TECHNICAL REPORT FOR URANIUM ENERGY CORP'S NICHOLS PROJECT KARNES COUNTY, TEXAS

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1. SUMMARY

This technical report provides a description of the property, the geological characteristics and mineral resource estimate at the Uranium Energy Corp (UEC) Nichols Project in Karnes County, Texas.

This report has been prepared to present the results of initial exploration drilling and sampling conducted by UEC and to update the mineral resource estimates from historical to current Canadian Institute of Mining (CIM) accepted classifications.

The UEC Nichols Project uranium property is located in central Karnes County, Texas and currently consists of nine in situ uranium mining leases that cover approximately 1,040.7 net acres of contiguous properties. The original holder of mining leases for this area was Texaco Uranium (Texaco). Texaco conducted an exploration program that included the current UEC leases in 1979 and 1980. Records indicate that at least 10 holes were drilled on the UEC properties and elevated gamma-ray log responses indicated the potential presence of uranium. The leases were taken over by Chevron Resources some time thereafter.

UEC obtained the mine leases from individual mineral rights owners in 2006. The leases are for 5 years with a 5 year renewal option. To date, UEC has completed 34 exploration boreholes and one core hole on the Nichols property.

The UEC Nichols Project is located in the Interior Coastal Plains portion of the Gulf Coastal Plains physiographic province. The geology is characterized by Tertiary age sedimentary units that dip and thicken toward the Gulf of Mexico. Uranium mineralization is not uncommon in multiple Tertiary age formations and is predominantly found within sand-sandstone type tabular and roll front deposits. The presence of strong reductants in permeable sands created either widespread or localized areas of reducing conditions in the groundwater that caused dissolved uranium migrating in oxidizing groundwater to precipitate and concentrate.

This report presents inferred mineral resources determined by UEC's 2008 exploration drilling results. Verification work, including the 34 exploration holes and core hole, by UEC at the property shows that a reported historical estimate by Texaco may have been reasonable; however this historical estimate, although similar to the inferred mineral resource determined during this project, is not current. UEC is not treating the historical estimate as current mineral resources as defined in NI 43-101. The historical estimate should not be relied upon. The current mineral resource estimate for the UEC Nichols Project is provided in Section 17 and summarized in Table 1-1.

Due to the uncertainty that may be attached to inferred mineral resources it cannot be assumed that all or any part of an inferred mineral resource will be upgraded to an indicated or measured mineral resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public

disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies.

Table 1-1. Mineral Resource Summary

Inferred				
Cutoff GT	Tons	Grade %eU_3O_8[†]	Pounds U_3O_8	Thickness (ft)
0.3	900,000	0.07	1,307,000	6

[†] Values Rounded to Nearest Hundredth

A cut-off grade of 0.02% eU_3O_8 and a GT product equal to or greater than 0.3 were used to define the mineral resources. This is based on a uranium price of US$40 per pound and estimated operating costs of approximately US$20 per pound. These cutoffs are in the range of most ISR mining operations in the south Texas trend and in other states where mining from similar depths with similar mineralization occurs. The author is of the opinion that the methodology and mineral resources determined by UEC were completed using accepted industry standards and the classification of resources meets the CIM definition standards as required by National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators (NI 43-101).

The results of borehole gamma-ray and resistance logs prompt fission neutron (PFN) logs, and lithologic logs indicate that elevated uranium mineralization occurs in at least two of the four identified sand units in the Whitsett Formation of the Jackson Group at this locality. All of the mineralized units are below the water table at depths from approximately 300 to 450 feet. Evaluation of existing average grade of uranium mineralization data and the depth of mineralized zones indicate in situ recovery (ISR) is potentially the most suitable mining method for this project.

The author recommendations for this project include the following:

1. Phase I is to proceed with another phase of exploration drilling, including selective coring. This is recommended for this project to upgrade the mineral resource classification to indicated and measured resources. Additionally this will provide further definition of the site mineralization mode, data verification, and better define the site geology and groundwater flow regime.

2. If the results of the Phase I drilling successfully increase the mineral resource base and classification, Phase II is recommended to gather data from a selective coring program to conduct data verification and disequilibrium determination, uranium assays, pertinent laboratory testing, including leachability studies, bulk density analyses, grain size analyses, and organic content determinations. Additionally, several temporary monitoring wells may be set in cored boreholes to collect preliminary hydrogeologic information including; preliminary hydraulic conductivity values and potential well yields, groundwater samples, and in-place field Eh measurements.

The estimated costs for the recommended additional work are US$250,000 for Phase I and US$350,000 for Phase II work.

2. INTRODUCTION AND TERMS OF REFERENCE

UEC, a Nevada reporting company, requested that the author prepare a technical report consistent with the requirements of the NI 43-101 for the company's Nichols Project located in Karnes County, Texas. The purpose of this technical report is to present the results of initial geological investigations (exploration drilling, coring, and logging) conducted by UEC at the property and to determine the current mineral resources classifications consistent with the CIM definition standards at the project. The project property consists of nine contiguous mining leases with subsurface deposits of uranium in sands/silty sand units of the Whitsett Formation of the Jackson Group.

Within this report common units of measure used and equivalent conversion factors include the following.

1 foot	=	0.3048 meter
1 yard	=	0.9144 meter
1 mile	=	1.61 kilometers
1 acre	=	0.4047 hectare
1 pound	=	0.454 kilogram
1 short ton	=	2,000 pounds

Additionally, several uranium mining terms used in this report are given below along with a brief definition.

cU_3O_8: Uranium assay or grade determined from chemical analysis of a sample, also referred to as chemical or natural uranium

eU_3O_8: An assay or grade of equivalent uranium as determined from a gamma ray log

Disequilibrium factor (DEF): A factor (ratio of cU_3O_8 or prompt fission neutron PFN U_3O_8 to eU_3O_8) used to adjust the grade of uranium when determining in-place mineral resources where most of the exploration data was borehole gamma logs

Eh: In this report, Eh is a unit of measurement (mV or millivolts) of the oxidation reduction potential (Redox) of groundwater. Eh is a measure of groundwater's capacity to either release or gain electrons in chemical reactions. The process of oxidation involves losing electrons while reduction involves gaining electrons

GT: A value calculated for a specific downhole interval by multiplying the average mineral grade in $\%U_3O_8$ times the interval thickness. Also referred to as G*T or GT

ISR: In Situ Recovery, a mining method where the mineral sought is recovered from the host rock by indirect methods that are generally chemically-based and do not require removal of the rock

Uranium Mineralization: In this report, uranium mineralization refers to specific areas where anomalous, down-hole gamma-ray activity was recorded, indicative of the presence of radionuclides such as U_3O_8.

Any references to monetary values in this report are in US currency unless otherwise noted.

The primary sources of information and data utilized in the preparation of this technical report are mainly from the geologic files (including geophysical logs, maps, cross sections, and uranium assay and testing data) of UEC (recent) and Texaco (historic). The author made a personal inspection of the property on September 22-23, 2008, that included: review of all available geophysical electric logs and field maps; observation of the operation of the UEC geophysical logging truck; and observation and verification of the UEC drilling-coring program and sample handling and logging procedures.

3. RELIANCE ON OTHER EXPERTS

The information presented in this report was obtained from a review of internal company files, reports, and maps in the UEC Austin office and at the Nichols Project site. Personal communications with UEC personnel who are qualified experts (listed below) in geology and ISR mining in South Texas and especially with the Nichols Project geology were utilized in the development of the geologic setting and mineral resource estimates. UEC personnel have been open and helpful with providing available information or data requested by the author.

The author of this report has extensive professional experience in uranium mining in the South Texas Uranium trend. His experience includes working directly for two operating ISR mining companies for several years and working on numerous projects for uranium mining company clients while working for a Texas consulting firm. The author's experience is in uranium mining and exploration but does not include detailed land, legal, and environmental work.

Although the author is not a land ownership and tenure specialist, he has examined the data relating to the verification of ownership of the land held under lease by UEC. He has reviewed the ownership examination data collected by UEC's Land Tenure Manager, Leonard Garcia, from deed records, deed of trust records, oil and gas lease records, abstract of judgment records, state and federal tax lien records, power of attorney records, probate records and official records of the County Clerk's Office of Karnes County, Texas.

The author of this report has also had discussions with Clyde L. Yancey, P.G., Exploration Manager, Leonard Garcia, Land Tenure Manager, and Larry Minter, P.G., Senior Geologist, all of whom are employees of UEC and are working on the Nichols Project.

4. PROPERTY DESCRIPTION AND LOCATION

The UEC Nichols Project property is located in south Texas near the northeast end of the extensive South Texas Uranium trend (Figure 4-1). The Nichols project consists of contiguous leases that would allow the mining of uranium by ISR methods while utilizing the land surface (with variable conditions) as needed, for mining wells and above ground facilities for fluid processing during the mining and groundwater restoration phases of the project. The UEC Nichols Project area is about 6 miles south of the town of Falls City (Figure 4-2). The approximate center of the project area is 28 d 53' 4" N latitude, 98 d 1 58" W longitude. Site drilling roads are gravel based and allow reasonable weather access for trucks and cars. Four-wheel drive vehicles may be needed during high rainfall periods.

Virtually all mining in Texas is on private lands with leases negotiated with each individual landowner/mineral owner. The principal Nichols property consists of one lease totaling about 909 acres. Seven other UEC leases in the northeast part of the project site brings UEC's total acreage in the area to 1040.7 acres. UEC obtained these mining leases during the period from 2006 to 2007. The leases are for 5 years with an option to renew for an additional 5 years. Royalties are on a sliding scale, based on the price of uranium at the date of delivery, ranging from 6 to 15%.

Texaco obtained a number of leases in the area, including the Nichols leases some years back (unknown) and completed an exploration drilling program resulting in an anecdotal historical uranium mineral resource estimate of approximately 1.2 million pounds. It is not known how much of the 1.2 million pounds was on the Nichols leases. UEC is not treating the historical estimate as current mineral resources as defined in NI 43-101. The historical estimate should not be relied upon.

No historic uranium mining is known to have occurred on any of the Nichols properties and only state permitted uranium exploration drilling has taken place. However, surface mining did take place on immediately adjacent property across the northwest boundary of the site. This mine is believed to be the Franklin pit, one of a number of open pit mines along the nearby Butler-Weddington trend mined from the late 1960s through the 1970s. No historic production records for this mine operation were available.

There are believed to be no existing environmental liabilities related to uranium exploration or production at the property leases. Prior to any mining activity at the Nichols Project, UEC is required to obtain a Radioactive Materials License, UIC Waste Disposal Well Permit, Aquifer Exemption, an Underground Injection Control (UIC) Mine Permit, and a Production Area Authorization (PAA) Permit for each wellfield developed for mining within the Mine Permit area. In addition, a waste disposal well will require a separate UIC Permit. These permits will be issued by Texas regulatory agencies. The current drilling and abandonment of uranium exploration holes on any of the leases is permitted by the Texas Railroad Commission. Reclamation and hole abandonment requirements under the permit are discussed in the drilling section of this report. Potential future environmental liability as a result of the mining must be addressed by the permit holder jointly with the permit granting agency. Most permits now have bonding

requirements for ensuring that the restoration of groundwater, the land surface, and any ancillary facility structures or equipment is properly completed.

Observations by the author during the site inspection indicated that historic uranium borehole drill locations were completely reclaimed, with no land surface disruption. Recent exploration boreholes have location markers but the excavated mudpits and drilling area have been reclaimed and re-graded to near original condition.

Figure 4-1-. Geology of South Texas Uranium Province

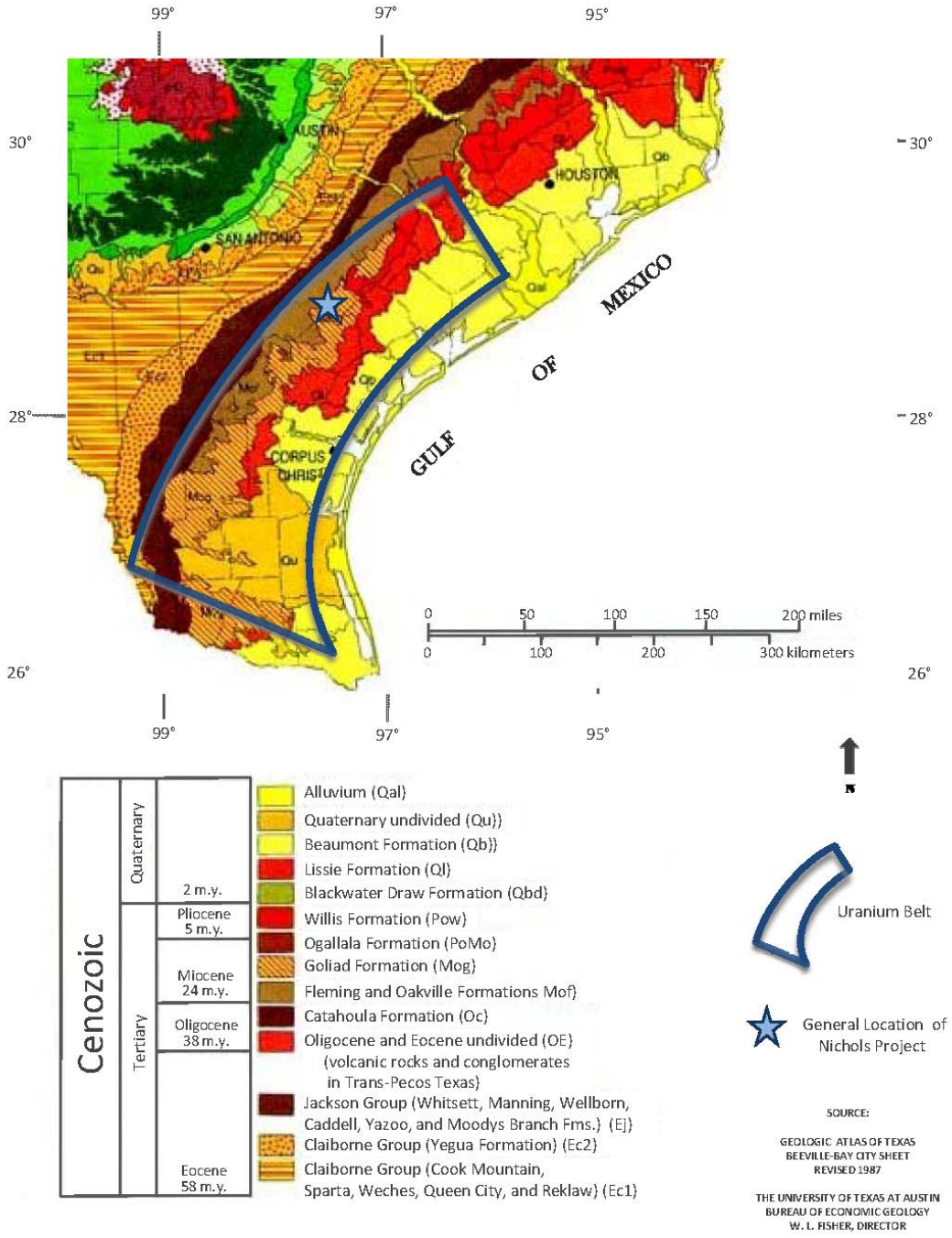


Figure 4-1. Geology of South Texas Uranium Province.

Figure 4-2 Nichols Project Location Map

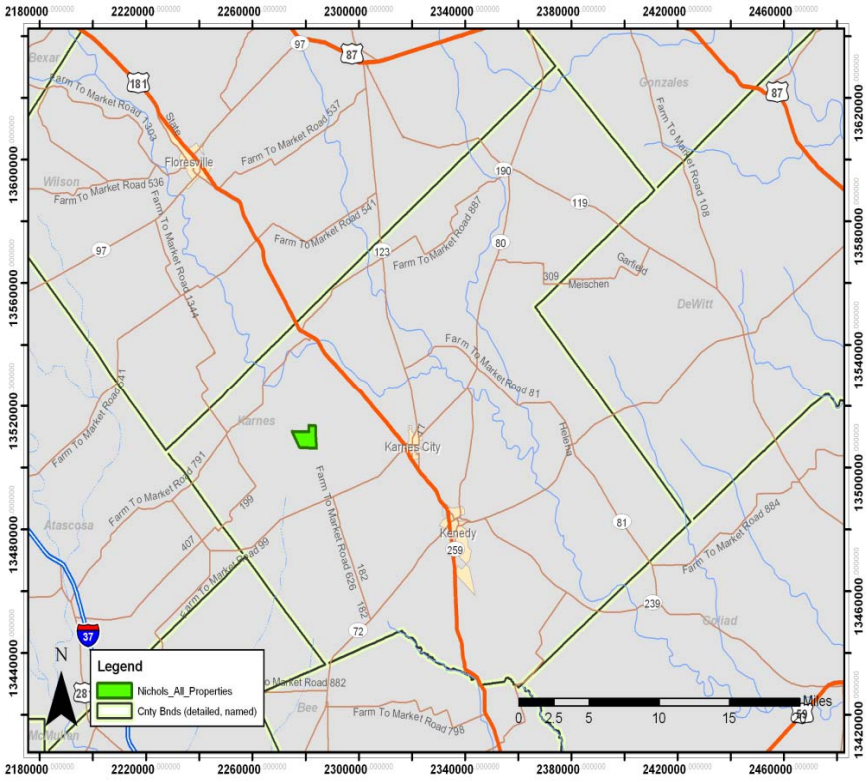


Figure 4-2. Nichols Project Location Map.

State Plane - Texas South Central - Feet - NAD83

5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

The Nichols Project area is situated in the interior portion of the Gulf Coastal Plain physiographic province (Texas BEG, 1996). The area is characterized by rolling topography with parallel to sub-parallel ridges and valleys. There is about 100 feet of relief at the site with ground surface elevations ranging from a low of 350 to a high of 450 feet above mean sea level. The leased property for the Nichols Project is used mostly for livestock grazing pasture and woodland. The overall property area is shown as having a Post Oak Woods, Forest, and Grassland Mosaic vegetation/cover type (Texas BEG, 2000).

The Nichols project site is easily accessible. From Karnes City take U.S. Highway 181 west for approximately 3 miles to State Highway 1144. Go south on 1144 to County Road (CR) 215. Go west on CR 215, then south on CR 211 to the project site. The County Roads are all weather gravel roads. The site location also has good access to larger population centers for additional personnel needs and supply resources. San Antonio and Corpus Christi are both less than 100 miles from the site by automobile.

Karnes County has a population of about 18,000. The climate can be classified as subtropical with an average annual rainfall of 33.2 inches. Maximum mean temperatures averaging in the upper 90s occur in July and minimum mean temperatures in the lower 40s occur in January. Otherwise there is not a regular non-operating season.
Karnes County has an extended history of uranium mining as previous mining and milling has taken place near the towns of Hobson and Panna Maria. A good, basic infrastructure (roads, medical facilities, schools, etc) is in place in Karnes County. It is anticipated that an available workforce tempered by some uranium experienced personnel will be available.

The necessary rights for constructing needed surface processing facilities are in-place on selected lease agreements. Sufficient electric power is believed to be available in the area, however new lines may be needed to bring additional service to the plant site and wellfields.

6. HISTORY

The original holder of mining leases for this area was an independent exploration consortium that initially drilled the site, discovered the mineralized Nichols trend, and sold the leases to Texaco. Texaco conducted an exploration program to enhance the initial drilling, that included the current UEC leases in 1979 and 1980. Records indicate that at least 10 holes were drilled on the UEC properties and elevated gamma-ray log responses verified the l presence of uranium. The leases were taken over by Chevron Resources some time thereafter. The earliest information available in UEC files are engineering drawings indicating that Texaco was planning to develop an ISR operation on the Nichols property. Information from a individual familiar with Texaco's exploration program on the Nichols property, as well as specifics of the ISR engineering drawings, indicated a historic resource of 1.2 million pounds U_3O_8. However, it is not clear as to whether this included uranium resources on adjacent or nearby leases. UEC is not treating the historical estimate as current mineral resources as defined in NI 43-101. The historical estimate should not be relied upon.

To the best of the author's knowledge, there is no record that any historic uranium production has occurred at the Nichols project property.

7. GEOLOGICAL SETTING

The geologic area of investigation in this report occurs within Tertiary sediments of Oligocene to Eocene age deposited in a coastal strand plain barrier bar system bounded on the seaward side by a shallow open shelf and on the back barrier side by a lagoon-marsh system (Dickinson, 1976; Fisher et al., 1970). The primary exploration target is the Eocene-age Whitsett Formation of the Jackson Group. Here the Whitsett ranges in thickness from about 160 to 180 feet, and consists of, in descending order the Tordillo Sandstone, the Conquista Clay, and the Dilworth Sandstone. For ease of correlation we have designated the apparent Tordillo Sand as the N-1 Sand, a grouping of 3 siltstone/sands embedded within the Conquista Clay as the N-2 Sand(s), and two well developed sands in the approximate Dilworth stratigraphic position as the N-3 and N-4 Sands.

Current drilling results indicate elevated gamma readings have been identified only in the N1 and N2 sands to date, with that in the N2 being substantially more extensive and higher grade. The N1 and N2 sands are thought to be fluvial/deltaic in origin and the N3 and N4 sands are considered to be offshore bars. Deposition and concentration of uranium in the Jackson Group likely resulted due to a combination of leaching of uranium from volcanic tuff or ash deposits within the overlying Catahoula tuff. The leaching process occurred near the outcrop area where recharge of oxidizing groundwater increased the solubility of uranium minerals in the interstices and coating sand grains in the sediments. Subsequent downgradient migration of the soluble uranium within the oxygenated groundwater continued until the geochemical conditions became reducing and uranium minerals were deposited either as roll fronts or in tabular bodies due to varying stratigraphic or structural conditions.

The geologic units encountered during drilling and their approximate depths are as follows:

- From surface to approximately 300 feet, the Catahoula Fm. consisting of light pink to brown tuffaceous mudstones, siltstones and sandstones.
- From approximately 300 feet to 450 feet is the Whitsett Formation consisting of, in descending order, the Deweesville Sandstone, Conquista Clay and Dilworth Sandstone members.
- From 450 feet to 550 feet the Eocene Manning Formation which is reported to be about 300 feet in thickness. The Manning Fm. consists of a mixture of sandstones and mudstones, with numerous lignite beds and some volcanic ash deposits.

8. DEPOSIT TYPE

Mineralization within the Tertiary age formations of the Texas gulf coast area occur as both roll fronts, in which the mineralization occurs in a "C" shape, or as a more flat lying tabular body. The roll fronts are generally associated with an extended oxidation-reduction boundary or front. At this time there is insufficient data to make the determination that the elevated gamma layers are roll front or tabular bodies.

At the Nichols Project there are four stacked sand horizons (N1 through N4) that are separated vertically by zones of finer sand, silt, and clay. Typical cross-sections with highlighted elevated gamma readings on the geophysical logs (representative of eU_3O_8) at the project site have been prepared for this report. The location of these cross sections is shown on Figure 8-1 Borehole and Cross Section Location Map. The cross-sections are presented on Figures 8-2, 8-3 and 8-4. The mineralized zones roughly parallel the A-A' cross-section. Specific mineralized trends are not noted due to intense competitor activity.

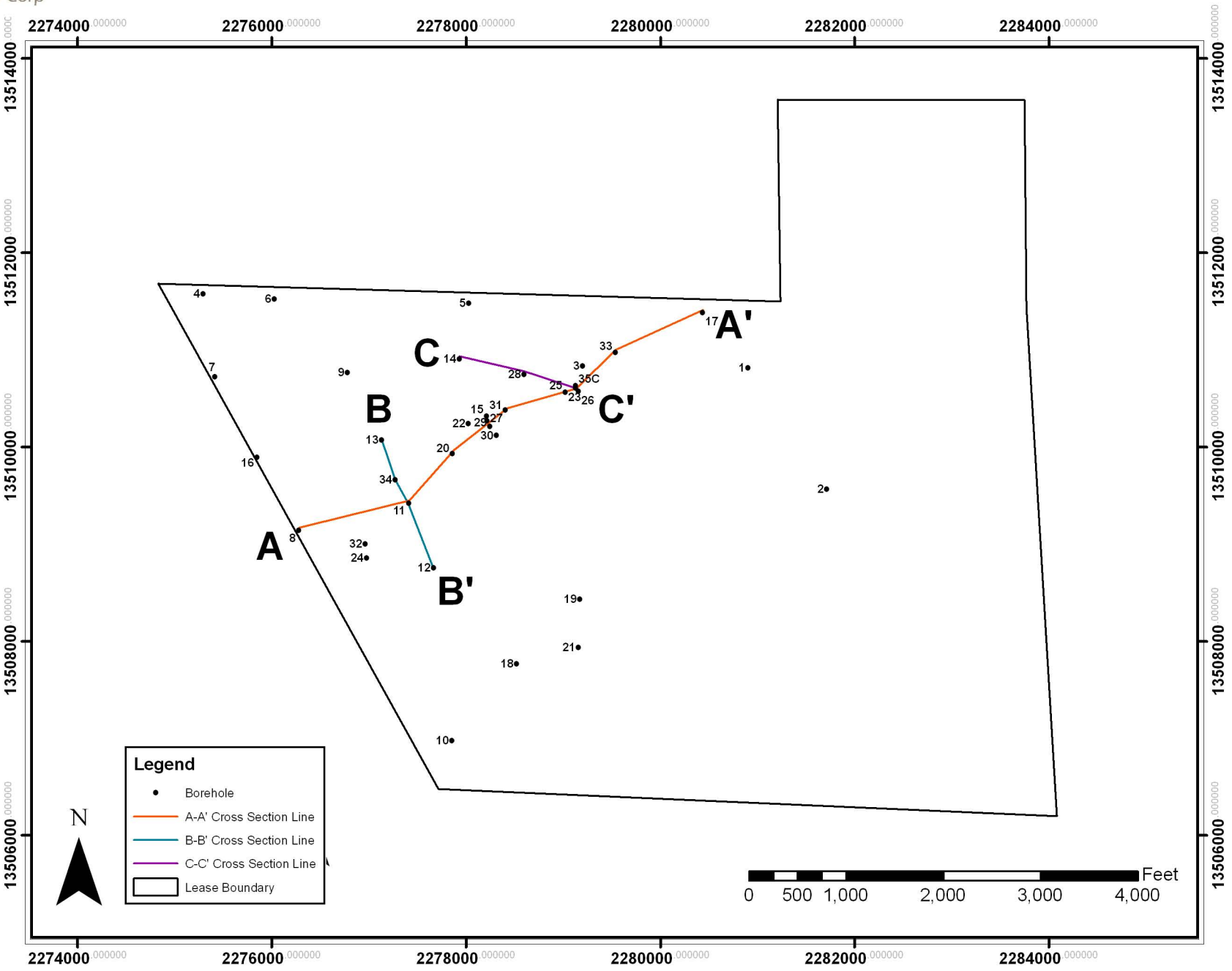


Figure 8-1. Borehole and Cross Section Location Map.

State Plane - Texas South Central - Feet - NAD83

Figure 8-2. Cross Section A - A’

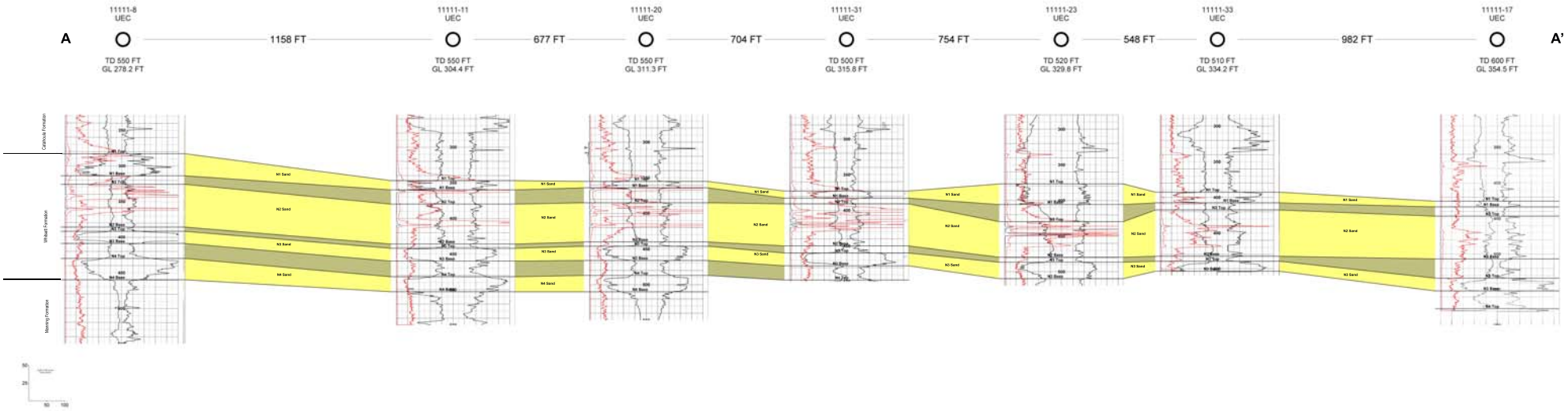


Figure 8-3. Cross Section B - B’

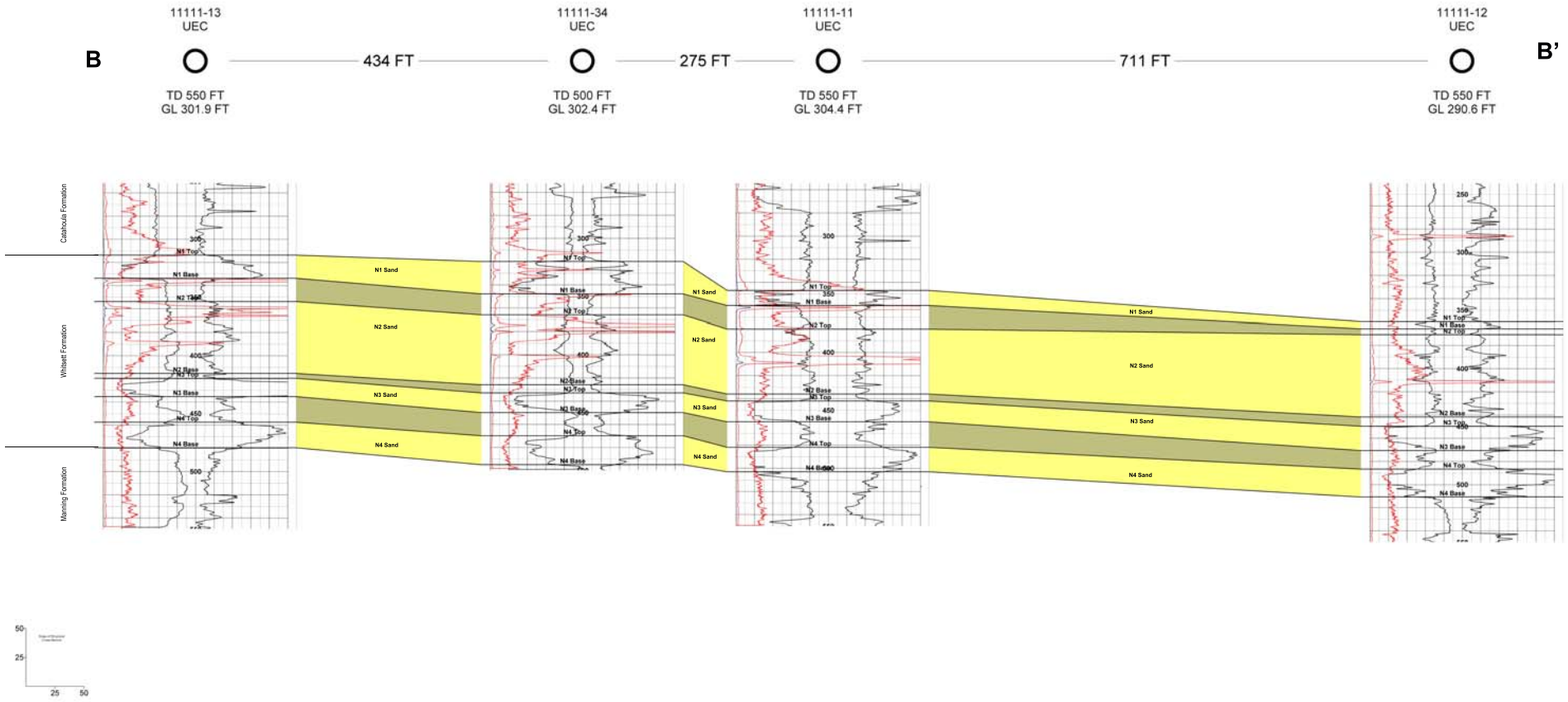
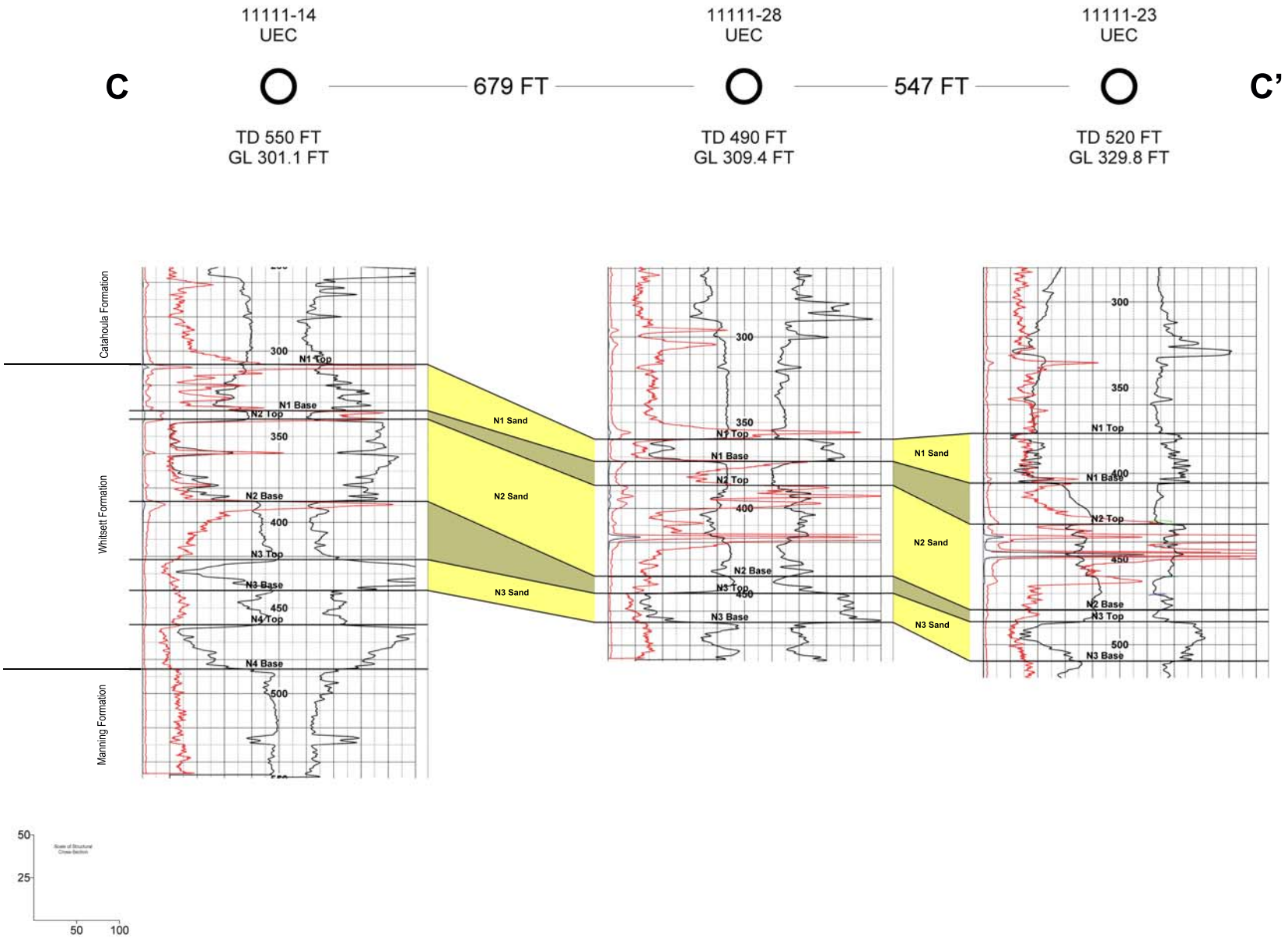


Figure 8-4. Cross Section C-C’.



9. MINERALIZATION

The four identified target sands at the Nichols Project occur as vertically stacked sands and sandstones and have been designated in descending order, the N1 through N4 Sands. Groundwater flowing from northwest to southeast in the Jackson sands likely contained low concentrations of dissolved uranium resulting from oxidizing conditions and the relatively short distance from the recharge area. The geochemical conditions in the sands near the UEC property changed from oxidizing to reducing due to an influx of reductants and/or the presence of abundant decaying organic matter in the host sands. Hydrogen sulfide and/or methane dissolved in groundwater are likely causes of reducing conditions in the area with consequent precipitation and concentration of uranium mineralization.

Identification of the uranium minerals has not yet been attempted at the UEC Nichols Project. The very fine uranium minerals found coating quartz grains and within the interstices in most south Texas sand and sandstone tabular and roll-front deposits has generally been believed to be dominantly uraninite, but that does not mean that such mineralization will be found on the Nichols Project. Detailed petrographic examination of disseminated uranium mineralization within sands/sandstones is generally not suitable for identification of the specific uranium minerals. Laboratory equipment such as x-ray diffraction units may be used to identify the minerals, however the specific mineral species typically found in reduced sands are generally similar in south Texas ISR projects and leaching characteristics are also similar. Based on the experience of the ISR mines throughout south Texas, the use of gamma-ray logging with a calibrated logging probe has become the standard method to determine the thickness and estimated grade of uranium bearing minerals.

The primary geologic target is the Eocene-age Whitsett Formation of the Jackson Group. Here the Whitsett ranges in thickness from about 160 to 180 feet, and consists of, in descending order, the Tordillo Sandstone, the Conquista Clay, and the Dilworth Sandstone. For ease of correlation we have designated the apparent Tordillo Sand as the N-1 Sand, a grouping of 3 siltstone/sands embedded within the Conquista Clay as the N-2 Sand(s), and two well developed sands in the approximate Dilworth stratigraphic position as the N-3 and N-4 Sands.

Based on 34 completed boreholes and one core hole on the first phase of UEC drilling at Nichols, the most extensive and highest grade mineralization has been identified in the N-2 Sand(s). Three boreholes and the core hole, all with grade thickness (GT) values above 0.3 feet-eU_3O_8%, (boreholes 11111-23, 11111-27, and 11111-31) have been logged within this ‘package’ of three siltstones/sands. Boreholes 23 and 27 are located in the central part of the lease approximately 1200 feet apart along a southwest-northeast trend. This is the primary trend of other ore bodies in the region. From drill cuttings the N-2 Sands appear to be silty to fine grained carbonaceous units. The organic materials within the units, which likely provided the reductants for mineralization development, are principally lignite. The N-2 Sands are embedded within a 60-90 foot thick section of Conquista Clay.

The only other mineralized unit identified to date is the N-1 Sand. This sand is weakly mineralized in several holes in the west central part of the property. The N-1 is a well developed sand unit which ranges in thickness from about 8 to over 20 feet. Typically the N-1 Sand occurs at a depth of about 300 feet, the N-3 at approximately 390 feet and the N-4 at approximately 490 feet. The stratigraphic dip is about 2 degrees to the southeast, so the depths of the units vary widely across the site. Trace alteration observed in hand specimens and gamma ray fluctuations within the N3 and N4 Sands indicate that mineralizing fluids have moved through and accumulated in these units, and therefore they are considered as resource targets at the Nichols project.

The N2 gamma ray anomaly zone is continuous for about 5,000 feet along a southwest/northeast trend. The trend appears to be related to a paleochannel, and the N1 Sand gamma ray anomaly also appears to be following the trend of the same paleochannel.

10. EXPLORATION

Exploration at the Nichols property was conducted by UEC using its truck-mounted, rotary mud drilling equipment. A backhoe is utilized to dig mud pits for each boring. At the conclusion of drilling, the boreholes are logged using one of UEC's truck-mounted logging units. At the conclusion of logging the boreholes are cemented and the drilling locations undergo a reclamation process approved by Railroad Commission of Texas (RRC). The RRC has oversight over the drilling and reclamation process and visually inspects each borehole location. As the exploration was carried out by way of drilling, further details of the exploration is included in Section 11 – Drilling.

11. DRILLING

Drilling for the Nichols Project has been conducted by UEC using its truck-mounted rigs drilling vertical holes ranging from about 4 to 6 inches in diameter. After reaching the designated total depth, the hole is circulated from bottom to clear the heavy cuttings from the hole and condition the hole for logging with a specialized calibrated tool that records resistance, spontaneous potential, and gamma ray. UEC owns two truck mounted logging units, one of which was assigned to this program. The gamma ray probe on each logging truck working on uranium drilling projects has to maintain calibration by regularly cross checking the probe calibration at a U.S. Department of Energy test pit near George West, Texas. The pit is set up for logging units to calibrate the gamma probe with a known radioactive source. This method has been successfully used in Texas since at least the mid-1970s. Calibration records are available for both of the UEC logging units. These records show that the UEC units have maintained industry standard calibration procedures for their probes.

Based on a review of drilling records, discussions with current UEC employees, and direct observation by the author, drilling on the property is conducted using mud rotary drilling with truck-mounted drilling rigs. Cuttings are typically taken at 10-foot intervals and placed in piles for a geologist to review for lithology and alteration. Because of the relatively steep dip, the boreholes have been completed at various depths. Early in the drilling program, the target total depth for each exploration borehole was 15 – 20 feet below the base of the N4 Sand. Once completed, the drill holes were logged by a UEC company logging unit using a probe with gamma ray, self-potential and single point resistance as well as downhole deviation. At the depth range of 300-500 feet measured bottom hole deviations from vertical are generally less than 10 feet.

For the initial exploration program UEC drilled a total of 34 boreholes and one core hole. Of the 35 holes, 4, including the core hole, contained uranium mineralization above the project grade cutoff (GT $\geq$ 0.3 feet-eU_3O_8%). Table 11-1 is a summary of the drilling results with the number of holes drilled with mineralized intercepts in each of the UEC mineralization designations.

All uranium grades have been determined from evaluation of calibrated gamma logs of the drill holes. The resulting grades are designated as equivalent percent U_3O_8 that have not been adjusted for the average DEF. The DEF has not yet been established for this site, but is discussed in Section 12-2 of this report.

Table 11-1 Summary of Current Drilling Results for the Nichols Project

No. Holes Total	Above Cutoff (≥0.3 GT)	Strong Mineral (≥0.2 <0.3 GT)	Mineral (≥0.1 <0.2 GT)	Other (<0.1 GT)
35	4	1	5	25

Mineralization classes are UEC designations
GT = Grade * Thickness in %e-U_3O_8-Feet

12. SAMPLING METHOD AND APPROACH

12.1 Gamma-Ray Logs

The equivalent mineralized intercepts calculated by UEC were derived from gamma-ray logs run as part of an electric log suite on each of the exploration drill holes. In addition to gamma-ray, the electric log suite included self-potential and single point resistance. The self-potential and resistance curves are primarily used to identify lithologic boundaries and to correlate sand and mineralized zones between drill holes. The equivalent U_3O_8 value (eU_3O_8) from the gamma-ray curves was calculated by converting counts per second (CPS) to grade ($\%U_3O_8$) for each one-half foot interval above a specific cutoff grade of 0.02%. This method is essentially the standard method as developed by the U.S. Atomic Energy Commission (AEC).

The UEC gamma-ray logs of each drill hole utilize the same basic methodology that has been used for years in the uranium industry. The use of downhole logging equipment to obtain a digital record of calibrated gamma-ray, single point resistance, and self-potential continues to be the primary method for exploration and delineation of uranium mineralized zones in South Texas ISR sites.

12.2 Disequilibrium

Uranium disequilibrium is the ratio of chemical or other direct assay method that measures the actual U_30_8 content (cU_30_8) to the equivalent U_30_8 content determined by a calibrated natural gamma ray log (eU_30_8). The first determination is generally conducted in a laboratory, while the second determination is typically a field measurement, from which an indirect or equivalent measure of uranium content is made. The ratio or disequilibrium between chemical/assay values of U_3O_8 and equivalent gamma logging values occurs because of the ongoing radioactive decay of uranium over time. A positive disequilibrium factor (DEF) >1.0 indicates the presence of more chemical uranium than equivalent uranium in the same nominal sample of subsurface. A DEF <1.0 indicates the presence of less chemical uranium than equivalent uranium in the same nominal amount of subsurface.

UEC's logging capabilities include a prompt fission neutron (PFN) downhole tool which has the ability to identify disequilibrium by a direct assay determination of U_3O_8 (cU_30_8) and a calibrated gamma ray log determination of U_3O_8 (eU_30_8) from the same logging tool in a drill hole. The PFN tool was run in addition to standard gamma on two holes at Nichols: borehole 1111-23 and core hole 1111-35C. Both of these holes contained mineralized intervals above the 0.3 GT value at the 0.02% cutoff.. A comparison of the mineralized intervals using the standard gamma tool and the PFN tool are presented below.

Hole #	Tool	Top of Interval	Interval/ Grade	GT	DEF
11111-23	Gamma	445.0	4.5'- 0.235	1.055	
11111-23	PFN	445.5	4.0'- 0.198	0.795	0.753
1111135C	Gamma	444.0	4.0'- 0.158	0.632	
1111135C	PFN	445.0	2.0'- 0.183	0.366	0.579

Based solely on these two logs, the DEF would appear to be <1.0, suggesting that there is less chemical uranium than equivalent uranium. However, the limited number of samples does not provide an adequate sample population from which to make a valid judgment. The variability of the DEF across a uranium roll front, both along strike and dip, is well documented within the technical literature. Additional coring and PFN logging will be performed to develop a defensible DEF.

12.3 Drill Cuttings

Drill cuttings are important sources of information for distinguishing and mapping alteration fronts and for use in correlating geophysical logs for lithology. The UEC field geologists typically observe the drill cuttings in the field and describe the sediments encountered in each boring in terms of color, grain size, and other distinguishing characteristics including the degree of sediment alteration as an indication of reduction and oxidation conditions. This information is important to locate the reduction-oxidation front/boundary. Cutting samples have not been used for chemical assay or other laboratory testing at the Nichols project due to dilution and contamination by drilling mud. Lithology logs are available for all of the drill holes, but they were not reviewed in full detail during this study.

UEC's policy has been to take samples of drill cuttings at 10-foot intervals from the surface to total depth. Once the cuttings have been observed and the lithologic logs prepared, the cuttings are discarded into the mud pit. After allowing suitable drying time, the mud in the pit and the cuttings are eventually covered with soil that has been stored from the excavation of the pits.

13. SAMPLE PREPARATION, ANALYSES AND SECURITY

13.1 Probe Truck and Calibration

All of the boreholes drilled on this project have been logged using UEC logging equipment. UEC has maintained scheduled calibration of the gamma probes on each of their trucks against standards in a U.S. Department of Energy maintained and monitored test pit facility outside George West, Texas. Probe truck and calibration information records have been kept by UEC. This information was available for review for this study.

At this time selected core samples have been analyzed only for chemical uranium, but samples have been delivered to the analytical laboratory for potential leachability testing. These tests will be conducted following consultation between the UEC production engineering group and the laboratory to develop the parameters for testing.

UEC geologists supervised the coring program and logged and prepared all the core samples. Extrusion of the core from the barrel was observed and noted. The core was placed in a PVC tray and taken to a portable work table for field screening. The sections of the core were immediately pieced together and the entire length of recovered core measured and recorded, with missing sections noted. The core was then scanned with a scintillometer for comparison and correlation with gamma logs, which were conducted after each core run. Correlation of the scintillometer survey and gamma logs assisted in defining lost core intervals. Lithologic descriptions of the core were then made, followed by cutting and bagging the core into one-foot sections. Each sample was placed into a clear polyethylene core sleeve with the open end folded over and sealed with fiberglass strapping tape, hole number, sample depth and orientation, and collection date were marked on each sample bag. The samples were placed into labeled core boxes which were capable of holding ten feet of core. Following completion of a core hole, the core samples were taken to UEC's secure field trailer at the project site.

13.2 Borehole Remediation and Abandonment

The Texas Railroad Commission requires exploration companies to obtain exploration permits before conducting drilling in any area. The permits include standards for the abandonment and remediation of test bore holes. The standards include the cementing of test bore holes, the filling and abandonment of mud pits, and the marking of bore holes at the surface. Remediation requirements are sometimes specific to the area of exploration and may include segregation, storage, and re-covering with topsoil, regrading, and revegetation. The Railroad Commission conducted a remediation inspection of the Nichols Project site upon completion of drilling. UEC's Nichols site is in compliance with Railroad Commission remediation requirements.

14. DATA VERIFICATION

This was the initial drilling effort by UEC at the Nichols Project, and as such, only a limited amount of data was available for review and verification. Much of the data was still in draft form and was reviewed in the field by the author. Available data included electric logs, lithologic logs, and draft maps under construction and revision as drilling progressed. Additionally, the author observed the coring operations, correlation, and sampling procedures.

The radiometric data from the gamma ray logging of each hole has provided the primary tool to determine the approximate grade of uranium in the subsurface. Additionally, one core with chemical assays that verified the occurrence of cU_3O_8 have been collected and analyzed during the UEC drilling program. The author has reviewed core intervals representative of mineralization and observed the coring program methodology and procedures by UEC personnel and drilling contractors at the project site. Based on the authors review and evaluation of the UEC information and procedures, the records and files from the drilling programs are suitable for estimating mineral resources in a manner consistent with accepted practices in the ISR uranium mining industry and compliant with CIM Mineral Resource standard definitions.

15. ADJACENT PROPERTIES

Based on the author's evaluation and review of UEC files, there has been uranium exploration and surface mining activity on adjacent properties to the UEC Nichols Project. Surface mining apparently took place across the northwest boundary of the Nichols property along the southern end of the Butler-Weddington trend by Tenneco. The date of mining is not known, but it is thought to have been in the early 1970s. Tenneco would have drilled exploration holes on the property prior to mining. This property is now under lease by Mantee.

As previously noted, Texaco Uranium held the property to the north and the Nichols property itself in the late 1970s and early 80s. Texaco drilled a number of exploration boreholes during this time and available information suggests that Texaco had plans to mine the area by ISR methods, but the plans were never put into action.

The closest ISR mining to the Nichols Project was that performed by Everest Exploration during the late 1970's and early 1980's at the Hobson facility, approximately 8 miles to the northeast, along strike with the Jackson Group.

16. MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing or metallurgical testing has yet been conducted on samples from the Nichols Project.

17. MINERAL RESOURCE ESTIMATES

17.1 Deposit Geology Pertinent to Resource Estimation

The mineralized sands at the Nichols project site are part of the Jackson Group, specifically the Whitsett Formation. At the project site, the Whitsett Formation is encountered from about 300 feet below ground surface (bgs) to over 500 feet bgs. Four potential target sands within the Whitsett Formation have been identified. In descending order these sands have been designated as the N1 through N4 Sands. To date only the N1 and N2 Sands have been found to have gamma ray anomalies, with the N2 anomalies being substantially greater than those of the N1.

The N1 Sand is 8-20 feet thick. Weak gamma ray anomalies have been detected in this sand in the west central part of the property. At this time the data suggests that the gamma anomaly is following the trend of a defined paleochannel. Accordingly, this sand is considered a potential target sand.

The N2 Sand(s) consists of three siltstone/sands embedded within the Conquista Clay. Gamma ray anomalies in three borings and the core hole were found to exceed project requirements. Additionally, the anomalies extend for over 5000 feet along the trend of a paleochannel. This trend provides sufficient room for significant resource development.

To date no gamma ray anomalies have been identified in the N3 and N4 Sands. However, these are well developed sands which have good potential to contain elevated gamma ray levels in some parts of the property. All exploration boreholes should be drilled through these units.

17.2 Data Sources

Data used for the resource estimate include mainly the downhole electric logs (consisting of gamma-ray, SP, and resistance curves), lithology logs, PFN logging, and various geological correlations, cross sections, and other geologic mapping. For the purposes of resource estimation, the data is considered to be reliable.

17.3 Resources

Based on the recent work completed by UEC, there are reasonable prospects for economic extraction of uranium from the host rock by the in situ recovery (ISR) method, although further work will be required before the company will be able to determine if there is an economic deposit on the property. Some additional studies should include leach amenability, permeability, density and chemical uranium and metals analyses.

At this stage, only inferred mineral resources can be estimated for this property. This is due principally to the limited amount of data collected to date. The method of estimation uses two geologic groupings or sets. The first set uses the characteristic of the N1 and N2 Sands and the second set is based on the characteristics of the N3 and N4 Sands. Both sets use a thickness of 6.0 feet. Average grade of the first set, 0.083%, is based on project grade mineralization encountered at the site. Average grade for the second set, 0.05% is

based on gamma characteristics observed during the recent drilling and drill cutting examination. This is considered to be appropriate based on the geologic conditions at the site coupled with field observations. Further characteristics for the N1 and N2 set include 150 and 200 foot widths, respectively, and 4,000 and 5,000 foot gamma-ray anomaly trends. The characteristics for the second set assume a 150 foot wide and 2,500 foot trend. A bulk density factor of 16 cubic feet per ton for the N1 mineralized zone and 15.5 cubic feet per ton for each of the other sands has been used. The author believes that a reasonable inferred mineral resource was obtained using these data and assumptions.

Table 17-1 Nichols Project Inferred Mineral Resources

Zone	Thickness ft	Grade %eU3O8	G*T	Area sq. ft.	Density cu.ft/ton	Tons	Pounds eU3O8
N-1	6	0.083	0.5	600,000	16	225,000	374,000
				(4000x150)			
N-2	6	0.083	0.5	1,000,000	15.5	387,000	643,000
				(5000x200)			
N-3	6	0.05	0.3	375,000	15.5	145,000	145,000
				(2500x150)			
N-4	6	0.05	0.3	375,000	15.5	145,000	145,000
				(2500x150)			
						Total	**1,307,000**

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

The current estimated mineral resource for the Nichols project shown above is based on U_3O_8 price of US$40 per pound and estimated operating cost of US$20 per pound. These costs are believed to be conservative and consistent with prices/costs reported in several other NI 43-101 technical reports. The author is of the opinion that the statement of mineral resources has been completed using industry accepted methodologies and standards and that the mineral resource classification for the Nichols Project estimate presented in this technical report meets the CIM Definition Standards as adopted by CIM Council on December 11, 2005 as required by NI 43-101. The CIM definition for Inferred Mineral Resource is given below.

"An 'Inferred Mineral Resource' is that part of a of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade

continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes."

Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies.

18. OTHER RELEVENT DATA AND INFORMATION

18.1 ISR Considerations

The Nichols Project appears to be most suitable for mining as an ISR (in-situ recovery) project. South Texas uranium deposits in permeable sands situated below the groundwater table are generally favorable to ISR production. The currently operating ISR operations in Texas are to the author's knowledge, generally all mining from sands of the Goliad Formation. However, this does not preclude mining from the Jackson if the geologic and engineering conditions are favorable at a specific property. This has yet to be determined for the Nichols site.

The current phase of data collection at the Nichols project indicates conditions are potentially suitable for ISR mining. Additional data pertaining to groundwater quality and the hydrogeologic conditions of the mineralized units will be required before a determination of the suitability for mine development can be made.

18.2 Environmental Considerations

Because of the early stage of evaluation of this property, many of the environmental considerations are unable to be addressed until further information is available. Should subsequent investigations at this project revise the mineral resources to indicated and /or measured classification it is anticipated that ISR would be the preferred mining method. In that case, multiple permits would be required to develop and mine at the Nichols Project. The Texas Commission on Environmental Quality (TCEQ) is the main Texas regulatory agency that oversees ISR mine permitting. The basic permits that would be required include: Underground Injection Control (UIC) Mining Permit, Aquifer Exemption, Production Area Authorization, UIC Waste Disposal Well Permit, and a Radioactive Material License.

18.3 Engineering Studies

As far as the author is aware, no UEC engineering studies have been conducted for this property. Reportedly, Texaco had developed some preliminary engineering plans for an ISR facility in the Nichols area, but the author has not seen or reviewed any of these historical documents.

19. INTERPRETATION AND CONCLUSIONS

The author's review of the Nichols project current data files, maps, and geologic cross sections and observation of the field drilling program in September 2008 indicates that the drilling data reliability is suitable and that the map posting and current inferred mineral resource estimate by UEC was done in a competent, knowledgeable, and accurate manner using accepted ISR industry standards. The density of data (number of drill holes) was likely not adequate for fully defining the mineralized units at the property, although it is not clear if UEC planned to fully explore the property in this phase of drilling. In the author's opinion, this initial exploration drilling program results indicate the potential for advancing the mineral resource classification with additional drilling.

UEC has estimated an initial inferred mineral resource of about 900,000 tons with an average grade of 0.07% U_3O_8 containing an estimated 1,307,000 pounds of U_3O_8 at the Nichols project. The resources are shown on Table 17-1. While the total number of borings with above grade cutoff was not a large percentage of the total borings, this project is primarily an early exploration project with no historic exploration data available from previous drilling programs by others. The data and assumptions made to estimate the current inferred mineral resource at the project were reasonable and appropriate. The author has reviewed the data and methodology used by UEC to complete the determination of the mineral resource and its classification and is of the opinion that this was completed using industry standards. Inferred mineral resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves and there is no certainty that the preliminary assessment will be realized.

20. RECOMMENDATIONS

UEC completed an initial exploration drilling program at the Nichols Project in Karnes County, Texas in late September 2008. This geologic investigation has resulted in an early understanding of the geologic conditions and framework at this mineral project. The author believes that the initial inferred mineral resource meets the CIM definitions as required by NI 43-101. Although the early exploration evidence of a uranium deposit is favorable, the author recommends that the company proceed with an expanded exploration program at the Nichols project (Phase I) to upgrade the inferred mineral resource. The Phase I work should follow the plan for the drilling done for this technical report with an objective of defining the mineralized units and upgrading the inferred mineral resource to include indicated and measured resources if possible. Positive results of Phase I would include increasing the volume and classification of the mineral resources to a point that UEC could decide to move the mineral project forward.

Proceeding to the Phase II recommended work is contingent on the positive result of Phase I drilling. Phase II involves tasks to make final decisions regarding continuation to a preliminary feasibility study. A specialty confirmation drilling program would be initiated with collection of significant core samples from all representative mineralized units to be used for 1) uranium assays to compare chemical grades with eU3O8 grades for primary data verification and determination of an average disequilibrium factor, 2) laboratory leachability tests of selected representative samples, 3) and bulk density and grain size determinations of representative core samples. Coincident with the drilling-coring program, selected core holes would be converted to either temporary or potentially long-term monitor wells for the initial purpose of conducting short term aquifer tests to determine the hydrogeologic characteristics of the mineralized units, collect groundwater samples, measure in place Eh and pH of groundwater, and measure area ground water elevations.

The estimated costs for the Phase I and Phase II recommendations are shown on Table 20-1.

Table 20-1. Phase I and Phase II Cost Estimates

Phase I	Cost (US$)
Rotary Drilling (~25,000 feet)	$130,000
Quality Control/Quality Assurance/Drilling Supvr.	$20,000
Drilling Supplies/Geophysical Logging/Backhoe	$90,000
Contingencies	$10,000
Total Phase I	**$250,000**

Phase II	Cost (US$)
Rotary Drilling (~5,000 feet)	$26,000
Core Collection (~250 feet)	$2,000
Laboratory Assays ($200 x 125 feet)	$25,000
Quality Control/Quality Assurance/Drilling Supvr.	$15,000
Drilling Supplies/Geophysical Logging/Backhoe	$25,000
Leachability/Other Lab Testing	$50,000
Temporary Wells	$100,000
Aquifer Testing/Monitoring	$75,000
Contingencies	$32,000
Total Phase II	**$350,000**

TOTAL PHASE I AND II	**$600,000**

21. REFERENCES

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22. DATE AND SIGNATURE PAGE

Dated in Clyde, Ohio this 21st day of January, 2009.

23. CERTIFICATE OF QUALIFIED PERSON

Thomas A. Carothers, P.G.
Geologist

I, Thomas A. Carothers do hereby certify that:

I am an Independent Consulting Geologist and reside at 633 Vine Street, Clyde, Ohio 43410.

I graduated with a Bachelor of Science in Geology in 1968 from The Ohio State University in Columbus, Ohio, and a Master of Science degree from Kent State University in Kent, Ohio in 1973 and have practiced my profession continuously since 1973 (35 years).

I have worked as a geologist and hydrogeologist for my full working career. I worked for a large geological and engineering consulting firm from 1973 to 1977 followed by working for US Steel's Texas Uranium Operation and then Tenneco Uranium's, both in south Texas, to 1984. From 1984 to 2003 I worked for a geology and environmental consulting firm and was involved in several uranium mining projects for operations in south Texas and New Mexico. I am or have been a member of the following: Texas Professional Geoscientist (current registration No. 1877); Member of Society of Mining Engineers of AIME (1978-1997); and National Ground Water Association (AGWSE).

I have read the definition of "qualified person" as defined in NI 43-101, and I certify that by reason of my education, affiliation with a professional organization (Foreign association in Appendix A), and past relevant work experience, I fulfill the requirements to be and am a "qualified person" for the purposes of NI 43-101.

I am responsible for the preparation of the technical report titled: "Technical Report for Uranium Energy Corp's Nichols Project, Karnes County, Texas" dated January 21, 2009.

I made a personal inspection of the Nichols Project property on September 22-23, 2008.

I have not had any prior involvement with the UEC Nichols Project property that is the subject of this technical report and I am independent of UEC and its subsidiaries, as described in Section 1.4 of NI 43-101.

I have read NI 43-101 and Form 43-101F1 and this technical report has been prepared in compliance with the instrument and the form.

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.

Dated in Clyde, Ohio this 21st day of January, 2009.

24. CONSENT OF QUALIFIED PERSON

January 21, 2009

To: British Columbia Securities Commission

I, Thomas A. Carothers, P.G., do hereby consent to the public filing of the technical report titled "Technical Report for Uranium Energy Corp's Nichols Project, Karnes County, Texas" (the "Technical Report") and to extracts from, or a summary of, the Technical Report in the news release (the "News Release") by Uranium Energy Corp. that is dated January 21, 2009.

I also confirm that I have read the written disclosure being filed and that it fairly and accurately represents the information in the Technical Report that supports the News Release dated January 21, 2009 by Uranium Energy Corp.