0.631
RU-246					118.5	121.6	3.1	0.761
	117.0	137.5	20.5	0.445	128.0	137.5	9.5	0.666
					131.0	133.1	2.1	1.676
RU-248	127.9	145.5	17.6	0.414	141.5	145.0	3.5	0.937
RU-251	248.5	249.0	0.5	0.282	-	-	-	-
	301.7	303.0	1.3	0.127	-	-	-	-
RU-252	181.0	184.0	3.0	1.492	-	-	-	-
RU-254	96.0	114.5	18.5	0.119	104.3	107.5	3.2	0.579
	132.0	153.0	21.0	0.125	137.0	143.0	6.0	0.196
	209.5	214.0	4.5	0.158	-	-	-	-
	259.4	260.0	0.6	0.182	-	-	-	-
RU-255	293.8	294.5	0.7	0.159	-	-	-	-
RU-256	99.8	105.0	5.2	0.340	99.8	102.0	2.2	0.602
	220.0	231.0	11.0	0.111	-	-	-	-
RU-260	238.0	249.0	11.0	0.230	243.0	249.0	6.0	0.383
RU-261	254.0	257.5	3.5	0.055	-	-	-	-
	264.5	276.0	11.5	0.091	-	-	-	-
	294.5	297.0	2.5	0.128	-	-	-	-
RU-262	114.5	116.5	2.0	0.106	-	-	-	-
	126.5	136.0	9.5	0.050	-	-	-	-
	269.0	284.0	15.0	0.128	282.5	284.0	1.5	0.838
RU-268	150.0	153.0	3.0	0.108	-	-	-	-
	306.5	307.0	0.5	0.245	-	-	-	-
RU-272	188.5	189.0	0.5	0.262	-	-	-	-
	279.0	286.6	7.6	0.125	-	-	-	-
	297.0	301.0	4.0	0.073	-	-	-	-
RU-273	88.5	92.5	4.0	0.063	-	-	-	-
	153.0	155.0	2.0	0.055	-	-	-	-
	169.0	171.0	2.0	0.062	-	-	-	-
RU-274	106.5	115.0	8.5	0.049	-	-	-	-
	202.0	214.0	12.0	0.060	-	-	-	-
RU-275	263.0	276.0	13.0	0.097	-	-	-	-
RU-276					211.5	214.0	2.5	0.552
	211.5	225.0	13.5	0.226	223.0	225.0	2.0	0.812
RU-277	258.0	265.0	7.0	0.117	-	-	-	-

Borehole ID					Higher Grade Intervals Within Lower Grades Intersections			
	From*	To*	Length*	U ₃ O ₈ **	From	To	Length	U ₃ O ₈ **
	283.0	286.5	3.5	0.058	-	-	-	-
RU-279	82.0	106.0	24.0	0.206	-	-	-	-
	86.5	92.5	6.0	0.370	-	-	-	-
	101.0	106.0	5.0	0.345	-	-	-	-
RU-280	135.0	137.0	2.0	0.131	-	-	-	-
RU-281	64.5	66.0	1.5	1.538	65.0	65.5	0.5	3.260
	176.0	178.0	2.0	0.108	-	-	-	-
RU-282	202.0	209.0	7.0	0.070	-	-	-	-

* Metres

** Percentage

10.3 Core Handling, Drill Hole Surveys and Logistical Considerations during the Mid-2009 – 2012 Drilling Programs

The summer 2009 drilling program in the Horseshoe and Raven area were performed by Driftwood Diamond Drilling Ltd. (“Driftwood”) of Smithers, B.C., Canada. The 2011 winter drill program was completed by Lantech Drilling Services Inc. of Dieppe, New Brunswick, while the summer program was completed by Graham Brothers Drilling Ltd, of Fosston, Saskatchewan. Drilling in the winter of 2012 was completed by Graham Brothers Drilling. Drill programs were typically run with two rigs operating on a full-time basis during the summer-fall (June to November) and winter (January to April) seasons.

All of the drilling during these programs has been with NQ size core (48 mm core diameter).

10.3.1 Drill Hole Field Locations and Surveys

After completion of drilling, the drill hole collar locations are marked in the field with 2 metres high wooden pickets, which are visible in all seasons. The pickets are labelled with a permanent aluminum tag with the hole name, dip, azimuth, and depth and clearly flagged with high visibility flagging tape.

Proposed hole collars are located in the field by chaining along grid lines from existing collars or located by a hand-held GPS unit. The proposed and completed collars are surveyed internally by UEX personnel with a hand-held Thales ProMark™3 GPS for preliminary interpretations. Independent checks have been completed on collar locations twice using Tri-City Surveys Ltd. (“Tri-City”), of Kindersley, Saskatchewan. Tri-City used a 5800/Trimble R8 Model 2 hand-held GPS with GNSS. Tri-City also relocated and surveyed the 2005 Cameco drill hole collars. The UEX and Tri-City collar readings are compared and, if any significant differences are noted, the Tri-City reading is re-surveyed; otherwise, it is adopted as the final collar reading.

Horseshoe and Raven were drilled on two separate, local project drilling grids. The Raven grid is rotated approximately 10° clockwise from the UTM WGS 84 (Zone 13) grid north and the Horseshoe grid is rotated approximately 35° anti-clockwise from

the UTM WGS 84 (Zone 13) grid north. Surveying, however, is conducted in UTM grids.

LiDAR (Light Detection and Ranging), an optical remote sensing technology used primarily for typical digital terrain modelling (“DTM”), was flown over the Horseshoe-Raven and West Bear portions of the Hidden Bay property in August 2007, by LiDAR Services International of Calgary, Alberta. The LiDAR survey was performed to accurately determine the surface landforms in the project areas and forms a cross check to the digital elevations of the surveyed drill hole collars. A surface DTM was created from the LiDAR and the collar locations were verified in Datamine. Drill hole collars with greater than 1 metres elevation difference were reviewed.

10.3.2 Downhole Surveys

Downhole surveys were routinely collected on all holes using the Reflex EZ-Shot® tool at approximately every 25 metres to 50 metres downhole spacing in the 2006-2009 drilling at Horseshoe and Raven and were also collected during the 2005 drilling program which was managed by Cameco (Lemaitre and Herman, 2006). Reflex EZ-Shot® is an electronic single shot instrument that measures six parameters in one single shot reading azimuth, inclination, magnetic tool face angle, gravity roll angle, magnetic field strength and temperature. These readings are transcribed onto a paper ticket book. Azimuth was recorded in magnetic north and then adjusted to true north with a correction factor of 10.2° of current magnetic declination added to the measured azimuth. This data was then entered in the drill logging database, with corrections if required. On some occasions, the magnetic field was outside of tolerance, and in this case, the measurement was ignored. The error rate where the azimuth had to be removed was 0.57% of all surveys and 0.3% of surveys had transcription errors which were resolved by UEX. Data is exported from the drill logging database and then imported into Datamine, where the drill holes are viewed in plan and section for accuracy.

10.3.3 Drill Core Handling Procedures

At the drill rig, core is removed from the core barrel by the drillers and placed directly in wooden core boxes that are a standard 1.5 metres long and a nominal 4.5 metres capacity. Individual drill runs are identified with small wooden blocks, where the depth (metres) is recorded. Diamond drill core is transported at the end of each drill shift to an enclosed core-handling facility at the Raven camp on the property. In general, the core handling procedures at the drill site are carried out to industry standard.

10.3.4 Core Recovery

Every hole is measured from the start of the hole to the bottom to determine core recovery or block marking errors and for reference metre marks. Core recovery is determined by measuring the recovered core length and dividing this by the downhole drilled interval. Core loss is recorded routinely both on the core boxes and during core logging.

UEX has conducted a core loss study over all mineralized domains. Core recoveries through the mineralized subzones in the Horseshoe and Raven Deposits are generally very high, with 100% recovery common, even in mineralized intervals. Significant core loss has occurred mainly in the proximal non-mineralized clay alteration haloes to the deposit and in the oxidized zone below the overburden. Up to

March 31, 2008, a total of 56.9 metres was logged with 0% core recovery, while 4191.95 metres were logged with core recoveries from 4% to 99% with the average loss recorded being 30% of the interval drilled. This equates to 1,248.7 metres of core loss over these partial intervals. Adding these figures, the cumulative total core loss was 1305.6 metres for the entire UEX drilled RU and HU holes totalling 114,392 metres drilled on Horseshoe-Raven up to March 2008, which accounts for 98.9% core recovery. Similarly high levels of core recovery are characteristic of the 2005 and 2009 drill holes. Golder has reviewed the core recoveries provided by UEX and has verified these results.

Core recovery for the July 2009 drilling and 2011 programs was 97.7%.

10.3.5 Drill Core Logging

All of the mid-2009 to 2012 surface holes were geologically logged and sampled by UEX field personnel. All holes were logged in accordance with the UEX legend (Table 10-4) and geological logging procedure. Geological logging includes the detailed recording of lithology, alteration, mineralization, structure, veining and core recovery. Upon completion of logging a hole, the data is reviewed on a set of working cross-sections for dynamic interpretation of the geology and mineralization. The logging was completed under the guidance of the site senior geologist at the time. Logging data was entered in digitally in to Lager 3D Exploration (“Lagger”) developed by North Face Software on lap top computers. Lagger can enter and edit drill hole and sample data and has a custom library of UEX geological codes to standardize the logging legend (Table10-4).

Principal lithologic units in the Horseshoe and Raven area, QZIT, CARK, ARKQ, SPLO, AMPH and CALC are described in Section 7. Many other units listed below are present on the Hidden Bay property, but not in the vicinity of the deposits.

Table 10-4: UEX Lithology Legend

Codes	UEX name	Description
OB	Overburden	Overburden
CONG	Conglomerate	Conglomerate: maximum grain size >4mm
MDST	Mudstone	Mudstone
SDST	Sandstone	Sandstone: grain size 0.065-4 mm
SLST	Siltstone	Siltstone
UX	Uranium mineralization	Uranium mineralization
CLAY	Clay	Clay alteration: hydrothermal or paleoweathering, protolith uncertain
GOUG	Fault gouge	Fault gouge: unconsolidated cataclasite, clay matrix breccia, precursor lithology is unclear
LOST	Lost core	Lost core
AMPH	Amphibolite	>80% dark green to black amphibole; often massive to crudely banded.
ARKS	Meta-arkose	Massive to weakly foliated or weakly gneissic feldspar > quartz-rich meta-sandstone, with weak to undeveloped gneissic compositional layering. Generally lower biotite content than semipelites
ARKQ	Arkosic Quartzite	Arkosic Quartzite: >30% feldspar, finer grained, more easily altered than the QZIT, specific to Raven Horseshoe area
CALC	Calc-silicate gneiss	Compositionally layered) with amphibole-pyroxene +/- garnet and psammitic (meta-arkosic) layers; may contain dolomite
CARK	Calc-arkose	Arkosic rock with calc-silicate bands (where ARKS>CALC)
DIAB	Diabase	Fine grained mafic dykes with sharp contacts, equigranular, post-metamorphic
DIOR	Diorite	Mafic equigranular, usually medium-grained feldspar with biotite or amphibole-bearing intrusion; usually foliated
DOLO	Dolomite	Grey to cream or pink, usually banded to laminated dolomite-rich unit often with calc-silicate, graphite, or arkosic lamina
GABR	Gabbro	Mafic equigranular, usually medium-grained feldspar + pyroxene +/- amphibole-bearing intrusion; usually foliated
GRAN	Granite	K-feldspar-quartz-biotite granite, massive to foliated; usually medium grained, non-porphyritic; pink to grey
GRGN	Granitic gneiss	Impure granitic gneiss with foliated granitic and other compositional bands
PEGM	Pegmatite	Coarse-grained K-feldspar-quartz-biotite pegmatite; also includes quartz-dominant pegmatites
PLAG	Plagioclase	Albite-pyroxene +/- amphibole metasomatic unit after meta-arkose; may contain coarse pyroxene and resemble an intrusion; gradational contacts
PEL0	Pelitic gneiss or schist	Biotite quartz feldspar +/- garnet +/- sillimanite gneiss or schist (>50% biotite for schist) with >25% combined biotite, garnet, and/or sillimanite
PEL1	"	As above, 1-5% graphite
PEL2	"	As above, 5-20% graphite
PEL3	"	As above, >20% graphite
SPL0	Semi-pelitic gneiss	Biotite quartz feldspar gneiss with <25% combined biotite, garnet, sillimanite, often with abundant pegmatitic segregations
SPL1	"	As above, 1-5% graphite
SPL2	"	As above, 5-20% graphite
SPL3	"	As above, >20% graphite
PYRX	Pyroxenite	>80% pyroxene, up to 20% amphibole; often massive to crudely banded. Grains up to 1.5 cm in diameter.
QZIT	Quartzite	Pale grey to white, massive quartz rich meta-sandstone with >80% quartz, and subsidiary feldspar +/- biotite
QZPL	Quartz-rich pelite	Quartz-rich pelite
QV	Quartz Vein	Quartz vein >20cm (+ or - carbonate) NB: Clearly not pegmatoid related

The primary purpose of a logging system is to provide a standard process for the geological logging procedures on the Hidden Bay exploration project.

The legend was developed to increase the amount and quality of geological data being collected and allow flexibility with data collection, so geologists can record all the information required without having to record one type of data at the expense of other data. The legend aims to simplify the interpretation of drill hole data and reduce the number of rock codes in the database to a manageable level.

The logging system is broken down into a series of tablets that are used to record the various forms of data required. These tablets include Lithology, Alteration / Paleoweathering, Veining/Structure and Veining/Structure Orientation Data. Each of the individual tablets is treated in isolation such that geologists can refine the data being recorded depending on the types of geological data required for the specific task, e.g. resource definition, grade control, regional exploration.

A core reference library has been established on site and good communication between geologists allow for a consistent approach to geological logging. All core is routinely wet down and digitally photographed as a permanent record of the lithological history, in addition to the geological log, with a Canon Powershot A610 digital camera.

A review by UEX of the historical Cameco logs and scissor holes of the 2005 Cameco drilling indicates that the geological information is complete and of good quality. The Cameco drill holes were logged using a similar legend under the guidance of Roger Lemaitre, P.Geo., from Cameco. Drill holes completed under the direction of Cameco in 2005 were also re-logged by UEX personnel in summer 2008 to standardize coding and logging data, to perform a second check on sampling intervals and to conduct infill sampling, where necessary.

10.3.6 Geotechnical Logging

All geotechnical logging was completed by, or under the supervision and advice from Golder personnel with the Saskatoon, Saskatchewan and Mississauga, Ontario offices. All selected holes were logged geotechnically in accordance with the UEX Geotechnical Protocol developed by Golder. A selection of holes were logged with RQD, which is the percent of total core length recovered in solid pieces greater than 10 cm in length that correlates with fracture density. Numerous holes were tested for intact rock strength using a rating system based on hammer blows, fracture count per run and detailed total core recovery.

During 2007 and 2008, Golder personnel came to the site and conducted intact rock strength measurements on HQ core using a point load testing machine. Throughout the drill seasons, Golder has also conducted detailed geotechnical assessments of drill core. Logging was completed using the Q rock mass rating system.

In winter 2007/2008, Golder surveyed a series of holes in the Horseshoe area using a downhole televiewer. The aim of this was to determine geotechnical properties directly above the mineralized zones and around the peripheries of the deposit

10.3.7 Radiometric Probing of Drill Holes

Downhole radiometric probing (gamma logging) with in-hole probing instruments is a routine task undertaken on all holes drilled at the Horseshoe, Raven and West Bear projects. In uranium exploration, probing is integral in accurately detecting gamma radiation downhole which directly correlates to mineralized zones, since these probes can quantitatively measure radioactivity caused by the atomic decay of uranium. Using in-house correlation formulas determined from comparing geochemical sampling with probe data, the concentration of uranium in situ can be determined. The probe data is used to determine a uranium equivalent intersection which is used for planning of follow-up drill holes and to correlate intervals in the core boxes to guide geochemical sampling. A detailed radiation measurement is taken every 10 cm downhole and 10 cm up hole by passing a probe continuously down the drill hole immediately after its completion and measuring in situ radioactivity.

The probes are calibrated before each drill program at the Saskatchewan Research Council's test pit facility in Saskatoon, Saskatchewan. 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. The radiometric logging was performed using a Mount Sopris Model 4MXA/1000 500 metres winch, or Model 4MXC/1000 1000 metres winch and MGX II Model 5MCA/PMA digital encoder. A Mount Sopris Modified Triple Gamma Probe consisting of a 2SMA-1000 Sonic Modem section (#3460 or #3461) and 2GHF-1000 Triple Gamma Probe section (#3431 or #3458) was used to probe all holes. Data was acquired using MSLog Version 7.43, a Mount

Sopris computer recovery program. Data from the probe is then used to correlate mineralized zones with the drill core and identify zones for sampling and geochemical assay. A second check is to scan the drill core with a hand-held SPP2 scintillometer or a RS-120/125 super scintillometer. Detailed radiometric measurements are taken every 10 cm on the core in mineralized zones and recorded on the core and in accordance with standard procedure. At times, there are some discrepancies with the downhole probe interval and the core due to stretch in the winch cable, the counter wheel icing up or a differing zero depth between the core and the probe data.

The detailed radiometric readings from the hand-held scintillometer on the drill core are used as a guide by the geologist for geochemical sampling. The geologist marks the intervals on the individual sample and the sample numbers and location are recorded in drill logs.

10.3.8 Relationship between Sample Length and True Thickness

Since the orientations of drill holes in the deposit vary, and the morphology of mineralized zones has variable orientation across the two deposits, the relationship of geochemical sample length in drill holes to the true thickness of mineralization is also variable. At both deposits, the steep orientation of most drill holes crosses the lens-shaped mineralized zones at or near to true thickness. The 15 metres to 30 metres spaced drilling density, and geological confidence in the mineralization extent orientation and morphology has enabled 3-dimensional (“3D”) wireframe modelling of both deposits which accommodates for variations in sample length to local orientation of drill holes and mineralized zones.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

Section 11 of this report has been taken from UEX's July 15, 2009, NI 43-101 report entitled "Technical Report on the Hidden Bay Property Saskatchewan, Canada, Including Updated Mineral Resource Estimates for Horseshoe and Raven Deposits" by Palmer and Fielder (2009). Due to the historical nature of the time period of when this data and information were collected, the qualified persons have to rely on the previous authors descriptions of how work was completed on this project. The qualified persons have checked these work descriptions against UEX's assessment reports from 2009 and 2011 and have found them to be identical. UEX is confident that the descriptions provided in this section are accurate for the time that the data was collected. The qualified persons reviewed sample intervals during their site visit in June of 2021 in all of the core that was reviewed but given the number of holes drilled on the deposit only a fraction of holes were reviewed. Where appropriate UEX's has updated totals for the data collected in the later half of 2009 and all of 2011.

A review of the procedures, described below of the sampling method and approach used by UEX at the time indicates that they are of an industry standard and provide an acceptable basis for the geological interpretation of the deposits leading to the estimation of mineral resources and economic evaluation of the deposits.

11.1 *Horseshoe and Raven*

Drill core sampling for geochemical assay is the primary sampling method. A combination of radiometric responses from hand-held scintillometer readings on drill core and recognition of visibly mineralized or altered areas guided sampling. Sampling has been conducted continuously across mineralized intervals within the mineralized zones. Samples were also collected from the non-mineralized core for at least several metres above and below mineralized intersections to confirm the location of the mineralization boundaries for each mineralized zone. In the case of multiple zones of mineralization in a hole, the internal non-mineralized section was generally sampled to provide a more continuous profile. In June 2008, UEX implemented a program of sampling weakly and non-mineralized core to clearly bracket mineralization with a nominal 2 metres of sampling below 0.02% U_3O_8 and any broad zones of internal waste were sampled. Re-sampling of holes was conducted at this time where previously sampled intervals were deemed too restricted in extent.

A representative length checks on selective sample intervals was conducted on all of the HU and RU holes up until March 31, 2008. A total of 16,756 metres of core was sampled representing 24,049 samples averaging 0.7 metres in length. Sample intervals range from 0.1 metres to 3.0 metres with 261 samples or one percent of the total dataset greater or equal to 1.2 metres in length. Note this excludes non-routine blanks and standards. Typically, the broader intervals were sampled over areas of low core recovery. An extra 1,635 samples, each approximately 10 cm in length, underwent spectral analysis with PIMA and were assayed with a full multi-element suite to spectrally and geochemically profile the alteration signature of the deposit. To

April 2009, the entire UEX drilled Horseshoe and Raven database includes 46,667 selective sample records and 3,002 systematic sample records (these numbers include routine standards and blanks). There have been 3,587 systematic sample records added to the database from July 2009 through 2011.

After core logging, all drill core marked for sampling is split longitudinally to obtain a representative half core sample for geochemical analysis. Splitting of core samples is undertaken by employees of UEX at the Raven Camp. Samples are split dry and not cut, using an electric hydraulic press with a “knife” and “V-block”. The splitter and sample trays are vacuumed clean to prevent contamination between each sample. One half of the core is placed in a clear plastic sample bag and the bag top is rolled down and then securely taped to prevent any sample loss. Once a sample is split and bagged up, an additional level of quality control is introduced where the radioactivity of the sample is measured by a SPP-2 scintillometer. These samples are then placed in approved pails and then sent to SRC Geoanalytical Laboratory for assaying. The second half is retained for geological documentation and record purposes and remains in the core box. A sample tag with the sample number is stapled into the core box to mark the location of the sample interval. All mineralized sections are kept in permanent wooden racks for easy access and review. After each hole is sampled, the splitting tent is cleaned to prevent hole to hole contamination and to minimize the amount of background radiation from dust.

A small representative portion of drill core has had the second half of the core removed for specific gravity and dry bulk density testing and some intersections have been taken for detailed metallurgical testing. The three HQ holes were bulk sampled for metallurgical testing and, as a result, no remaining core is available.

No inherent sampling biases exist in the longitudinal splitting of the core and sample processes are consistent from season to season. It is Golder’s opinion that the samples are of good quality, representative and no material factors that may have resulted in sample biases. The sample data has been verified through correlation of probe, detailed radiometric SPP2 readings and a detailed assay comparison and QA/QC program.

A list of the drill hole intersections within the mineralized subzones for the Horseshoe and Raven Deposits are contained in Appendix I.

11.2 Sampling Quality and Representativeness

The sampling methods and approach employed by UEX at the Horseshoe and Raven Deposits meet industry standards. The sampling of outlying targets was not reviewed by Golder/Qualified persons but is being carried out using the same protocols. There are no drilling, sampling or recovery (core loss) factors that, in the authors opinion, could materially impact the accuracy and reliability of the results. Sample locations and lengths are selected to appropriately represent mineralization distribution, with breaks between sample intervals made between obvious changes in geology or mineralization distribution. As a result, the sampling is considered to consistently represent the appropriate length and quantity of mineralization to determine a representative uranium grade independent of mineralization style.

All laboratory analyses of drilling samples for UEX, except for select check sampling, were conducted by the Saskatchewan Research Council (SRC). The SRC has an ISO/IEC 17025:2005 accredited quality management system (Scope of Accreditation

#537), from the Standards Council of Canada (SRC, 2007). SRC's Geoanalytical Laboratory is located at 125-15 Innovation Blvd., Saskatoon, Saskatchewan. The SRC laboratories are accredited by the Canadian Association for Laboratory Accreditation Inc.

Once the samples have arrived in Saskatoon, all elements of sample preparation have been completed by employees of the Saskatchewan Research Council's Geoanalytical lab. When samples arrive at the lab, no employee, officer, director, or associate of UEX, is or has been involved in any aspect of sample preparation and analysis. In Golder's opinion, the sample preparation, security, and analytical procedures meet industry standards.

11.3 Shipping and Security

Radioactive samples, mainly drill core, are shipped within Canada in compliance with pertinent federal and regulations regarding their transport and handling. UEX has developed a procedure to detail requirements for exploration staff and others to ensure nuclear substances are shipped in compliance with regulatory requirements.

The transportation instructions are provided for the shipment of Dangerous Good Class 7, Radioactive Materials. Each shipment must meet all regulatory requirements of the Transportation of Dangerous Goods.

The samples are held in approved pails and sealed shut with secure lids and meet the requirements of the CNSC Packaging and Transport of Nuclear Substances Regulations. Each pail is weighed, and the level of the radioactivity is measured in compliance with the transportation of dangerous goods regulations. The sealed pails are temporarily stored outside the core shacks at the Raven and West Bear Camps. Once a week, the shipment of radioactive samples is transported by road from the camp directly to SRC's lab in Saskatoon. The pails are shipped in a closed vehicle under the exclusive use rules by our carrier, J.P. Enterprises Inc., based in La Ronge, Saskatchewan. In Golder's opinion, there is little chance of tampering of samples as they are shipped directly to the lab from the camps.

11.4 Geochemical Analyses

11.4.1 Analytical Procedures

The resource data set uses U_3O_8 assay by ICPOES as the primary analytical method and ICP Total Digestion for lower grade samples (<1,000 ppm U).

On arrival at the SRC laboratory, all samples are received and sorted into their matrix types and received radioactivity levels. The samples are then dried overnight at 80°C in their original bags and then jaw crushed until • 60% of the material is <2 mm size. A 100 g sub sample is split using a riffler, which is then ground (either puck and ring grinding mill or an agate grind) until

•90% is minus 106 µm. The grinding mills are cleaned between sample using steel wool and compressed air or in the case of clay rich samples, silica sand is used. The pulp is transferred to a labelled plastic snap top vial.

The samples are tested using validated procedures by trained personnel. All samples are digested prior to analysis by ICP and fluorimetry. All samples are subjected to

multi-suite assay analysis, which includes U, Ni, Co, As, Pb by total and partial digestions. During initial phases of exploration, assaying using three separate digestions methods were tested: Boron, Partial and Total. In early winter 2007, routine analysis of Boron was discontinued. Boron analyses exist for 73 holes up to HU-053 and RU-020, and for drill holes completed during the 2005 program which was managed by Cameco.

Total Digestions are performed on an aliquot of sample pulp. The aliquot is digested to dryness on a hotplate in a Teflon beaker using a mixture of concentrated HF:HNO₃:HClO₄. The residue is dissolved in dilute HNO₃ (SRC, 2007). Partial digestions are performed in an aliquot of sample pulp. The aliquot is digested in a mixture of concentrated HNO₃: HCl in a hot water bath then diluted to 15 ml with DI water. Fluorimetry is used on low uranium samples (<100 ppm) as a comparison for ICPOES uranium results. Uranium is determined on the partial digestion. An aliquot of digestion solution is pipetted into a 90% Pt 10% Rh dish and evaporated. A NaF/LiK pellet is placed on the dish and fused on a special propane rotary burner and then cooled to room temperature.

The SRC Geoanalytical laboratory reports uranium values in parts per million (“ppm”). In order to convert the uranium values to weight percent U₃O₈, the reported values were divided by a conversion factor of 10,000, and then multiplied by another conversion factor of 1.17924.

The reader is referred to the SRC’s website (<http://www.src.sk.ca/>) for more details regarding the analytical techniques and sample handling procedures.

SRC Geoanalytical Laboratories U₃O₈ Method Summary (McCready, 2007)

All samples are received and entered into the Laboratory Information Management System (“LIMS”). In the case of uranium assay by ICPOES for UEX, a pulp is already generated from the first phase of preparation and assaying (discussed above). UEX routinely assays every sample above 1,000 ppm Uranium via ICP Total Digestion with ICPOES (Inductive Coupled Plasma – Optical Emission Spectrometry) Uranium assay. A 1,000 mg of sample is digested for one hour in an HCl: HNO₃ acid solution. The totally digested sample solution is then made up to 100 ml and a 10-fold dilution is taken for the analysis by ICPOES. Instruments were calibrated using certified commercial solutions. The instruments used were Perkin Elmer Optima 300DV, Optima 4300DV or Optima 5300DV. The detection limit for U₃O₈ by this method is 0.001%. SRC management has developed quality assurance procedures to ensure that all raw data generated in-house is properly documented, reported and stored to meet confidentiality requirements. All raw data is recorded on internally controlled data forms. Electronically generated data is calculated and stored on computers. All computer-generated data is backed up on a daily basis. Access to samples and raw data is restricted to authorized SRC Geoanalytical personnel at all times. All data is verified by key personnel prior to reporting results. Laboratory reports are generated using SRC’s LIMS.

11.4.2 Laboratory Audits

Two detailed laboratory audits were completed on the primary laboratory, SRC in Saskatoon, by UEX personnel. A laboratory audit was conducted on September 24, 2007, and a follow-up review on June 5, 2008. The laboratory audit covered all aspects of the sample preparation and analytical process. The review is documented

with an appropriate action plan for non-compliance or suggested action items. SRC and UEX have established an open relationship where the external QA/QC program and their interpretation of the laboratory's internal QC program are discussed on a regular basis.

11.5 Uranium Equivalent Grades

In late March 2009, logged mineralized intersections from two drill holes, which had not been sampled, were involved in a fire that destroyed the core splitting shack. The core, as per procedures, had been logged, photographed, and had detailed SPP2-RS120/125 scintillometer radiometric readings collected every 10 cm on the core, prior to the incident. The drill holes had also been radiometrically probed.

A total of 228 samples were lost from the Raven and Horseshoe area. All HU-344 samples and a portion of HU-347 were lost for a total of 92 samples at Horseshoe Northeast. The majority of RU-205 samples and a portion of RU-197 were lost for a total of 136 samples lost at Raven West. RU-197 did not intersect any of the interpreted mineralized subzones. Probe grades indicate that these holes intersected lower grade portions of the deposits.

This technical report did not use equivalent probe grades for any of the lost holes in the resource calculation.

11.6 Dry Bulk Density Samples

In order to obtain bulk density estimates, UEX, under Golder's guidance, has taken a large selection of samples for dry bulk density measurement. These samples are systematically selected from different mineralized zones and a proportionately valid sample distribution of all rock types and alteration types, including different intensities of clay alteration.

Prior to September 1, 2008, a total of 2,615 samples from 33 holes underwent dry bulk density testing from Horseshoe and Raven. There were 1,845 samples from 33 Horseshoe (HU) holes and 770 samples from 4 Raven (RU) holes.

A further 1,109 samples, with a particular emphasis on the Raven Deposit, underwent dry bulk density testing during the period from September to June 2009, bringing the total number to 3,724 analyses. There are now results for 2,198 samples from 39 Horseshoe (HU) holes and 1,526 samples from 19 Raven (RU) holes with good spatial and lithological spread.

Average dry bulk density for Horseshoe and Raven lithologies is 2.48 g/cm³. The density statistics by rock type are listed in Table 13-1 and Table 13-2 for Horseshoe and Raven, respectively.

No further density sampling was completed past May of 2009 as the current amount of information was sufficient for resource estimation.

Table 11-1: Horseshoe Bulk Density (g/cm³) Statistics Grouped by Lithology

HORSESHOE					
Rock	Count	Mean	Median	Minimum	Maximum
ARKQ/S	1455	2.47	2.5	1.45	3.14
CARK	66	2.73	2.75	2.34	2.86
CLAY	12	1.88	1.78	1.33	2.45
DIAB/DIOR	14	2.71	2.73	2.27	2.85
GOUG	2	1.98	1.98	1.75	2.21
PEGM	94	2.37	2.41	1.89	2.65
PEL0	7	2.41	2.38	2.22	2.64
QZIT	450	2.53	2.55	2.02	2.83
SPL0	6	2.57	2.53	2.44	2.75
UX	92	2.49	2.49	1.75	2.95
Total	2198	2.48	2.52	1.33	3.14

Table 11-2: Raven Bulk Density (g/cm³) Statistics Grouped by Lithology

RAVEN					
Rock	Count	Mean	Median	Minimum	Maximum
ARKQ	301	2.43	2.51	1.11	2.64
BX	10	1.98	1.99	1.74	2.32
CARK	413	2.44	2.42	1.98	2.93
GRAN	17	2.32	2.4	1.64	2.58
PEGM	53	2.41	2.44	1.58	2.89
PEL0	61	2.56	2.62	1.92	2.76
QZIT	632	2.54	2.55	1.44	2.65
SPL0	39	2.50	2.5	2.24	2.67
Total	1526	2.48	2.53	1.11	2.93

11.6.1 Analytical Methods

Dry bulk density samples were collected from half split core retained in the core box after geochemical sampling, since the dry bulk density process requires wax coating of the samples, which would affect the geochemical analysis. An approximately 7 cm to 15 cm piece of half split core was submitted for each analysis. Samples were tagged and placed in sample bags on site, then shipped to SRC. Once received by SRC, samples are weighed dry and then covered in an impermeable barrier and then reweighed. The samples are then submersed in room temperature water and reweighed. The dry bulk density is calculated and reported.

As shown in Figure 11-1 below, there is no correlation between grade and dry bulk density. The regression curve is flat. However, above 3% U₃O₈, there is a small inflection associated with a weak positive correlation between U₃O₈ grade dry bulk densities.

There is a strong negative correlation with logged proportions of clay in the core and bulk density. Table 11-3 details the uranium grade ranges and specific gravity. Those samples not assayed for uranium are typically sitting distal to mineralization in less altered rock.

Table 11-3: Average Dry Bulk Densities (g/cm³) by Grade Bins

U ₃ O ₈ % Grade range	Number of samples	SG average	U ₃ O ₈ % average
Not assayed	539	2.58	Barren
Assay to 0.05%	1,885	2.47	0.02%
0.05% to 0.1%	385	2.47	0.07%
0.1% to 1%	770	2.45	0.33%
>1%	145	2.48	2.26%
TOTAL	3,724	2.48	0.21%

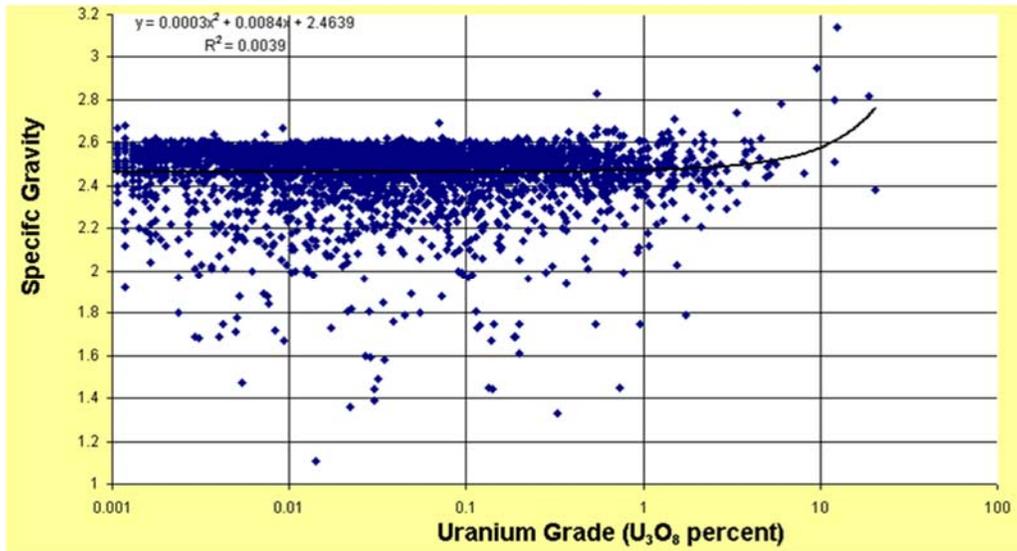


Figure 11-1: Logarithmic Plot of Dry Bulk Density versus Uranium Grade in Corresponding Geochemical Samples

SRC has conducted 170 repeat analyses whereby in each batch at least one sample is repeated in every 40 samples. The repeats for this period were completed at a ratio of one repeat to 14 routine samples. All repeats passed the internal QC limit of +/- 0.02 g/cm³. The sample repeats have a strong positive correlation for both the period prior to September 2008 (Figure 11-2) and the period from September 2008 to June 2009 (Figure 11-3).

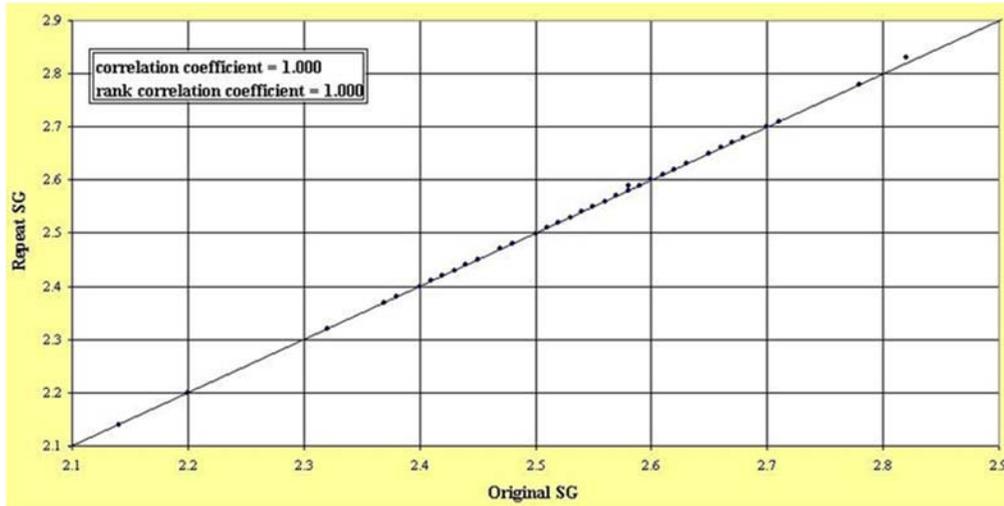


Figure 11-2: Quantile - Quantile Plot of Laboratory Bulk Density Replicated for Batches Submitted for all Seasons Prior to September 2008

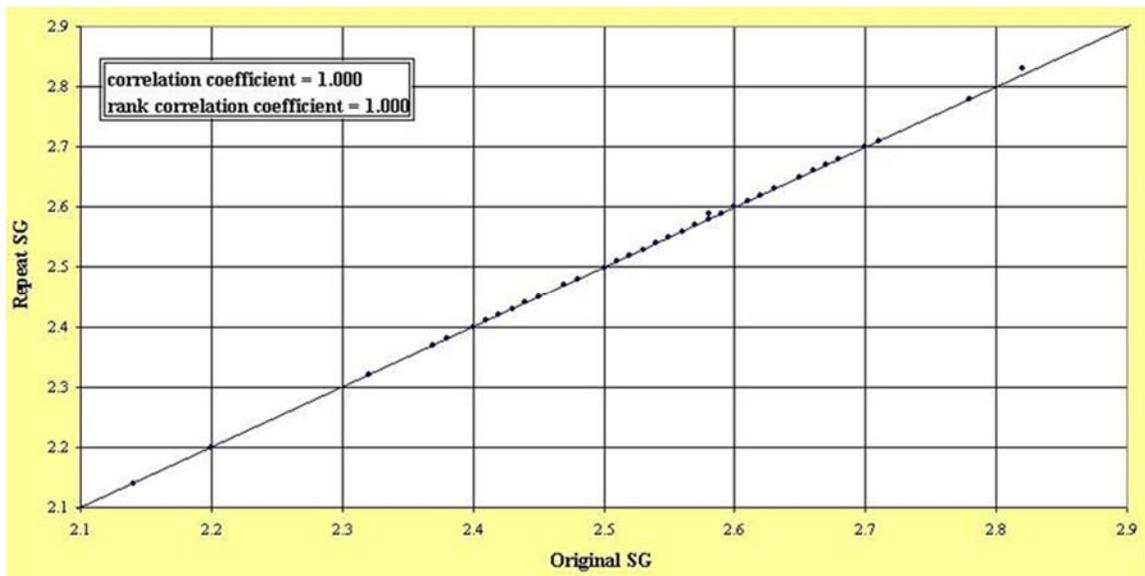


Figure 11-3: Quantile - Quantile Plot of Laboratory Bulk Density Replicated for Batches Submitted between September 2008 and June 2009

As a check, prior to September 2008 a total of 52 samples, or 1 in 50, underwent wet bulk density measurements in parallel with dry bulk density measurement. The average wet density of the selected sample was 2.61 g/cm³ and the difference between the corresponding dry densities averaging 2.53 g/cm³ is 2.8%. One known standard, a piece of granite, was used for the wet density measurements and the three results were in the acceptable range of 2.71 g/cm³ +/- 0.01 g/cm³.

During the period from September 2008 to June 2009, a total of 51 samples, or 1 in 22, underwent wet density measurements in parallel with the dry bulk density measurement. The average wet density of the selected samples was 2.54 g/cm³ and the difference between the corresponding dry densities, which average 2.47 g/cm³, is 2.8%.

One known standard, a piece of granite, was used for the wet density measurements and the eleven results were in the acceptable range of 2.71 g/cm³ +/- 0.01 g/cm³.

11.7 Summary

All samples were prepared and analyzed at SRC, an ISO 17025 accredited laboratory. In the opinion of the authors, the sample preparation, security, and analytical procedures for all assay data for 2009 and 2011 meet industry standards and are adequate for use in mineral resource estimation.

12 DATA VERIFICATION

12.1 *Verification by UEX*

Section 12 of this report has been summarized from UEX's July 15, 2009, NI 43-101 report entitled "Technical Report on the Hidden Bay Property Saskatchewan, Canada, Including Updated Mineral Resource Estimates for Horseshoe and Raven Deposits" by Palmer and Fielder (2009). Due to the historical nature of the time period of when this data and information were collected, the qualified persons have to rely on the previous authors descriptions of how work was completed on this project. The qualified persons have checked these work descriptions against UEX's assessment reports from 2009 and 2011 and have found them to be identical. UEX is confident that the descriptions provided in this section are accurate for the time that the data was collected. The qualified persons reviewed sample intervals during their site visit in June of 2021 in all of the core that was reviewed but given the number of holes drilled on the deposit only a fraction of holes was reviewed. Where appropriate UEX's has updated totals for the data collected in the later half of 2009 and all of 2011 (Table 12-1).

Minor updates to include the drilling results from the 2009 and 2011 drill campaigns have been made and comments inserted where appropriate.

The full description of the UEX Horseshoe and Raven QA/QC program is available in that document. A review of the QA/QC program by current UEX QP's indicates that the program meets industry standards, and the data is sufficient for resource estimation.

Table 12-1: Number of Samples for Each Deposit by Year

Horseshoe Sample Data				
Year	Number of Samples	Total Sample Length for Year	QAQC'd Report	Percent of Total Data for Resource
1974	38	40.4	2009	0.2
2005	866	394.68	2009	3.6
2006	2031	1145.47	2009	8.4
2007	11576	8252.43	2009	48.1
2008	5051	4087.6	2009	21.0
2009	3894	3662.3	2009	16.2
2009	135	128.7	2021	0.6
2011	472	361.6	2021	2.0
Total	24063	18073.18		
Raven Sample Data				
Year	Number of Samples	Total Sample Length for Year	QAQC'd Report	Percent of Total Data for Resource
2005	1577	853.6	2009	7.3
2007	4485	3366.55	2009	20.9
2008	7305	5671.6	2009	34.0
2009	5116	4619.83	2009	23.8
2009	159	136.6	2021	0.7
2011	2821	2433.3	2021	13.1
Total	21463	17081.48		

12.1.1 Verifications of Analytical Quality Control Data

As part of UEX's quality improvement programs ("UEX Batch Acceptance Procedure"), a rigorous QA/QC program was implemented during the 2007 summer drilling program and continues to be followed. All drill core samples are submitted to the SRC laboratories in Saskatoon for geochemical analysis. Inserted into each drill core sample batch submitted to SRC are a total of 20 samples for analysis. Sixteen samples are sawed half core drill samples and four QA samples, which include a blank, a duplicate and two standard samples. The standard samples inserted into each batch are a commercially available standard (certified reference material), a blank, a field duplicate and a round robin pulp. Results are documented in Table 12-1 and Table 12-2. Most drill holes at both the Horseshoe and Raven Deposits that were completed under the management of UEX have been completed under this program. Prior to the implementation of this program, only blank samples were submitted routinely throughout the 2006 and early 2007 drilling programs. Additional QA/QC samples have been taken from the drill holes that were drilled prior to the UEX Batch Acceptance Procedure being implemented to improve the confidence in the earlier sampling. SPP2 radiometric readings have also been compared to the geochemical assays and a good correlation was noted.

To the knowledge of qualified persons from UEX the same QA samples implemented in 2007 continued to be followed during the summer 2009 and 2011 drilling programs. However, review of the sample information in the sample database from that time did not indicate which samples were field duplicates and standards. As a result, Table 12-3 includes only lab inserted standards and duplicates and does not include the number of field duplicates.

Table 12-2: Summary of the Horseshoe and Raven QC Results for the Reporting Period 2005 to September 2008 (Baldwin, 2009)

QA/QC Sample	Number	Outside	Percentage Outside of Tolerance
CG515 standard (ICP)	2016	0	0%
Blanks (ICP)	1033	6	0.60%
Field Duplicates	228	11	5% (outside of 30%)
Laboratory Replicates	1098	0	0%
Laboratory Replicates (ICPOES)	404	1	0.20%
BL-2 (ICP) standard	210	0	0%
BL-3 (ICP) standard	180	0	0%
BL-4 (ICP) standard	334	0	0%
BL-4A (ICP) standard	232	0	0%
UEX08 (ICP) standard	9	0	0%
BL-1 (ICPOES) standard	17	0	0%
BL-2 (ICPOES) standard	255	0	0%
BL-2A (ICPOES) standard	159	0	0%
BL-3 (ICPOES) standard	259	0	0%
BL-4 (ICPOES) standard	332	3	1%
BL-4A (ICPOES) standard	615	0	0%
BL-5 (ICPOES) standard	7	0	0%
ICP vs. ICPOES assay	4,575	3	0.10%

Table 12-3: Summary of the Horseshoe and Raven QC Results for the Reporting Period September 2008 to June 2009 (Baldwin, 2009)

QA/QC Sample	Number	Outside	Percentage Outside of Tolerance
CG515 standard (ICP)	879	0	0%
Blanks (ICP)	261	1	0.40%
Field Duplicates	30	3	10% (outside of 30%
Lab Replicates (ICP)	516	0	0%
Lab Replicates (ICPOES)	116	0	0%
BL-2 (ICP) standard	5	0	0%
BL-4A (ICP) standard	520	1	0.20%
UEX08 (ICP) standard	516	5	1.00%
BL-2 (ICPOES) standard	16	0	0%
BL-2A (ICPOES) standard	25	0	0%
BL-3 (ICPOES) standard	6	0	0%
BL-4A (ICPOES) standard	251	0	0%
UEX08 (ICPOES) standard	144	1	0.70%
ICP vs. ICPOES assay	696	4	0.6% (outside 10%

In all cases, results outside of acceptable limits have been followed up through checking results from the batch with the laboratory or having the analysis repeated. In the case of the error repeating, the core was re-split and the new sample submitted for analysis.

Analysis of standards for the period 2005 to September 2008 indicates that results were acceptable (within three standard deviations from the mean) for 100% of 965 standards submitted via U ppm ICP Total Digestion, and 1,641 or 99.8% of the 1,644 standards submitted via the ICPOES U_3O_8 assay technique. Assay comparisons between three different assay techniques revealed a strong positive correlation for U ppm and U_3O_8 .

Analysis of standards for the period September 2008 to June 2009 indicates that results were acceptable (within three standard deviations from the mean) for 1913 or 99.6% of 1,920 standards submitted via U ppm ICP Total Digestion and 441 of the 442 standards submitted via the ICPOES U_3O_8 assay technique. Assay comparison between different assay techniques revealed a strong positive correlation for U ppm and U_3O_8 .

Laboratory replicates correspond to a pulp analyzed in replicate as part of the laboratory's internal QC measures to ensure reproducibility of assay results over time. Replicates also serve as a validation tool for batches with identified problems in either standards or blanks. The laboratory replicates are found to be in acceptable limits with a correlation coefficient close to one ($R^2 > 0.999$) and have very low dispersion for ICP and ICPOES analytical techniques.

Table 12-4: Summary of Horseshoe and Raven QC Results for the reporting period July 2009 to 2011

QA/QC Sample	Number	Outside	Percentage Outside of Tolerance
Lab (ICP) Replicates	160	0	0%
Lab (ICPOES) Replicates	58	0	0%
CG515 (ICP) Standard	23	0	0%
CAR110 (ICP) Standard	223	0	0%
BL-2 (ICP) Standard	13	9*	1.7%
BL-2 (ICPOES) Standard	14	0	0%
BL-2A (ICPOES) Standard	13	0	0%
BL-3 (ICP) Standard	3	0	0%
BL-3 (ICPOES) Standard	20	0	0%
BL-4A (ICP) Standard	34	0	0%
BL-4A (ICPOES) Standard	55	0	0%
UEX08 (ICP) Standard	49	0	0%
UEX08 (ICPOES) Standard	49	0	0%

*One standard was outside of the tolerance limits by 1.7% the rest were less than 1%.

Analysis of standards for the period July 2009 to 2011 indicates that results were acceptable (within three standard deviations from the mean) for 335 or 98% of 345 standards submitted via U ppm ICP Total Digestion and 151 of the 151 standards submitted via the ICPOES U₃O₈ assay technique.

The laboratory replicates are found to be in acceptable limits with a correlation coefficient close to one ($R^2 > 0.999$) and have very low dispersion for ICP and ICPOES analytical techniques.

Upon review of the geochemical sampling for mid-2009 and all of 2011, UEX was unable to discern which samples were the field duplicates. This is likely due to the database that stored all the Horseshoe and Raven data, and no current staff at UEX knowing how it was used. UEX also investigated the 2009 and 2011 assessment reports for this data, and it was not reported separately there either. The qualified person is confident that they were collected after conversations with a Geotechnician who split the samples and was responsible for running the sample shack, though his knowledge of the database is negligible.

12.2 Qualified Person Data Verification

In order to verify that the data in the historical UEX database was acceptable for the November 2021 Horseshoe and Raven Mineral Resource Estimates, the QP's reviewed the data from logging through to the final database. The assay data file from the database was checked against the Golder Assay database from 2009 and the recent historical drilling was checked against the assay files obtained from SRC, UEX's primary laboratory. The data verification was carried out by Nathan Barsi (P. Geo.) with assistance from Susan Biss (P. Geo.), UEX's Land and Geodatabase Administrator.

In the database, there are a total of 715 drill holes: 404 for Horseshoe and 311 for Raven. This includes 96 new drill holes which have been added to the database since the completion of the previous estimates for Horseshoe and Raven in July 2009. These include 28 drill holes in Horseshoe and 68 drill holes in Raven drilled in summer 2009 and 2011.

The database for the use in the mineral resource estimate included:

- Drill hole collar position data (electronic format)
- Downhole in-hole survey data (electronic)
- Sample assay, sample lithological, drill core recovery and sample bulk density data

As part of the qualified persons verification checks for the previously reported estimates, Nathan Barsi, P.Geol., and Chris Hamel, P.Geol., of UEX visited the property between June 9 and 17, 2021. During these site visits, a selection of drill logs were compared to original stored core samples, logging and sampling procedures were reviewed and 4 spot checks of collar locations from different programs were confirmed with Trimble DGPS R12 equipment.

12.3 Logging and Sampling Procedure Review

During the QP's site visit, the logging and sampling procedure were reviewed against the historical drill logs and were found to be consistent as those described in Section 11.

12.4 Collar Position

During the QP's site visit, 4 drill hole collars were surveyed using Trimble R12 equipment. The surveys were taken when the GPS indicated a minimum of 1 m accuracy. The QP's surveys were then compared to the collar positions in the UEX database. No significant differences were found between the survey collar positions provided by UEX and the GPS surveys complete by the QP's.

Table 12-5: Raven Collars, Comparison between QP's GPS and UEX Database

BHID	2021 Survey			Original			Difference		
	Y	X	Z	Y	X	Z	Y	X	Z
RU-053	6446314.8	572964.7	442.1	6446311.9	572967.3	441.0	2.8	-2.6	1.1
RU-079,-083	6446315.1	572913.0	446.8	6446313.6	572914.3	446.0	1.5	-1.4	0.8
RU-111,-112	6446382.8	572888.9	450.3	6446382.8	572887.7	450.0	0.0	1.2	0.3
RU-272	6446278.7	572868.6	444.2	6446277.3	572870.3	444.0	1.4	-1.6	0.2

12.4.1 Downhole Surveys, Collar and Lithology Review

Prior to carrying out the July 2009 estimate, the downhole survey and lithology data were checked against the original survey files and logs and against the 2008 database used for the previous estimates. Golder checked out the validity of the modelling database against lithology log sheets and downhole survey data supplied by UEX in paper and electronic format. No errors were noted in the new data and the minor differences between the old and new databases were due to updated information.

In-hole downhole surveys for the UEX Horseshoe and Raven drill holes included dip and azimuth readings obtained from a Reflex EZ-Shot® downhole survey tool. The digital readings from this instrument are recorded on paper logs and corrected to true north prior to input into the database.

During the verification for the previous estimates a total of 1,208 entries in the survey data file were checked against the paper logs. A total of 19 errors, mainly in bearing, were noted and corrected.

Two entries out of the 1,990 lithology entries checked did not have a lithology recorded. No other transcriptions errors were noted. No significant discrepancies were noted when comparing the core to the drill logs during the site visits.

The July 2009 downhole survey data from UEX database was checked against original survey file by selecting randomly five holes from Horseshoe and three from Raven. The verification of survey data was conducted by visual checking of the database against original documents. Some systematic errors were noted. UEX reviewed all of the entries, including those used in the earlier estimates and corrected the errors.

The lithology data from UEX database was checked against original log by randomly selecting three drill holes at Horseshoe and three at Raven. No errors were found.

12.5 Assay and Bulk Densities Databases

The assay data supplied to Golder by UEX consisted of those carried out by Cameco until 2005 and those carried out by UEX from 2006 to 2009. Original assay certificates in electronic format were provided directly to Golder by SRC.

The previous data verification consisted of those carried out by Cameco until 2005 and those carried out by UEX from 2006 to 2008. Four differences were noted out of the 808 Cameco assays, based on a review of the assay certificates supplied to Golder by SRC.

Original assay certificates for the UEX assaying issued by SRC were imported into an Access database and compared to the assay file supplied by UEX. A total of 24,083 U_3O_8 sample values were checked for the Horseshoe and Raven Deposits, which represent all of the supplied samples. A total of 1,459 differences were noted, of which 1,251 were due to differences in the sample identifier. The other 208 differences were due to input errors.

Golder also received the original bulk density certificates from SRC to review the Horseshoe and Raven density data file. Two errors were noted among the 2,615 results that were checked, which represent the bulk densities estimated for Horseshoe and Raven.

The July 2009 data verification was carried out on assay values obtained from sampling carried out by UEX from September 2008 to 2009. The 2009 database was checked against the 2008 database and the assays from 2008 to 2009 campaign were checked against the original SRC files.

The 2009 database was compared to the 2008 database. Some differences were noted. These were mainly due to re-sampling or the use of an additional significant figure when converting U to U_3O_8 . All the differences were satisfactorily explained. No differences in density were noted.

A total of 12,103 U_3O_8 sample values were checked for the Horseshoe and Raven deposits, which represent all of the summer 2008 and winter 2009 samples. A total of 964 differences were noted. These were primarily due to UEX not using a consistent formula for converting U to U_3O_8 . These were corrected.

Golder also received the original bulk density certificates from SRC to review the Horseshoe and Raven density data file. A total of 1,317 values were checked and no error was noted.

Since no additional bulk density data was collect past the July 2009 resource report the QP's are satisfied with this data set and for its use in resource estimation.

12.6 Independent Samples

During the site visits in 2007 and 2008, a total of 15 samples were collected from the remaining half core for Horseshoe and Raven and submitted to SRC for assay analysis. These samples are to provide an independent verification of U_3O_8 mineralization on the Horseshoe, and Raven Deposits. Each sample was analyzed by total digestion ICP Analysis. The assay values for the Golder samples vs. the UEX original samples are provided in Table 12-6. Differences in the assay's values are probably due to the sample size difference between the Golder samples and the UEX samples. The Golder samples for Horseshoe and Raven were between 7 cm and 16 cm in length, whereas the UEX samples average was 70 cm. The samples do confirm the presence of U_3O_8 , mineralization at Horseshoe and Raven deposits.

Table 12-6: Independent Samples taken by Golder at Horseshoe and Raven

Golder		Original	
Sample Id	U3O8 (%)	Sample Id	U3O8 (%)
G79037	0.100	87855	2.110
G79038	0.933	65068	0.348
G79040	0.295	69154	0.395
G79041	1.438	62657	0.520
G79042	4.339	89598	7.600
G019190	1.179	2007-901	0.528
G019191	5.742	G-2008-111	1.650
G019192	2.334	G-2008-145	1.880
G019193	2.134	G-2008-73	1.860
G019194	0.011	2007-1964	0.015
G019195	0.947	2007-1404	0.849
G013038	0.971	2007-1826	0.977
G013039	0.004	2007-1826	0.015
G013040	0.002	2007-397	0.002
G013041	6.732	2007-227	1.780
G013042	0.498	2007-1961	0.238

The QP's recommend a check assay sampling program be instituted that would increase the number of check assays for a higher degree of confidence especially in the summer 2009 and 2011 data.

12.7 Conclusion

The QP's verification coupled with the historical data verification indicates that the logging, sampling, shipping, sample security assessment, analytical procedures, inter-laboratory assay validation and validation by different techniques are comparable to industry standard practices.

The databases are considered acceptable for Mineral Resource estimation of the Horseshoe and Raven Deposits.

12.7.1 Authors Comments

In the opinion of the authors, the sample collection, preparation, security and analytical procedures for all assay data for the historical data and the summer 2009 and 2011 drill programs comply with industry standards and are adequate to support mineral resource estimation. The authors believe that the samples were collected properly, are representative of the material intersected in the holes and hence are representative of the Horseshoe and Raven deposits in the 2009 and 2011 programs.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

Metallurgical test work was completed on the Horseshoe and Raven deposits between 2006 and 2009. The details and analysis of the completed work is found in:

- Palmer, K., and Fielder, B., 2009. Technical Report on the Hidden Bay Property, Saskatchewan, Canada, Including Updated Mineral Resource Estimates for Horseshoe and Raven Deposits. Report by Golder Associates Ltd to UEX Corporation.
- Doerksen, G., Melis, L., Liskowich, M., Murphy, B., Palmer, K., and Pilotto, D., 2011. Preliminary Assessment Technical Report on the Horseshoe and Raven Deposits, Hidden Bay Project Saskatchewan, Canada. Report by SRK Consulting (Canada) Inc. to UEX Corporation.

A summary of the metallurgical work reported in the 2011 PEA is found below:

Metallurgical testing for UEX Corporation's Hidden Bay Project included testwork on both the West Bear deposit and the Horseshoe-Raven deposits. Testwork, completed at SGS Canada Inc.'s Lakefield Research facility in Lakefield, Ontario (SGS Lakefield) under the direction of Melis Engineering Ltd. ("Melis"), started in 2006 on preliminary samples of the West Bear mineralization and was completed in 2009 as a second phase of work on Horseshoe-Raven mineralization. This report focuses on the Horseshoe and Raven deposits.

Based on supporting metallurgical test work, process recoveries are estimated to be 95%.

Horseshoe-Raven test composites were prepared from assay rejects and from purpose-drilled HQ core. The elemental analyses of the composites showed that the Horseshoe and Raven uranium deposits are relatively low in deleterious elements such as arsenic, molybdenum, selenium, and base metals. Five uranium carriers were identified, uraninite, boltwoodite, uranophane, coffinite and minor amounts of carnotite.

The Horseshoe-Raven composites were categorized as medium in hardness from the perspective of SAG milling, with an average SPI value of 69 minutes. The ball mill Bond Work Indices were all within a tight range of 16.1 to 17.7 kWh/t with an average value of 16.7 kWh/t, showing very little variation across the deposits and characterizing the Horseshoe-Raven mineralization as moderately hard for ball mill grinding.

Leach test results confirmed the Horseshoe-Raven mineralization is easily leached under relatively mild atmospheric leach conditions. Leach extractions of 98% or greater can be achieved for the Horseshoe and Raven mineralization under atmospheric leach conditions using a mesh-of-grind K80 (80% passing size) of approximately 145 µm, a leach temperature of 50°C, a free acid concentration of 10 g H₂SO₄/L, representing an acid consumption of 45 kg H₂SO₄/t, an ORP of 500 mV, representing a sodium chlorate consumption of 0.6 kg NaClO₃/t, and a leach

retention time of 8 to 12 hours. An overall uranium recovery of 95% was used in this study for all the cash flow analysis. Mine optimization work used 96% uranium extraction, prior to finalization of the recovery estimate.

The pregnant leach solution and residue from a Horseshoe bulk leach test were retained to generate waste raffinate and leach residue for waste treatment testing. The specific gravity of the generated tailings was measured at 2.59 t/m³. The tailings K80 was 136 µm and the K50 (50% passing size) was 54 µm.

Tailings supernatant aging tests resulted in elevated levels of radium and molybdenum in the supernatant. This was expected, and confirms that, like all uranium tailings supernatant, excess tailings water would be re-used and/or treated in the mill process and waste treatment circuits under normal operating conditions.

The concentrations of uranium (0.015 mg/L), arsenic (0.0067 mg/L), molybdenum (0.0115 mg/L), radium 226 (0.02 Bq/L) and selenium (0.009 mg/L) obtained in treated effluent are below typical regulatory limits set by the provincial and federal governments.

This report assumes that run of mine (“ROM”) material will be trucked to the Rabbit Lake processing facility for treatment. It is assumed that a toll treatment agreement could be reached with Cameco, the owner of the Rabbit Lake plant, which would allow Hidden Bay mineralization to be processed at an average rate of 1,000 tpd. It is also assumed that the Rabbit Lake facility would provide toll tailings deposition for the Hidden Bay ROM material.

An internal scoping study was completed for the Horseshoe-Raven deposits that assessed the viability of heap leaching the mineralized material. No additional work has been completed on mineral processing and metallurgy.

14 MINERAL RESOURCE ESTIMATE

14.1 Introduction

The Mineral Resource Estimate presented herein represents the third mineral resource evaluation prepared for the Horseshoe and Raven Deposits in accordance with the Canadian Securities Administrator's National Instrument 43-101. This report replaces all previous technical reports issued on the portions of the Hidden Bay project that are now part of the Horseshoe-Raven project.

Uranium deposits on the Horseshoe-Raven property for which historical and recent NI 43-101 compliant resources have been estimated are the Horseshoe and Raven Deposits. Resources estimated to NI 43-101 compliant standards for the Horseshoe, Raven and West Bear Deposits on the Hidden Bay property are documented by Lemaitre (2006), Palmer (2007 and 2008) and Palmer and Fielder (2009).

The mineral resource model prepared by UEX considers 404 core boreholes (128,180 m) drilled by UEX during the period of 2005 thru 2009 and 2011 for the horseshoe deposit and 311 core boreholes (82,205 m) for the Raven Deposit. The resource estimation work was completed by Mr. Nathan Barsi, P.Geo. (APEGS # 15012) who is an appropriate Qualified Person as this term is defined in National Instrument 43-101. The effective date of the Mineral Resource Statement is November 16, 2021.

This section describes the resource estimation methodology and summarizes the key assumptions considered by UEX. In the opinion of UEX, the resource evaluation reported herein is a reasonable representation of the global uranium mineralization found at the Horseshoe and Raven Deposits at the current level of sampling. The mineral resources were estimated in conformity with generally accepted CIM *Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines* and are reported in accordance with the Canadian Securities Administrators' National Instrument 43-101. Mineral resources are not mineral reserves and have not demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into mineral reserve.

The database used to estimate the Horseshoe and Raven mineral resources was the previously validated database from the Palmer and Fielder 2009 Resource Report and the additional drill holes added to that database by UEX in mid-2009 and 2011 which have been validated by the qualified persons. The qualified persons are of the opinion that the current drilling information is sufficiently reliable to interpret with confidence the boundaries for uranium mineralization and that the assay data are sufficiently reliable to support mineral resource estimation.

Datamine Studio RM software was used to construct the geological solids, and prepare assay data for geostatistical analysis, construct the block model, estimate metal grades, and tabulate mineral resources. Microsoft Excel was used for geostatistical analysis.

14.2 Mineral Resource Estimation Methodology

The mineral resources reported herein were estimated using an inverse-distance squared interpolated block modelling approach informed from core borehole data constrained within uranium mineralization wireframes for both deposits. The geological model of the mineralization represents distinct irregularly shaped pods that are, mappable continuously from borehole to borehole. The lenses were defined using a traditional wireframe interpretation constructed from explicit modelling and sectional interpretation of the drilling data using a 0.02% U₃O₈ threshold as per the recommendations from the technical reports from Palmer and Fielder 2009, and Doerksen, et.al., 2011. Constructing a singular wireframe envelope for both deposits eliminated the 28 subzones for the Horseshoe Deposit and the 16 subzones from the Raven Deposit.

The evaluation of the mineral resources involved the following procedures:

- Database compilation and verification
- Construction of three-dimensional wireframe models for the boundaries of the uranium mineralization using a 0.02 percent U₃O₈ threshold
- Data extraction and processing (capping), and statistical analysis
- Selection of estimation strategy and estimation parameters
- Block modelling and grade estimation
- Validation
- Preparation of the Mineral Resource Estimate

14.3 Resource Database

All exploration data available to evaluate the mineral resources for the Horseshoe and Raven deposits are listed in Table 14-1. These holes were drilled by UEX in 2005 thru 2009 and 2011. These drillholes pierce the mineralization wireframe or are within the immediate vicinity of it.

Table 14-1: Horseshoe and Raven Deposits Exploration Drill Holes

Horseshoe Deposit		
# of Drill Holes	Metres	Series of Holes
404	128,180	HO-001 - H-016, HR-001 - HR-013, HS-001, HU001-HU-373, HU-318A
Raven Deposit		
# of Drill Holes	Metres	Series of Holes
311	82,206	RV-001 - RV-028, RU-001 - RU-283

All drillholes were surveyed by Total station DGPS at the time of their completion.

UEX exported all the relevant borehole sampling data for the mineral estimation as CSV files from the DHLogger database, and imported it into Datamine Studio RM. UEX performed the following validation steps:

- Checked minimum and maximum values for each quality value field and confirmed/edited those outside of expected ranges.

-
- Checked for gaps, overlaps and out of sequence intervals in assays tables.
 - There were very few intervals that needed to be adjusted since the previous resource database was used. The authors spot checked records against the previous database with the current database and found no errors or anomalies.

After these measures were implemented, no errors were found in the database. UEX is satisfied that the database is useable for mineral resource estimation.

14.4 Geological Modelling

Sections were setup for each of the deposit's perpendicular to the controlling structure. This made sense because of the extensive amount of work done on the geological controls of the mineralization in the previous reports. The singular wireframes for both deposits were modeled independently of the stratigraphic units by creating wireframes interpolated from the mineralization assays. Every effort was made to exclude any material below the cut-off of 0.02% U₃O₈ but in some cases samples below cut off would have to be included to achieve the goal of a singular wireframe for each deposit. The singular strings on each section generally follow the dip/orientation of the previous wireframed subzones resulting in strings that are generally irregular versions of lenticular, tabular, and vein like horizons. Once the strings were completed, they were joined together to create a singular wireframe is defined within the diamond drillhole pattern (Figures 14-1 thru 14-4). The wireframes themselves are an anastomosing body that connect to each other from section to section when appropriate. This is not surprising given that the mineralization is mostly a disseminated style with areas of higher grade being more vein type controlled. The Horseshoe wireframe dips moderately to the southeast and has a distinct plunge to the mineralization progressing from the southwest to northeast. The Raven wireframe is more tabular and dips moderately to the southeast. Upon completion of the wireframes the assay sample database was trimmed to samples that only fall within the mineralized wireframe.

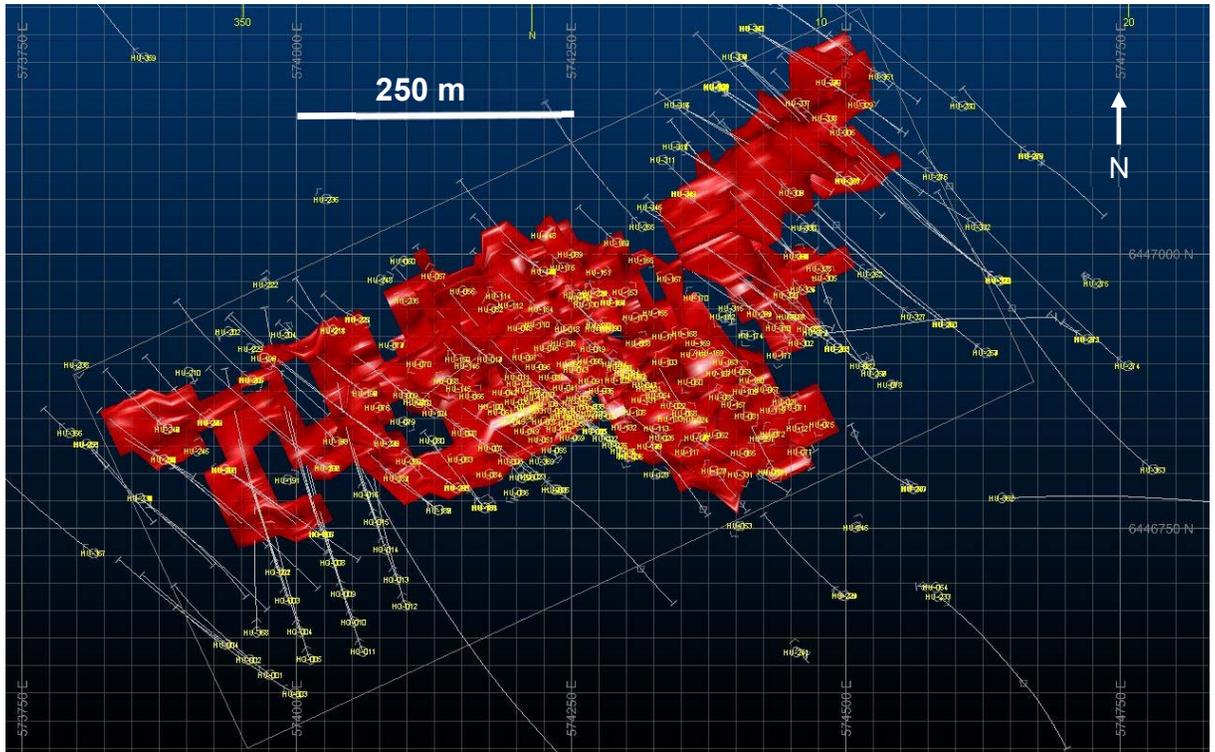


Figure 14-1: Horseshoe Wireframe Plan View (Looking Down)

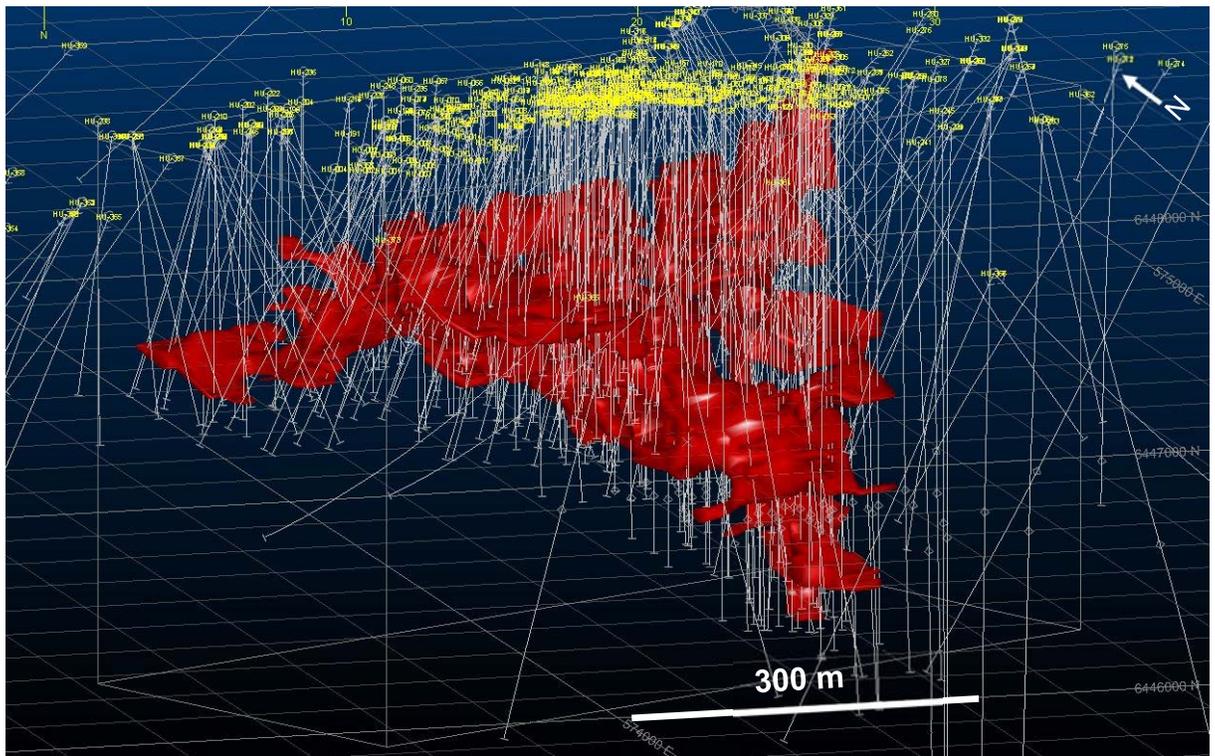


Figure 14-2: Horseshoe Wireframe Isometric View (Looking NNE)

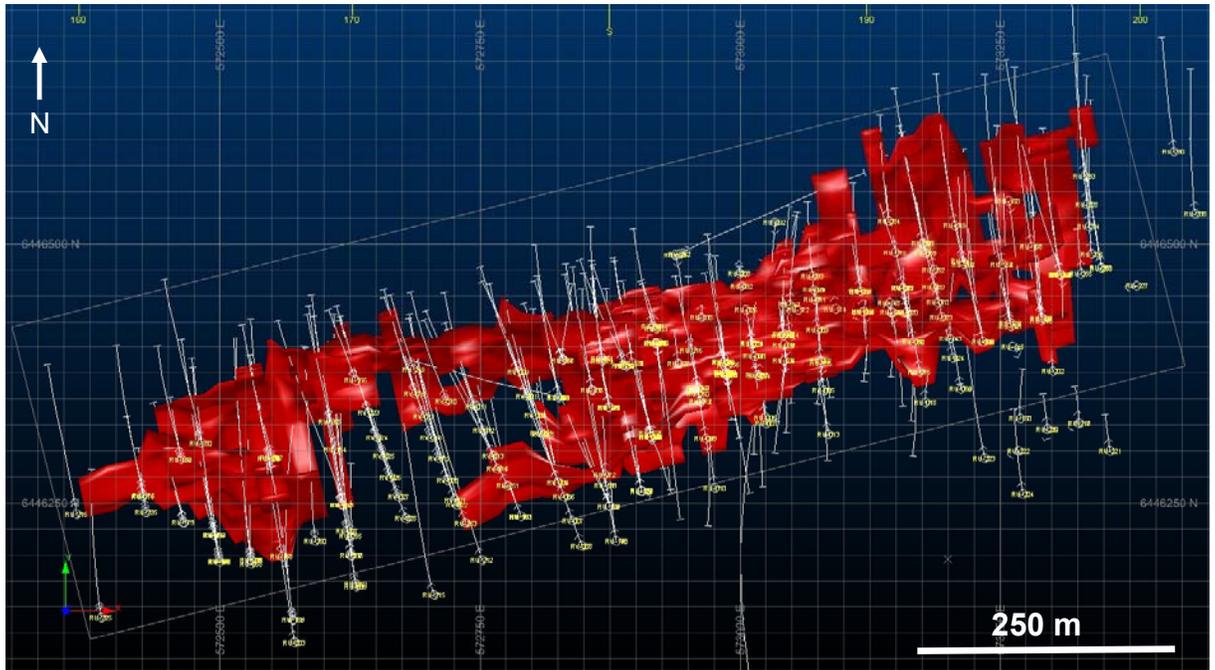


Figure 14-3: Raven Wireframe Plan View (Looking Down)

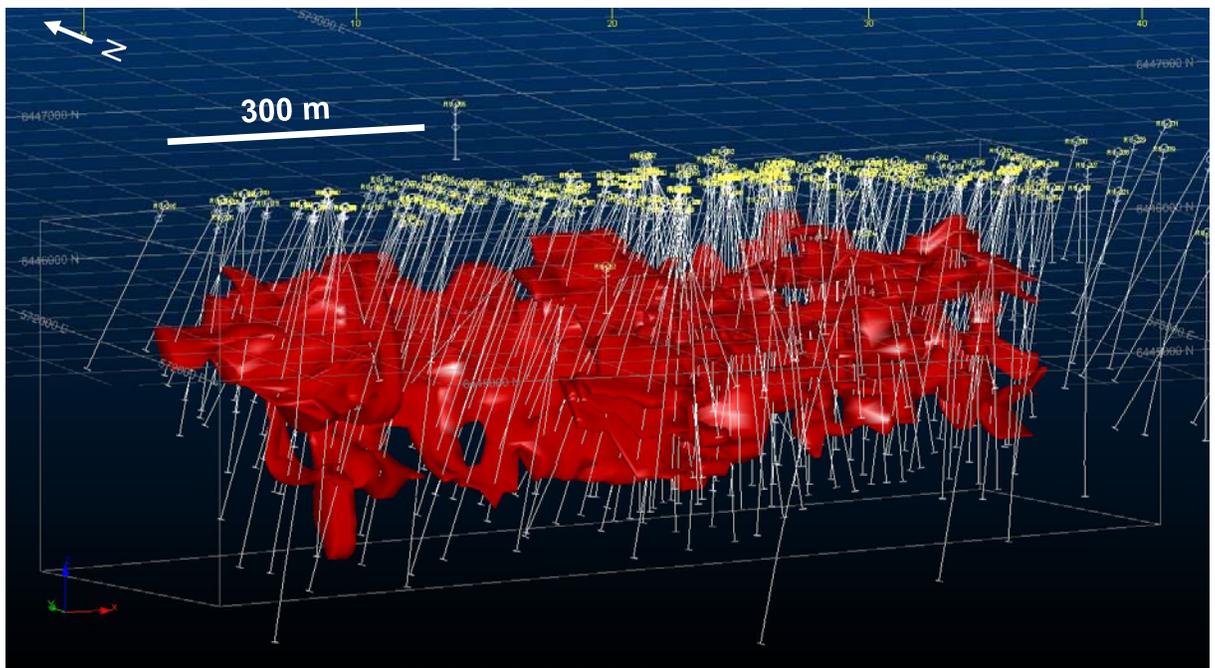


Figure 14-4: Raven Wireframe Isometric View (Looking NNE)

14.5 Specific Gravity

Specific gravity measurements were obtained by dry bulk density at the assay laboratory as part of the routine assaying protocol. A total of 2,198 specific gravity measurements were taken within the various stratigraphic units and in all types of alteration on the Horseshoe deposit, while 1,526 samples were taken on the Raven deposit. Due to the spatial location of the specific gravity measurements and the lack

of correlation between the measurements and the metal content, a uniform specific gravity was applied to the uranium mineralization wireframes of 2.48. Figures 14-5 and 14-6 and Tables 14-2 and 14-3.

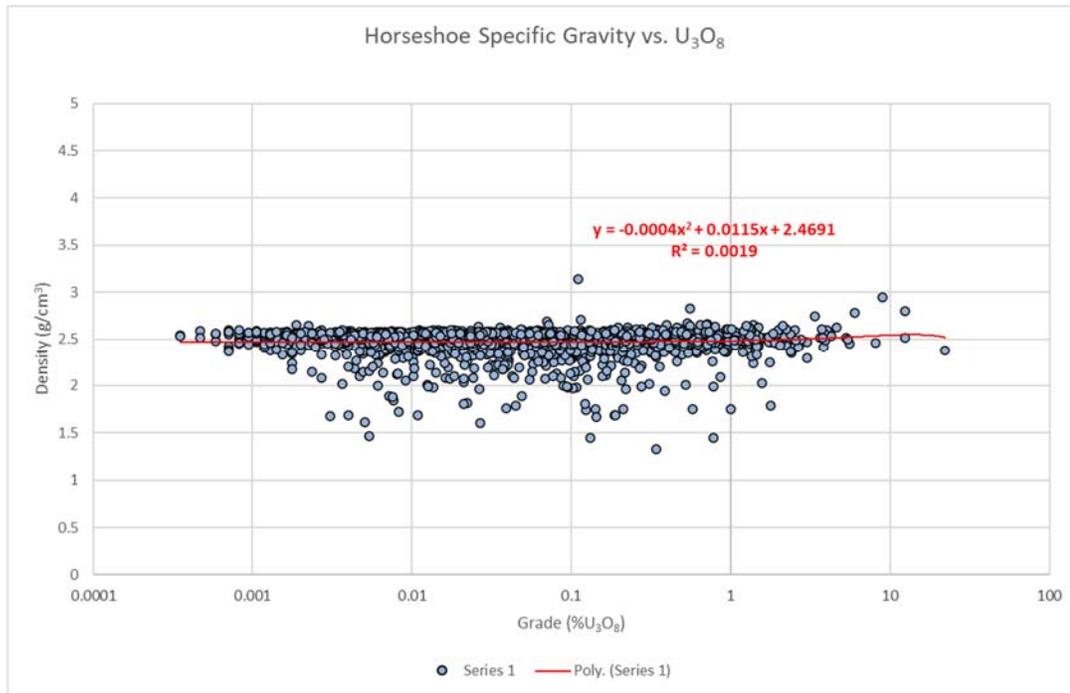


Figure 14-5: Horseshoe Density vs U₃O₈

Table 14-2: Horseshoe Density Statistics

<i>Horseshoe Density Statistics</i>	
Mean	2.48
Standard Error	0.00
Median	2.52
Mode	2.54
Standard Deviation	0.15
Sample Variance	0.02
Kurtosis	10.98
Skewness	-2.44
Range	1.81
Minimum	1.33
Maximum	3.14
Sum	5461.39
Count	2198.00

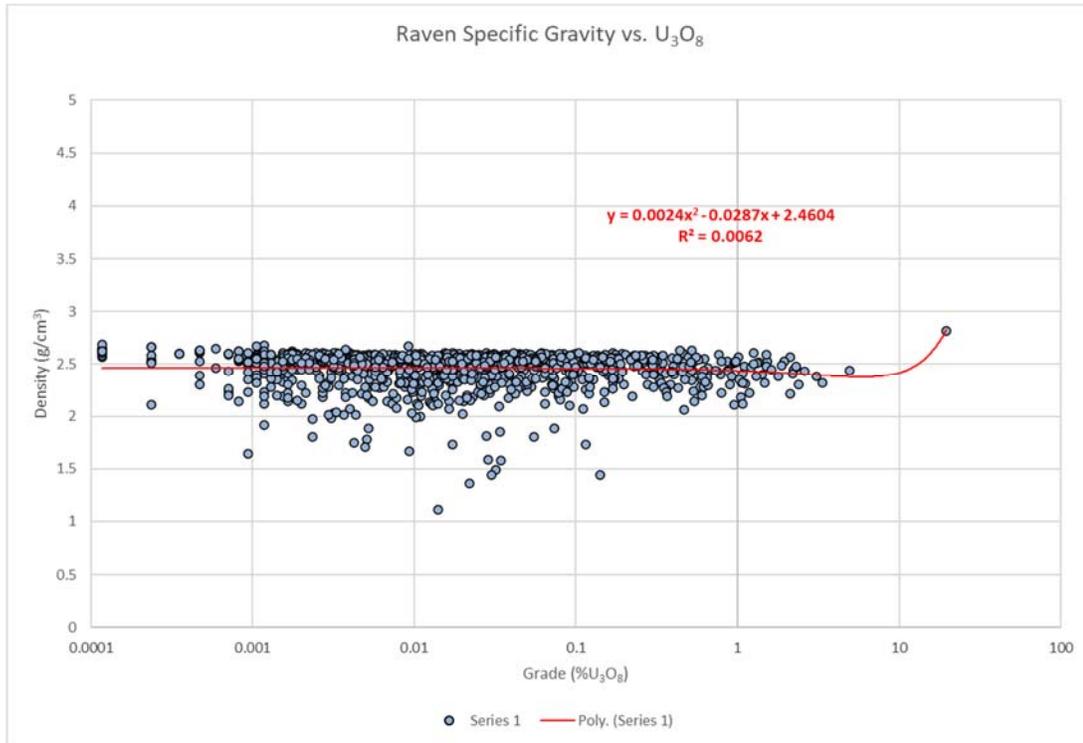


Figure 14-6: Raven Density vs U₃O₈

Table 14-3: Raven Density Statistics

<i>Raven Density Statistics</i>	
Mean	2.48
Standard Error	0.00
Median	2.53
Mode	2.57
Standard Deviation	0.18
Sample Variance	0.03
Kurtosis	8.47
Skewness	-2.24
Range	1.82
Minimum	1.11
Maximum	2.93
Sum	3780.93
Count	1526.00

14.6 Composites

Assays were composited to 1.0 metre lengths, which is the 80th percentile of the lengths contained within the mineralized wireframe. The minimum composite length allowed is 0.15 metres. The compositing method chosen in Datamine Studio RM is the one whereby all samples are included in one of the composites. This is achieved by adjusting the composite length but trying to keep the length as close as possible to the 1.0 metre. Compositing had the effect of slightly reducing the coefficient of variation.

14.7 Capping

Basic statistics, histograms, and cumulative probability plots for each metal were applied to determine appropriate capping grades. UEX capped the Horseshoe assays at 10 percent and the Raven assays at 1.88 percent after generating cumulative probability plots. These are illustrated in Figures 14-7 and 14-8. Basic statistics for the uranium assays, composited assays, composite assays trimmed to inside the wireframe, and composite assays trimmed to the wireframe with capping applied, are summarized in Table 14-4. The authors used the composite assayed that were capped and trimmed to the uranium wireframe assays to complete the block model estimations for each deposit.

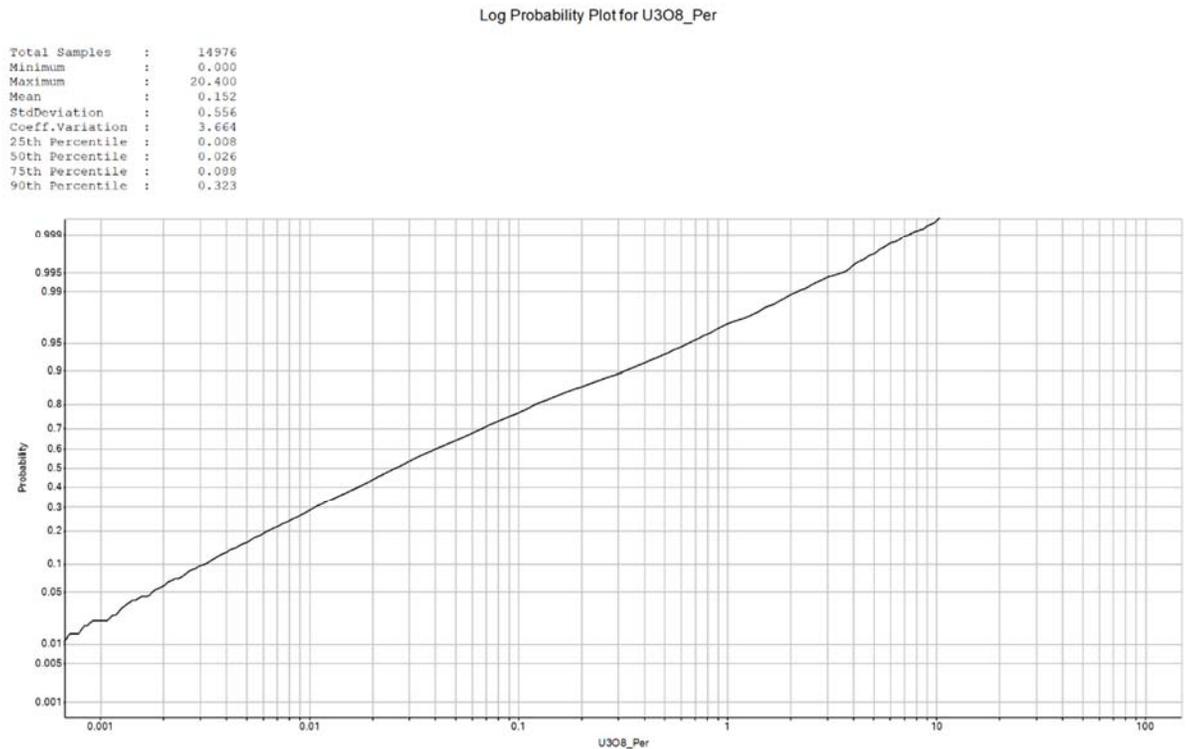


Figure 14-7: Log Probability Plot for Horseshoe Composite and Trimmed Assays

Log Probability Plot for U3O8_Per

Total Samples : 12177
 Minimum : 0.000
 Maximum : 18.800
 Mean : 0.076
 StdDeviation : 0.270
 Coeff.Variation : 3.550
 25th Percentile : 0.007
 50th Percentile : 0.020
 75th Percentile : 0.057
 90th Percentile : 0.158

Red Line – Capped Value

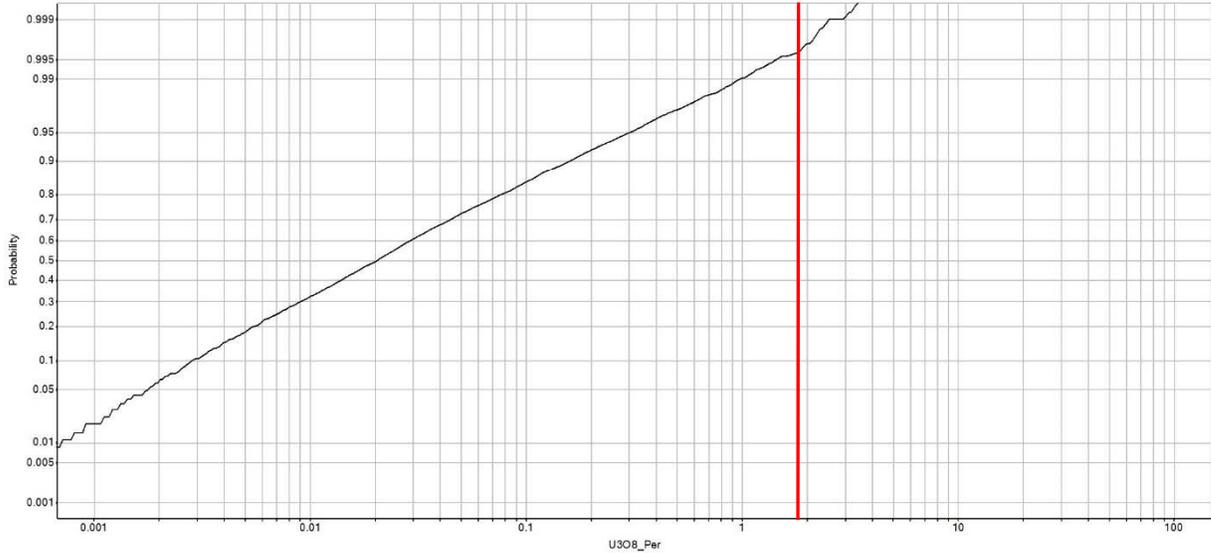


Figure 14-8: Log Probability Plot for Raven Composite and Trimmed Assays

Table 14-4: Basic Statistics for Mineralized Wireframes at Horseshoe and Raven

Horseshoe and Raven Deposits							
Deposit	Sample Count	Minimum	Maximum	Mean	Standard Deviation	Coefficient of Variation	Capped Count
Assays							
Horseshoe	24068	0.0000	20.40	0.100	0.449	4.50	-
Raven	21463	0.0000	18.80	0.047	0.214	4.51	-
Comp. Assays							
Horseshoe	23755	0.0000	20.40	0.100	0.449	4.48	-
Raven	20983	0.0001	18.80	0.048	0.211	4.42	-
Comp. Trim. Assays							
Horseshoe	14976	0.0000	20.40	0.152	0.556	3.66	-
Raven	12177	0.0001	18.80	0.076	0.270	3.55	-
Trim. Cap. Assays							
Horseshoe	14976	0.0000	10.00	0.150	0.513	3.42	8
Raven	12177	0.0001	1.88	0.073	0.184	2.53	42

14.8 Block Model Definition

UEX followed the block size criteria set forth in the 2009 NI 43-101 Horseshoe-Raven Mineral Resource Technical Report as a starting point, with a block size of 5 by 5 by 2.5 metres for the mineralized wireframe. The blocks were visually checked by UEX in both 2D and 3D and deemed it appropriate to use the existing block criteria as referenced above. Sub-cells, at 0.25 metres resolution, were used to respect the geology of the modelled wireframe. Sub-cells were assigned the same grade as the parent cell. The block model was rotated on the Z-axis to honour the orientation of the mineralization. The characteristics of the final block model are summarized in Table 14-5.

Table 14-5: Horseshoe and Raven Deposits Block Model Specifications

Horseshoe Deposit							
Lenses	Axis	Block Size (m)		Origin*	Number of Cells	Rotation Angles	Rotation Priority
		Parent	Sub-cell				
All	X	5	0.25	573955	158	-	-
	Y	5	0.25	6,446550	75	-	-
	Z	2.5	0.25	-60	190	335	1
Raven Deposit							
Lenses	Axis	Block Size (m)		Origin*	Number of Cells	Rotation Angles	Rotation Priority
		Parent	Sub-cell				
All	X	5	0.25	572300	62	-	-
	Y	5	0.25	6,446420	217	-	-
	Z	2.5	0.25	90	136	76	1

* UTM grid (NAD 83 datum)

14.9 Search Ellipsoid

UEX used chose search ellipsoids based on the controls of mineralization at both deposits. The X axis was the long axis as it is parallel to the main trend of the axial plane that controls mineralization. The Y axis was rotated to match the general dip of the units. The Z axis was most restrictive to limit spreading/smearing of material between zones of higher-grade mineralization (Table 14-6).

Table 14-6: Search Ellipse Parameters for Horseshoe and Raven Estimation

Horseshoe Deposit								
R1x	R1y	R1z	Angle¹	Angle¹	Angle¹	Axis	Axis	Axis
(m)	(m)	(m)	1	2	3	1	2	3
15	15	10	335	-40	0	3	1	3

Raven Deposit								
R1x	R1y	R1z	Angle¹	Angle¹	Angle¹	Axis	Axis	Axis
(m)	(m)	(m)	1	2	3	1	2	3
25	25	10	345	-40	0	3	1	3

¹ The rotation angles are shown in Datamine RM convention.

14.10 Estimation Strategy

Table 14-5 summarizes the general estimation parameters used for the uranium estimation. Grade estimation used an inverse distance weighting squared estimation algorithm and three passes informed by composited, capped and trimmed to wireframe assays. The first pass was the most restrictive in terms of search radii required. Successive passes usually populate areas with less dense drilling, using less restrictive data requirements (Table 14-6). Upon completion of the estimation UEX reviewed the resource estimate at each cross-section to visually ensure that the estimation was representative of the assay grades where the drillhole pierces/passes through the wireframe. For the first estimation pass, assays from at least 5 samples were required to estimate a block, though most blocks used the maximum numbers or assays allowable if it could get them.

Table 14-7: Estimation Parameters for Horseshoe and Raven Deposits

Horseshoe Deposit			
Parameter	1st Pass	2nd Pass	3rd Pass
Interpolation method	ID2	ID2	ID2
Search range X (relative to ellipse)	1X	1X	1X
Search range Y (relative to ellipse)	1X	1X	1X
Search range Z (relative to ellipse)	1X	1X	1X
Minimum number of Assays	5	3	3
Maximum number of Assays	10	12	24

Raven Deposit			
Parameter	1st Pass	2nd Pass	3rd Pass
Interpolation method	ID2	ID2	ID2
Search range X (relative to ellipse)	1X	2X	4X
Search range Y (relative to ellipse)	1X	2X	4X
Search range Z (relative to ellipse)	1X	2X	4X
Minimum number of Assays	5	3	3
Maximum number of Assays	24	24	24

Table 14-8: Volume Estimated per Pass for Each Deposit

Horseshoe Deposit			
Lenses	Estimation	Volume	Percent
	Pass	Estimation	Estimated
All	1	196,577	70%
	2	81,913	29%
	3	1187	1%

Raven Deposit			
Lenses	Estimation	Volume	Percent
	Pass	Estimation	Estimated
All	1	303,772	88%
	2	39,005	11%
	3	1159	1%

14.11 Block Model Validation

The resulting block models for both the Horseshoe and Raven Deposits were validated by:

- Comparison of block model volumes to volumes within solids
- Visual comparison of colour-coded block model grades with drill hole grades on section and plan plots
- Comparison of block model grades and drill hole grades using swath plots

14.11.1 Block Volume/Solid Volume Comparison

The block model volumes were compared to the wireframe volumes (Table 14-9). Both deposits returned nearly identical volumes for the block models versus the wireframes. The very small variation in volume is likely from using cubes to fill a complex irregular shape.

Table 14-9: Wireframe Volume vs Block Model Volume

Horseshoe	
Wireframe Volume (m ³)	Block Model Volume (m ³)
4,495,576	4,495,127
Raven	
Wireframe Volume (m ³)	Block Model Volume (m ³)
5,174,080	5,174,176

14.11.2 Visual Validation of Sections

The visual comparisons of block model grades with composite grades for both deposits show a reasonable correlation between the values. No significant discrepancies were apparent from each section that was reviewed. Examples of this process can be seen in Figure 14-9 and Figure 14-10.

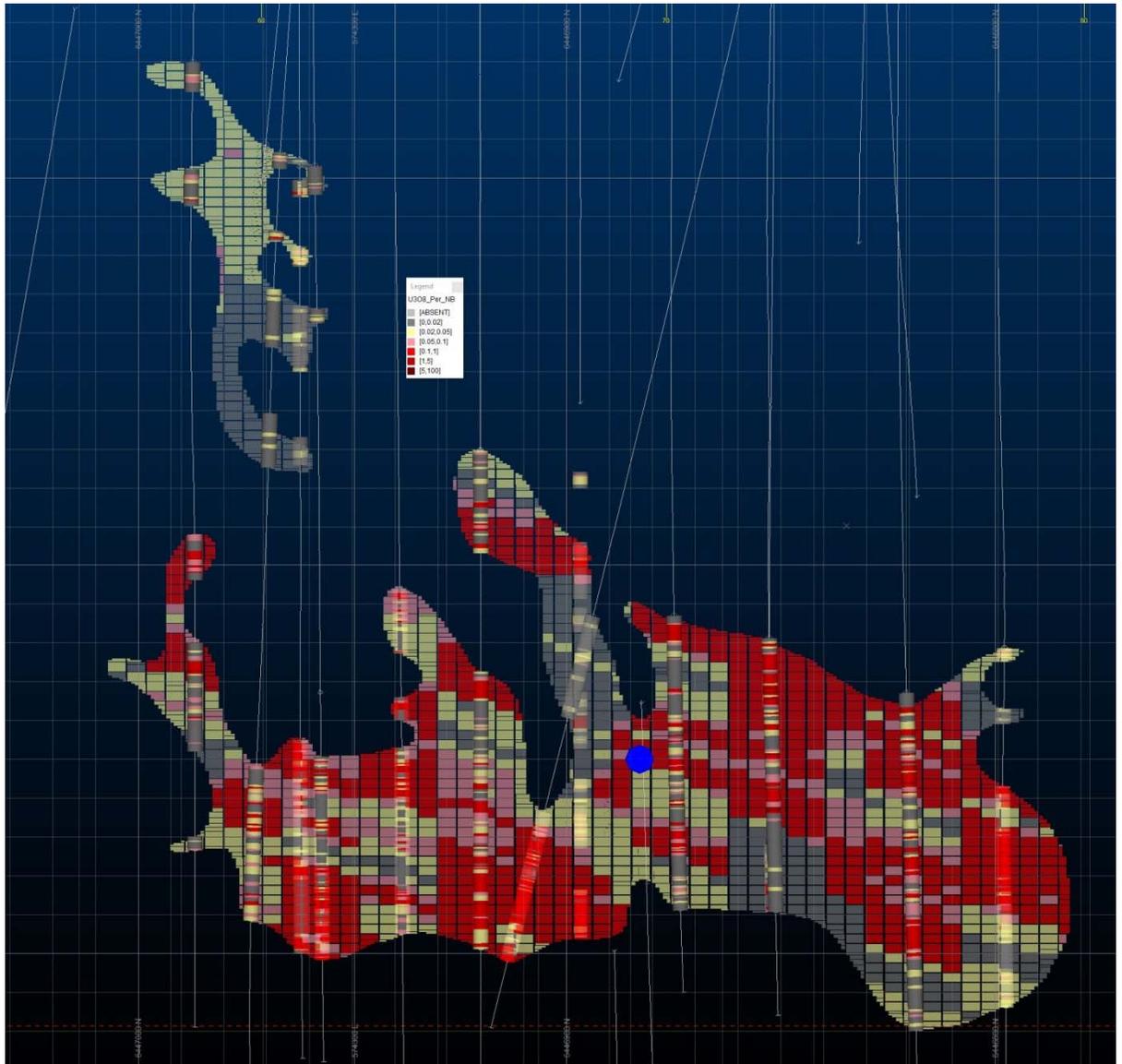


Figure 14-9: Horseshoe Visual Check of Drill Hole Grades Against Block Grades (Section Orientation of 335°)

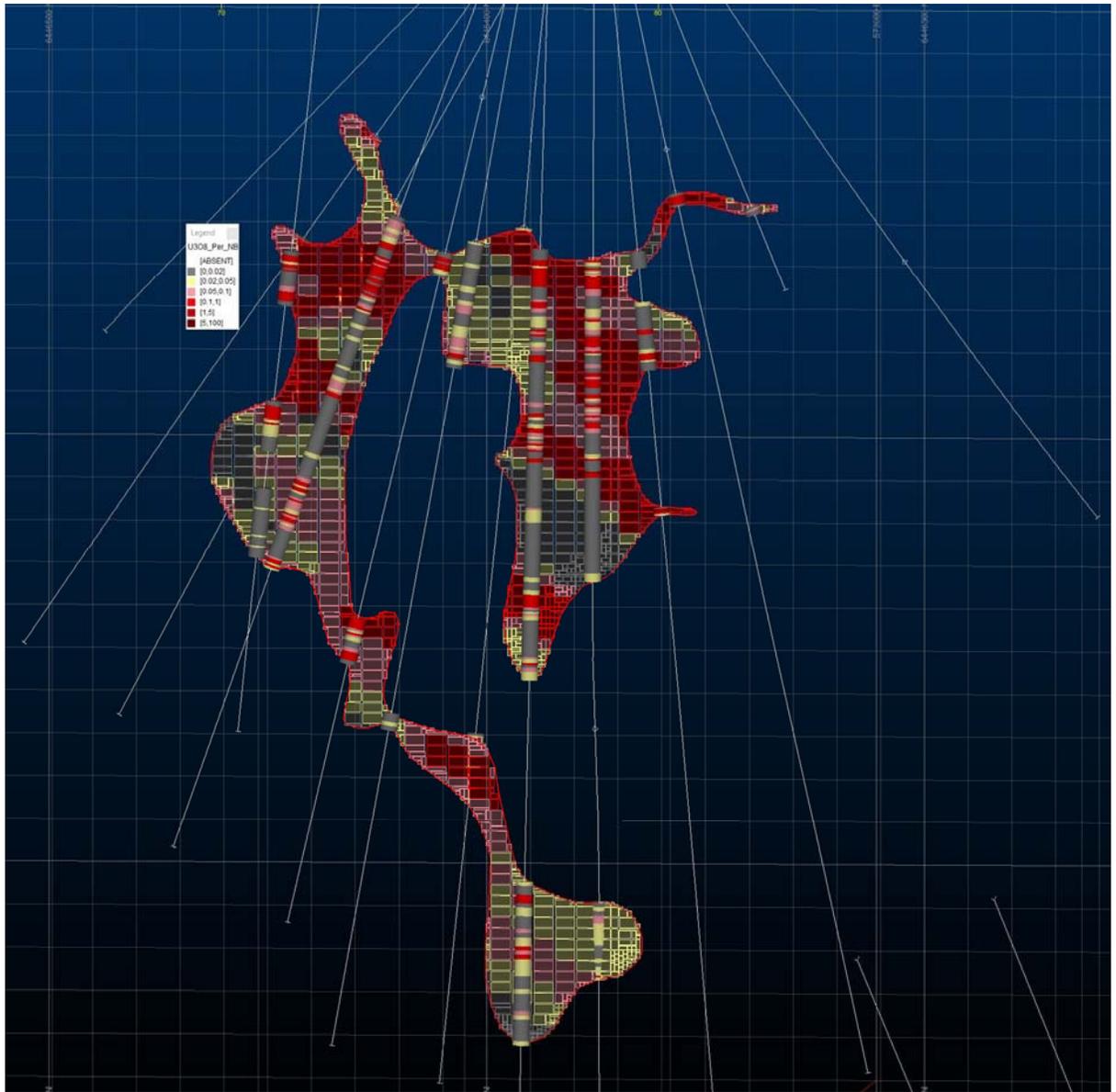


Figure 14-10: Raven Visual Check of Drill Hole Grades against Block Grades (Section Orientation of 345°)

14.11.3 Swath Plots

Swath plots have been generated for the block model grades vs the drill holes assays for each wireframe. In general, the swath plots show a good correlation between drill holes and ID2 values. There are a few instances where the swath plot has a few peaks that weakly correlate but that is likely due to the irregular morphology of the deposits as it progresses along the X direction. The Swath Plots show that the block model is not exaggerating the localized high-grade uranium assays and was used as confirmation that the model is not over-estimating uranium grades.

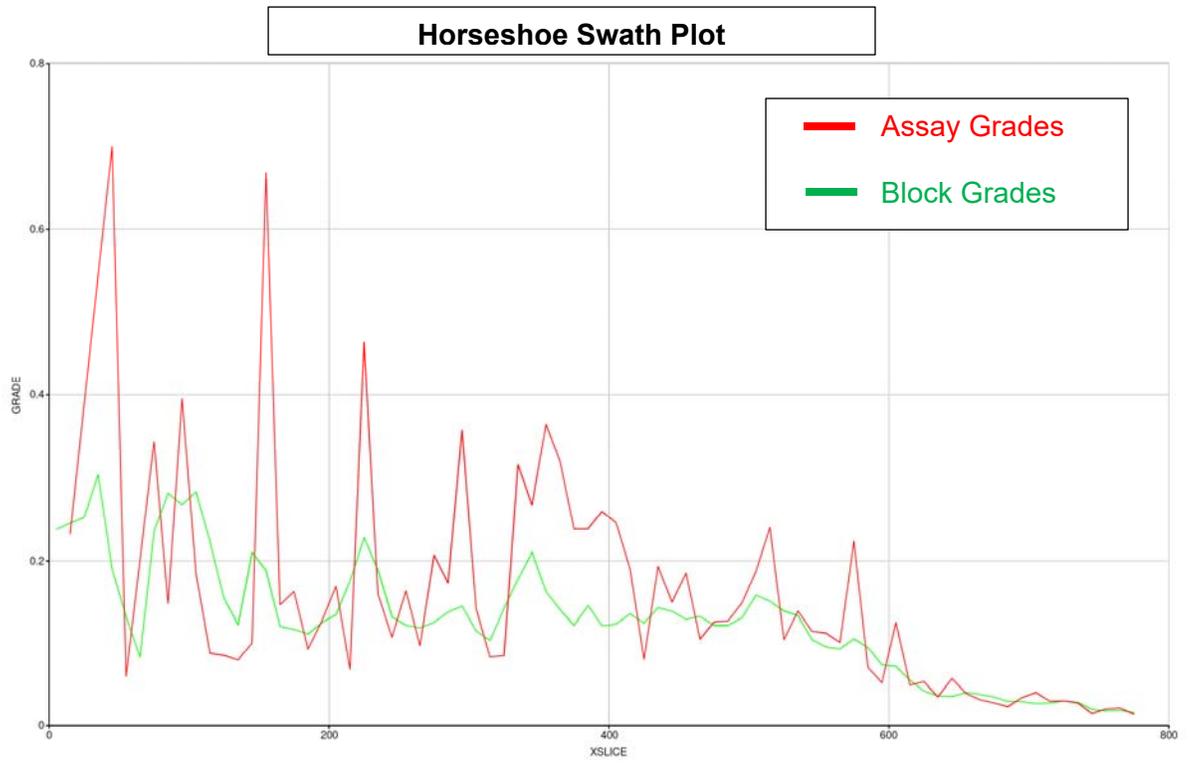


Figure 14-11: Horseshoe Swath Plot in the X Direction

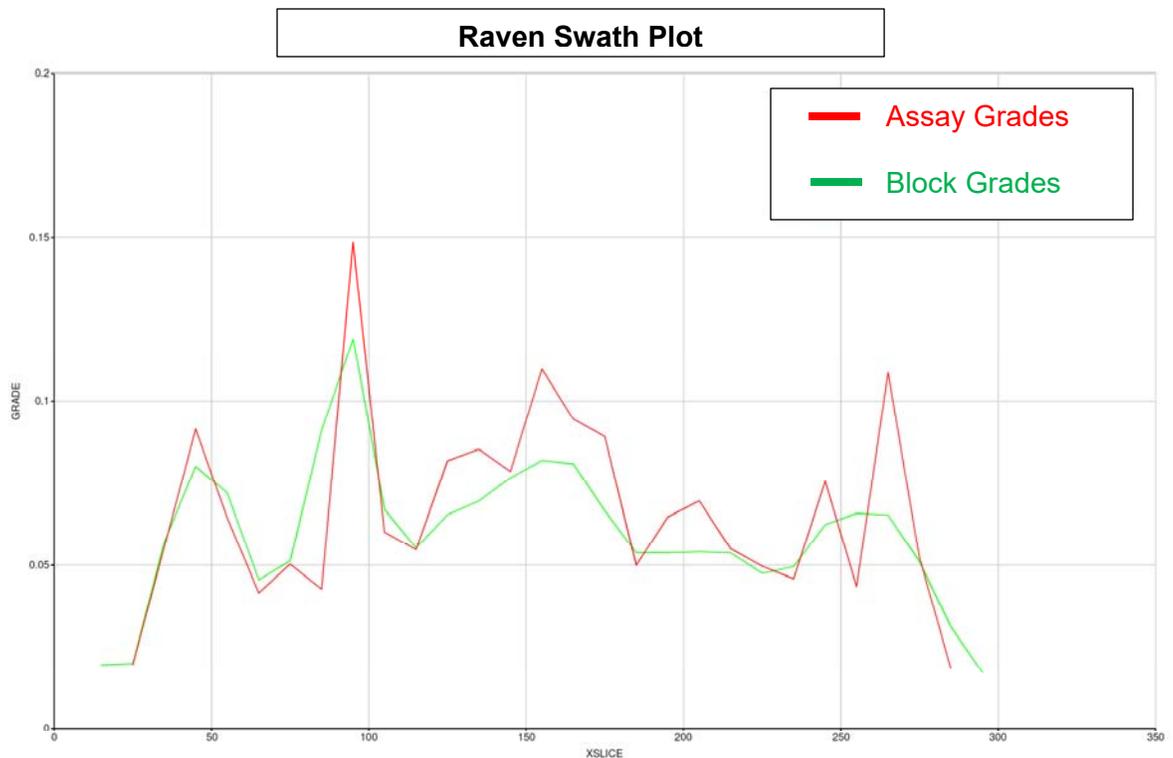


Figure 14-12: Raven Swath Plot in the X Direction

14.11.4 Validation Author Statement

Validation checks confirm that the block estimates are a reasonable representation of the informing data considering the current level of geological and geostatistical understanding of the Project.

14.12 Mineral Resource Classification

Block model quantities and grade estimates were classified according to the CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014) by Mr. Nathan Barsi, P.Geo. (APEGs#15012).

“Mineral resource classification is typically a subjective concept, and industry best practices suggest that resource classification should consider the confidence in the geological continuity of the mineralized lenses, the quality and quantity of exploration data supporting the estimates, the geostatistical confidence in the tonnage and grade estimates, and the continuity at the reporting cut-off grade. Appropriate classification criteria should aim at integrating these concepts to delineate regular areas at a similar classification.”

The authors are satisfied that the geological modelling honours the current geological information and knowledge. The location of the samples and the assay data are sufficiently reliable to support resource evaluation. The sampling information was acquired by core drilling with pierce points between 7 and 30 m apart, but generally at 10 m across section and 25 m along strike. UEX is confident that it has modelled the

overall spatial location of the uranium mineralization and that it is representative of the controls. Preliminary metallurgical data has been collected and has been disclosed above in the relevant section. UEX considers all block estimates within the mineralized lenses to satisfy the classification criteria for an Indicated Mineral Resource.

CIM *Definition Standards for Mineral Resources and Mineral Reserves* defines a mineral resource as:

“[A] concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth’s crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.”

The “*reasonable prospects for economic extraction*” requirements, generally implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade that considers extraction scenarios and processing recoveries.

For the purposes of this report the authors decided to use the same cut-off grade Golder Associates applied in the 2009 Resource report as the additional drilling only increased the drilled metreage by ~ 13%. This report uses the 2009 report as a reference point to add the additional pounds to the deposit from the new information, while keeping the majority of criteria the same. Upon review, the authors consider that it is appropriate to report the Horseshoe-Raven Deposits mineral resource at the same cut-off grade of 0.05 percent U₃O₈.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resources will be converted into mineral reserve. The authors are unaware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, and political or other relevant issues that may materially affect the mineral resources.

The Mineral Resource Estimate for the Horseshoe and Raven Deposits is presented in Table 14-10.

Table 14-10: Horseshoe and Raven Deposits Mineral Resource Estimates

Horseshoe Deposit Uranium Resource				
Deposit	Category	Quantity (Tonnes)	Average Grade U₃O₈ (%)	Total lbs U₃O₈
Horseshoe	Indicated	4,982,500	0.215	23,594,000
Raven Deposit Uranium Resources				
Deposit	Category	Quantity (Tonnes)	Average Grade U₃O₈ (%)	Total lbs U₃O₈
Raven	Indicated	5,370,000	0.117	13,832,400

*Mineral resources are not mineral reserves and have not demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into mineral reserve. All figures are rounded to reflect the relative accuracy of the estimates. Resources were estimated using a cut-off grade of 0.05% U₃O₈.

14.13 Grade Sensitivity Analysis

The mineral resource model is relatively sensitive to the selection of the reporting uranium cut-off grade. To illustrate this sensitivity, the quantities and grade estimates are presented in Table 14-11 at various cut-off grades. The reader is cautioned that the figures presented in this table should not be misconstrued with a Mineral Resource Statement. The tables are only presented to show the sensitivity of the block model estimate to the selection of U₃O₈ cut-off grade.

Table 14-11: Global Block Model Quantities and Grade Estimates at Various U₃O₈ Cut-Off Grades

Horseshoe Grade Estimates			
Cut-Off	Indicated Blocks		
Grade	Volume / Quantity		Grade
U₃O₈	Volume	Tonnage	U₃O₈
(%)	(m³)	(tonnes)	(%)
None	4,495,127	11,147,916	0.109
0.01	4,113,990	10,202,696	0.119
0.02	3,415,704	8,470,945	0.140
0.05	2,009,077	4,982,512	0.215
0.10	1,196,033	2,966,088	0.313
0.15	866,315	2,148,462	0.386
0.20	628,722	1,559,230	0.466
0.25	468,775	1,162,562	0.548
0.30	372,190	923,032	0.620
0.35	300,907	746,250	0.689
0.40	238,923	592,530	0.771

Raven Grade Estimates			
Cut-Off	Indicated Blocks		
Grade	Volume / Quantity		Grade
U₃O₈	Volume	Tonnage	U₃O₈
(%)	(m³)	(tonnes)	(%)
None	5,174,176	12,831,957	0.064
0.01	5,013,261	12,432,888	0.066
0.02	4,117,590	10,211,623	0.077
0.05	2,165,334	5,370,028	0.117
0.10	867,706	2,151,912	0.186
0.15	439,339	1,089,560	0.250
0.20	244,018	605,165	0.312
0.25	149,652	371,138	0.368
0.30	93,338	231,479	0.424
0.35	60,029	148,873	0.481
0.40	40,251	99,822	0.534

The sensitivity analysis indicates that a large portion of the resource for the deposits are lower grade pounds.

15 MINERAL RESERVE ESTIMATE

Not Applicable at this stage of the project.

16 MINING METHODS

A preliminary mining method was proposed in the 2011 PEA. The authors have not completed any review, expressed any view, or completed any work towards determining a possible or viable mining method for the Horseshoe or Raven uranium deposits at this time. The 2011 PEA is no longer considered current by the Company and the mining methods proposed in the 2011 PEA should not be relied upon.

17 RECOVERY METHODS

A preliminary recovery method was presented in the 2011 PEA listed below:

- Doerksen, G., Melis, L., Liskowich, M., Murphy, B., Palmer, K., and Pilotto, D., 2011. Preliminary Assessment Technical Report on the Horseshoe and Raven Deposits, Hidden Bay Project Saskatchewan, Canada. Report by SRK Consulting (Canada) Inc. to UEX Corporation.

Subsequent to the 2011 PEA, an internal scoping study was completed for UEX by JDS Energy & Mining Inc. in 2016 to assess the viability of Heap Leaching the recovered uranium mineralization. Initial conclusions support the use of the heap leaching method for recovery, with a more robust test recommended as follow-up to the study.

The authors have not completed any review, expressed any view, or completed any work towards determining a possible or viable recovery method for the Horseshoe or Raven uranium deposits at this time. The 2011 PEA is no longer considered current by the Company and the recovery method proposed in the 2011 PEA should not be relied upon.

18 PROJECT INFRASTRUCTURE

Project infrastructure was described in detail in the 2011 PEA. The authors have not completed any review, expressed any view, or completed any work regarding the project infrastructure for the Horseshoe or Raven uranium deposits at this time. The 2011 PEA is no longer considered current by the Company and the project infrastructure proposed in the 2011 PEA should not be relied upon.

19 MARKET STUDIES AND CONTRACTS

Market studies and contracts were described in detail in the 2011 PEA. The authors have not completed any review, expressed any view, or completed any work regarding market studies for the Horseshoe or Raven uranium deposits at this time. The 2011 PEA is no longer considered current by the Company and the market studies presented in the 2011 PEA should not be relied upon.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

Environmental studies, permitting and social or community impact were described in detail in the 2011 PEA. The authors have not completed any review, expressed any view, or completed any work regarding environmental studies, permitting, or social or community impact for the Horseshoe or Raven uranium deposits at this time. The 2011 PEA is no longer considered current by the Company and these matters addressed in the 2011 PEA should not be relied upon.

21 CAPITAL AND OPERATING COSTS

Proposed capital and operating costs for the development of the Horseshoe and Raven deposits were described in detail in the 2011 PEA. The authors have not completed any review, expressed any view, or completed any work regarding capital and operating costs for the Horseshoe or Raven uranium deposits at this time. The 2011 PEA is no longer considered current by the Company and the capital and operating costs proposed in the 2011 PEA should not be relied upon.

22 ECONOMIC ANALYSIS

An economic analysis of the development of the Horseshoe and Raven deposits were described in detail in the 2011 PEA. The authors have not completed any review, expressed any view, or completed any work concerning an economic analysis for the Horseshoe or Raven uranium deposits at this time. The 2011 PEA is no longer considered current by the Company and the economic analysis contained in the 2011 PEA should not be relied upon.

23 ADJACENT PROPERTIES

The Horseshoe-Raven Property is surrounded by mineral claims that are operated by UEX Corporation, Cameco Corporation, IsoEnergy, and Scott Bell. These properties are primarily explored for uranium mineralization.

The information regarding equity ownership and work activity was collected from the Government of Saskatchewan MARS system for land management, the Saskatchewan Mineral Assessment Database, and various company press releases.

A concise summary of the exploration status on the mineral claims surrounding the Horseshoe-Raven Property is provided herewith.

23.1 *UEX Corporation*

UEX has 100 percent ownership of the Hidden Bay Property, adjacent to the northern claims of the West Bear Property. The Hidden Bay Property is comprised of 46 claims totalling 51,847 hectares.

The Hidden Bay Property is within the Paleoproterozoic Wollaston Domain. Helikian sandstone of the Athabasca Group overlays only the western part of the Property, with up to 120 metres of sandstone. The most recent activity on the property was drilling and geophysics in 2021. The 2021 drill program was 6 diamond drill boreholes (1,315 m) at the Uranium-Nickel sands target area. The geophysical surveys were on two grids at Dwyer Lake Grid, and at the Uranium-Nickel Sands target for a total of 103.1 km grid preparation, and 95.5 km HLEM geophysical survey.

23.2 *Cameco Corporation*

Cameco Corporation is 100% owner of the 10,105 ha Rabbit Lake Property that is host to the past producing Rabbit Lake, Collins Bay A, Collins Bay B, and Collins Bay D mines, as well as the deposits at Eagle Point. Infrastructure on the property is the underground mine at Eagle Point, the conventional mill, and necessary supporting camp and shop facilities, airport, haul road, above ground tails, and in-pit tails in the Rabbit Lake Pit. The Eagle Point mine and Rabbit Lake mill facility were placed on care and maintenance in 2016 and remain so at the time of writing this report. Indicated resources remaining at Eagle Point are 39.7 million lb U₃O₈ with 33.6 million lb U₃O₈ inferred.

23.3 *IsoEnergy*

The Trident Project is located 4 kilometres southeast of the Raven and Horse-shoe deposits and 8 km south of the Rabbit Lake mine and mill. Trident's five claims cover 15,874 hectares in two blocks that are adjacent to the southern boundary of the Horseshoe and Raven Claim.

23.4 *Scott Bell*

Scott Bell holds title to one claim of 32.5 ha that is adjacent the eastern boundary of the Horseshoe Raven claim.

24 OTHER RELEVANT DATA AND INFORMATION

No other significant information concerning the Horseshoe and Raven Deposits and their local area is considered relevant to the report at this time. Future preliminary economic assessments, pre-feasibility and feasibility studies will address environmental, economic, and cultural aspects of potential future development of the deposits.

25 INTERPRETATION AND CONCLUSIONS

UEX undertook developing singular wireframes for both the Horseshoe and Raven deposits at the recommendation of the authors of the previous 2009 technical report and 2011 Preliminary economic study. Both reports highlighted that there was up to a 15% difference between interpolation methods when calculating mineral resources. This fact, coupled with historical drilling at the Horseshoe and Raven deposits necessitated the need for an updated mineral resource for each of the deposits.

The Horseshoe Deposit is estimated to contain an indicated resource of 23,594,000 lbs U_3O_8 with an average grade of 0.215% U_3O_8 at a cut-off of 0.05% U_3O_8 . The Raven Deposit is estimated to contain and indicated resource of 13,832,400 lbs U_3O_8 with an average grade of 0.117% U_3O_8 at a cut-off of 0.05% U_3O_8 . No inferred resources have been estimated for either deposit.

This results in the Horseshoe deposit's contained uranium in indicated resources in this estimate decreased by ~ 1.5 percent but the average grade increased by ~ 9% percent at a cut-off grade of 0.05% U_3O_8 when compared to the combined indicated and inferred resources reported in the historical 2009 technical report. This decrease is likely attributed to the wireframes 28 subzones in the 2009 estimate being very thin and vein like in their original construction. The singular wireframe was developed in this estimate using the former subzones for each deposit as a guide. The alternate section definition and the distribution of the drill holes and assays resulted in the distal extensions of the majority of the subzones being truncated by the newly interpreted singular wireframes around the margin of the two deposits.

The Raven deposit's contained uranium in indicated resources in this estimate is increased by 0.1 percent along with the average grade increase at a cut-off of 0.05% U_3O_8 when compared to the combined indicated and inferred resources reported in the historical 2009 technical report. The objective of the 2011 drill program at the Raven deposit was to confirm continuity of mineralization. The very small increase in resources estimated at the Raven deposit in this report, as well as the corresponding slight increase in grade is partly the result of the results of the 2011 drill program.

This updated mineral resource will be able to be used for any future development work on the Horseshoe and Raven property given that all the drillhole data has been included and disclosed at effective date of this report.

26 RECOMMENDATIONS

The qualified persons recommendations are as follows:

26.1 Preliminary Assessment

Given that the Horseshoe and Raven resource is in the Indicated category; and that 2011 Preliminary Assessment Technical Report is considered out of date it is recommended that new Preliminary Economic Assessment be initiated to determine the potential economics and viability of mining the Horseshoe and Raven Deposits. This document would determine whether the projects warrant advancing to a pre-feasibility study. Completing the preliminary economic assessment is estimated to cost CAD \$150,000 - \$200,000.

26.2 Check Assay Sampling

During the proposed Preliminary Economic Assessment work recommended in Section 26.1 above, it is recommended that UEX undertake a check assay sampling program to supplement the summer 2009 to 2011 assay data as the duplicate data could not be easily segregated and validated from the assay database. The qualified persons are confident that duplicate samples were taken but a new check assay sample program would eliminate any doubt of the validity of the data. It is recommended to take ~ 500 samples across both deposits as this would be ~ 2% of the sample population to date. The majority of the costs associated with a new check sample program would be analytical costs as the sample pulps from the original assay sample pulps maybe still be available from the laboratory. If the samples are available, the estimated cost of a check sampling program would be CAD \$25,000. If they are not available, the cost would increase by approximately 33% as new samples would have to be collected from the historical drill core the next time an exploration program is active at the Raven camp where the core is stored. This would cost approximately CAD\$35,000.

26.3 Advanced Metallurgy

Preliminary metallurgy was completed for the 2009 and 2011 technical reports. Additional metallurgical work was completed in 2015 focusing on the viability of using uranium heap leach recovery, and the results of the 2015 testing was then used in an Scoping Study completed by JDS Mining in 2016. That study recommends that UEX advance the heap leach metallurgical testing to the next phase by completing additional compositing of representative samples from the Horseshoe and Raven deposits to continue developing the parameters for recovering the mineralized material in a sellable product. A recommend minimum of 6 tonnes of material is required for this work. The cost of completing this work would be CAD\$2,350,000 and is broken down in the Table 26-1.

Table 26-1: Cost Break Down of Metallurgical Drill Program

Description	Total (C\$ 000's)
Direct Costs	
Personnel	220
Field Equipment Costs	30
Analysis	80
Travel and Transport	15
Miscellaneous	5
Subtotal	350
Contractor Costs	
Diamond Drilling	1,500
Camp Costs	400
Other Contractor	100
Subtotal	2,000
Total	2,350

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28 DATE AND SIGNATURE PAGE

This report titled "2021 Technical Report on the Horseshoe-Raven Project, Saskatchewan" and dated November 16, 2021, was prepared, and signed by the following authors:

Dated at Saskatoon, SK
16 November 2021

(Signed & Sealed) "Nathan A. Barsi"



Nathan A. Barsi, P.Geo.
District Geologist



Dated at Saskatoon, SK
16 November 2021

(Signed & Sealed) "Christopher J. Hamel"



Christopher J. Hamel, P.Geo.
Vice President, Exploration



29 CERTIFICATES OF QUALIFIED PERSONS

CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled: **2021 Technical Report for the Horseshoe-Raven Project, Saskatchewan** with an effective date of November 16, 2021, and a signature date of November 16, 2021.

I, Nathan Barsi, do hereby certify that:

- 1) I am the District Geologist with the firm of UEX Corporation with an office at Unit 200, 3530 Millar Avenue, Saskatoon, Saskatchewan, Canada.
- 2) I am a graduate of the University of Saskatchewan in 2007, I obtained a B.Sc. Geology. I have practiced my profession continuously since May 2007. My experience that is relevant to the scope of this Technical Report is:
 - District Geologist for UEX Corporation from October 2021 to present where I supervised field teams and helped to direct uranium and cobalt-nickel exploration field programs in Saskatchewan.
 - Senior Geologist for UEX Corporation from January 2021 to October 2021 where I managed field projects and completed resource definition work on the West Bear Cobalt Nickel Deposit.
 - Project Geologist for UEX Corporation from 2018 to January 2021 where I was the project manager on the West Bear Project for all field activities for the company.
 - Contract Geologist for UEX Corporation from December 2016 to December 2017 where I participated in the execution of the Christie Lake field program.
 - Project Geologist, Cameco Corporation from April 2014 to October 2016 where I was responsible for the management of uranium field exploration programs in northern Saskatchewan.
 - Exploration Geologist, Cameco Corporation from May 2007 to March 2014 where I participated in the successful execution and management of uranium field exploration programs.
- 3) I am a professional Geoscientist registered with the Association of Professional Engineers & Geoscientists of Saskatchewan (APEGGS#15012).
- 4) I have personally inspected the subject project and was on site on between June 9 to 17, 2021.
- 5) I have read the definition of Qualified Person set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association, and past relevant work experience, I fulfill the requirements to be a Qualified Person for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.
- 6) I am employed by the issuer, UEX Corporation, and therefore am not independent of the issuer as defined in Section 1.5 of National Instrument 43-101.
- 7) I am the co-author of this report and contributed to sections 1 to 26 of this technical report.
- 8) I have not been involved with the subject property prior to my employment at UEX Corporation
- 9) I have read National Instrument 43-101 and confirm that this technical report has been prepared in compliance therewith.
- 10) As of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Saskatoon, Saskatchewan
November 16, 2021


Nathan Barsi, P.Geo. (APEGGS#15012)
Project Geologist
UEX Corporation

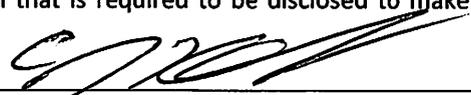
CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled: **2021 Technical Report for the Horseshoe-Raven Project, Saskatchewan** with an effective date of November 15, 2021, and a signature date of November 15, 2021.

I, Christopher Hamel, do hereby certify that:

- 1) I am Vice President, Exploration with the firm of UEX Corporation with an office at Unit 200, 3530 Millar Avenue, Saskatoon, Saskatchewan, Canada.
- 2) I am a graduate of the University of Saskatchewan in 2001, I obtained a B.Sc. Geology. I have practiced my profession continuously since June 2001. My experience that is relevant to the scope of this Technical Report is:
 - Exploration Manager for UEX Corporation from January to September 2021, and Vice President, Exploration from October, 2021 to present, where I guide field teams in the planning and execution of field programs generative and evaluative work for the company.
 - Chief Geologist for UEX Corporation July 2017 to January 2021 where I supported field activities and performed generative and evaluative work for the company.
 - Contract Geologist for UEX Corporation from January 2017 to June 2017 where I participated in the execution of the Christie Lake field program.
 - Contract Geologist Forum Uranium November 2016 participated in the uranium exploration field program at the Clearwater Project.
 - District Geologist, Cameco Corporation from April 2012 to October 2016 where I supervised field teams and helped to direct uranium exploration field programs in Saskatchewan.
 - Project Geologist, Cameco Corporation from April 2008 to March 2012 where I was responsible for the management of uranium field exploration programs in northern Saskatchewan.
 - Exploration Geologist, Cameco Corporation from April 2004 to March 2008 where I participated in the successful execution and management of uranium field exploration programs.
- 3) I am a professional Geoscientist registered with the Association of Professional Engineers & Geoscientists of Saskatchewan (APEGSS#12985).
- 4) I have personally inspected the subject project and was on site on between June 9 to 17, 2021.
- 5) I have read the definition of Qualified Person set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association, and past relevant work experience, I fulfill the requirements to be a Qualified Person for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.
- 6) I am employed by the issuer, UEX Corporation, and therefore am not independent of the issuer as defined in Section 1.5 of National Instrument 43-101.
- 7) I am the co-author of this report and responsible for sections 1 to 27 and accept professional responsibility for those sections of this technical report.
- 8) I have had no involvement with the subject property prior to my employment at UEX Corporation.
- 9) I have read National Instrument 43-101 and confirm that this technical report has been prepared in compliance therewith.
- 10) As of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Saskatoon, Saskatchewan
November 16, 2021



Christopher Hamel, P.Ge. (APEGSS#12985)
Vice President, Exploration
UEX Corporation