

**TECHNICAL REPORT ON THE SUE D  
URANIUM DEPOSIT MINERAL  
RESOURCE ESTIMATE,  
SASKATCHEWAN, CANADA**

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**PREPARED FOR  
DENISON MINES INC.**

**Authors:**

**James W. Hendry, P.Eng.**

**Richard E. Routledge, M.Sc., P.Geol.**



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**ROSCOE POSTLE ASSOCIATES INC.**

**Toronto, Ontario.**

**Vancouver, B.C.**

**Rouyn-Noranda, Québec.**

# TABLE OF CONTENTS

	PAGE
1 EXECUTIVE SUMMARY .....	1-1
Introduction.....	1-1
Land Status.....	1-2
Exploration History.....	1-2
Geology and Mineralization .....	1-3
Mineral Resources .....	1-6
Environmental Status.....	1-6
Metallurgy.....	1-7
Mining and Processing Operations.....	1-8
Mineral Reserves .....	1-8
Interpretation and Conclusions .....	1-8
2 INTRODUCTION AND TERMS OF REFERENCE .....	2-1
3 LIST OF ABBREVIATIONS.....	3-1
4 QUALIFICATIONS .....	4-1
5 DISCLAIMER.....	5-1
Reliance on Other Experts .....	5-1
6 PROPERTY DESCRIPTION AND LOCATION.....	6-1
Property Location.....	6-1
Claims Status .....	6-1
Environmental and Permitting Status .....	6-5
7 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY.....	7-1
Accessibility.....	7-1
Climate.....	7-2
Local Resources .....	7-3
Infrastructure.....	7-3
Physiography.....	7-4
8 HISTORY .....	8-1
9 GEOLOGICAL SETTING.....	9-1
Regional Geology .....	9-1
Local and Property Geology .....	9-3
Pre-Athabasca Formation - McClean Lake Area.....	9-3
Athabasca Formation - McClean Lake Property .....	9-5
Quaternary Geology.....	9-5

Structure .....	9-5
Alteration .....	9-7
Sue D Area Geology .....	9-9
10 DEPOSIT TYPES .....	10-1
Sue D Deposit Type .....	10-3
11 MINERALIZATION .....	11-1
12 EXPLORATION .....	12-1
13 DRILLING .....	13-1
14 SAMPLING METHOD AND APPROACH .....	14-1
15 SAMPLE PREPARATION, ANALYSES AND SECURITY .....	15-1
16 DATA VERIFICATION .....	16-1
17 ADJACENT PROPERTIES .....	17-1
18 MINERAL PROCESSING AND METALLURGICAL TESTING .....	18-1
19 MINERAL RESOURCE ESTIMATE .....	19-1
Wireframe Model .....	19-1
Bulk Density .....	19-2
Assay Compositing .....	19-5
Assays and Composites Statistics .....	19-5
Grade Capping .....	19-8
Block Model .....	19-8
Grade Interpolation .....	19-8
Bulk Density Interpolation .....	19-9
Mineral Resource Summary .....	19-14
Resource Classification .....	19-14
Model Validation .....	19-14
20 OTHER RELEVANT DATA AND INFORMATION .....	20-1
McClellan Lake Joint Venture Operation Plan .....	20-1
Environmental Considerations .....	20-1
21 INTERPRETATION AND CONCLUSIONS .....	21-1
22 RECOMMENDATIONS .....	22-1
23 REFERENCES .....	23-1
24 SIGNATURE PAGE .....	24-1
25 CERTIFICATE OF QUALIFICATIONS .....	25-1
James W. Hendry .....	25-1
Richard E. Routledge .....	25-3

## LIST OF TABLES

	PAGE
Table 1-1 Resource Estimate .....	1-6
Table 3-1 Standard List of Abbreviations.....	3-2
Table 3-2 Supplementary list of abbreviations .....	3-3
Table 8-1 McClean Lake Properties - Production History .....	8-3
Table 19-1 Analyses and Composite Statistics.....	19-7
Table 19-2 RPA Resource Estimate .....	19-14
Table 19-3 Comparison of Grades for Analyses, Composites and Resource Blocks.....	19-17

## LIST OF FIGURES

	PAGE
Figure 6-1 General Location Map.....	6-2
Figure 6-2 Location Map, Denison Uranium Projects, Northern Saskatchewan.....	6-3
Figure 6-3 Denison Uranium Projects In The Athabasca Basin .....	6-4
Figure 7-1 McClean Lake and Midwest Properties .....	7-2
Figure 7-2 Mineral Leases and Surface Facilities Location Map .....	7-5
Figure 7-3 Sue Site, Drilling, Infrastructure and Physiography .....	7-6
Figure 9-1 Projects Location and General Geology Map .....	9-2
Figure 9-2 Sue – McClean N/S Trends Basement Geology .....	9-4
Figure 9-3 Table of Formations .....	9-6
Figure 10-1 Conceptual Model of Egress Type, Sandstone-Hosted Mineralization .....	10-2
Figure 10-2 Variation in Egress-Type Sandstone-Hosted, Host Rock Alteration Features .....	10-3
Figure 13-1 Drill Hole Location Plan .....	13-3
Figure 13-2 Composite Vertical Longitudinal Section.....	13-4
Figure 13-3 Composite Vertical Cross Section .....	13-5
Figure 13-4 Vertical Cross Section 4N.....	13-6
Figure 13-5 Vertical Cross Section 9N.....	13-7
Figure 14-1 Length Statistics for Samples in the Mineral Wireframes .....	14-2
Figure 17-1 Regional Property Map .....	17-2
Figure 19-1 Dry Density versus (%U <sub>3</sub> O <sub>8</sub> +%As+%Ni).....	19-3
Figure 19-2 Dry Density versus %U <sub>3</sub> O <sub>8</sub> .....	19-4
Figure 19-3 Log Probability Plot of Analyses within the 0.1% U <sub>3</sub> O <sub>8</sub> Wireframe .....	19-6
Figure 19-4 Block Model Vertical Cross Section 4N.....	19-10
Figure 19-5 Block Model Vertical Cross Section 9N.....	19-11
Figure 19-6 Block Model Plan 306 RL Elevation .....	19-12
Figure 19-7 Block Model Plan 324 RL Elevation .....	19-13

Figure 19-8 Classification of Sue D Resources ..... 19-16

Figure 19-9 Box and Whisker Plot of Analyses, Composites and Resource Block  
Grades ..... 19-18

Figure 19-10 Box and Whisker Plot of Analyses, Composites and Resource  
Block Grades..... 19-19

Figure 19-11 Comparision of Analyses, Composites and Block Grades..... 19-20

Figure 19-12 Resource Tonnes, Grade and Contained Metal Profiles ..... 19-21

# 1 EXECUTIVE SUMMARY

## INTRODUCTION

Roscoe Postle Associates Inc. (RPA) was retained by Denison Mines Inc. (Denison) in December 2004 to independently review and audit the Mineral Resources and Mineral Reserves of certain uranium deposits in the Athabasca Basin of northern Saskatchewan in which Denison holds an interest. RPA completed reports on the Midwest Lake property in June 2005 and on the McClean Lake property in November 2005. The latter report did not address the McClean Lake Sue D Mineral Resources and, in January 2006, Denison retained RPA to independently review and estimate the Mineral Resources of the Sue D uranium deposit. This technical report was written by RPA in accordance with the requirements of National Instrument 43-101 (NI 43-101), Companion Policy 43-101CP, and Form 43-101F1 of the Ontario Securities Commission (OSC) and Canadian Securities Administrators (CSA).

Denison has a 22.5% interest in the McClean Lake Joint Venture (the MLJV) which includes the Sue D deposit. Cogema Resources Inc. (Cogema) is the operator of the MLJV and owns an interest of 70%. Cogema is a wholly owned subsidiary of Cogema S.A., incorporated in France (Cogema Group), which in turn is a wholly owned subsidiary of Areva S.A, also incorporated in France.

The MLJV holds mineral claims and leases covering areas that host six uranium deposits including Sue A, B, D, E, McClean North, and Caribou (collectively referred to as the McClean Lake property). The claims also include the mined-out JEB and Sue C deposits. Ore from Sue C is currently being processed from processing plant stockpiles, and Sue A is in production, currently contributing approximately half the plant feed.

The MLJV owns a uranium processing facility, the JEB mill, which has a nominal design of six million pounds of U<sub>3</sub>O<sub>8</sub> per year. It was put into operation in 1999 to process ore from the now mined-out JEB and Sue C deposits. In 2001, the JEB mill

received a four-year operating licence that increased its approved annual production capacity from six to eight million pounds  $U_3O_8$ . A mill expansion is planned to allow a further increase in annual capacity up to twelve million pounds  $U_3O_8$  in 2006.

This technical report presents RPA's estimate of Mineral Resources of the Sue D deposit at the MLJV property only. RPA has reported on the Mineral Resources and Mineral Reserves of the Midwest Joint Venture property and the other MLJV deposits under separate cover (Hendry et al., 2005a,b).

## **LAND STATUS**

The MLJV surface lease, covering an area of 3,677 hectares, was granted by the Province of Saskatchewan in 1991. This lease was replaced by a new 33-year agreement in 2002. The mineral property consists of two mineral leases covering an area of 980 hectares and ten mineral claims covering an area of 3,250 hectares. The mineral leases are renewable on a 10-year basis; the next expiry date is in April 2006. Title to the mineral claims is secure until 2023.

The MLJV expects that all the leases will be renewed in the normal course, as required, to enable the McClean Lake property to be fully exploited.

## **EXPLORATION HISTORY**

In 1974, Canadian Occidental Petroleum Limited ("Canadian Oxy") commenced uranium exploration in the area between the then known Rabbit Lake deposit and the Midwest property, where previously uraniferous boulder trains had been found. In 1977 a diamond drilling program was carried out in joint venture with Inco Ltd., and one of the 47 drilled holes encountered encouraging uranium mineralization. Extensive exploration work that followed discovered the McClean North deposit in 1979, the McClean South zone in 1980, and the JEB deposit in 1982. In January 1985, after a brief suspension of

exploration, Minatco Limited ("Minatco"), a predecessor in title to Cogema, entered into a joint venture with CanadianOxy and Inco Ltd. Exploration resumed and, as a result, the Sue A deposit was found in 1988, followed by the Sue B and Sue C deposits and then Sue D deposit in 1989. The Sue E deposit was discovered in late 1991 and the Caribou deposit in 2002.

In 1993, the respective owners of McClean Lake properties and the Midwest property combined their interests to make one complementary project for processing ore through a single mill at McClean Lake. In order to accomplish this, a portion of Denison's interest in Midwest was exchanged for an interest in McClean Lake. A number of ownership changes took place between 1993 and 2004. Currently, Cogema is the operator of the joint venture, with 70% ownership and Denison having 22.5% ownership.

## **GEOLOGY AND MINERALIZATION**

The MLJV uranium deposits lie near the eastern margin of the Athabasca Basin in the Churchill Structural Province of the Canadian Shield. The bedrock geology of the area consists of Precambrian gneisses unconformably overlain by flat-lying unmetamorphosed sandstones and conglomerates of the Athabasca Group. The Precambrian basement complex consists of an overlying Aphebian-aged supracrustal metasedimentary unit infolded into the older Archean gneisses. The younger Helikian-aged Athabasca sandstone was deposited onto this basement complex. The basement surface is marked by a paleoweathered zone with lateritic characteristics referred to as regolith.

Excluding the JEB deposit, which was mined out several years ago and is now used as the Tailings Management Facility, the MLJV deposits are located along two "trends" of mineralization, the McClean trend and the Sue trend. The Caribou is a singular deposit in its own area at this time. Geology of the McClean trend deposits and the Caribou deposit is described in Hendry and Routledge (2005).



The Sue deposits lie along a linear trend on the western flank of the Collins Bay dome. These deposits extend north and south along or near a steeply east-dipping unit of graphitic gneiss within a 4.2 kilometre long basement electromagnetic (EM) conductor. The Sue A and Sue B deposits are located on and above the sandstone-basement unconformity which lies 65 m to 75 m below the surface. The bulk of the mineralization occurs in the sandstone. These deposits are typically hosted by massive earthy-red clay extending for approximately 10 m above and below the unconformity. The pitchblende mineralization at Sue A and Sue B is generally associated with niccolite.

The mined-out Sue C deposit lies 100 m west of the south end of the Sue A deposit. The deposit had a N12°E strike for 390 m and occupied a -75°E dipping structure. There was a distinct depth gradation to the uranium mineralization in Sue C; with the mineralization subcropping at the unconformity in the northern and central part of the deposit and plunging gently south at the southern portion. The central 80 m to 100 m part of the deposit extended 80 m below the unconformity and contained approximately 75% of the reserves.

The Sue E deposit underwent development drilling in 2002. The deposit strikes for approximately 320 metres, with widths varying from 5 m to 15 m, and occurs at 65 m to 135 m below the surface. The style of mineralization and setting is similar to that of the southern part of the Sue C deposit in that it is totally basement-hosted. However, the nickel/uranium and arsenic/uranium ratios in the Sue E deposit are relatively high.

The Sue D deposit, lying between Sue C and Sue E, was drilled initially in 1989 and again in 1994 and 2001. The mineralization trends N12°E for approximately 140 m, has widths up to 16 m and thickness from 10 m to 30 m. Mineralization is strongly fault controlled and occurs in upper and lower zones that are hosted almost entirely in the basement. The lower zone accounts for most of the Sue D Indicated Mineral resource and lies at a depth of approximately 155 m to 220 m below surface, or approximately 75 m to 110 m below the sandstone-basement unconformity. The upper zone consists of less continuous lenses located at or near the unconformity.

The Sue D mineralization consists primarily of pitchblende and uraninite accompanied by nicolite (nickel sulfarsenides). Some remobilized uranium is present as coffinite. The mineralization occurs in disseminated thin veins or fracture/breccia fills and as massive patches and nodules agglomerated along foliation. Nickel, cobalt, and arsenic grades are generally low, typical of basement deposits, but local pockets of higher grades occur ranging up to 25.3% Ni and 0.16% Co. Sue D may be classed as a basement-hosted, ingress type unconformity related uranium deposit similar to Sue C and Sue E on the Sue trend and Rabbit Lake, Eagle Point, Claude, and Cluff Lake North deposits elsewhere in the Athabasca Basin.

## MINERAL RESOURCES

RPA has reviewed data for the Sue D deposit and has independently estimated uranium and nickel Mineral Resources in accordance with the requirements of NI 43-101 and the definitions set out by the CIM Standards on Mineral Resources and Reserves Definitions and Guidelines adopted by the CIM Council on August 20, 2000. Table 1-1 presents a summary of the Sue D Mineral Resources over a range of cut-off grades. The MLJV historically mined the Sue C deposit based on an ore cut-off grade of 0.1% U<sub>3</sub>O<sub>8</sub> to define ore scheduled for processing at the JEB mill facility versus discard material. RPA reviewed this cut-off grade against the current economic factors, including operating costs, metallurgical recovery, and U<sub>3</sub>O<sub>8</sub> prices and revenue criteria. In RPA's opinion, the 0.1% U<sub>3</sub>O<sub>8</sub> cut-off grade is reasonable for resource estimation at Sue D.

**TABLE 1-1 RESOURCE ESTIMATE**

**McClellan Lake Joint Venture - McClellan Lake Property, Sue D Deposit, Saskatchewan**

Cut-Off Grade U <sub>3</sub> O <sub>8</sub> %	Indicated Resources					Inferred Resources				
	Tonnes	U <sub>3</sub> O <sub>8</sub> %	Ni%	U <sub>3</sub> O <sub>8</sub> Lbs (000's)	Bulk Density t/m <sup>3</sup>	Tonnes	U <sub>3</sub> O <sub>8</sub> %	Ni%	U <sub>3</sub> O <sub>8</sub> Lbs	Bulk Density t/m <sup>3</sup>
<b>0.1</b>	<b>122,800</b>	<b>1.05</b>	<b>0.58</b>	<b>2,840</b>	<b>2.37</b>	<b>24,240</b>	<b>0.39</b>	<b>0.92</b>	<b>208,900</b>	<b>2.36</b>
0.2	114,900	1.11	0.60	2,810	2.37	20,210	0.44	1.07	194,700	2.36
0.3	97,400	1.26	0.65	2,710	2.37	12,070	0.57	1.62	150,300	2.35
0.4	80,260	1.46	0.72	2,580	2.36	7,570	0.70	2.20	116,300	2.34
0.5	67,090	1.66	0.76	2,450	2.36	5,770	0.77	2.44	98,330	2.33
0.6	55,400	1.89	0.84	2,310	2.36	4,490	0.83	2.77	82,460	2.33

Note: Denison Mines Inc. holds 22.5% interest in the MLJV and the above Resources

## ENVIRONMENTAL STATUS

RPA retained SENES Consultants Limited to review the environmental aspects of the MLJV properties and operations in 2005 as far as these aspects could materially affect the potential for mining. Briefly, the Sue A deposit is approved for development as an open pit mine and began production in late 2005. The Sue B deposit is approved for development as an open pit; however, current plans for this operation have been

suspended. The Sue E deposit development as an open pit mine has been approved and mining has started. No material issues have been identified in Environmental Assessment (EA) or EA review. Remote mining methods are being developed and evaluated at the McClean North deposits and an initial jet-boring test program was carried out in 2005 under appropriate permits. RPA has not reviewed the results of the test program that was operated by Cogema. Once the mining methods are established, the mine operating plan will have to be submitted for regulatory review and approvals. The Caribou and Sue D deposits have not been evaluated and mining plans and environmental assessment have not been completed at this time.

All ore from the MLJV deposits will be processed at the JEB mill, which is being expanded to also process material from the Cigar Lake deposit. The JEB mill has processed all ore from the JEB open pit and is currently processing stockpile ore from Sue C pit together with mine production from Sue A. Extensive regulatory review has been completed for the management of tailings and waste rock from the MLJV and Midwest Projects. Contaminated waste rock is being disposed of in the disused Sue C pit, and all tailings from the milling of the Cigar, Midwest, and MLJV deposits are disposed of in the JEB tailings disposal facility. This tailings disposal facility can store all future production. Monitoring of the approved disposal facility has demonstrated that the facility is operating as designed.

Effluent treatment facilities are in place to manage all mine and mill effluents from the MLJV Lease. As of RPA's and SENES' review in 2005, these plants were performing well and met all regulatory discharge limits.

## **METALLURGY**

The MLJV owns and operates the JEB mill. Operations started in 1999, and the mill has since successfully been producing approximately six million pounds of U<sub>3</sub>O<sub>8</sub> per year from JEB and Sue C ores. Going forward production plans include milling stockpiled Sue C ore, Sue A and E, McClean North and Midwest deposits. Sue D is not currently in

the MLJV mine plan. While RPA is unaware of any direct metallurgical testing of the Sue D mineralization it is RPA's opinion that the Sue D mineralization is very similar to that of the Sue E deposit and that uranium, nickel and cobalt values will be recoverable in the JEB mill.

## **MINING AND PROCESSING OPERATIONS**

Past mining operations and mine development plans for the MLJV deposits are predominantly based on open pit mining methods, and an existing fleet of mining equipment is on site. For the most part, this same equipment fleet will be utilized to develop the new deposits. The only area where other mining methods are currently under consideration is at the McClean North deposit. In this case the mineralized zones are small high-grade pods that lie under relatively deep cover. The amount of barren waste rock to be stripped makes their development as open pits unattractive. As an alternative, blind shaft boring and mechanical reaming is feasible for mining (Hendry and Routledge, 2005a), and the MLJV is currently investigating the potential to mine by hydraulic jet boring. The Sue D deposit may have potential for economic development at current uranium prices and RPA recommends that the MLJV undertake a preliminary review of its potential development.

## **MINERAL RESERVES**

The MLJV has not included the Sue D deposit in its development plan. Consequently no Mineral Reserves have been established at Sue D. Mineral Reserves for the other McClean Lake deposits are reported by Hendry and Routledge (2005a).

## **INTERPRETATION AND CONCLUSIONS**

A number of deposits currently controlled by the MLJV projects, including Sue D, represent potential sources of additional feed materials for the existing JEB processing facilities. While the economic potential of the Sue D deposit has not been assessed at this

point RPA believes that the Sue D deposit may have potential for economic development at current uranium prices and RPA recommends that the MLJV undertake a preliminary review of its potential development.

Although drilling and analytical data for Sue D were readily provided by the MLJV in ASCII format, RPA found that the information needed a significant amount of organizing, checking, and clarification, as was the case for RPA's work on the Midwest Lake project and other McClean Lake deposits. RPA spent a considerable amount of time and effort in digital translation and data verification in order to accept the database for resource estimation. In RPA's opinion, the database is now suitable for uranium and nickel resource estimation.

The Sue D deposit ranks as the third largest Sue deposit in terms of contained uranium metal, but the bulk of the uranium in the deposit lies deeper than the Sue A, B, and mined-out Sue C deposits. The Sue D deposit is smaller than the Sue E deposit, which is similarly relatively deep in the basement.

In the course of completing the Sue D deposit resource estimate, RPA has found that documentation and data are not easy to access and that not all of the known information could be retrieved. In order to complete the Sue D database, RPA recommends that Denison acquire the additional Co, Cu, As, and V analytical data for the fill-in S500 series holes that were not available to RPA. RPA cautions that any additional data should be reviewed in detail to ensure consistency of units and correspondence between the intervals and analyses. Once compiled, the Sue D drill hole database should be thoroughly audited.

RPA recommends that any existing specific gravity test results for Sue D drill core be located and reviewed. If this is not available, RPA recommends that specific gravity measurements be done on existing core from the Sue D deposit.

RPA recommends that the MLJV evaluate the Sue D deposit for the potential to recover and realize the value from the contained nickel and cobalt.

RPA recommends that the MLJV periodically update the economic evaluations of the Sue D deposit as additional information becomes available through drilling and/or experience in the Sue A and Sue E mine operations, as well as updating cost factors and uranium pricing levels.

RPA recommends that any future drilling on the Sue D deposit should employ inclined holes to better define the subvertical basement fault structures that host and control the distribution of uranium mineralization.

## **2 INTRODUCTION AND TERMS OF REFERENCE**

Roscoe Postle Associates Inc. (“RPA”) was retained by Denison Mines Inc. (“Denison”) in December 2004 to independently review and audit the Mineral Resources and Mineral Reserves of certain uranium deposits in the Athabasca Basin of northern Saskatchewan in which Denison holds an interest. RPA completed reports on the Midwest Lake property in June 2005 (revised February 14, 2006) and on the McClean Lake property in November 2005 (revised February 16, 2006). The latter report did not address the McClean Lake Sue D Mineral Resources and, in January 2006, Denison retained RPA to independently review and estimate the Mineral Resources of the Sue D uranium deposit. This technical report was written by RPA in accordance with the requirements of National Instrument 43-101 (NI 43-101), Companion Policy 43-101CP, and Form 43-101F1 of the Ontario Securities Commission (OSC) and Canadian Securities Administrators (CSA).

Denison holds a 22.5% interest in the McClean Joint Venture (MLJV). Cogema Resources Inc., a wholly owned subsidiary of AREVA, a multinational French government agency, is the operator of the MLJV and holds a 70% interest.

The MLJV holds mineral claims and leases covering the areas that host six uranium deposits including the Sue A, B, D, E, McClean North, and Caribou (all referred to as the McClean Lake property). The claims also include the mined-out JEB and Sue C deposits, ores from which are currently being processed from stockpiles together with mine production from Sue A.

The MLJV owns a uranium processing facility, the JEB Mill, which has a nominal design capacity of six million pounds of U<sub>3</sub>O<sub>8</sub> per year. It was put into operation in 1999 to process ore from the now mined-out JEB and Sue C deposits. In 2001, the JEB Mill received a four-year operating licence that permits increased annual production from six



to eight million pounds U<sub>3</sub>O<sub>8</sub>. A mill expansion is planned to allow a further increase in annual capacity up to twelve million pounds U<sub>3</sub>O<sub>8</sub> by 2006.

Denison also owns a 25.17% interest in the Midwest Joint Venture which includes the Midwest uranium deposit (the Midwest property). The latter is located near South McMahon Lake, approximately 20 kilometres by existing roads from the McClean Lake processing facilities. Subsequent to completion of a test-mining program in 1988 and 1989, the Midwest property has been under an environmental monitoring and site security surveillance program.

This technical report presents RPA's estimate of Mineral Resources of the Sue D deposit at the MLJV property only. RPA has reported on the Mineral Resources and Mineral Reserves of the Midwest Joint Venture property and the other MLJV deposits under separate cover (Hendry et al., 2005a,b).

The principal technical documents and files related to the McClean Lake uranium deposits are as follows:

- Report on Reserves and Resources of Denison Energy Inc. McClean Lake and Midwest area, Saskatchewan, by William C. Kerr, P.Geo., Joe Spiteri, P.Geo., Gary A. Cohoon, P.Geo., H.C. Counsell, P.Eng., and Andrew C. Rickaby. September 15, 2003.
- McClean North Uranium Deposit, Report on Reserves based on Pre-feasibility Study development using Hydraulic Borehole Mining Method, by Denison Energy Inc., Andrew C. Rickaby, William C. Kerr, Gary A. Cohoon. November 29, 2003.
- Denison Mines Annual Information Form for the fiscal year ending December 31, 2004.

Work on this report was completed by RPA Principal Mining Engineer James Hendry, P.Eng., and RPA Consulting Geologist Richard Routledge, M.Sc., P.Geol.

Mr. Hendry and Mr. Routledge are Qualified Persons in accordance with the requirements of NI 43-101. Mr. Hendry and Mr. Routledge visited the McClean Lake

mine site on February 1 and 2, 2005, and the Cogema exploration office in Saskatoon on January 31, 2005 and February 2 to 5, 2005. Mr. Routledge also held further discussions on April 6, 2005, with Cogema resource estimation personnel at their office in Vélizy Cedex near Paris, France. RPA Consulting Geologist David Ross, M.Sc., P.Geo. collected additional data and reports from Cogema in Saskatoon from July 19 to 23, 2005.

Technical documents and reports on the property were reviewed at the site and additional information was obtained from the Denison and Cogema personnel. Discussions were held with technical personnel as follows:

Jim Corman, Mine Manager, McClean Lake, Saskatchewan;

Mike Eade, Chief Engineer, McClean Lake, Saskatchewan;

Bill Dodds, Mine Superintendent, McClean Lake, Saskatchewan;

William Kerr, Director, Resource Evaluation, Denison Mines Inc.;

Steve Wilson, Chief Mine Geologist, McClean Lake, Saskatchewan;

Sylvain Eckert, Manager, Mine Products, Cogema Resources Inc., Saskatoon;

RPA would like to acknowledge the co-operation and assistance that has been provided by Denison and Cogema personnel.

### **3 LIST OF ABBREVIATIONS**

In this report, monetary units are Canadian dollars (US\$) unless otherwise specified. The metric system (SI) of measurements and units has been used unless otherwise specified. Tables showing abbreviations used in this report are provided below:

**TABLE 3-1 STANDARD LIST OF ABBREVIATIONS**  
**McClellan Lake Joint Venture - McClellan Lake Property, Saskatchewan**

<b>Abbr.</b>	<b>Meaning</b>	<b>Abbr.</b>	<b>Meaning</b>
μ	micro (one-millionth)	km <sup>2</sup>	square kilometre
°C	degree Celsius	kPa	kilopascal
°F	degree Fahrenheit	kVA	kilovolt-amperes
μg	microgram	kW	kilowatt
A	ampere	kWh	kilowatt-hour
a	annum	l	liter
CFM	cubic feet per minute	l/s	litres per second
bbl	barrels	m	metre
Btu	British thermal units	M	mega (million)
C\$	Canadian dollars	m <sup>2</sup>	square metre
cal	calorie	m <sup>3</sup>	cubic metre
cm	centimetre	min	minute
cm <sup>2</sup>	square centimetre	masl	metres above sea level
d	day	mm	millimeter
dia.	diameter	mph	mile per hour
dmt	dry metric tonne	MVA	megavolt-amperes
dwt	dead-weight ton	MW	Megawatt
ft	foot	MWh	megawatt-hour
ft/s	foot per second	m <sup>3</sup> /h	cubic metres per hour
ft <sup>2</sup>	square foot	opt, oz/st	ounce per short ton
ft <sup>3</sup>	cubic foot	oz	troy ounce (31.1035g)
g	gram	oz/dmt	ounce per dry metric tonne
G	giga (billion)	ppt/ppm/ppb	part per thousand/per million/per billion
gal	Imperial gallon	psia	pound per square inch absolute
g/l	gram per litre	psig	pound per square inch gauge
g/t	gram per tonne	s	second
gpm	Imperial gallons per minute	st	short ton
gr/ft <sup>3</sup>	grain per cubic foot	stpa	short ton per year
gr/m <sup>3</sup>	grain per cubic metre	stpd	short ton per day
hr	hour	t	metric tonne
ha	hectare	tpa	metric tonne per year
hp	horsepower	tpd	metric tonne per day
in	inch	US\$	United States dollar
in <sup>2</sup>	square inch	USg	United States gallon
j	joule	USgpm	US gallon per minute
k	kilo (thousand)	V	volt
kcal	kilocalorie	W	Watt
kg	kilogram	wmt	wet metric tonne
km	kilometre	yd <sup>3</sup>	cubic yard
km/h	kilometre per hour	yr	year

**TABLE 3-2 SUPPLEMENTARY LIST OF ABBREVIATIONS**  
**McClellan Lake Joint Venture - McClellan Lake Property, Saskatchewan**

Abbreviation	Meaning
As	Arsenic
Co	Cobalt
Mg	Magnesium
Ni	Nickel
U	Uranium
U <sub>3</sub> O <sub>8</sub>	Uranium oxide
Ukg/t	Uranium grade in kg/tonne (or ppt)
m.v.	Million years
O <sub>2</sub>	Oxygen
e.m.f.	Electromotive force
C.C.D. circuit	Counter current decantation
SAG	Semi autogenous grinding
SX	Solvent extraction
HVAC	
Bq/g	

## 4 QUALIFICATIONS

Roscoe Postle Associates Inc. (RPA) is an independent firm of Geological and Mining Consultants based in Toronto with an office in Vancouver. Since its establishment in 1985, RPA has carried out consulting assignments for nearly five hundred clients, including major mining companies, junior mining and exploration companies, financial institutions, governments, law firms and individual investors. Our clients are principally Canadian, American, and European companies.

RPA's business primarily involves providing independent opinions on mineral resources and reserves, technical aspects and economics of mining projects, valuation of mining and exploration properties and scoping, pre-feasibility, and feasibility studies. RPA has completed assignments on projects located in all parts of Canada, the United States, Russia, Latin America, Australia, and in other countries in Europe, Africa and Asia.

RPA has completed several hundred assignments related to Mineral Resource or Reserve estimates and audits. RPA has also audited a number of Feasibility Studies and carried out many due diligence and project monitoring assignments for chartered North American and European banks. RPA has participated in a number of Feasibility Studies with Hatch Associates Ltd. (Hatch) and other major international consulting engineering firms.

RPA has extensive experience with uranium deposits including resource and reserve reviews, audits and estimates, QA/QC reviews, database validation assignments for operating mines, and qualifying reports. Details on RPA's qualifications, services, clients, and types of assignments are available on RPA's website ([www.rpacan.com](http://www.rpacan.com)).

## 5 DISCLAIMER

This report has been prepared by RPA for Denison. RPA has not verified the mineral land titles or the status of ownership. RPA has relied on mineral land title information as provided by Denison and Cogema. The information, conclusions, and estimates contained herein are based on:

- Information available to RPA at the time of preparation of this report,
- Assumptions, conditions and qualifications as set forth in this report, and
- Data, reports, and opinions supplied by Denison and Cogema and other third party sources.

## RELIANCE ON OTHER EXPERTS

RPA relied on third party sources for the following information.

- Metallurgical testing and review of McClean Lake process operations by metallurgist Mr. Tim Counsel, P. Eng., is available in Kerr et al. (2003). RPA retained Mr. Counsel in 2005 for opinion and contribution to reporting on MLJV processing as described in Item 18 Mineral Processing and Metallurgical Testing.
- Environmental review of the McClean Lake operations and site by SENES Consultants Limited (SENES) as described in Item 20 Other Relevant Data and Information. SENES has had previous experience with the MLJV property, and RPA retained SENES in 2005 to contribute to the preparation of Item 20.

The information, conclusions and opinions prepared by Mr. Counsel and SENES as contained in Items 18 and 20 herein are based on:

- Information available to them in 2003 and 2005.
- Data, reports, and opinions supplied by Denison, Cogema, and other third party sources in 2003 and 2005.
- SENES representative Mr. Randy Knapp, B.A.Sc., P. Eng., and Mr. Counsel visited the Cogema office in Saskatoon between January 31, 2005 and February 5, 2005. Both have visited the MLJV property in the past.

## 6 PROPERTY DESCRIPTION AND LOCATION

### PROPERTY LOCATION

The McClean Lake property is located in northern Saskatchewan at longitude 103° 53'W and latitude 58° 15'N (Figure 6-1 and 6-2). The property, including the JEB mill, is located approximately 26 kilometres by road west of the Rabbit Lake mine and approximately 750 kilometres by air north of Saskatoon (Figure 6-3).

### CLAIMS STATUS

The McClean Lake property covers an area hosting the Sue A, B, D, and E, McClean North, Caribou, and the former JEB and Sue C uranium deposits, as well as other prospects. Sue A is currently in production. The JEB and Sue C deposits have been mined out and the ore, stockpiled on surface, is currently being processed with Sue A ore. Open pit stripping is in progress at Sue E. The JEB open pit has been converted into the JEB Tailings Management Facility designed to receive tailings from the McClean Lake ores as well as the Midwest Project and Cigar Lake ores. Special low-grade uranium-bearing waste (“special waste”) from the McClean Lake and Midwest deposits will be placed in the mined-out Sue C pit. Special waste is material containing very low grade uranium mineralization of approximately 0.03%  $U_3O_8$  (0.025% U) up to cut-off (usually about 0.1%  $U_3O_8$  or 0.085% U) and requiring special disposal. Agreement has been reached for the Cigar Lake special waste to be deposited in that pit as well.

The JEB Mill consists of a modern mill licensed to produce eight million pounds of uranium concentrate per year, a sulphuric acid plant, warehouses, shops, offices, and living accommodations for site personnel, together with related infrastructure. The JEB Mill is currently operating at a rate of approximately six million pounds per year of  $U_3O_8$  to fulfil existing contracts and to optimize stockpile throughput.





Figure 6-1

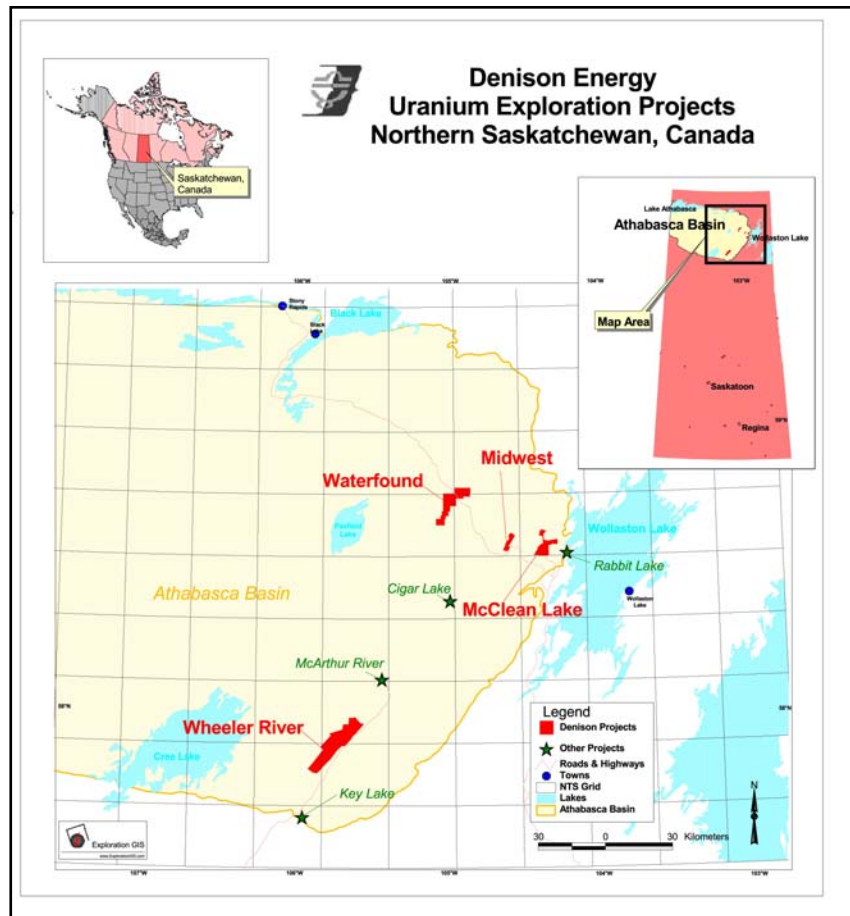
**Denison Mines Inc.**

*Saskatchewan Projects*  
*Saskatchewan, Canada*

**General Location Map**

March 2006

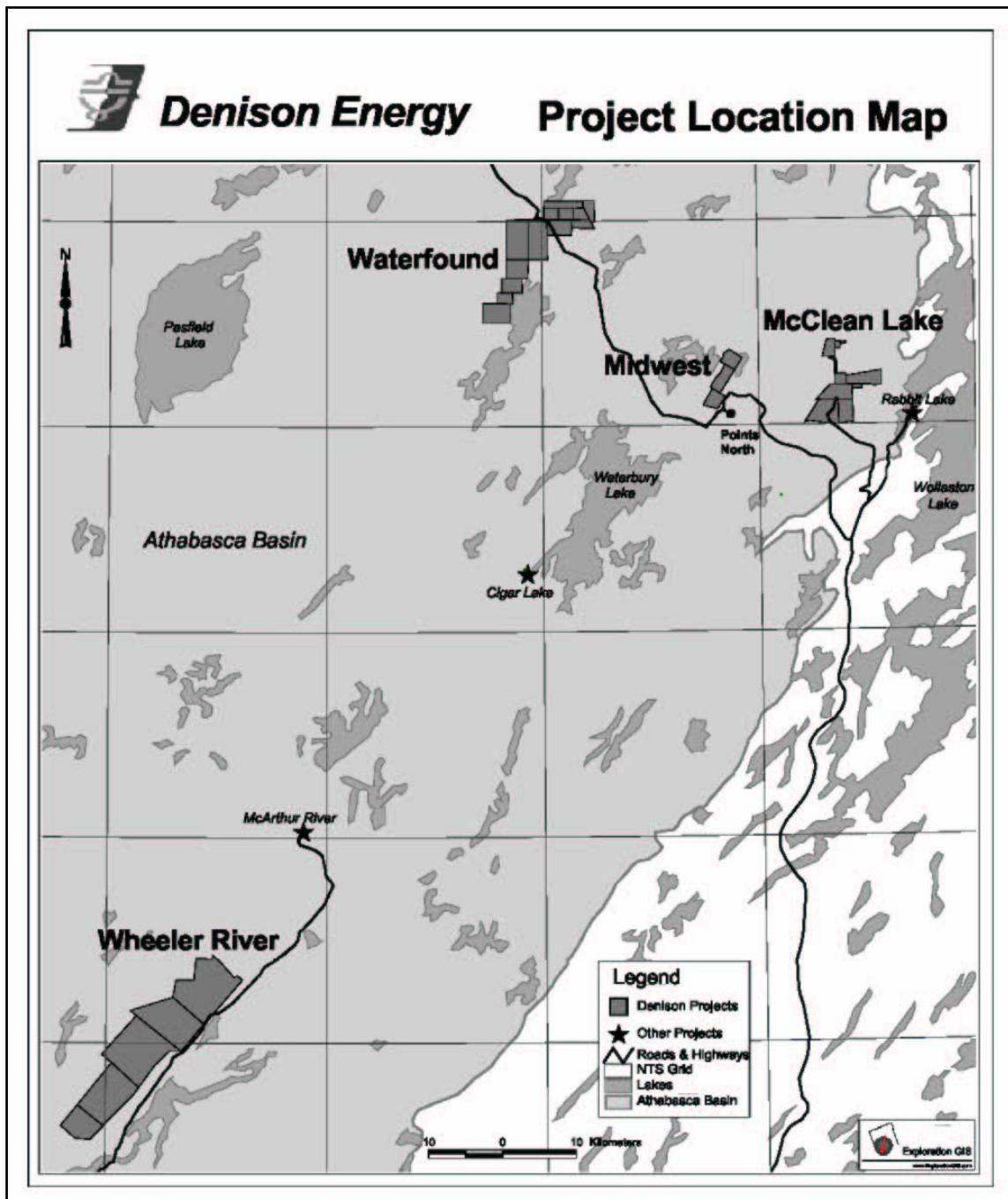
**FIGURE 6-2 LOCATION MAP, DENISON URANIUM PROJECTS, NORTHERN SASKATCHEWAN**



Source: Denison Mines Inc.

All of the surface facilities and the mine sites are located on lands owned by the Province of Saskatchewan. The right to use and occupy the lands was granted in a surface lease agreement with the Province of Saskatchewan. The original surface lease covering an area of approximately 3,677 hectares and granted in 1991 was replaced by a new agreement in 2002 valid for a period of 33 years. Obligations under the surface lease agreement primarily relate to annual reporting regarding the status of the environment, the land development and progress made on northern employment and business development.

FIGURE 6-3 DENISON URANIUM PROJECTS IN THE ATHABASCA BASIN



Source: Denison Mines Inc.

The McClean Lake Property consists of two mineral leases covering an area of 980 hectares and ten mineral claims covering an area of 3,250 hectares. The right to mine the McClean Lake deposits was acquired under these mineral leases, as renewed from time to

time. The mineral leases are valid for 10 years with the right to renew for successive 10-year periods, provided that the leaseholders are not in default pursuant to the terms of the lease. The terms of the two mineral leases expire in April 2006. It is expected that the leases will be renewed as required to enable the McClean Lake deposits to be fully exploited. Title to the mineral claims is secure until 2023.

The uranium produced from the McClean Lake deposits are subject to Saskatchewan uranium royalties under the terms of Part III of the Crown Mineral Royalty Schedule, 1986 (Saskatchewan), as amended.

## **ENVIRONMENTAL AND PERMITTING STATUS**

The McClean Lake property is subject to decommissioning liabilities. Cogema, the operator, filed a conceptual decommissioning plan with the Saskatchewan government. Financial assurances are in place for the total amount of \$35.0 million to cover the estimated costs of this decommissioning work. MLJV has filed an updated decommission plan with the regulatory bodies, with estimated decommissioning costs reduced to \$29 million.

The McClean Lake site is operated under various permits, licences, leases, and claims granted and renewed from time to time. MLJV reports that currently all are in good standing. On July 25, 2005, the Canadian Nuclear Safety Commission (CNSC) issued Mine Operating Licence, UMOL – MINE MILL – McCLEAN .02/2009, for a four-year term to May 30, 2009. The Approval to Operate Pollutant Control Facilities 10–2005 was issued on August 26, 2005, by Saskatchewan Environment. This approval expires on August 31, 2010. RPA has viewed documentation supporting the latter two renewals.

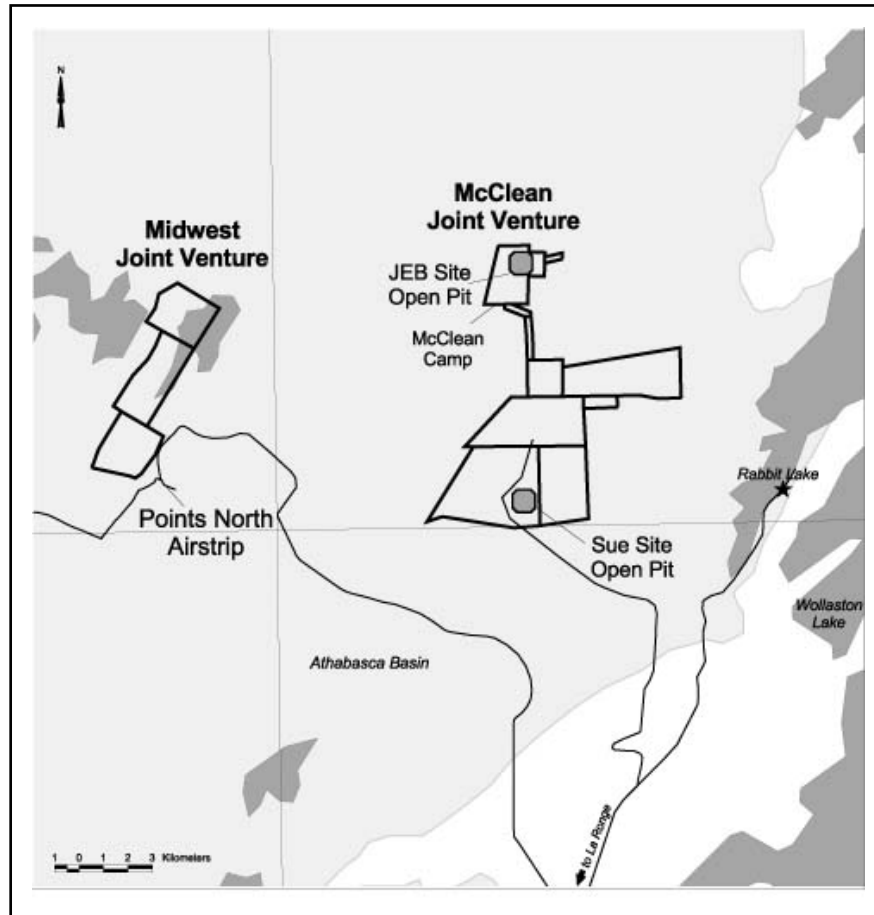
## **7 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

### **ACCESSIBILITY**

Access to the McClean Lake property sites is by both road and air. Goods are transported to the sites by truck over an all-weather road connecting with the provincial highway system. Air transportation is provided through the Points North airstrip approximately 25 kilometres from McClean Lake (Figure 7-1).

The nearest permanent community is Wollaston Post, approximately 50 kilometres from the property on the other side of Wollaston Lake. Workers commute to and from the site by aircraft landing at Points North, then by bus to the site. While at the site, workers reside in permanent camp facilities at McClean Lake. Personnel are recruited from the northern communities and major population centres, such as Saskatoon, and normally work one week on and one week off.

FIGURE 7-1 MCCLEAN LAKE AND MIDWEST PROPERTIES



Source: Denison Mines Inc.

## CLIMATE

Site activities are carried out all year despite the cold weather during the winter months. The climatological data, temperature and precipitation, have been summarized from data provided by Environment Canada (2003). The mean monthly temperatures are below 0°C for seven months of the year. Annually, mean monthly temperature ranges between -24.3°C and 15.3°C, with extremes as low as -34.2°C, indicating the severity of the winter. The precipitation is relatively heavy for the region (550 millimetres annually with more than half that total falling as rain). The wettest period is from June to September, which accounts for 55% of the total annual precipitation. The mean date of the last frost in spring is June 1 and the mean date of the first frost in the fall is September

1, giving a mean annual frost-free period of 86 days. The mean annual temperature is  $-3.6^{\circ}$  C, and the area lies within a zone of discontinuous permafrost.

## **LOCAL RESOURCES**

Water for industrial activities is obtained from Pat Lake, southwest of the JEB Mill, on the McClean Lake Property.

Electric power for the JEB Mill and to the Sue A and C open pit site north of Sue D is obtained from the provincial grid through a switch station at Points North, with stand-by power available as required.

## **INFRASTRUCTURE**

The main facilities and operations at the McClean Lake Property are an open pit mining area (Sue A/C site) and the JEB Mill located near the previously mined out JEB pit, which has been converted to the tailings management facility (JEB Site). There are also various supporting facilities for activities such as water treatment, site infrastructure including roads, electricity distribution, and the camp facilities. The Sue C pit is mined out and mining of the north-adjointing Sue A pit is underway. The Sue B and E pits have been approved for mining and the Sue E open pit is being stripped to access ore. A twelve kilometre haul road connects the Sue and JEB Sites. The camp facilities are located near the JEB site. The office and shops for the mill are housed in the mill complex.

The JEB mill uses sulphuric acid and hydrogen peroxide leaching and a solvent extraction recovery process to extract and recover the uranium product from the ore. A series of unit processes, or circuits, are directly associated with uranium production. Discharge of treated water is through the JEB water treatment plant, located at the JEB site. Tailings are discharged through a pipe-in-pipe containment system to the edge of

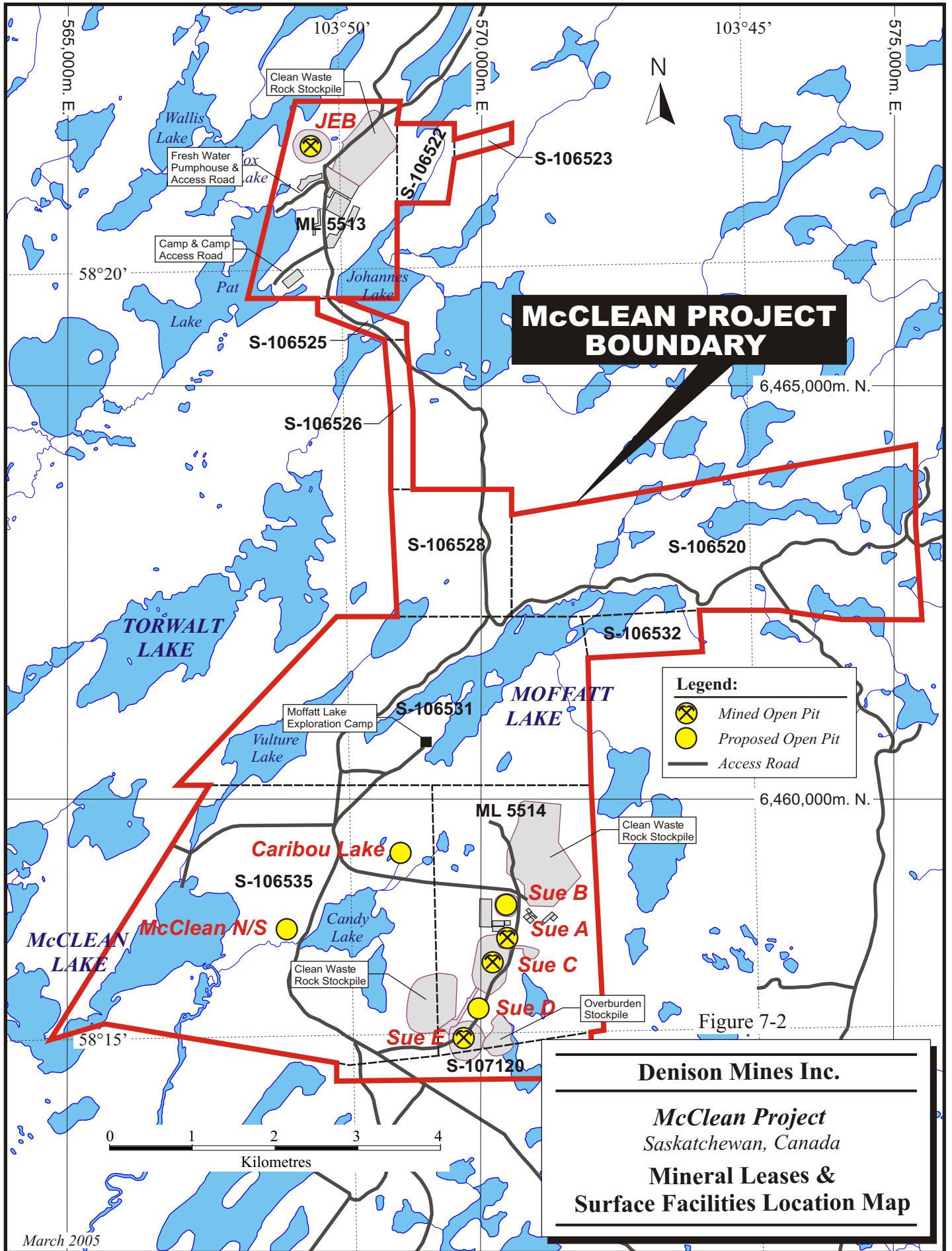
the JEB tailings management facility (JTMF), where they are deposited in water in the mined-out JEB pit.

All tailings from the JEB mill are deposited in the JTMF in the mined-out JEB pit. A facility also has been designed to receive tailings from the processing of the high-grade Midwest and Cigar Lake ores.

## **PHYSIOGRAPHY**

The entire area was glaciated at least three times during the last 150,000 years. The land forms are sandy and gravel moraines, drumlins, and drumlinoids that follow northeast-southwest trends and produce sand and gravel ridges over the largest portion of the area. The maximum relief is 90 m (450 m to 540 m above sea level). The drainage is typical of relatively flat, recently glaciated regions, with numerous lakes and wetlands covering 25% of the area. Discontinuous muskeg is present throughout the area in topographic depressions and ranges in thickness from one to two metres. The vegetation in the area, rarely more than 10 m high, consists of jack pine and black spruce with moss as the predominant groundcover.





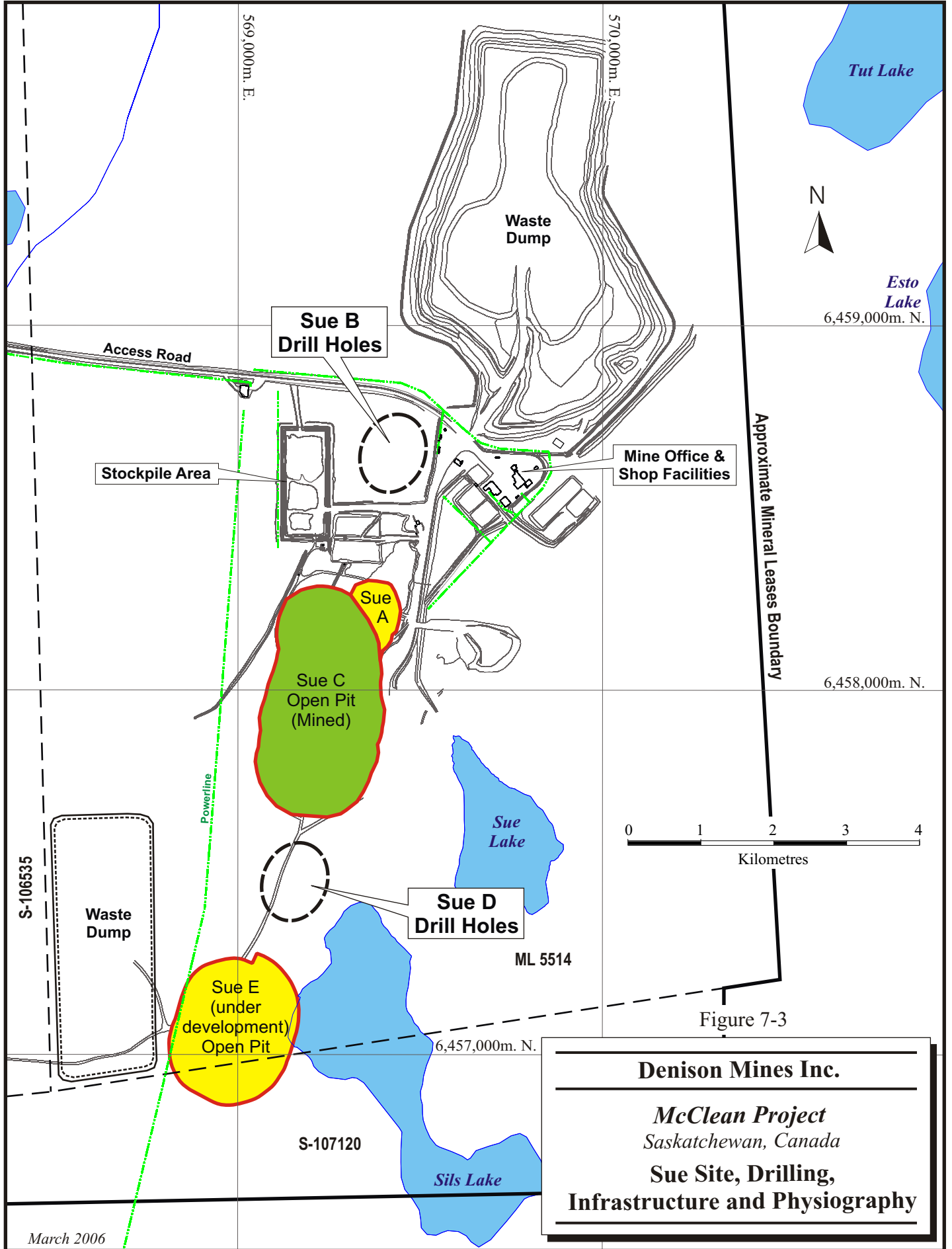


Figure 7-3

**Denison Mines Inc.**

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*McClellan Project*  
Saskatchewan, Canada

**Sue Site, Drilling,  
Infrastructure and Physiography**

March 2006

## **8 HISTORY**

Canadian Occidental Petroleum Limited (Canadian Oxy) began exploring for uranium in northern Saskatchewan in 1974. The prospective area was located between the known Rabbit Lake deposit and Midwest Lake where previously uraniferous boulder trains had been found. In April 1977, Canadian Oxy entered into a joint venture agreement (Wolly Joint Venture) with Inco Limited (Inco). During a diamond drilling programme in 1977, one of the 47 holes drilled encountered encouraging uranium mineralization. Over the next two years, extensive exploration work was carried out, including airborne geophysics, electromagnetic surveys, and diamond drilling.

Mineralization was discovered in January 1979, and the follow-up drilling later that year confirmed the existence of a significant unconformity-type uranium deposit (the McClean North deposit). Subsequent exploration resulted in the discovery of the McClean South and JEB deposits in 1980 and 1982, respectively.

In 1984, CanadianOxy and Inco received conditional approval from the regulatory authorities for an underground exploration permit for the McClean deposit. Shortly thereafter, Canadian Oxy and Inco reached a corporate decision to suspend all ongoing field and engineering work on that project.

In January 1985, Minatco Limited (Minatco), a predecessor in title to Cogema, entered into the Wolly Joint Venture (predecessor to the McClean Joint Venture) with Canadian Oxy and Inco. From 1985 to 1990, Minatco continued exploration of the McClean Lake Property including airborne and ground geophysical surveys, percussion and diamond drilling. The reconnaissance diamond drilling programme resulted in the discovery of the Sue A deposit in 1988. Further drilling discovered the Sue B and Sue C deposits in the later part of 1988 and 1989, with Sue D first intersected in 1989. The Sue E was initially drilled in 1991.

In 1993, the owners of the Midwest Property and the McClean Lake Property agreed to combine their interests and develop two complementary projects. Ownership interests in the respective joint ventures were interchanged with Denison which acquired a 22.5% interest in McClean Lake.

Development of the McClean Lake uranium facility began in March 1995. Construction and commissioning were completed in 1997. The JEB deposit was mined out and the ore stockpiled. In 1999, the JEB Pit was converted into the JEB Tailings Management Facility.

Mining of the Sue C orebody was completed on February 3, 2002, and all of the ore has been stockpiled on surface. The low-grade uranium special waste, from the mining of the JEB and Sue C deposits, was disposed of in the mined-out Sue C pit in such a manner that it could not interfere with the mining of the adjacent Sue A deposit. This work was completed in April 2002. The pit was allowed to flood naturally.

In 2002, exploration drilling discovered a pod-like deposit at the western extension of the Sue trend, in the Caribou Lake area, approximately three kilometres from the Sue C pit. Mineralization occurs in sandstones at and immediately above the unconformity and is arsenic-rich, which makes it distinct from deposits on the Sue trend. Additional definition drilling was also done at the Sue E deposit.

In October 2003, Denison Energy Inc. issued a NI 43-101 Report on the reserves and resources of the McClean Lake and Midwest areas, with a comment that underground development of the McClean North area was not likely the most economically effective method as originally proposed in a feasibility study by Kilborn in 1990. This was followed by a Denison Energy Inc. report in November 2003 with a resource estimate at the pre-feasibility level assuming development of McClean North using Blindshaft Boring.

Effective March 8, 2004, Denison became an active business, having acquired the mining and environmental services' business from Denison Energy Inc.

Table 8-1 illustrates the recent production history from the McClean Lake properties to year end 2004:

**TABLE 8-1 MCCLEAN LAKE PROPERTIES - PRODUCTION HISTORY**  
**McClean Lake Joint Venture - McClean Lake Property, Saskatchewan**

	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
Ore Milled - tonnes x 1,000	23	82	98	122	132	152
Average Grade - % U <sub>3</sub> O <sub>8</sub>	3.24	3.42	3.10	2.29	2.07	1.86
Production - lbs U <sub>3</sub> O <sub>8</sub> x 1,000	1,455	6,015	6,595	6,098	6,028	6,005

## **9 GEOLOGICAL SETTING**

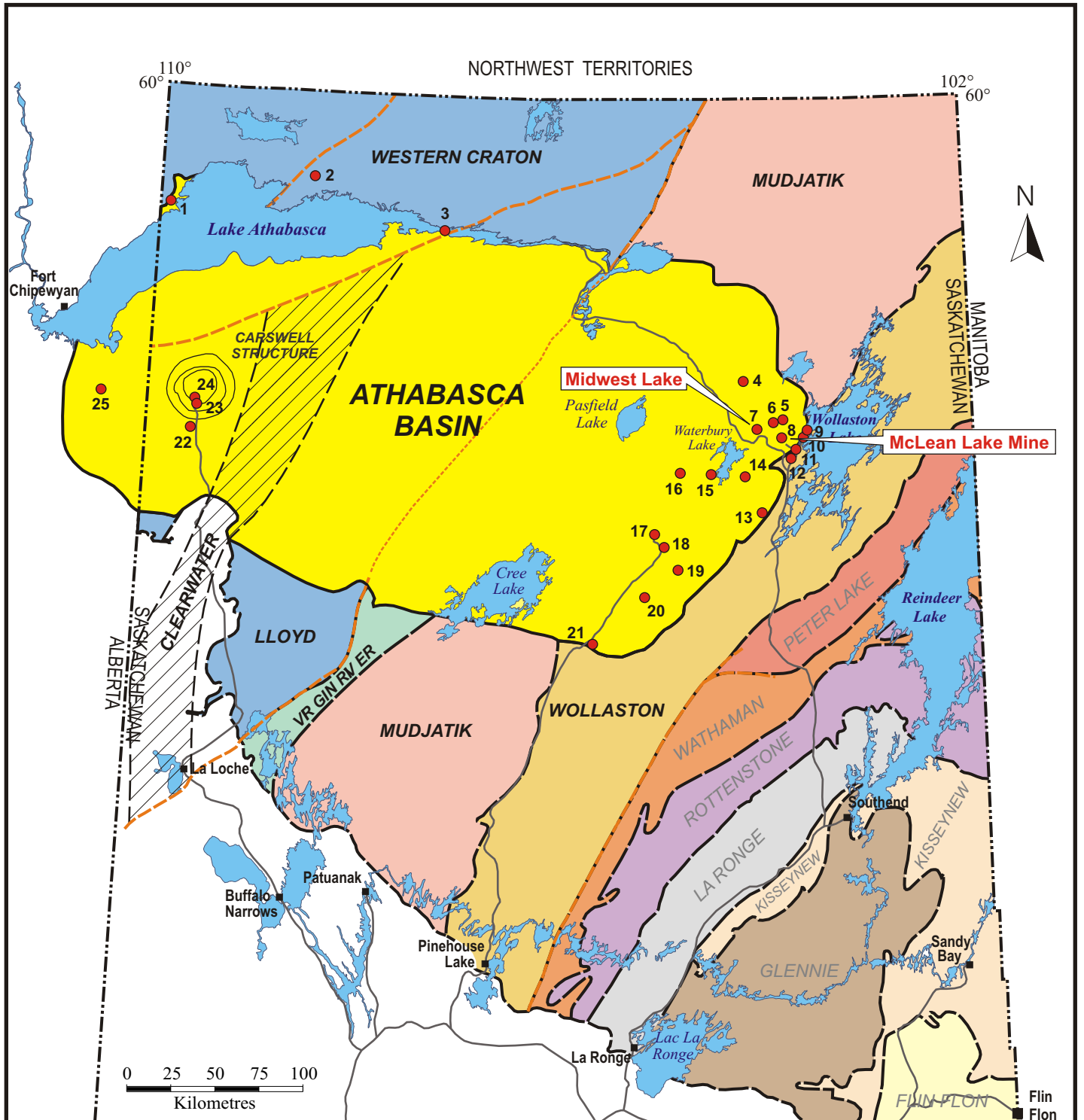
This section has been taken directly from the 2003 Denison report (Kerr et al., 2003).

### **REGIONAL GEOLOGY**

The McClean Lake and Midwest uranium deposits lie near the eastern margin of the Athabasca basin in the Churchill Structural Province of the Canadian Shield. The bedrock geology of the area consists of Precambrian gneisses unconformably overlain by flat-lying, unmetamorphosed sandstones and conglomerates of the Athabasca Group. The Midwest property straddles the transition zone between two prominent litho-structural domains within the Precambrian basement, the Mudjatik to the west and the Wollaston to the east, while the McClean Lake Property lies entirely within the Wollaston domain (Figure 9-1).

These domains are the result of the Hudsonian Orogeny in which an intense thermo-tectonic period remobilized the Archean age rocks and led to intensive folding of the overlying Aphebian-age supracrustal metasedimentary units. The Mudjatik domain represents the orogenic core and comprises non-linear, felsic, granitoid to gneissic rocks surrounded by subordinate thin gneissic supracrustal units. These rocks, which have reached granulite-facies metamorphic grades, usually occur as broad domal features. The adjacent Wollaston domain consists of a steeply dipping isoclinally-folded sequence of Aphebian gneissic rocks with a distinct northeast lineal structural trend. The basement surface is marked by a paleoweathered zone with lateritic characteristics referred to as regolith.

The sedimentary rocks of the Athabasca Basin unconformably overlie the metamorphic basement. The basin is deep, closed, and elliptically shaped. The sedimentary rocks in the basin are fluvial sandstones and conglomerates with minor shales and dolomites.



- Legend:**
- Precambrian Domain Boundaries & Names
  - Shear Zone
  - Road
  - Town
  - · - · - Provincial Boundary
  - Uranium Mines & Major Deposits
- |                            |                                     |  |
|----------------------------|-------------------------------------|--|
| 1- Maurice Bay Deposit     | 10- Collins Bay A & B Zone Deposits | 19- McArthur River-Harrigan Zone Deposit |
| 2- Nesbill Labine Mine     | 11- Rabbit Lake Mine                | 20- Moore Lake Showing                   |
| 3- Fond-du-Lac Deposit     | 12- Horseshoe & Raven Deposits      | 21- Key Lake Mine                        |
| 4- La Rocque Lake Deposit  | 13- West Bear Deposit               | 22- Shea Creek Deposit                   |
| 5- JEB Deposit             | 14- Wolf Lake & Sand Lake Deposits  | 23- Cluff Lake Mine                      |
| 6- Dawn Lake Deposit       | 15- Cigar Lake Mine                 | 24- Cluff Lake Mine                      |
| 7- <b>Midwest Lake</b>     | 16- Close Lake Deposit              | 25- Maybelle River Deposit               |
| 8- <b>McLean Lake Mine</b> | 17- McArthur River Mine             |  |
| 9- Eagle Point Mine        | 18- McArthur River-BJ Zone Deposit  |  |

Figure 9-1

**Denison Mines Inc.**

*Midwest & McLean Lake Mines*  
Saskatchewan, Canada

**Projects Location & General Geology Map**

March 2006

Source: Mineral Resource Map of Sask., 2000 Edition

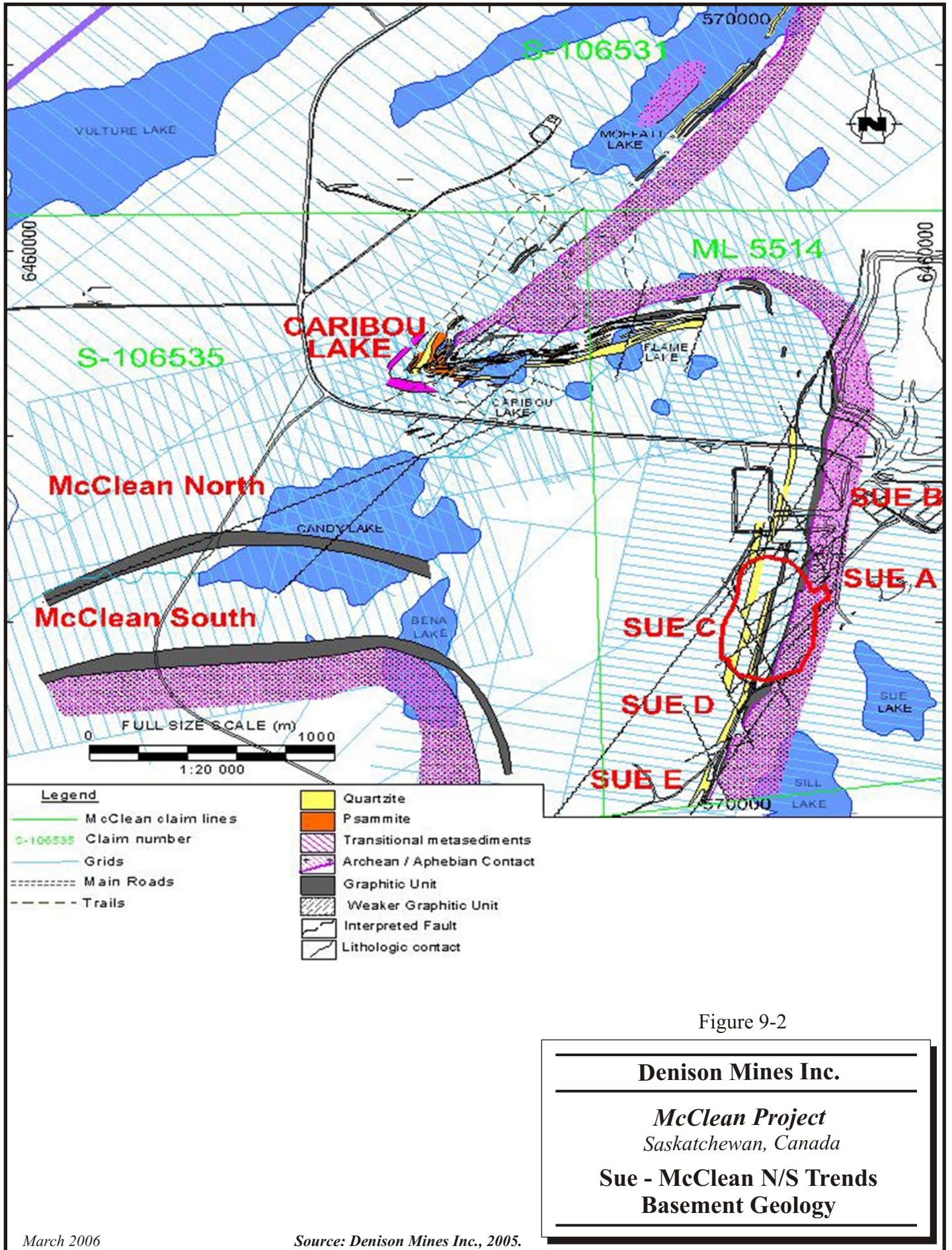
The area is cut by a major northeast-striking fault system of Hudsonian Age. The faults occur predominantly in the basement rocks but often extend up into the Athabasca Group due to several periods of post-depositional movement. Diabase sills and dykes are frequently associated with the faulting.

## **LOCAL AND PROPERTY GEOLOGY**

### **PRE-ATHABASCA FORMATION - MCCLEAN LAKE AREA**

The pre-Athabasca or basement geology underlying the McClean Lake area is composed of a thin cover of Lower Aphebian gneissic rocks, believed to be 200 m to 300 m thick, lying on Archean granitoid gneisses. Geophysical evidence suggests that approximately one half of the McClean Lake area is underlain by these felsic granitoids. The rocks occur as domal masses and range from foliated granitoids in the core to more gneissic rocks on the margins and, in many instances, are wrinkles or bulges of much larger features. Complex folding has produced thin arcuate antiforms in the Archean granitoids surrounded by narrow synforms of lower Aphebian pelitic gneisses containing a graphitic unit that is highly significant with regard to uranium exploration. The lower member of the Aphebian cover displays a continuous stratigraphic succession of predominantly metapelitic gneisses containing a dominant graphitic member. All of the known significant uranium mineralization on the McClean property is directly associated with that graphitic member (Figure 9-2).





**ATHABASCA FORMATION - MCCLEAN LAKE PROPERTY**

Figure 9-3 illustrates the generalized stratigraphic sequence in the McClean Lake Property.

The unconformity at the base of the Athabasca Sandstone contains a tropical paleo-weathering profile. The regolith varies from a few metres to over 30 m thick, the thickness being highly dependent on the composition of the parent rock as well as basement structures. The regolith is often completely destroyed by hydrothermal alteration in the zones of mineralization.

The Athabasca Sandstone unit covers the whole area of the Property. It is represented by up to 200 metres of the Manitou Falls formation, a non-marine fluvial sandstone with conglomeratic lenses in the basal B member. These sandstones were deposited on alluvial fans and in braided streams and typically show abundant cross-bedding, coarser and finer units, and a general horizontal layering. The Athabasca Sandstone thickens westward into the basin.

**QUATERNARY GEOLOGY**

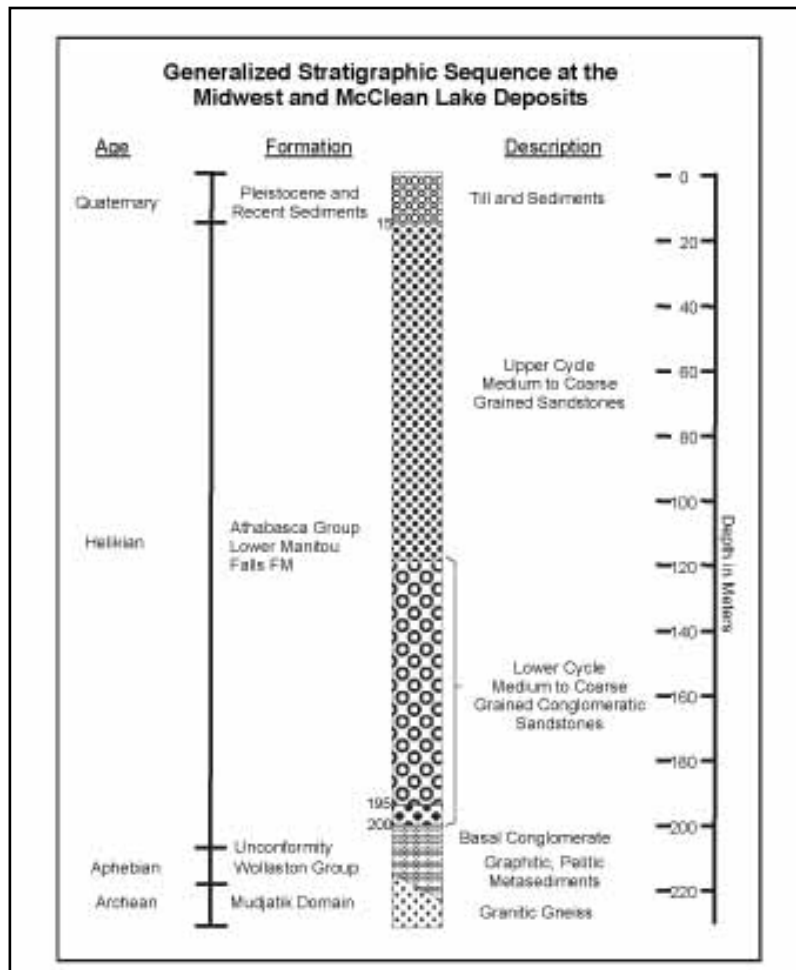
The surficial deposits are of Quaternary age and consist largely of a Pleistocene drumlinized till plain resting directly on the sandstone bedrock. The till is locally overlain by sediments consisting of glacio-fluvial sands and gravels, and recent alluvial sands and silts. The till generally is two to four metres thick, but reaches as much as 15 metres under gently undulating drumlins that add up to 30 metres to the local relief.

**STRUCTURE**

The structural geology of the pre-Athabasca rocks is highly complex, having undergone at least three major deformational episodes of folding during the Hudsonian orogeny. Many of the faults exhibit several superimposed periods of activity with both horizontal and vertical movements being evident. Some fault sets were reactivated following Athabasca sedimentation and provided channel-ways for hydrothermal

solutions and the loci for uranium deposition. Horizontal shear cleavage has been identified at the unconformity horizon and is best expressed in the highly altered environment of the uranium deposits. These shear structures appear to be related to and control the alteration.

**FIGURE 9-3 TABLE OF FORMATIONS**



Source: Denison Mines Inc.

The McClean North and South deposits are controlled by a zone of strong east-west faulting and fracturing coincident with the basement graphitic gneisses. These faults dip approximately 70° south and exhibit a combination of normal and reverse offsets which create basement highs of a few metres. There are also steeply dipping northeast and northwest-trending fracture sets which show both vertical and lateral displacement.

The favourable graphitic gneiss, which hosts or is immediately below the Sue deposits, is in fault contact to the east with feldspathic gneisses and granitoid rocks, whereas to the west it is gradational, with intermediate gneissic units.

At the Sue deposits, combinations of normal and reverse faults that parallel the east-dipping foliation in the graphitic gneisses have resulted in basement relief of 10 m to 20 m. Reverse faulting stepped the unconformity down to the west. The Sue A and B deposits occur along the western flank of a basement horst which has eight to ten metres of relief. Northeasterly and northwesterly striking faults offset and modify the major north-south structural controls, creating conditions which limit, or significantly control, the extent of mineralization along the trend.

## **ALTERATION**

The following description of alteration associated with unconformity-type uranium deposits was largely taken from Quirt, 2003 by Denison:

The two main types of ore paragenesis in the Athabasca Basin are dictated by the form of fluid interaction and can be separated by deposit location as follows:

(1) Sandstone hosted egress-type (Midwest) involving mixing of the oxidized sandstone brine with relatively reduced fluids issuing from the basement into the sandstone.

(2) Basement hosted ingress-type (Sue C, D and E) involving fluid-rock reactions between oxidising sandstone brine entering basement fault zones and the wall rock. Both types of mineralization and associated host-rock alteration occurred at sites of basement-sandstone fluid interaction where a spatially stable redox gradient/front was present.

The dominant ore location can occur in the sandstone directly above the unconformity (McClellan Lake Property), straddling the unconformity (Midwest), or perched high above the unconformity (certain zones at both McClellan Lake and Midwest). Similarly, in some deposit areas, there is a plunge to the mineralized pods from sandstone-hosted to basement-hosted within deposit-scale strike lengths (McClellan Lake trend, Sue trend).

Most sandstone-hosted deposits display dominant desilicification features and coincident abundant accumulations of clay minerals and detrital minerals such as zircon and tourmaline. Around basement-hosted deposits, however, the host rock alteration is dominantly chloritic, with restricted illite at the expense of biotite, cordierite and garnet as at Sue C.

Illite is often characteristic of the core of the altered and mineralized zone. Complex redox-controlled reactions and acid-base reactions resulted in precipitation of massive pitchblende, with associated hematite accumulation and varying amounts of base and other metallic mineralization at sites of fluid-fluid and fluid rock interaction. The geochemical signatures of the individual unconformity-type deposits do vary significantly. Sandstone-hosted deposits, such as Midwest, predominantly demonstrate subequal U+Ni+Co+As mineralization, while the basement-hosted deposits of the Sue trend are predominantly U+V.

Kilborn (1990) describes the alteration at the McClean Lake deposits as follows:

At the McClean North and South deposits, alteration is extensive above and below the mineralization, being largely controlled by the zone of east-west faulting. Argillic (clay) alteration with some hematitic and chloritic alteration envelopes the mineralization and extends upwards along fractures for several tens of metres where it is ultimately capped by silicified sandstones. Alteration of the basement rocks below the mineralization consists of bleaching, chloritization, argillization, and hematization. Transverse to the mineralized trend, the alteration diminishes very rapidly and rocks are frequently fresh within a few metres of mineralization. At Sue A, the deposit lies on and immediately above the unconformity in an envelope of massive earthy-red clay. Argillic alteration extends almost to the sandstone subcrop along fault zones, leaving only scattered sections of silicification in the cap rock. At Sue B, the mineralization is likewise hosted by massive earthy-red clay, while the upper zone displays remnant silicification. The sandstone between the upper and lower zones is lightly silicified. The vein type Sue C deposit is intimately associated with clay alteration and argillization of the basement.

The Sue E deposit is likewise basement-hosted and has limited basement alteration outside of the mineralization.

## **SUE D AREA GEOLOGY**

The Sue trend lies on the west flank of the Collins Bay granitoid dome and is hosted by a north-south segment of a regionally extensive, steeply dipping thin band of graphitic gneiss within the Wollaston Domain. The Sue D deposit lies north of Sue E and south of Sue C/A open pit along the principal Sue trend consisting of a north-south, multiple shear structure and graphite unit. The Sue trend, from Sue E to the north of Sue B, is 2.5 km long. Further north, the favourable graphitic gneisses follow the Collins Bay granite contact and swing west in the “Sue nose area” and thence continue west-southwest, extending approximately two kilometers to the Caribou deposit site that is located approximately two kilometres northwest of Sue D.

The Sue D deposit, as defined by a 0.1% U<sub>3</sub>O<sub>8</sub> grade envelope, is approximately 118 m long by 20 m wide and 10 m to 30 m thick. Uranium mineralization is hosted by faulted/fractured, brecciated and altered graphitic paragneiss below the Athabasca Sandstone-Aphebian basement angular unconformity. The sandstone-basement contact dips west as a result of a series of down-throws along reverse faults paralleling the deposit strike.

The Sue D uranium mineralization dips moderately to steeply east as a series of lenses lying at depths of 85 m to 200 m. In the north, an upper zone of low to moderate grade uranium mineralization is approximately 20 m thick and extends from just above the unconformity to depth and narrows to the south. A deeper or lower, higher grade zone occurs in anastomosing north-trending faults approximately 50 m to 200 m below the unconformity and is 10 m to 30 m thick and up to 16 m wide. Cross cutting structures control mineralization at fault intersections and also displace or thicken the zone by fault repetition. The upper and lower zones merge in the north end of the deposit but diverge to the south.

The uranium mineralization is strongly fault-controlled at Sue D. Five fault systems have been described by Wilson et al. (1994) as follows.

1. N10°E to N15°E reverse faults, with vertical movement up to 30 m, displacing the sandstone–basement contact and defining the 30 m to 40 m wide Sue D mineralized zone and controlling mineralization. The structures dip 60°E to 70°E consistent with the mineralization lenses.
2. N30°E reverse faults dipping 60°W to 70°W. These cut the main structures and divide the zones into upper and lower.
3. N70°E mineralized subvertical cross faults with dextral offsets. These displace the deposit but also thicken mineralization at the intersections with the north-trending main faults. These faults terminate the deposit to the north and south (Wilson et al., 1994).
4. N125°E unmineralized, subvertical sinistral cross faults cut the mineralization in the centre of the deposit.
5. North-trending faults that dip 20°E to 30°E and cut off the main north-trending mineralized structures at depth in the south portion of the deposit.

RPA independently interpreted structures from the spatial distribution of uranium in drill hole assays. Three cross faults, two with sinistral movement and one with dextral, have clearly displaced uranium mineralization in the deposit laterally and vertically in the order of 5 m to 20 m.

## 10 DEPOSIT TYPES

The following description of unconformity-type uranium deposits was adapted from Quirt (2003) by Denison:

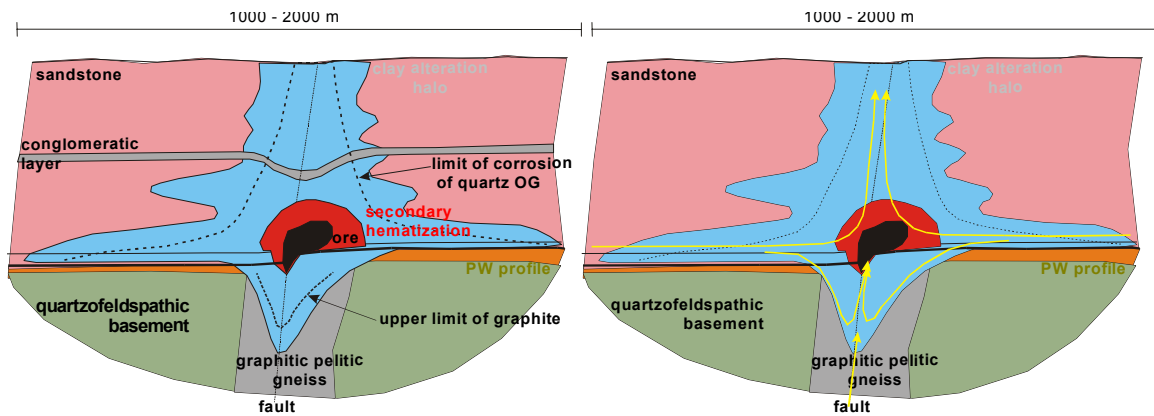
Unconformity-type uranium deposits are very high grade and high tonnage relative to other types of uranium deposits, and the Athabasca-hosted deposits in Saskatchewan currently account for over 34% of worldwide uranium production. A model of unconformity-type uranium deposits is illustrated in Figure 10-1. According to Quirt (2003), there are two main types of ore paragenesis that are dictated by the form of fluid interaction and can be separated by deposit location:

- 1) Sandstone-hosted egress-type (e.g., Cigar lake, Cluff D, McArthur River, Collins Bay, Midwest) involving mixing of the oxidized sandstone brine with relatively reduced fluids issuing from the basement into the sandstone, and
- 2) Basement-hosted ingress-type (e.g., Rabbit Lake, Eagle Point, Sue C, Claude, and Cluff Lake N) involving fluid-rock reactions between oxidising sandstone brine entering basement fault zones and the wall rock.

For the sandstone-hosted deposits, fluid-fluid interactions best explain the presence of massive and fracture mineralization, while for basement-hosted deposits, fluid-rock interactions best explain the presence of fracture filling mineralization. Both types of mineralization and associated host-rock alteration occurred at sites of basement-sandstone fluid interaction where a spatially stable redox gradient/front was present. Without sufficient ore reaction constituents and/or the presence of a stable redox front, a barren host-rock alteration halo formed without significant mineralization.



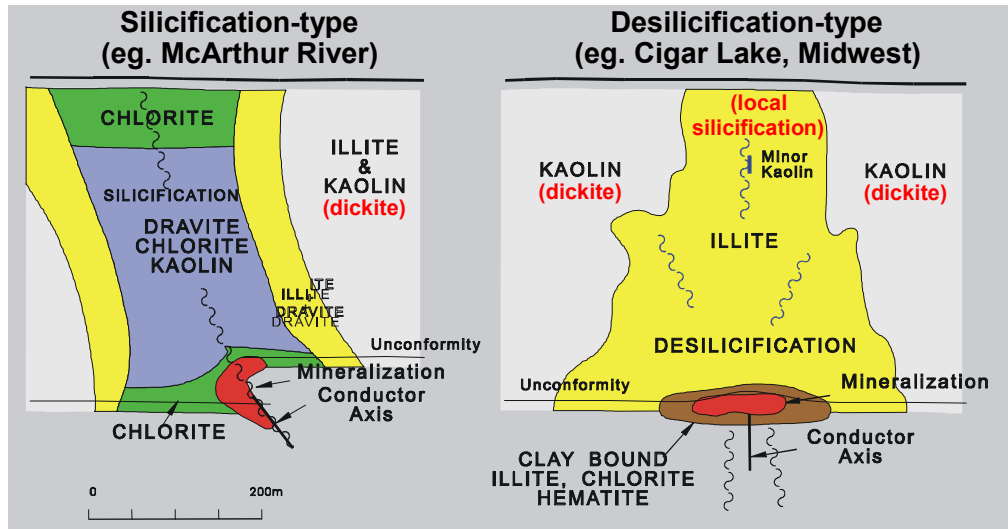
**FIGURE 10-1 CONCEPTUAL MODEL OF EGRESS TYPE, SANDSTONE-HOSTED MINERALIZATION**



Conceptual model of egress-type sandstone-hosted mineralization;  
 left: mineralization and alteration features, right: fluid flow (Hoeve and Quirt, 1984, 1987).

The prevailing hydrological conditions controlled the location of fluid interaction relative to the unconformity, with either egress-type or ingress-type deposits. For the egress-type deposits, the location relative to the unconformity of the fluid mixing and the redox front were variable and controlled by the hydrological environment. The dominant ore location can occur in the sandstone directly above the unconformity (Key Lake, Midwest) or perched high above the unconformity (McClellan Lake Sue A and B, Cigar Lake). The basement-hosted fluid rock interactions show less variation in location relative to the unconformity. Similarly, in some deposit areas, there is a plunge to the mineralized pods (e.g., McClellan Lake Sue trend). Other deposit areas do not exhibit this feature (Midwest, Cigar Lake).

**FIGURE 10-2 VARIATION IN EGRESS-TYPE SANDSTONE-HOSTED, HOST ROCK ALTERATION FEATURES**



After Quirt, 2003 and Wasyluk (2000)

### SUE D DEPOSIT TYPE

The Sue D deposit is located south of Sue C along the southerly plunge direction of the mineralized deposits along the Sue trend and is the deepest Sue deposit. It is a basement-hosted unconformity-type uranium deposit of the ingress-style similar to other ingress-type basement deposits in the trend, such as Sue E and Sue C to the north, and Rabbit Lake, Eagle Point, Claude, and Cluff Lake North deposits in the Athabasca Basin uranium camp. Deposit genesis at Sue D likely involved fluid-rock reactions between oxidizing basal sandstone brines, entering along basement fault zones, and the gneissic wall rock.

## 11 MINERALIZATION

Mineralization at Sue D consists primarily of uranium oxides (pitchblende and uraninite) with a suite of nickel-cobalt arsenides (primarily nicolite) and minor chalcopyrite and pyrite. Late remobilized uranium is present as coffinite. The mineralization occurs disseminated, in thin veins or fracture/breccia fills and as massive patches and agglomerated nodules. Commonly, the mineralization is fine to centimetre scale nodules along foliation.

Nickel, cobalt, and arsenic grades are generally low, typical of basement deposits, but there are localized pockets of higher grade base metals. Assays range locally up to 25.3% for Ni and 0.16% for Co. Only 61 (6.7%) of the Ni assays are  $\geq 1\%$  and the average Ni:U ratio is 0.05. Geochemically, uranium correlates with nickel and vanadium, with anomalous nickel, vanadium, and molybdenum forming a broad envelope around the deposit.

Alteration of the basement host gneisses is primarily hydrothermal, consisting of argillization and bleaching, with local transformation entirely to massive clay. The argillization overprints earlier retrograde chloritization and obliterates the regolith below the unconformity. Late stage yellow-brown and deep red hematization is associated with the pitchblende. The sandstones above the deposit are extensively fractured and clays altered. Matrix clays range from 3% to 33% illite and kaolinite, with illite accounting for mostly  $>60\%$ . Late silicification healed fractures occur in the sandstones locally.

## **12 EXPLORATION**

Sue D was explored by Minatco diamond drilling from surface from 1989 to 1992. Forty-three holes totalling 8,703 m were completed in three campaigns. An additional 23 fill-in holes were drilled in 1994 and 2001.

## 13 DRILLING

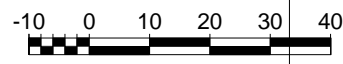
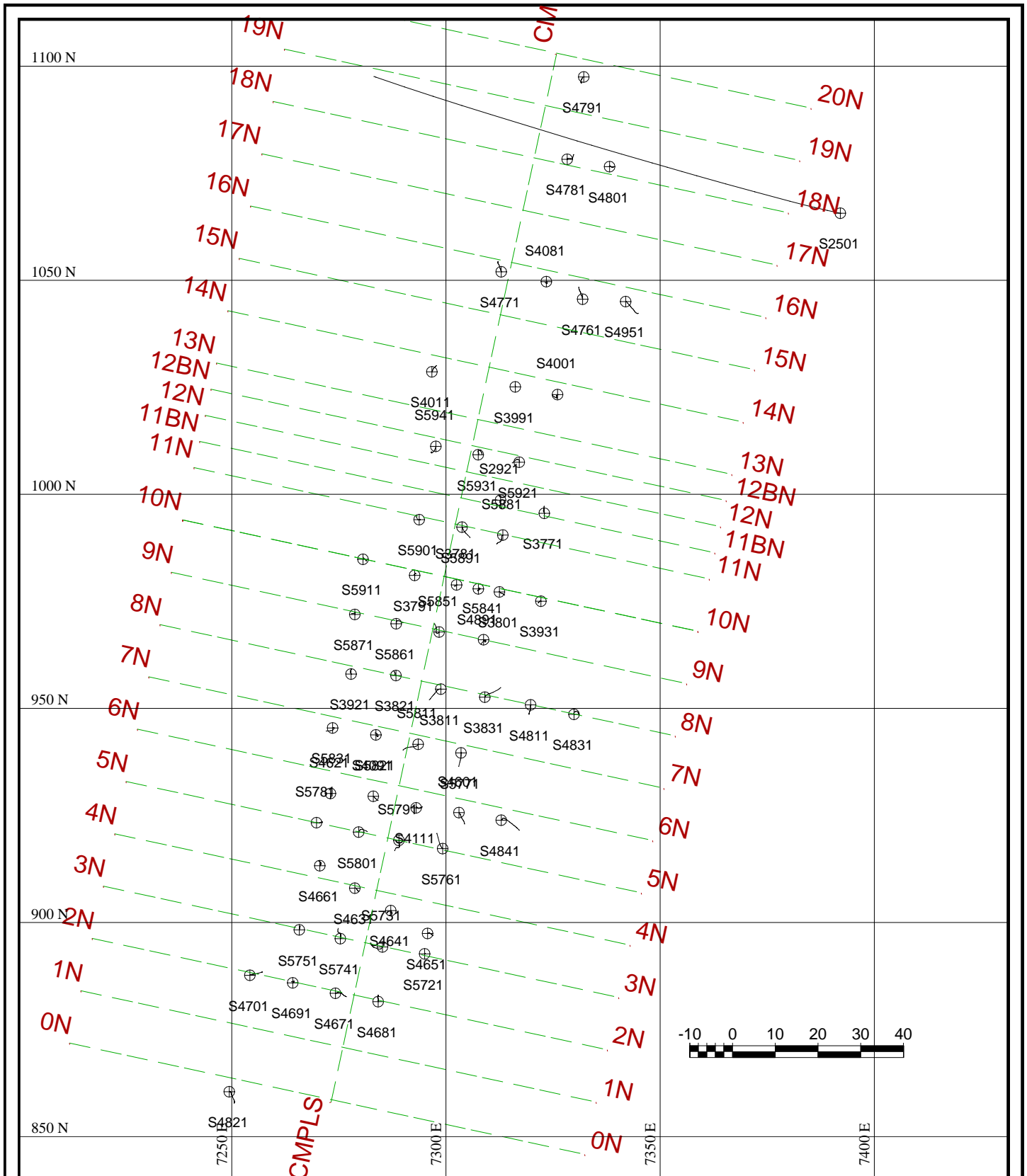
RPA received the drill hole database for Sue D from Cogema. The database contains lithologic, assay, collar header and survey data, but no mineralization or other wireframes, i.e., no topographic, overburden, unconformity, or pit surfaces. The initial database received contained data for 23 holes, far fewer holes than described in exploration reports. RPA requested verification of the database and subsequently received data for 70 holes. RPA noted a shift in collar coordinates for holes duplicated in the databases by 0.44 m east, 1.66 m north, and 1.96 m to 1.99 m elevation. Consequently, RPA has used the second database and assumes that it is the most up to date in terms of collar surveys.

The axis of the drill grid is approximately N12°E. The resource drilling covers an area of 140 m by 230 m or approximately 2.5 hectares. Holes were collared on nominal 12.5 m sections and spaced 10 m apart on section, and most holes penetrate in excess of 100 m into the basement. The section spacing at Sue D is similar to the spacing used for delineation drilling at other McClean Lake deposits.

Delineation diamond drilling at Sue D was primarily NQ (47.6 mm). Sixty-nine “S” series holes (S198 to S594) and a PV11 hole are included in the Cogema resource drill hole database. RPA notes that the hole numbers in the digital databases have an additional “1” appended to the original number. The 70 holes in the Cogema digital resource database total 13,395 m. Holes are vertical except for S250 (239.0 m) that is inclined -60° to 282° azimuth, i.e., drilled west-northwest. Holes lengths (depths) range from 98 m to 248 m and average 191 m.

Drill hole collars were surveyed for elevation and local grid coordinates. The latter are retained in the digital database. Down hole deviation was measured by Sperry-Sun multishot instrumentation. All holes record four to five down hole deviation surveys, with readings taken generally below the casing (14 m to 23 m) and then at a nominal 50 m intervals with the final reading at the toe. RPA checked for excessive deviation as an

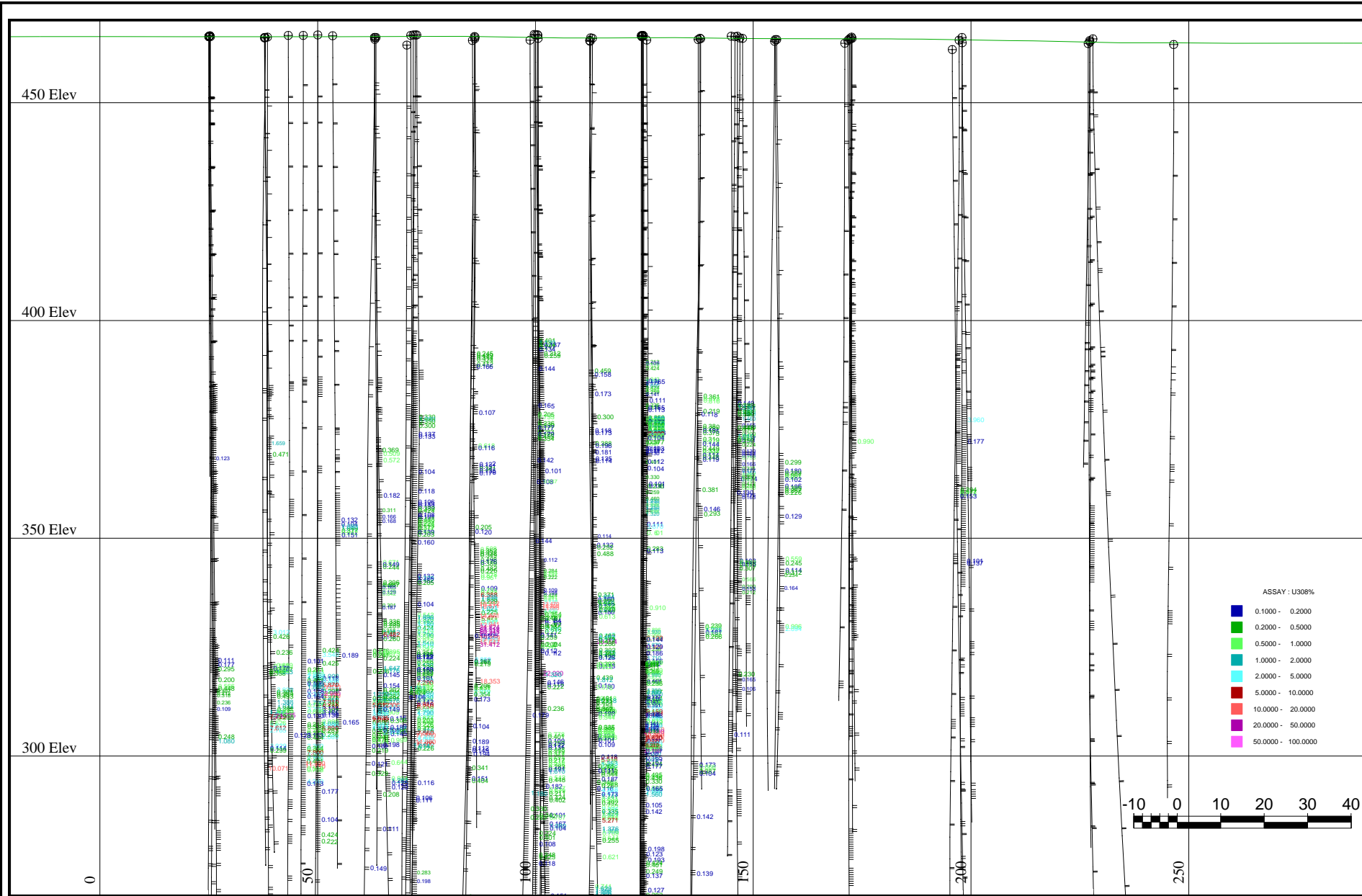
indication of drilling problems. Two holes showed possibly excessive (0.065°/m, i.e., 2°/100 ft.) dip change indicative of drilling or survey problems. These occurred on the first reading below the casing where the drill string may be deflected more than usual when penetrating bedrock. On-screen review of the traces for these holes indicates that their deviation is not unreasonable.



  
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 Toronto, Ontario M5J 2H7

**Figure 13-1**  
**MLJV**  
**Sue D Deposit**  
**Drill Hole Location Plan**

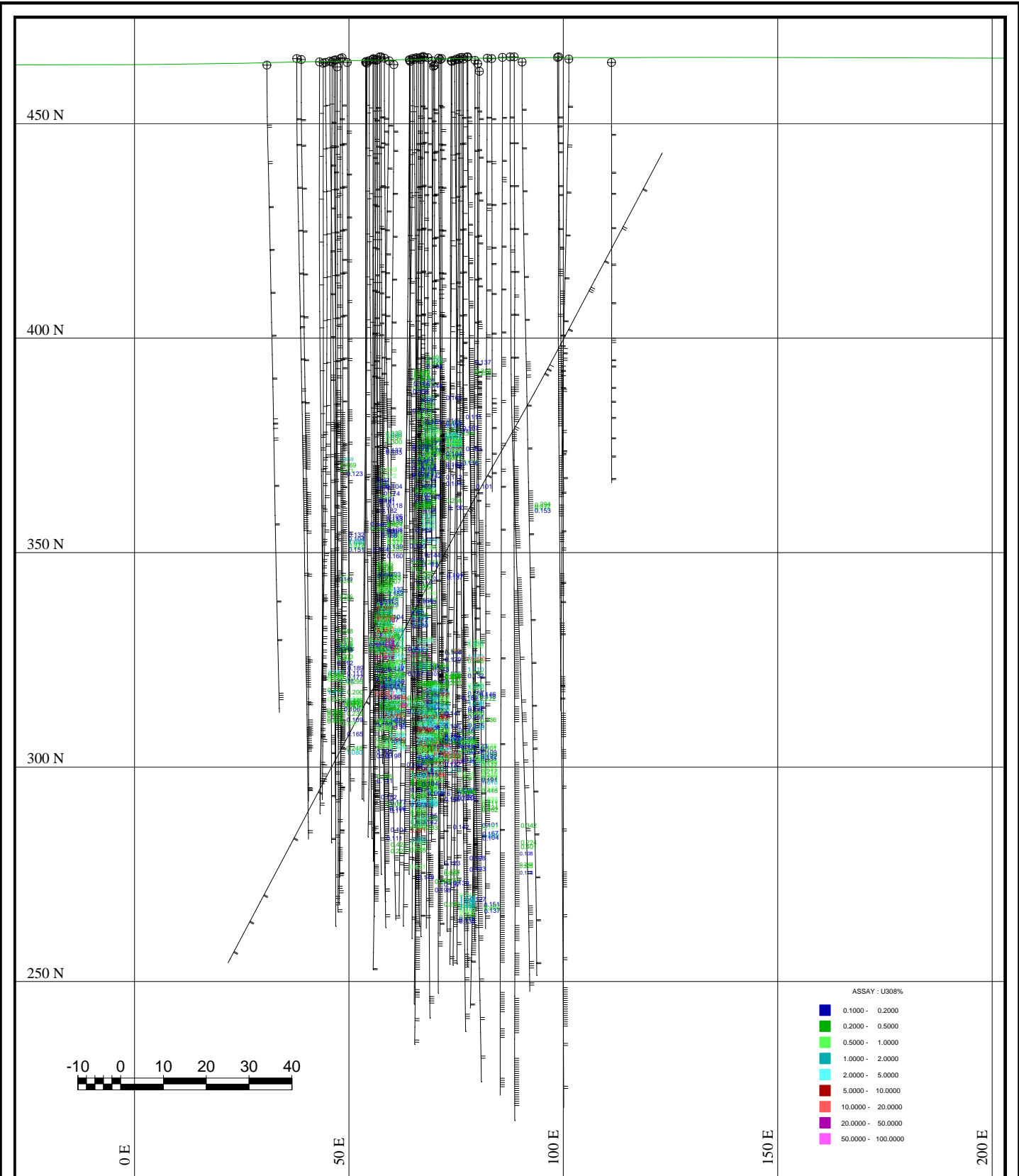
13-4



**RPA**  
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 GEOLOGICAL AND MINING CONSULTANTS  
 55 University Avenue, Suite 501  
 Toronto, Ontario M5J 2H7

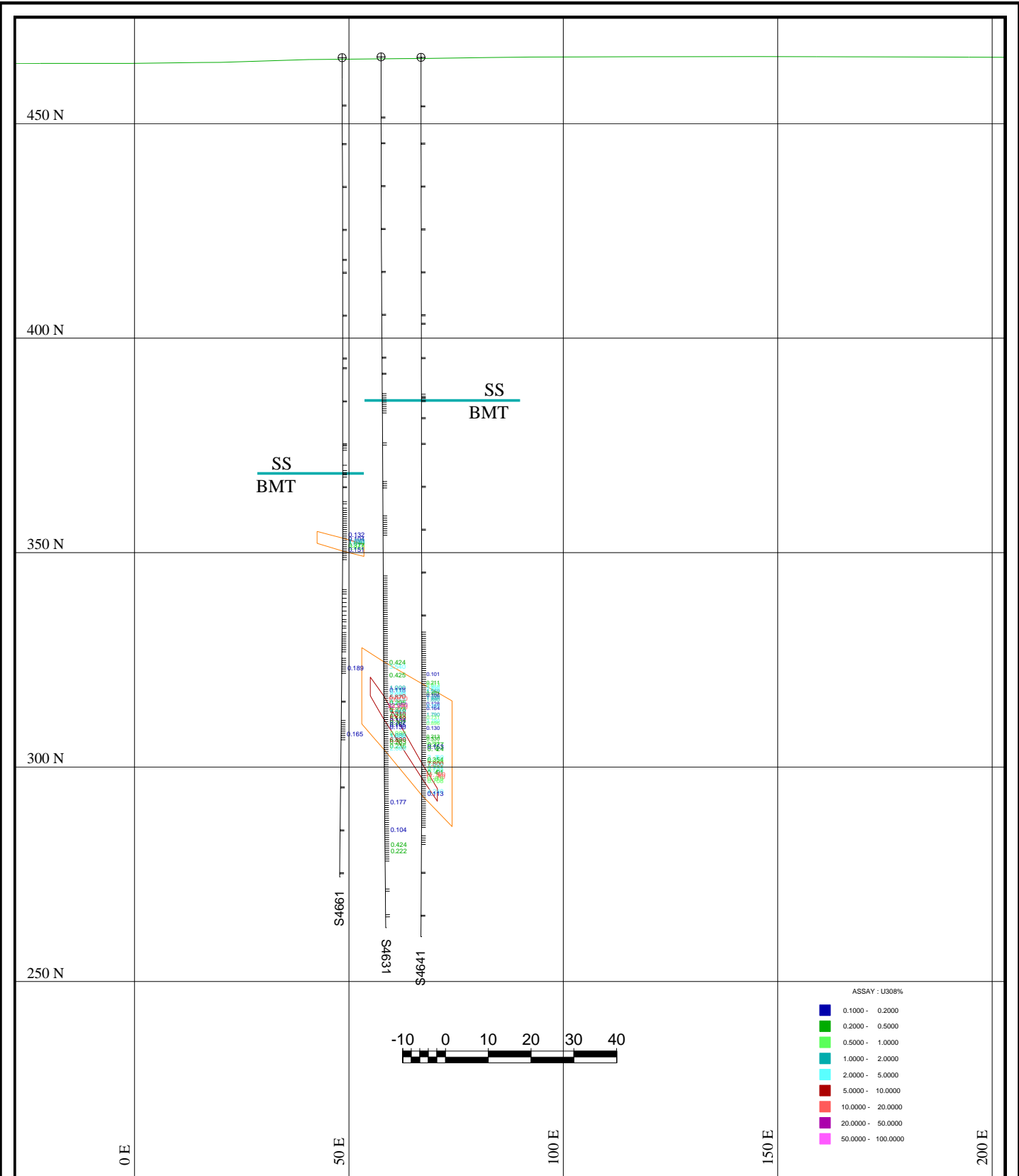
**Figure 13-2**  
**MLJV**  
**Sue D Deposit**  
**Composite Vertical Longitudinal Section**  
**U3O8% Assays**





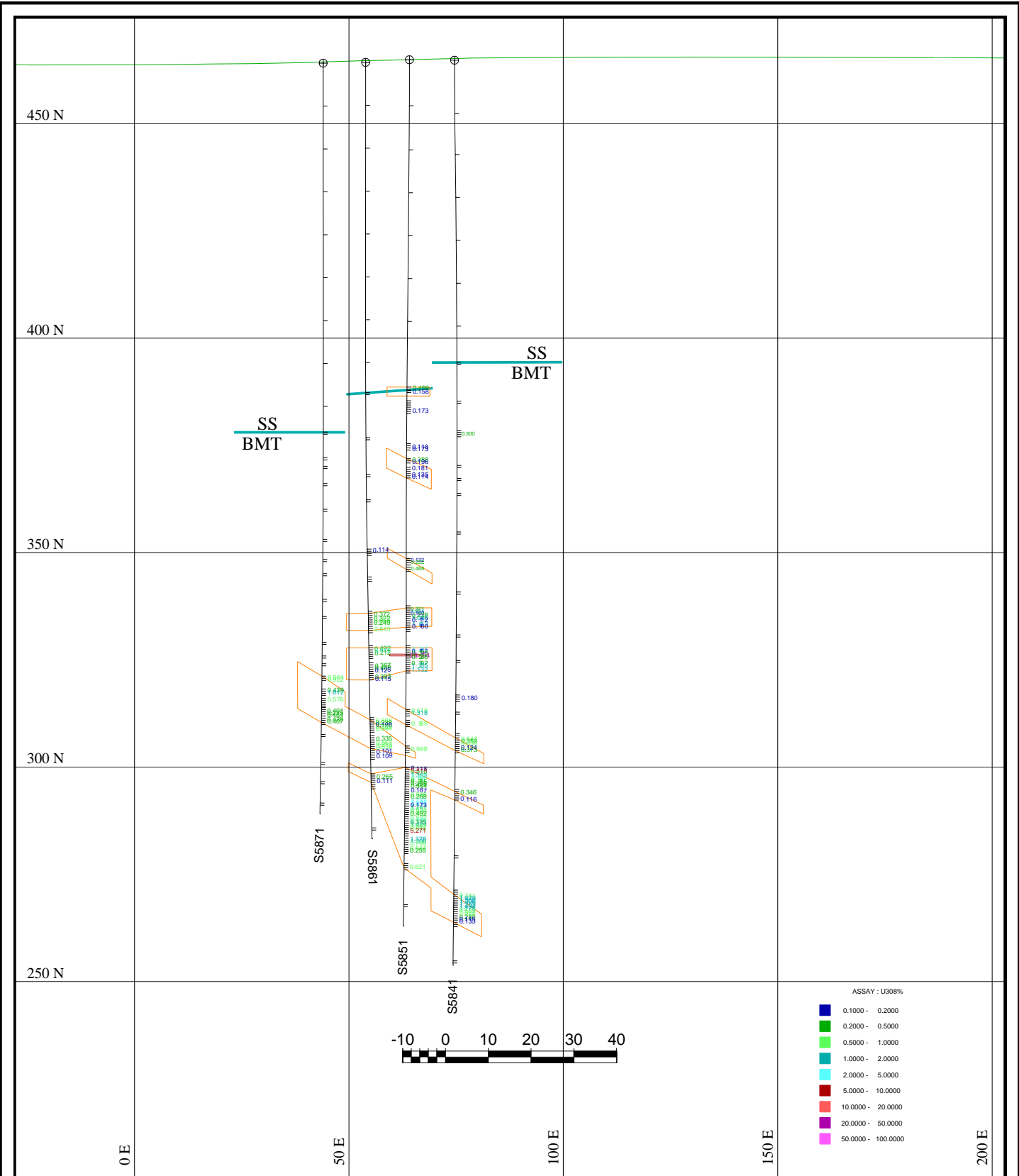
  
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**Figure 13-3**  
**MLJV**  
**Sue D Deposit**  
**Composite Vertical Cross Section**



  
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**Figure 13-4**  
**MLJV**  
**Sue D Deposit**  
**Vertical Cross Section 4N**



  
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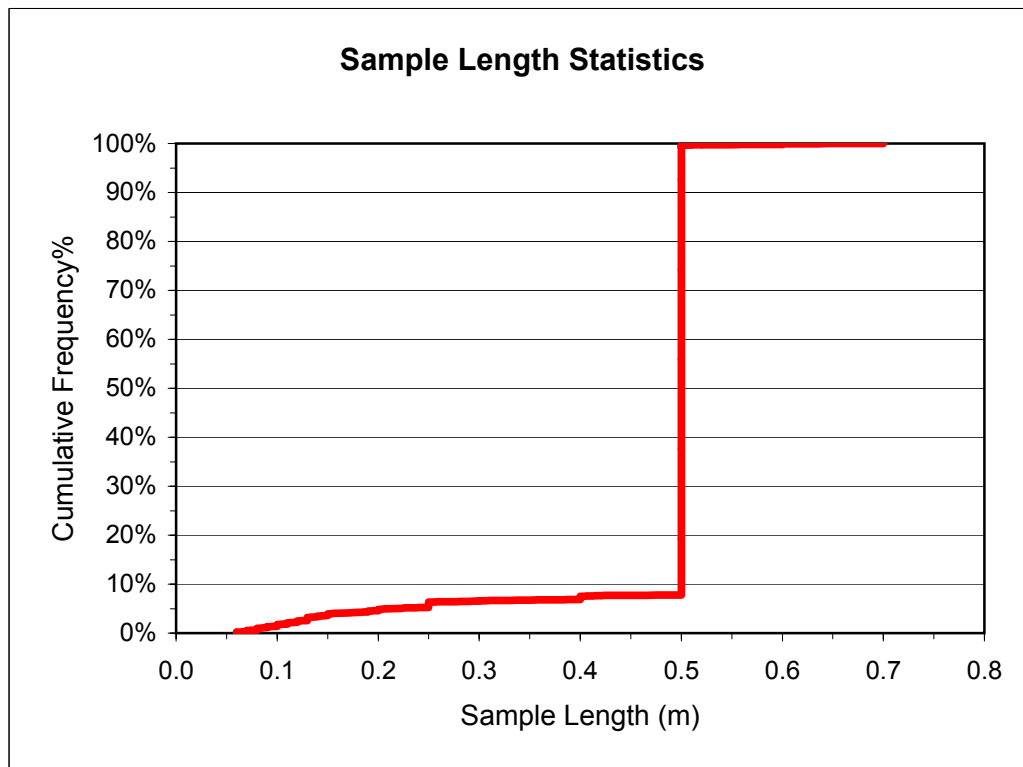
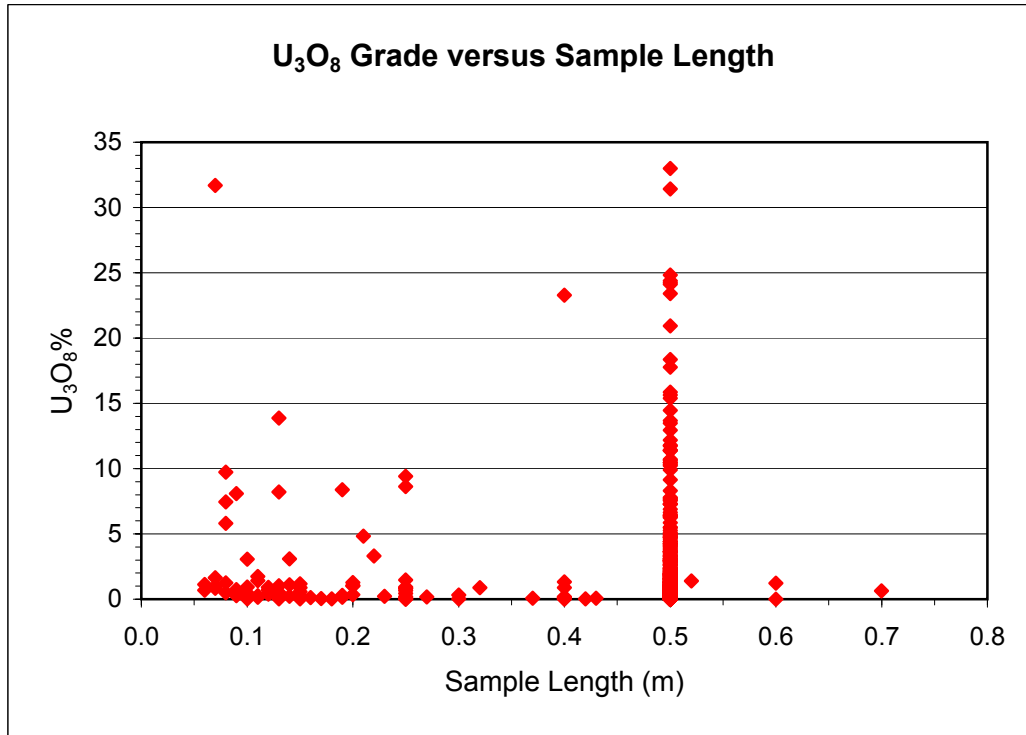
**Figure 13-5**  
**MLJV**  
**Sue D Deposit**  
**Vertical Cross Section 9N**

## **14 SAMPLING METHOD AND APPROACH**

Core sampling is the primary sampling method. Hand held scintillometer readings on core guided sampling and provided for sampling on the basis of radiometric responses (uranium grade) where necessary. Sampling was relatively continuous for mineralized intervals within the mineralized zone, but above the zone in sandstone only mineralized intervals were analyzed.

Core sample intervals vary from 0.4 m to 15.3 m. Sampling was standardized at 0.5 m intervals and 85% of the sampled intervals are at 0.4 m to 0.5 m. Sampling in the deposit itself is grade independent, with 90% of the samples taken at 0.5 m intervals (Figure 14-1). Longer sample lengths ( $\geq 3$  m) are all in waste, with lengths  $\geq 10$  m being primarily in sandstones above the unconformity and not in the Sue D deposit.

**Figure 14-1 Length Statistics for Samples in the Mineral Wireframes  
MLJV McClean Lake Property, Sue D Uranium Deposit, Saskatchewan**



## **15 SAMPLE PREPARATION, ANALYSES AND SECURITY**

Chemical analyses of core samples for  $U_3O_8$  in % or ppm were performed on behalf of Minatco by Barringer Laboratories (Alberta) Ltd. in Calgary (Barringer) during February 1992. Barringer assayed for  $U_3O_8$  in ppm or percent, and V, As, Ni, Pb and Mo in percent. It did not assay for cobalt.

Later assaying was done for Cogema by the Saskatchewan Research Council geochemical laboratory (SRC) in Saskatoon in late 1994. The SRC geochemically analyzed for 31 elements including uranium (ppm), cobalt, and the Barringer suite of elements except for arsenic.

The digital resource database provided by Cogema contains  $U_3O_8$ , Ni, Co, As, Cu, Pb, Mo, and V all in ppt (parts per thousand) units. Since As and Co were not analyzed for all holes, the resource drill hole database is incomplete for these elements.

RPA converted the  $U_3O_8$  ppt to  $U_3O_8\%$  in the database to be consistent with the RPA work on other Denison deposits.

Minatco, as operator of the Wolly Joint Venture, had all samples (over 1985) prepared and analyzed by Barringer Magenta Laboratories (Alberta) Ltd. in Calgary, AB (Barringer). This also included samples collected from Minatco drilling of the Sue D deposit.

Barringer's analytical protocol was:

- Dry core.
- Crush core to -4 mm (5 mesh).
- Crush sample reduction to 500 g by Jones Riffle splitter.

- Ring pulverize 500 g to -147  $\mu\text{m}$  (100 mesh).
- Reduce/split pulp to 500 mg (0.5 g) for analysis.

Mineralization, fault, and alteration character samples were analyzed for  $\text{U}_3\text{O}_8$ , Ni, Co, As, Cu, V, Mo, and Pb. In unmineralized sandstone character samples, only  $\text{U}_3\text{O}_8$  was determined. At Barringer, pulps were completely digested by a multi-acid nitric-perchloric-hydrofluoric mix, and Ni, Co, V, Mo, and Pb were determined by atomic absorption spectrophotometry (AA).  $\text{U}_3\text{O}_8$  was analyzed by fluorimetry and arsenic by colorimetry. Results exceeding 5%  $\text{U}_3\text{O}_8$  were reanalyzed using a 1 g pulp aliquot; the sample was digested as previously described and then analyzed volumetrically for  $\text{U}_3\text{O}_8$ .

Kilborn (1990) reports the following analytical quality assurance/quality control (QA/QC) work:

- Batch control samples were routinely inserted and analyzed by Barringer.
- Minatco periodically submitted duplicate samples for  $\text{U}_3\text{O}_8$  analysis at Barringer and pulps for check analysis at other laboratories. Kilborn reports that variability in  $\text{U}_3\text{O}_8$  grade is within 10% for grades  $\text{U}_3\text{O}_8 > 0.10\%$ .

Denison comments that, since 1990, the majority of samples have been assayed at the Saskatchewan Research Council Laboratories (“SRC”) in Saskatoon. SRC analyses for uranium used the fluorimetric method with a Jarrel Ash Fluorimeter at a detection limit of 0.2 ppm U. Base metals are analyzed using ICP methods with a Perkin Elmer Optima 3000 DV. SRC includes standards and blanks interspersed amongst samples.

## 16 DATA VERIFICATION

RPA audited the digital database received from Cogema. RPA cross referenced 145 analyses (13%) in six drill holes from the SRC laboratory certificates to Sue D project summary logs of assay intervals generated in 1994, and then to the Cogema resource digital database. RPA found that, in hole S586, the sample numbers and analytical values were interchanged for two intervals at 162.0 m to 162.5 m and 165.9 m to 166.4 m. Grades were low ppm waste and would have no impact on resource estimation.

The second database received from Cogema contained PV-series and S-series holes from S198 to S495, as well as the S500 series holes that were in the initial database, the latter apparently being fill-in holes drilled later. RPA notes that the uranium analyses are in  $U_3O_8$  ppt for the early holes, converted from  $U_3O_8$  ppm/% in Barringer analyses, in contrast to  $U_3O_8$  ppm units for the S500 series fill-in holes in the same database that originated as uranium ppm geochemical analyses. The uranium and other units for Co, Cu, Mo, Ni, and Pb were standardized to percent in the RPA resource estimation database. RPA further notes that there are consistent minor differences (<1%) in the uranium analyses of the same intervals between the initial database and the second database received from Cogema. The difference is likely a result of conversion of units and rounding as data are transferred from database to database.

In the Cogema database, sampling for the S500 series holes includes 50 m in 100 subintervals at 0.5 m, which generally falls within the 10 m interval sampling of the sandstones. The latter were analyzed for  $Al_2O_3\%$ ,  $MgO\%$ ,  $K_2O\%$ , Pb ppm and U ppm only, in contrast to the subintervals that were analyzed for the 31 oxide/element suite similar to the regular sampling and analysis. Since these provide volumetrically less data, they were omitted from the RPA resource database.

RPA notes that nickel and molybdenum values in the S500 series holes were shifted up-hole some seven intervals with respect to the correct position and corresponding



analyses. In addition, there were a small number of incorrect entries for these elements. RPA corrected the data based on drill core geochemistry analysis logs prepared in the summer of 1994.

RPA notes that Co, Cu, As, and V analyses were not entered into the Cogema database for the S500 series holes, although these elements were analyzed. RPA recommends that the Sue D drill hole database be thoroughly reviewed, audited, and updated for the non-entered data.

RPA used Gemcom software to validate the structural integrity of the database. Two overlapping assay intervals were identified in holes S585 and S586 at 138.5 m and 154.7 m, respectively. Both errors occur where higher grade caused a change in regularized sampling. RPA does not have the drill logs for these holes, and the entries in the summary geochemical analysis log overlap as well. RPA adjusted the “from-to” values to shorten the higher grade analyses since the high grade intervals would have been initially identified radiometrically and marked for sampling as a priority and the low grade adjoining intervals would have been set accordingly to resume continuous sampling at the standardized 0.5 m interval.

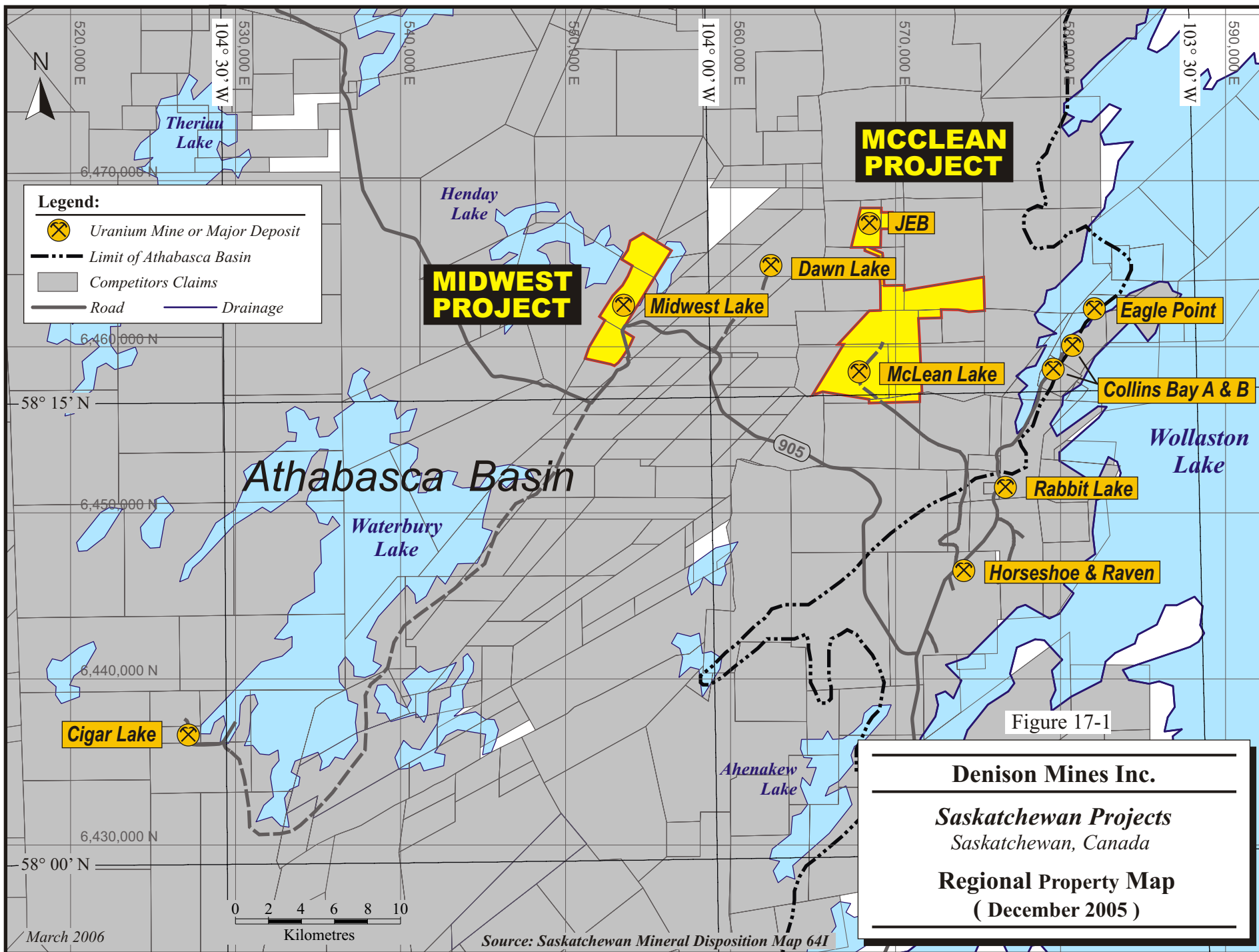
The Gemcom validation routines identified 1,329 unanalyzed intervals, some of which occur within semicontinuous sampling. In general, higher grade uranium mineralization was sampled continuously, but there are areas of weaker mineralization, within the mineralization envelope wireframes, that were not analyzed.

In RPA’s opinion, the database is now reasonable for uranium and nickel resource estimation.

## **17 ADJACENT PROPERTIES**

The mineral property immediately surrounding the MLJV property, on three sides, was part of the Wolly Joint Venture which received considerable exploration effort. The MLJV property was carved out of portions of the Wolly Joint Venture properties by the joint venture participants.

The property south of the MLJV property is held by Cameco. As of December 2005, mineral tenements cover most of the area surrounding the Denison projects. Figure 17-1 illustrates the property boundaries in the vicinity of the McClean Lake.



**Legend:**

- Uranium Mine or Major Deposit
- Limit of Athabasca Basin
- Competitors Claims
- Road
- Drainage

Figure 17-1

**Denison Mines Inc.**

*Saskatchewan Projects*  
Saskatchewan, Canada

**Regional Property Map**  
( December 2005 )

## **18 MINERAL PROCESSING AND METALLURGICAL TESTING**

The McClean Joint Venture owns and operates the JEB mill. Operations started in 1999, and the mill has successfully been producing approximately six million pounds of  $U_3O_8$  per year from the JEB and Sue C ores. Production plans include milling stockpiled Sue C ore, Sue A and E, and Midwest deposits.

During 2004, MLJV reported that 152,092 tonnes of Sue C stockpile ore were processed in the JEB mill at a grade of 1.86%  $U_3O_8$ , producing over six million pounds of  $U_3O_8$  calcined yellowcake. The uranium recovery was 97.3%.

In 2005, MLJV plans to continue processing Sue C stockpile ore, increasing the treatment rate to 165,000 tonnes per year but decreasing a head grade to 1.68%  $U_3O_8$ . This will result in slightly higher mill losses at a recovery rate of 97%.

Thus far, the JEB mill has processed ores from the JEB and Sue C pits. Over the last five years, the operation of the mill has improved, showing a consistent reduction in unit operating costs.

While RPA is unaware of any direct metallurgical testing of the Sue D mineralization it is RPA's opinion that the Sue D mineralization is very similar to that of the Sue E deposit and that uranium, nickel and cobalt values will be recoverable in the JEB mill.

## 19 MINERAL RESOURCE ESTIMATE

Resources for Sue D have not been recently stated by Cogema or Denison and the deposit is not contemplated for mining by Denison at this time. RPA, therefore, carried out an independent resource estimate by conventional 3D computer block modelling.

### WIREFRAME MODEL

RPA examined the spatial distribution of  $U_3O_8$  analyses in context with the Wilson et al. (1994) structural controls interpretation and mineralization was contoured as polylines at 0.1%  $U_3O_8$  on 13 vertical cross sections. A minimum vertical mining width of two metres was employed. The 0.1%  $U_3O_8$  envelope implies a gross metal oxide value of C\$63.11/tonne at a long-term price of U\$23.20/lb  $U_3O_8$  and C\$100.70/tonne at a current price of U\$37/lb  $U_3O_8$  (ref: Northern Miner Press Vol 91 No. 49 and 50, Jan.-Feb. 2006). The 0.1%  $U_3O_8$  envelope is therefore justified as a potential incremental mining cut-off grade at this time. A 0.1%  $U_3O_8$  envelope has also been employed for resource estimates of other MLJV deposits (Hendry and Routledge, 2005a; Kerr et al. 2003). Uranium market,  $U_3O_8$  prices, and US\$-C\$ exchange rate used in this report are discussed in Item 20 Other Relevant Data and Information.

A higher grade pod with assays  $\geq 5\%$   $U_3O_8$  within the 0.1%  $U_3O_8$  envelope was modelled as a discrete wireframe within the 0.1%  $U_3O_8$  grade envelope.

Given the difficulty in correlating grade hole to hole, apparent fault displacement of mineralization trends between sections and the thrustured basement on sections, RPA extruded polylines on vertical cross section for 3D solid wireframe generation. Extrusion was half the distance to the adjacent cross section. In RPA's opinion, only minor volumetric improvement could be made to the wireframe model by more rigorous geometric modeling, given the complexity of the fault-controlled mineralization geometry, and this would have little impact in terms of overall resource estimation error.

**BULK DENSITY**

Where bulk density and specific gravity (SG) are a function of grade, as is the case for high density uranium mineralization, estimation of average grade requires weighting grades by density or the average grade may be underestimated.

Specific gravity test data for Sue D was unavailable. Consequently specific gravity (SG) was calculated using the formulas developed by RPA by regression on Sue E SG data as described in Hendry and Routledge (2005), where RPA/FSS (Froideveaux/Srivastava/Schofield) performed a statistical analysis of the relationship between dry density and the intensity of U<sub>3</sub>O<sub>8</sub>, As, and Ni mineralization. RPA considers the use of Sue E SG data as reasonable since the Sue D uranium mineralization is hosted in basement rocks similar to Sue E and is located within a short distance from the Sue E site. The graphical relationship between the metals and SG is reproduced from Hendry and Routledge (2005a) (Figures 19-1 and 19-2).

FIGURE 19-1 DRY DENSITY VERSUS (%U<sub>3</sub>O<sub>8</sub>+%AS+%NI)

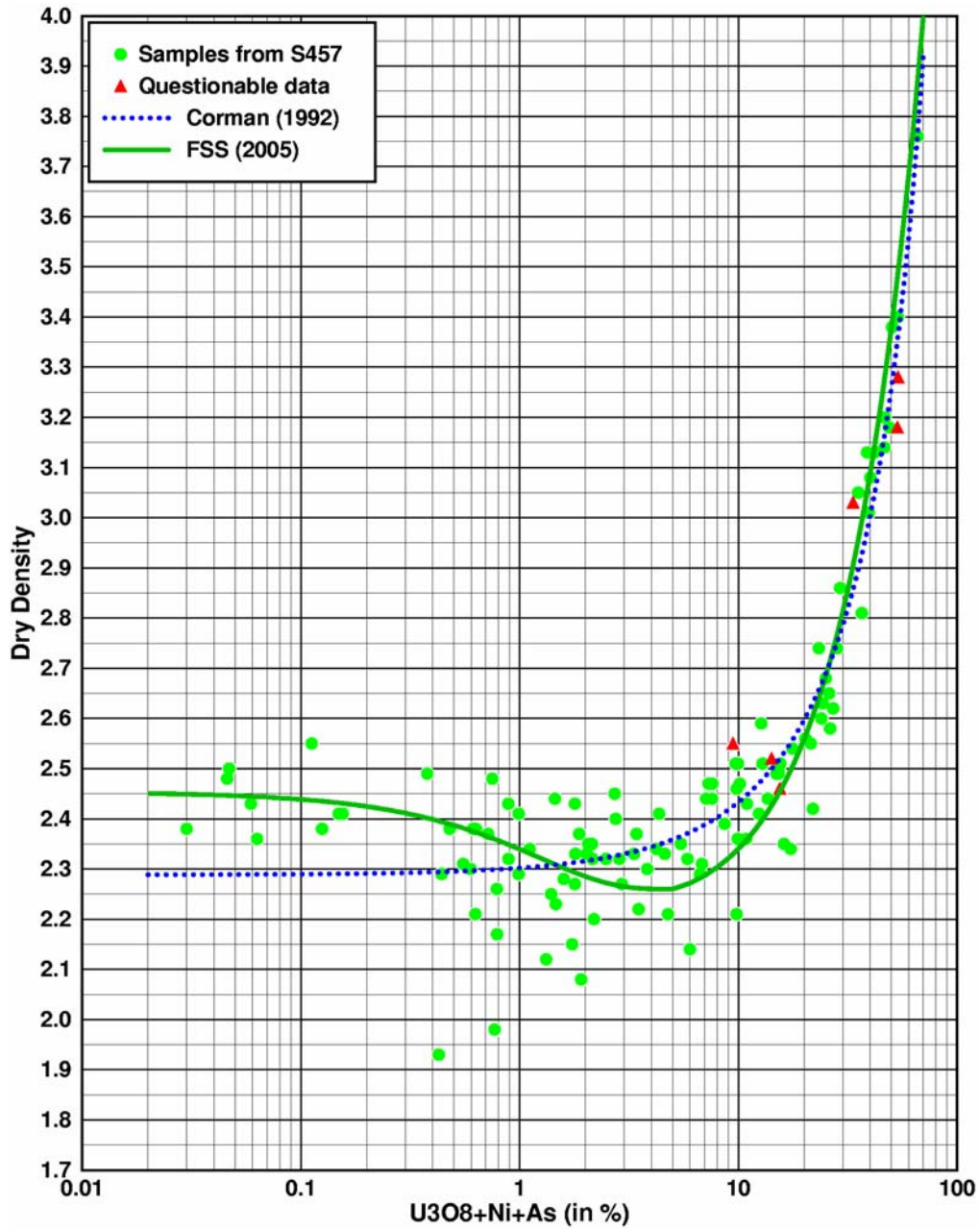
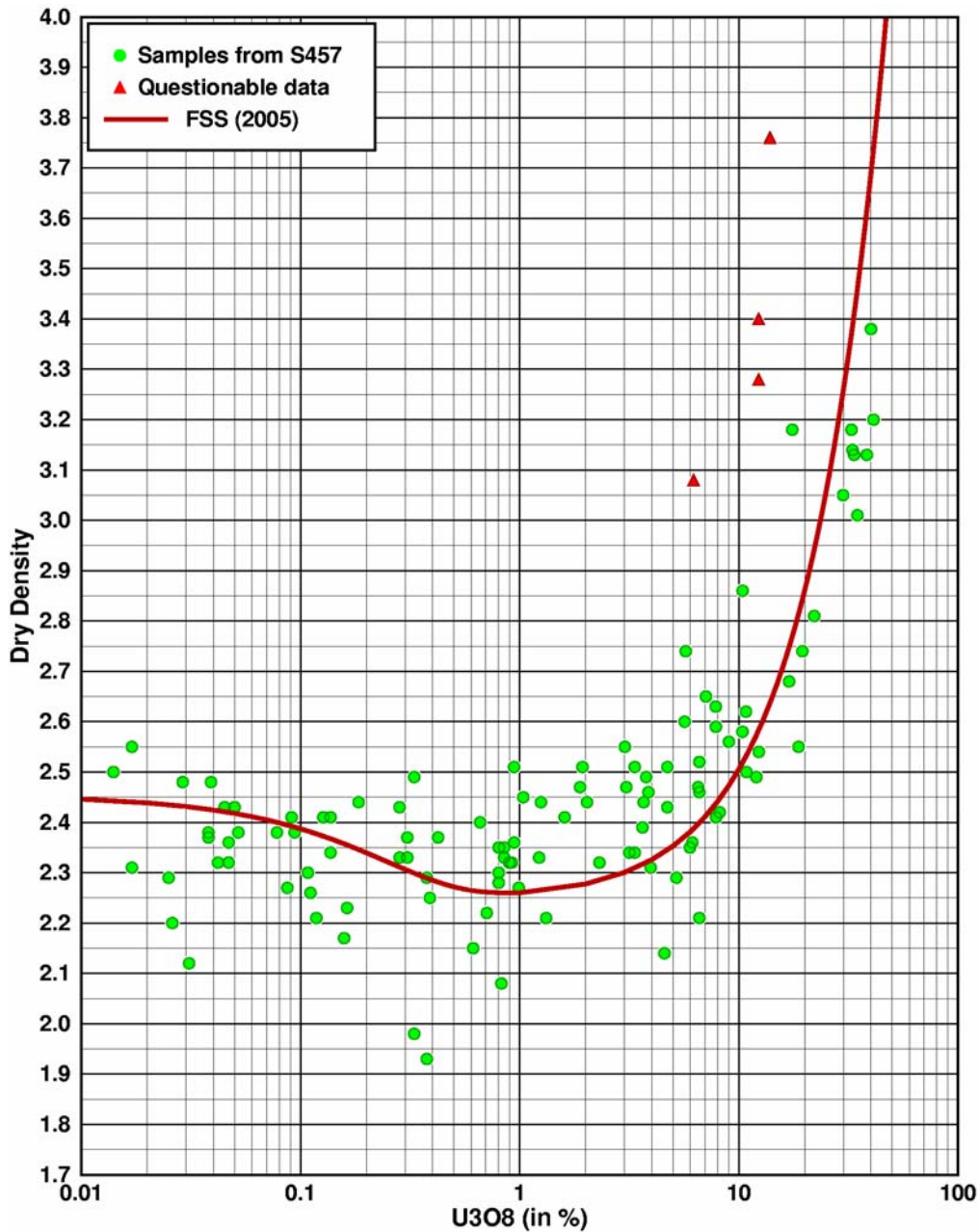


FIGURE 19-2 DRY DENSITY VERSUS %U<sub>3</sub>O<sub>8</sub>



The above data derive from SG testing of drill core in one drill hole at Sue E. The formulas have been developed to use Ni% and As% data and/or U<sub>3</sub>O<sub>8</sub>% values depending on the availability in the database. The formulas are:

- 1) For  $U_3O_8\% + As\% + Ni\% \geq 5$ :  $SG = 2.26 + (0.01161 * [U_3O_8\% + As\% + Ni\% - 5]^{1.2})$
- 2) For  $U_3O_8\% + As\% + Ni\% < 5$ :  $SG = 2.26 + (0.00031 * [U_3O_8\% + As\% + Ni\% - 5]^4)$



- 3) For  $U_3O_8\% \geq 1$ :  $SG=2.26+(0.01758*[U_3O_8\%-1]^{1.2})$
- 4) For  $U_3O_8\% < 1$ :  $SG=2.26+(0.19375*[U_3O_8\%-1]^4)$

Analyses in the database were used to calculate SG values for each sample interval for the purpose of compositing length and SG weighted assays and preparing a bulk density block model.

The SG data and calculated SG are assumed to be equivalent to bulk density. Where grades are low (e.g., 0.1%  $U_3O_8$  or 0.1%  $U_3O_8+As+Ni$ ), the SG formula results in a SG of 2.42. This appears to be somewhat low for barren basement gneiss and assumes that density lowering factors, such as fracturing, faulting, and intense clay alteration, are pervasive within the mineralization zone even where grades are low.

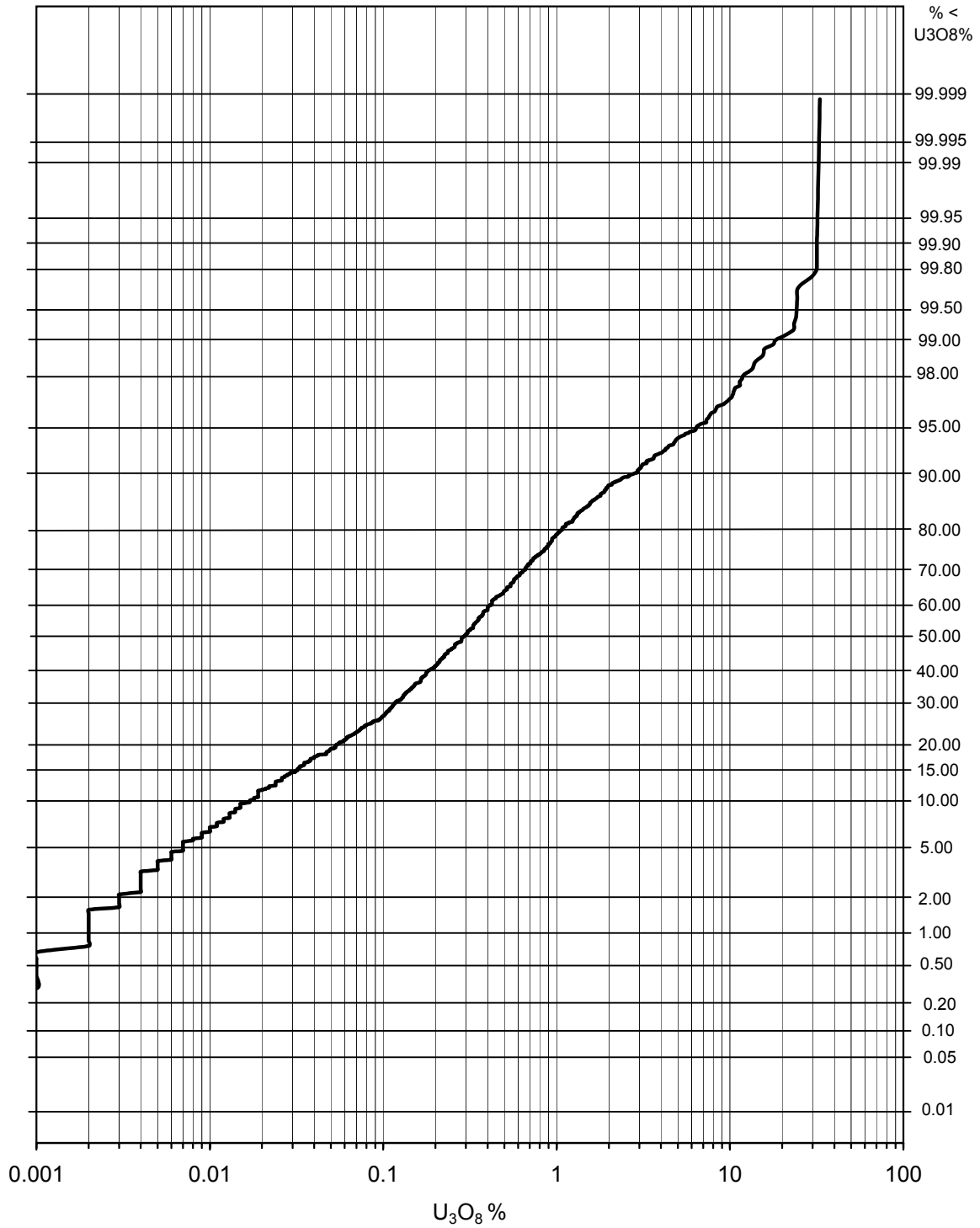
### **ASSAY COMPOSITING**

Assays (analyses) were composited down hole at one-metre lengths and clipped within the wireframes. Composite grades were length and density weighted. Composites less than 0.24 m were eliminated from grade interpolation. Generally, composites with lengths less than one half to one third of selected lengths are dropped. However, the higher grade,  $\geq 5\%$ ,  $U_3O_8$  subzone, which RPA wireframed separately, had few composites and retaining composites of  $\geq 0.24$  m was necessary for a reasonable grade estimate of this subzone.

### **ASSAYS AND COMPOSITES STATISTICS**

Individual assays (analyses) were coded within the wireframe mineralization envelope, and grade distribution within the zone was examined by statistical analysis. Table 19-1 shows statistics for raw analyses and one-metre composites within the mineralization wireframes. Figure 19-3 shows cumulative frequency log probability plots of  $U_3O_8$  analyses within the 0.1%  $U_3O_8$  wireframe.

Figure 19-3  
Denison Mines Inc. Sue D U<sub>3</sub>O<sub>8</sub> Analyses in Wireframe  
Cumulative Frequency % Log Probability Plot



**TABLE 19-1 ANALYSES AND COMPOSITE STATISTICS**  
**McClellan Lake Joint Venture - McClellan Lake Property, Sue D Deposit, Saskatchewan**

Statistic	Analyses				1 m Composites			
	Length (m)	U <sub>3</sub> O <sub>8</sub> %	Ni%	SG	Length* (m)	U <sub>3</sub> O <sub>8</sub> %	Ni%	SG
Count	1,014	1,014	1,014	1,014	522	522	522	522
Sum	485.61	-	-	-	484.97	-	-	-
Minimum	0.06	0.000	0.000	2.26	0.30	0.00	0.00	2.26
25th Percentile	0.50	0.074	0.007	2.30	1.00	0.133	0.009	2.32
Median	0.50	0.258	0.026	2.37	1.00	0.303	0.029	2.37
75th Percentile	0.50	0.660	0.154	2.43	1.00	0.661	0.200	2.41
Maximum	0.60	11.800	25.300	3.54	1.00	5.971	16.191	3.37
Range	0.54	11.800	25.300	1.28	0.70	5.969	16.191	1.11
Mean	0.48	0.594	0.544	2.37	0.93	0.574	0.532	2.37
Sg and/or Length								
Weighted Mean	-	0.571	0.566	2.37	-	0.573	0.567	2.37
Variance	0.01	1.008	4.113	0.01	0.03	0.558	3.173	0.01
Standard Deviation	0.08	1.004	2.028	0.08	0.17	0.747	1.781	0.07
Coefficient of Variation	0.17	1.692	3.725	0.04	0.19	1.302	3.348	0.03
90th Percentile	0.50	1.481	0.837	2.45	1.00	1.424	1.004	2.44
95th Percentile	0.50	2.374	2.487	2.45	1.00	2.130	2.621	2.44
97th Percentile	0.50	3.247	5.161	2.45	1.00	2.705	4.961	2.45
98th Percentile	0.50	3.762	6.969	2.45	1.00	2.927	6.841	2.45
99th Percentile	0.50	4.851	11.269	2.45	1.00	3.234	10.646	2.45
99.5th Percentile	0.50	6.331	14.687	2.58	1.00	3.999	12.765	2.60

\* 36 composites <0.24 m omitted from interpolation

Statistic	High Grade Sub Area				High Grade Sub Area			
	Length (m)	U <sub>3</sub> O <sub>8</sub> %	Ni%	SG	Length* (m)	U <sub>3</sub> O <sub>8</sub> %	Ni%	SG
Count	76	76	76	76	38	38	38	38
Sum	33.91	-	-	-	33.53	-	-	-
Minimum	0.07	0.005	0.007	2.26	0.24	0.336	0.009	2.29
25th Percentile	0.50	4.358	0.150	2.32	1.00	5.225	0.183	2.32
Median	0.50	8.263	0.406	2.41	1.00	8.290	0.412	2.42
75th Percentile	0.50	13.073	0.832	2.58	1.00	13.602	0.982	2.67
Maximum	0.70	32.980	16.900	3.42	1.00	24.172	14.176	3.20
Range	0.63	32.975	16.893	1.16	0.76	23.836	14.167	0.92
Mean	0.45	9.801	1.247	2.51	0.88	10.305	1.158	2.52
Sg and/or Length								
Weighted Mean	-	10.425	1.334	2.51	-	10.381	1.345	2.51
Variance	0.02	64.224	8.062	0.08	0.05	49.756	5.957	0.07
Standard Deviation	0.13	8.014	2.839	0.29	0.23	7.054	2.441	0.26
Coefficient of Variation	0.30	0.818	2.277	0.11	0.26	0.685	2.107	0.10
90th Percentile	0.50	23.353	2.725	2.99	1.00	22.748	2.287	2.97
95th Percentile	0.50	24.498	4.825	3.03	1.00	23.618	4.129	3.01
97th Percentile	0.50	29.765	6.063	3.25	1.00	24.011	5.088	3.02

98th Percentile	0.50	31.556	11.350	3.36	1.00	24.096	7.557	3.07
99th Percentile	0.55	32.020	16.450	3.41	1.00	24.134	10.866	3.14
99.5th Percentile	0.62	32.500	16.675	3.41	1.00	24.153	12.521	3.17

\* 5 composites <0.24 m omitted from interpolation

**GRADE CAPPING**

In general industry practice in Saskatchewan unconformity related deposits, high grade U<sub>3</sub>O<sub>8</sub> analyses are not capped since they usually cluster in discrete areas and can be modelled in separate wireframes or their influence can be reasonably constrained by suitable grade interpolation parameters. RPA examined the U<sub>3</sub>O<sub>8</sub> grade distribution in Figure 19-3 for multiple grade populations and grade outliers that may require constraint. Inflections in the grade distribution suggest up to four U<sub>3</sub>O<sub>8</sub> grade populations:

- <0.1 %
- ≥0.1% to ≤4%
- >4% to ≤23%
- >23% to 32%

Most of the grade population >5% U<sub>3</sub>O<sub>8</sub> is contained in a separate wireframe, for which grades were interpolated independently.

**BLOCK MODEL**

RPA constructed a block model based on blocks 6 m (grid NS) by 3 m (grid EW) by 2 m vertical (36 m<sup>3</sup> or approximately 85 tonnes per block). The model is rotated 12° east (012° azimuth) to reflect the long axis (trend) of the Sue D uranium mineralization. With its origin at 7,232 m (X), 877 m (Y), and 400 m RL (Z), the model contains 72,000 blocks in 80 levels (Z) by 30 rows (Y) by 30 columns (X) representing a volume of 2,592,000 m<sup>3</sup>. The block horizontal dimensions are approximately one half to one third the drill hole spacing and together with one-metre composites and two-metre block vertical width, provide for reasonable grade resolution.

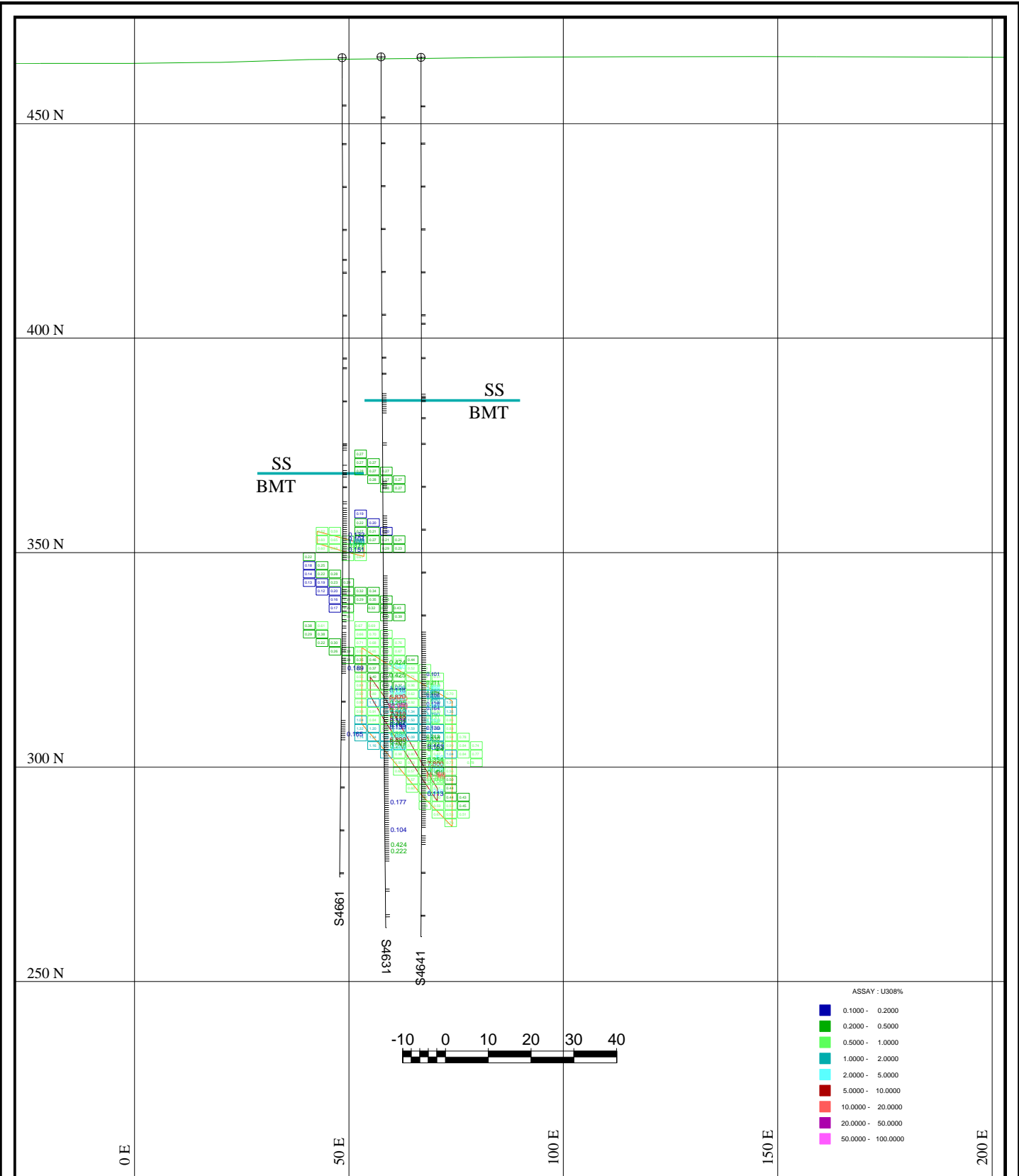
**GRADE INTERPOLATION**

U<sub>3</sub>O<sub>8</sub> grade was interpolated to resource blocks by the inverse distance squared (ID<sup>2</sup>) method based on a search ellipse dipping 30° to 102° azimuth. Search axes are: major 20

m; intermediate 20 m; minor 5 m (vertical). Block grade interpolation criteria included two composites minimum (one composite for the high-grade zone) and 12 composites maximum. If less than two composites were available to fill the wireframe, a minimum of one composite was used to populate block grade for Inferred Resources. The high-grade subzone was interpolated independently using a hard boundary. Cross sections and plans of the U<sub>3</sub>O<sub>8</sub> grade block model are illustrated in Figures 19-4 to 19-7.

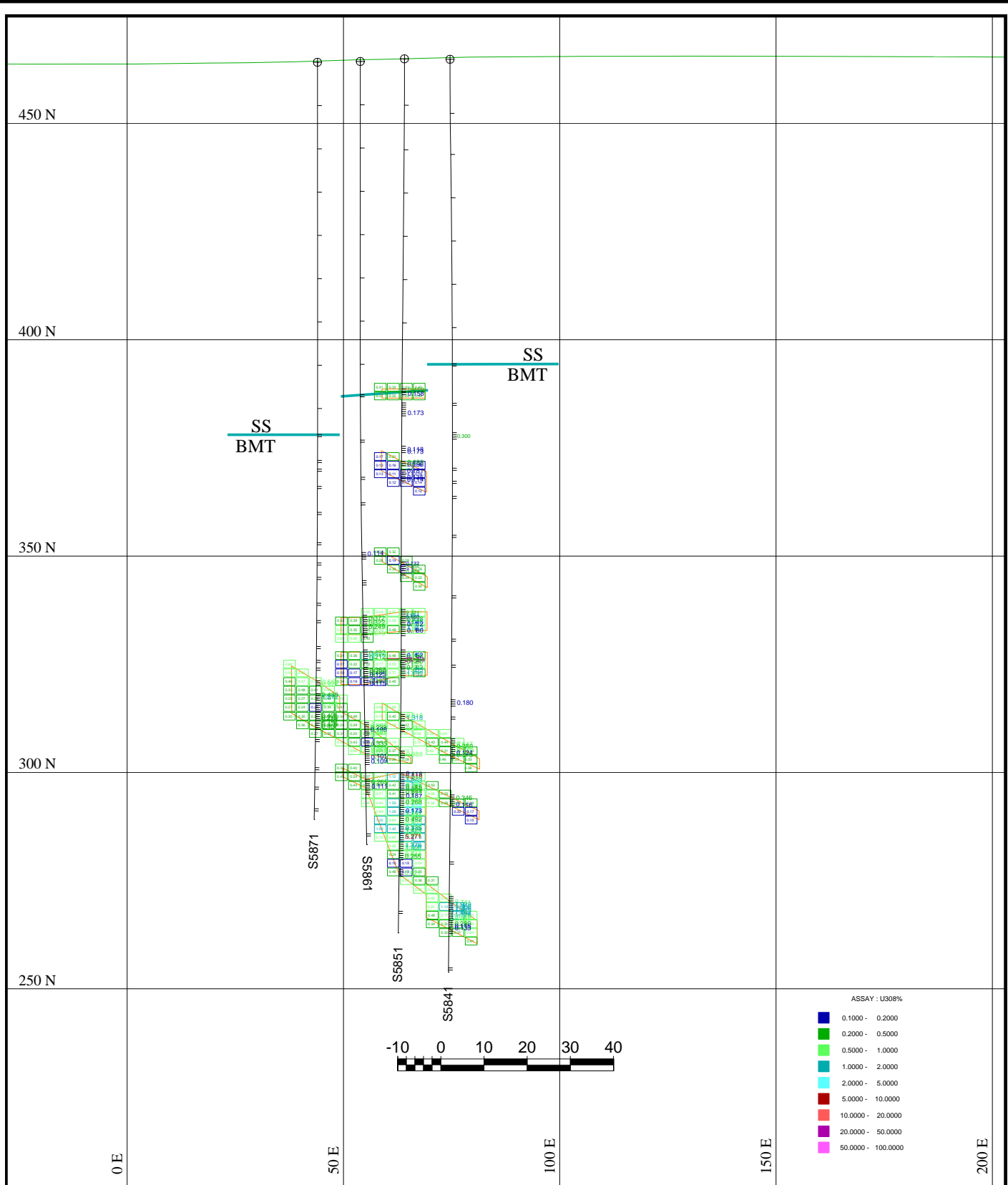
### **BULK DENSITY INTERPOLATION**

A bulk density block model was ID<sup>2</sup> interpolated using the weighted specific gravity of composites. Block volume to tonnage conversion used the modelled block bulk densities. RPA acknowledges that specific gravity tests on individual core samples may underestimate the in situ bulk density since voids in rocks, related to rock fracturing, faulting, ground water dissolution of mineral, etc., are under-represented in small samples.



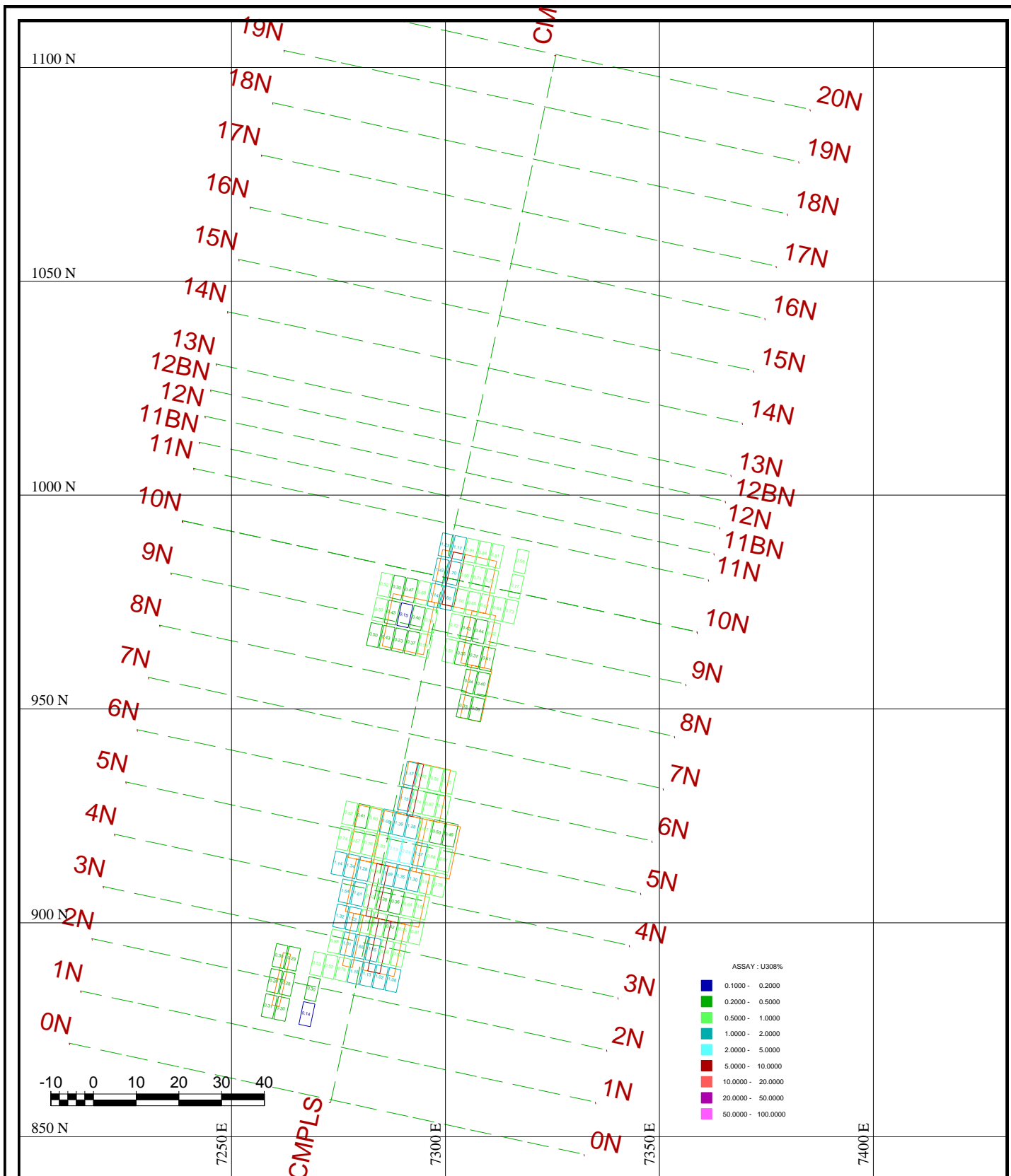
  
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 GEOLOGICAL AND MINING CONSULTANTS  
 55 University Avenue, Suite 501  
 Toronto, Ontario M5J 2H7

**Figure 19-4**  
**MLJV**  
**Sue D Deposit**  
**Block Model Vertical Cross Section 4N**



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 55 University Avenue, Suite 501  
 Toronto, Ontario M5J 2H7

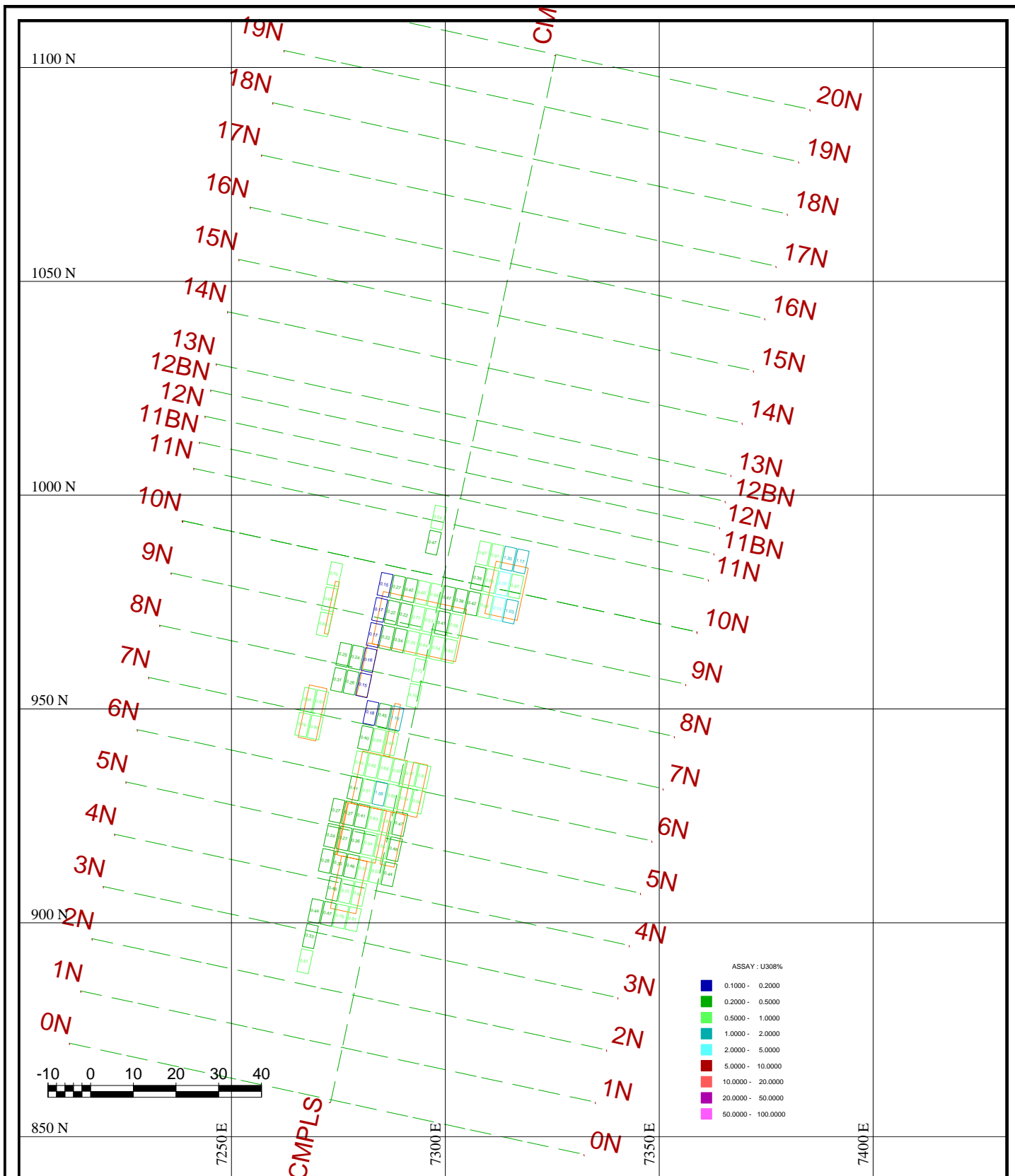
**Figure 19-5**  
**MLJV**  
**Sue D Deposit**  
**Block Model Vertical Cross Section 9N**



  
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**Figure 19-6**  
**MLJV**  
**Sue D Deposit**  
**Block Model Plan 306 Elev**





  
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**Figure 19-7**  
**MLJV**  
**Sue D Deposit**  
**Block Model Plan 324 Elev**

**MINERAL RESOURCE SUMMARY**

The RPA independent resource estimate is presented in Table 19-2 using a rang of cut-off grades from 0.1% U<sub>3</sub>O<sub>8</sub> to 0.6% U<sub>3</sub>O<sub>8</sub> in increments of 0.1% U<sub>3</sub>O<sub>8</sub>.

**TABLE 19-2 RPA RESOURCE ESTIMATE**

**McClellan Lake Joint Venture - McClellan Lake Property, Sue D Deposit, Saskatchewan**

Cut-Off Grade U <sub>3</sub> O <sub>8</sub> %	Indicated Resources*					Inferred Resources*				
	Tonnes	U <sub>3</sub> O <sub>8</sub> %	Ni%	U <sub>3</sub> O <sub>8</sub> Lbs (000's)	Bulk Density t/m <sup>3</sup>	Tonnes	U <sub>3</sub> O <sub>8</sub> %	Ni%	U <sub>3</sub> O <sub>8</sub> Lbs	Bulk Density t/m <sup>3</sup>
<b>0.1</b>	<b>122,800</b>	<b>1.05</b>	<b>0.58</b>	<b>2,840</b>	<b>2.37</b>	<b>24,240</b>	<b>0.39</b>	<b>0.92</b>	<b>208,900</b>	<b>2.36</b>
0.2	114,900	1.11	0.60	2,810	2.37	20,210	0.44	1.07	194,700	2.36
0.3	97,400	1.26	0.65	2,710	2.37	12,070	0.57	1.62	150,300	2.35
0.4	80,260	1.46	0.72	2,580	2.36	7,570	0.70	2.20	116,300	2.34
0.5	67,090	1.66	0.76	2,450	2.36	5,770	0.77	2.44	98,330	2.33
0.6	55,400	1.89	0.84	2,310	2.36	4,490	0.83	2.77	82,460	2.33

Note. Denison Mines Inc. holds 22.5% interest in the McClellan Lake Joint Venture and the above resources

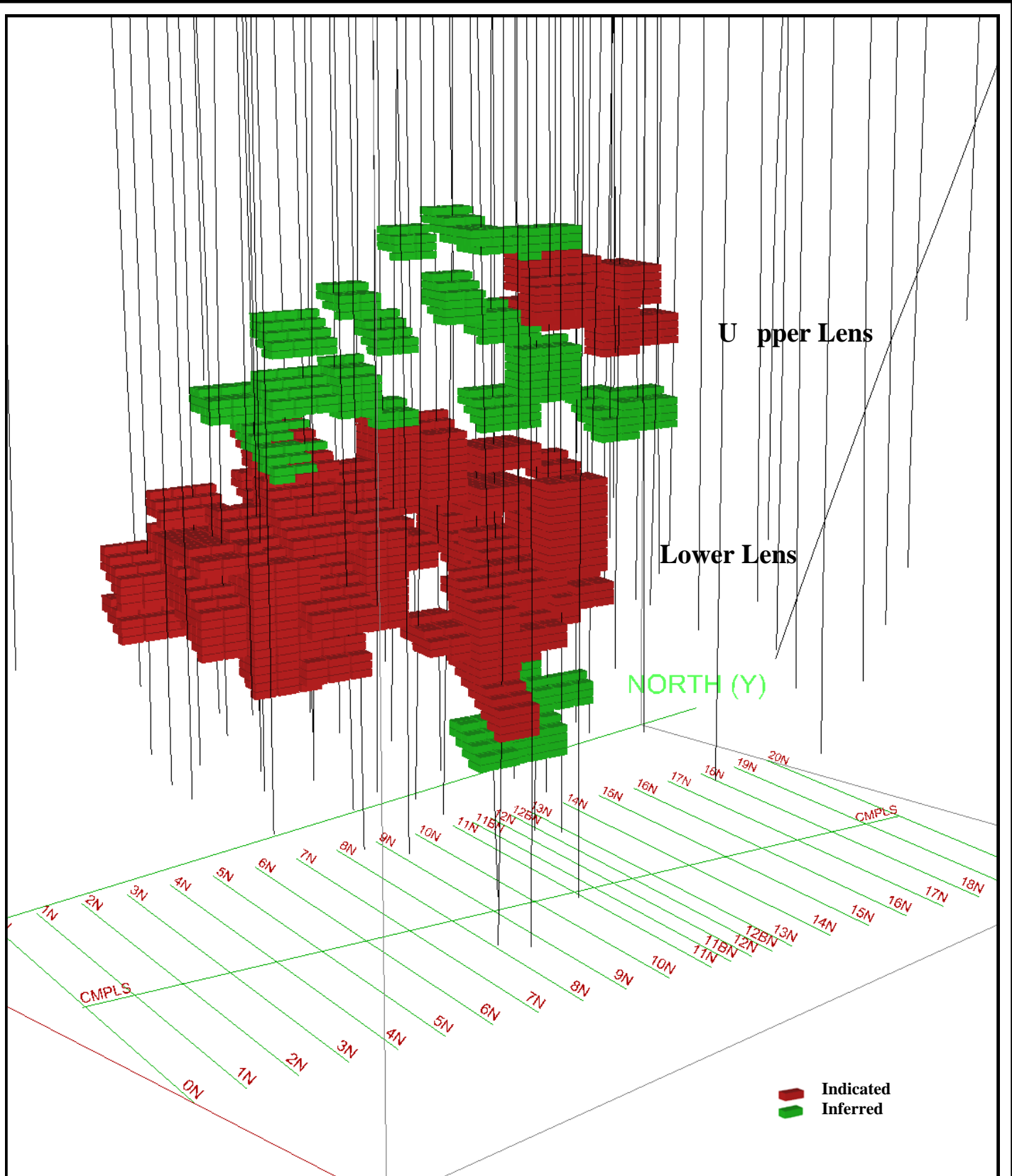
**RESOURCE CLASSIFICATION**

RPA classifies the resources contained in all small lenses, except one, in the upper zone portion of the Sue D deposit as Inferred Mineral Resources owing to few defining drill holes and samples and in light of the structural complexity of the deposit. Resource blocks in the larger, lower zone portion of the deposit, where more sample data exists and continuity is somewhat better, are classified as Indicated Mineral Resource (Figure 19-8).

**MODEL VALIDATION**

Statistics for raw analyses, composites, and blocks were compared to validate the block model grade interpolation. Statistics for raw analyses, one-metre composites, and the RPA block model (low-grade and high-grade wireframes) are shown in Table 19-3 and illustrated in Figures 19-9, 19-10, and 19-11, respectively. The block grades compare reasonably well with the grades of composites and analyses within the wireframes, and validate the block model. The block model shows reasonable smoothing and typical volume-variance effect that increases the percentage of low grade in the low-grade range and decreases the percentage of the high-grade range with respect to composites and analyses.

Figure 19-12 profiles resource tonnes,  $U_3O_8$  grade, and contained  $U_3O_8$  versus  $U_3O_8$  cut-off grade. The resource shows relatively low sensitivity from 0.1%  $U_3O_8$  to 0.2%  $U_3O_8$  and then a linear decline in tonnes, grade, and metal from 0.2%  $U_3O_8$  to 0.6%  $U_3O_8$ .



  
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**Figure 19-8**  
**MLJV**  
**Sue D Deposit**  
**Classification of Sue D Resources**

**Table 19-3 Comparison of Assay, Composite and Resource Block Statistics  
MLJV McClean Lake Property, Sue D Uranium Deposit, Saskatchewan**

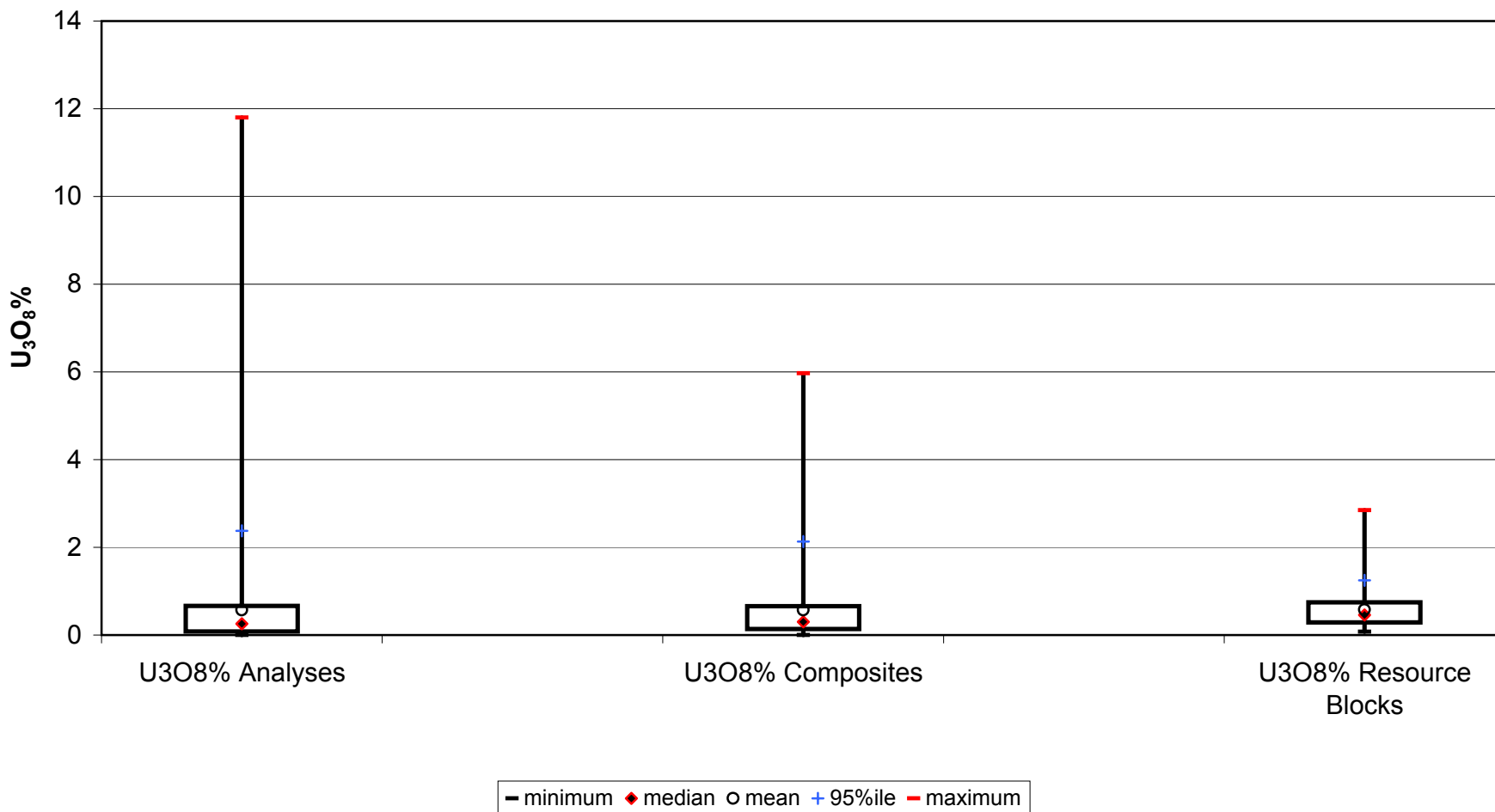
<b>Low Grade Wireframe Statistic</b>	<b>Assays U<sub>3</sub>O<sub>8</sub>%</b>	<b>Composites U<sub>3</sub>O<sub>8</sub>%</b>	<b>Blocks U<sub>3</sub>O<sub>8</sub>%</b>
Count	1,014	522	3,299
Minimum	0.000	0.00	0.078
25th Percentile	0.074	0.133	0.285
Median	0.258	0.303	0.460
75th Percentile	0.660	0.661	0.749
Maximum	11.800	5.971	2.849
Range	11.800	5.969	2.771
Weighted Mean	0.571	0.573	0.578
Variance	1.008	0.558	0.127
Standard Deviation	1.004	0.747	0.356
Coefficient of Variation	1.692	1.302	0.635
90th Percentile	1.481	1.424	1.086
95th Percentile	2.374	2.130	1.245
97th Percentile	3.247	2.705	1.329
98th Percentile	3.762	2.927	1.420
99th Percentile	4.851	3.234	1.580
99.5th Percentile	6.331	3.999	1.758

\* 36 composites <0.24 m omitted from interpolation

<b>High Grade Wireframe Statistic</b>	<b>U308%</b>	<b>U308%</b>	<b>U308%</b>
Count	76	38	257
Minimum	0.005	0.336	3.290
25th Percentile	4.358	5.225	7.247
Median	8.263	8.290	8.159
75th Percentile	13.073	13.602	13.412
Maximum	32.980	24.172	23.118
Range	32.975	23.836	19.828
Weighted Mean	10.425	10.381	9.952
Variance	64.224	49.756	27.079
Standard Deviation	8.014	7.054	5.204
Coefficient of Variation	0.818	0.685	0.494
90th Percentile	23.353	22.748	18.190
95th Percentile	24.498	23.618	23.118
97th Percentile	29.765	24.011	23.118
98th Percentile	31.556	24.096	23.118
99th Percentile	32.020	24.134	23.118
99.5th Percentile	32.500	24.153	23.118

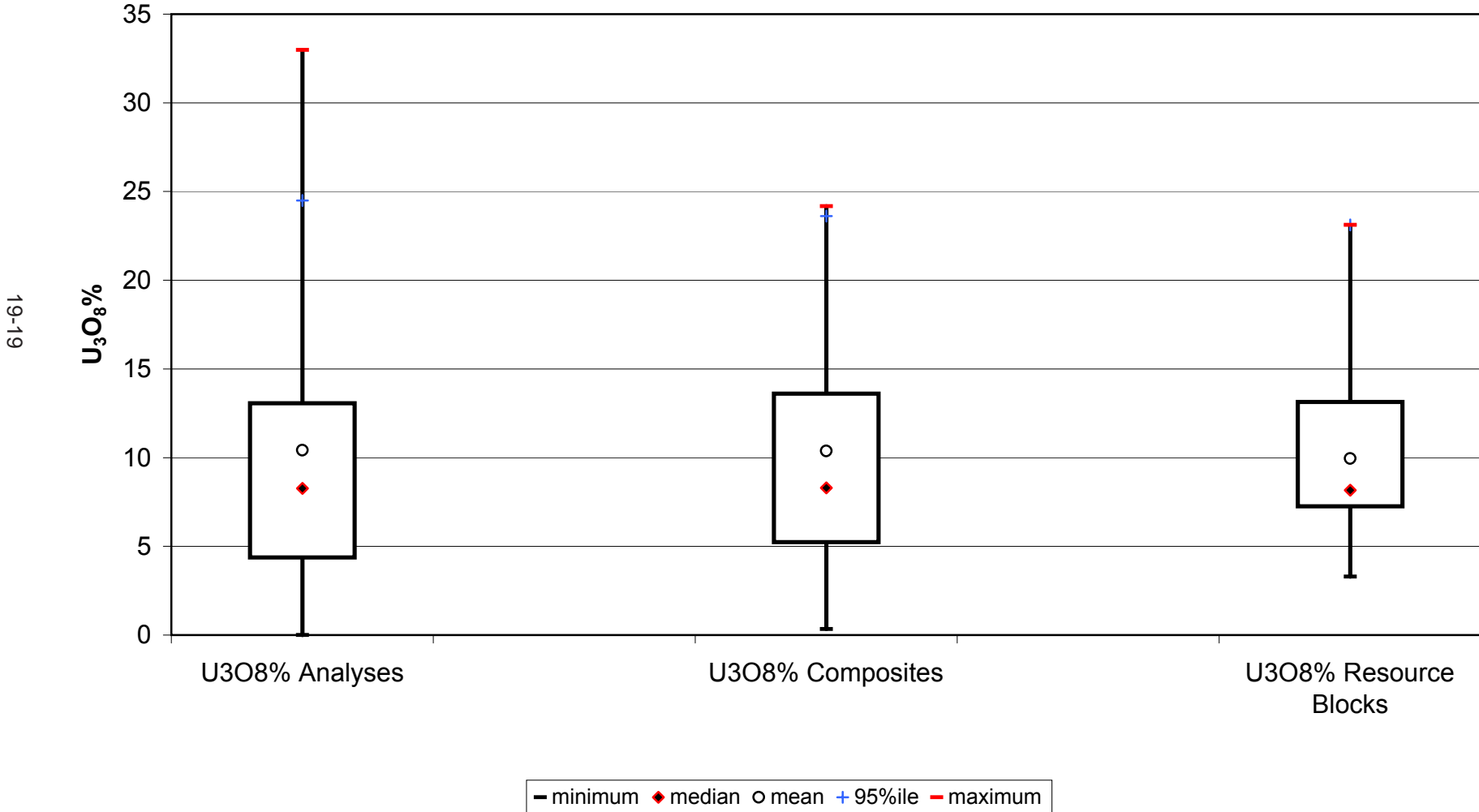
\* 5 composites <0.24 m omitted from interpolation

**Figure 19-9**  
**MLJV McClean Lake Property**  
**Sue D Uranium Deposit, Saskatchewan**  
**Box and Whisker Plots of U<sub>3</sub>O<sub>8</sub> Analyses, Composites and Resource Blocks**



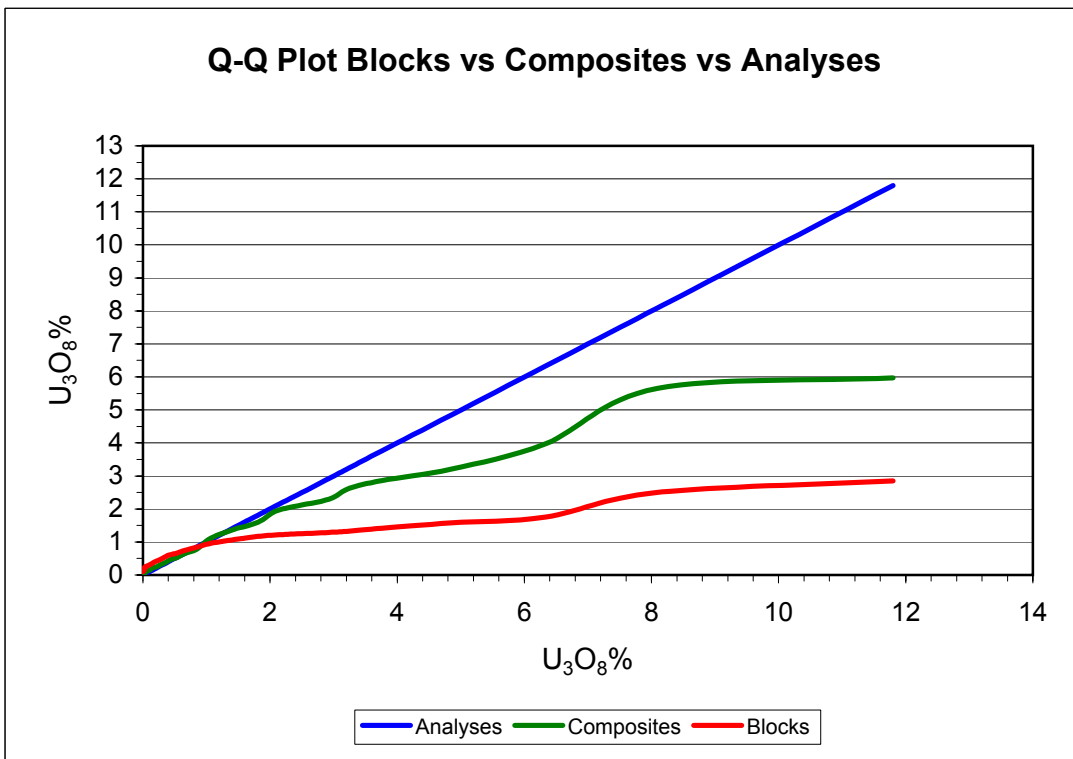
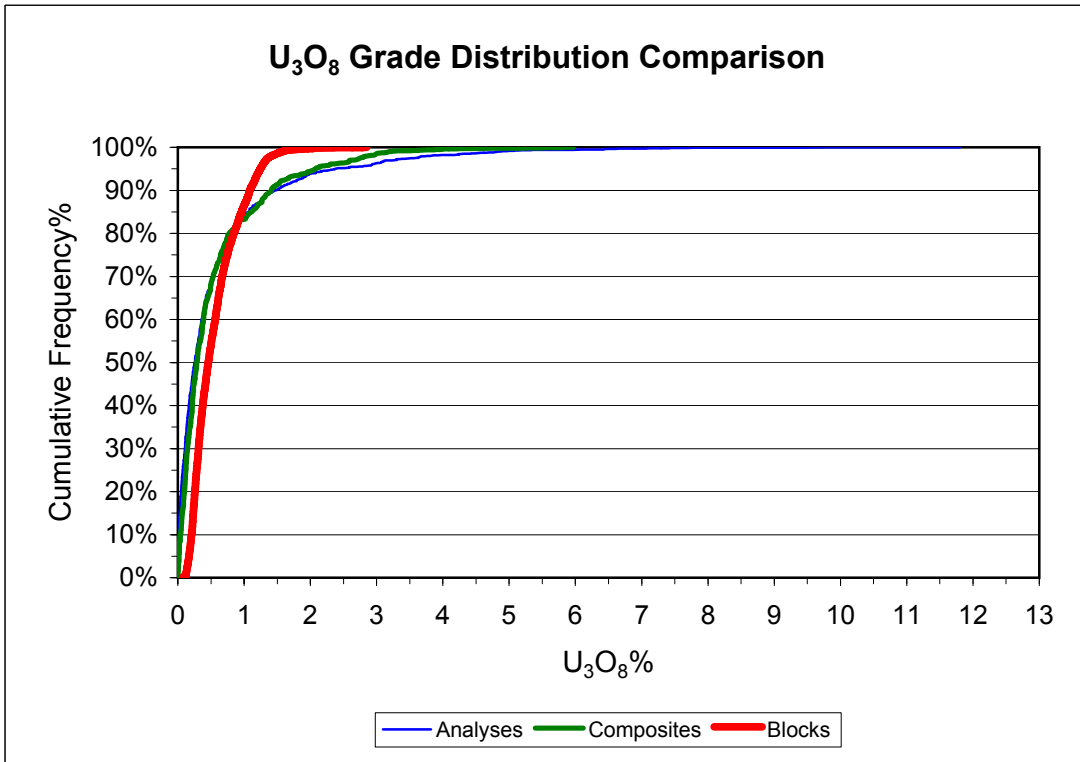
19-18

**Figure 19-10**  
**MLJV McClean Lake Property**  
**Sue D Uranium Deposit, Saskatchewan**  
**Box and Whisker Plots of U<sub>3</sub>O<sub>8</sub> Analyses, Composites and Resource Blocks**



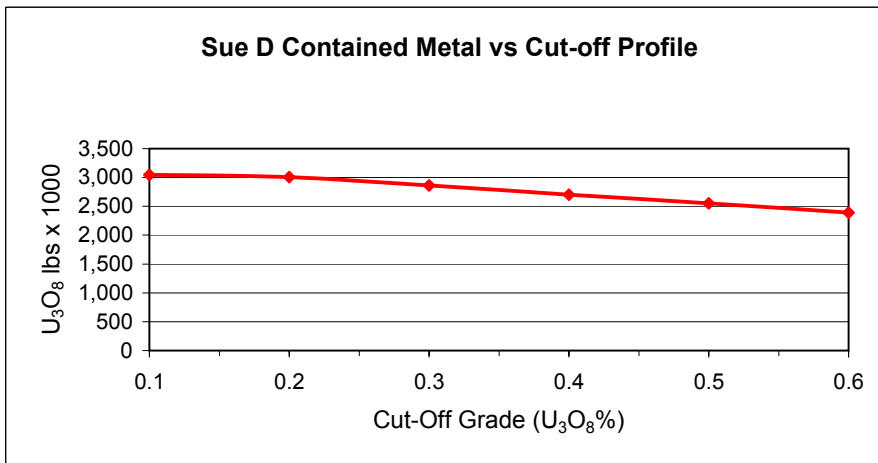
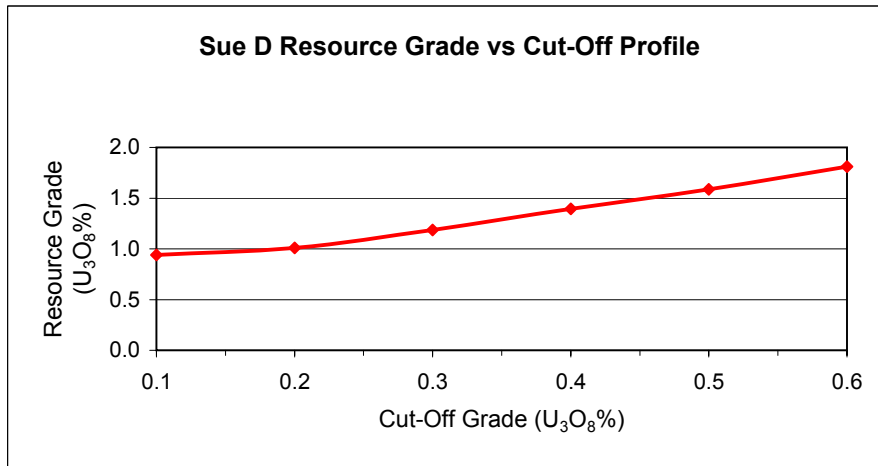
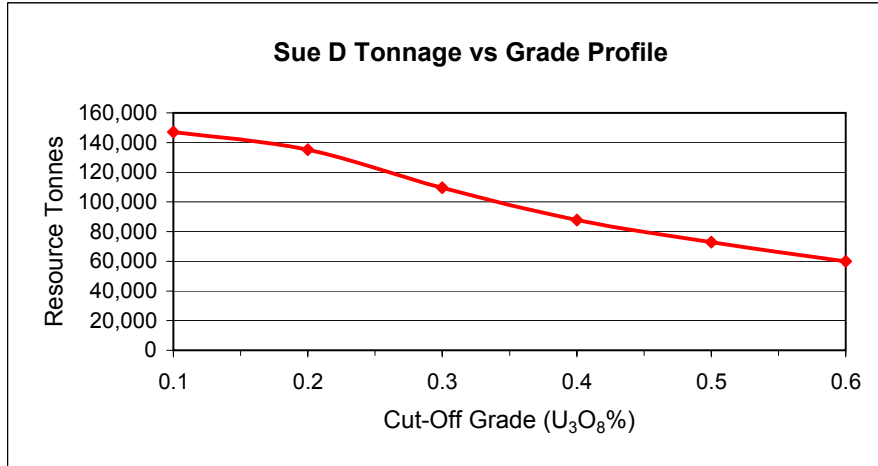
19-19

**Figure 19-11 Comparison of Analyses, Composites and Block Model Grades MLJV McClean Lake Property, Sue D Uranium Deposit, Saskatchewan**





**Figure 19-12 Resource Tonnes, Grade and Contained Metal Profiles  
MLJV McClean Lake Property, Sue D Uranium Deposit, Saskatchewan**



## **20 OTHER RELEVANT DATA AND INFORMATION**

### **MCCLEAN LAKE JOINT VENTURE OPERATION PLAN**

The MLJV is operating using a development plan involving the progressive development of the Sue A and Sue E deposits in order to sustain the mill feed and processing operations at the JEB mill facilities. In addition to these open pit operations the MLJV is currently evaluating mining of the McClean North deposit using blind shaft boring methods. Finally the development plans call for the construction and startup of open pit mining operations at the Midwest project which will also supply feed to the JEB mill. The Midwest deposit and associated Mineral Resources and Reserves are described in detail by Hendry et al. (2005b).

### **ENVIRONMENTAL CONSIDERATIONS**

RPA retained SENES Consultants Limited in 2005 to address environmental considerations for the 43-101 review of McClean Lake and Midwest Projects (Hendry et al., 2005) that could materially affect the potential for mining of the reserves. This section of the report summarizes SENES findings.

The McClean Lake deposits under review and summary comments on their history and status include the following.

- The JEB orebody: mined from 1995-1997.
- McClean Lake Underground: mining deferred until remote mining method has been developed.
- Sue orebodies including A, B, C, D, and E deposits.
- Sue C: open pit mined from 1997 – 2002.
- Sue A: Open pit stripping - summer 2005, ore production - late fall 2005.

- Sue B: Approved project as an open pit, with mining deferred until remote mining method has been developed.
- Sue E: Approved in 2005 as an open pit mine. No material issues have been identified in Environmental Assessment (EA) or EA review. Mining is proposed for 2005-2007. Stripping in progress.
- McClean North: As of November 2005, the EA had not been submitted. Project is deferred until remote mining method has been developed and tested.

**MILLING AND TAILINGS MANAGEMENT**

All ore from the McClean Lake deposits will be processed at the JEB mill, which has recently been expanded to also process ores from the Cigar Lake deposit. The JEB mill has processed all ore from the JEB open pit and is currently processing ores from the Sue C and Sue A pits.

Extensive regulatory review has been completed for the management of tailings and waste rock from the McClean and Midwest Projects. Contaminated waste rock is being disposed of in the disused Sue C pit and all tailings from the milling of the Cigar, Midwest, and McClean deposits are disposed of in the JEB tailings disposal facility. This tailings disposal facility can store all future production. Monitoring of the approved disposal facility has demonstrated that the facility is operating as designed.

Effluent treatment facilities are in place to manage all mine and mill effluents from the McClean Lease. These plants are performing well and meet all regulatory discharge limits.

**PERMITTING AND APPROVALS**

All uranium mining projects in Saskatchewan are to undergo environmental assessments under the Canadian Environmental Assessment Agency (CEA) and require Provincial Environmental Impact Statements (EIS). The CEA process is coordinated with the Province of Saskatchewan so that the EAs will meet both Federal and Provincial requirements.

Prior to the enactment of CEA, environmental permitting of the uranium mines was subject to the Environmental Assessment and Review Process Guideline Order. Under this order, a joint Federal/Provincial Panel was established to review the Uranium Mine developments in Northern Saskatchewan. This Panel approved the mining and milling of McClean North (underground mine), the Sue A, B, and C open pits, the Midwest Mine (underground jet boring), and the JEB open pit mine. Although all projects were approved, Cogema has only recently obtained a CNSC licence for JEB and the Sue A, B, and C open pits. The Sue D deposit was not considered because it is not in the MLJV's current mine plans.

In November 2004, a CEA screening report was filed for the mining of Sue E. This report was reviewed by the regulators, and comments were received with no material issues raised. Cogema prepared a response document (filed in February 2005) to address all issues raised. The licence application for Sue E went before the CNSC Board for approval in the late spring of 2005 and approval was received in the fall of 2005.

At this time, there is no definitive schedule for licensing of the McClean underground or Caribou deposits. Cogema is conducting a 2005/2006 hydraulic jet boring testing program (remote mining technique), part of which was carried out at the McClean North deposit in summer 2005. RPA has not reviewed the results of the 2005 program. It is expected that this test work will demonstrate that remote mining is a cost effective method for mining of all the deep deposits such as Caribou, Sue B, Midwest and possibly Sue D.

## **21 INTERPRETATION AND CONCLUSIONS**

A number of deposits currently controlled by the MLJV projects, including Sue D, represent potential sources of additional feed materials for the existing JEB processing facilities. While the economic potential of the Sue D deposit has not been assessed at this point RPA believes that the Sue D deposit may have potential for economic development at current uranium prices and RPA recommends that the MLJV undertake a preliminary review of its potential development.

Although drilling and analytical data for Sue D were readily provided by the MLJV in ASCII format, RPA found that the information needed a significant amount of organizing, checking, and clarification, as was the case for RPA's work on the Midwest Lake project and other McClean Lake deposits. RPA spent a considerable amount of time and effort in digital translation and data verification in order to accept the database for resource estimation. In RPA's opinion, the database is now suitable for uranium and nickel resource estimation.

The Sue D deposit ranks as the third largest Sue deposit in terms of contained uranium metal, but the bulk of the uranium in the deposit lies deeper than the Sue A, B, and mined-out Sue C deposits and Sue D is smaller than the Sue E deposit, which is similarly relatively deep in the basement.

## **22 RECOMMENDATIONS**

In the course of completing the Sue D deposit resource estimate, RPA has found that documentation and data were not easily accessed and that not all of the information that is believed to exist could be retrieved. In order to complete the Sue D database RPA recommends that Denison acquire the additional Co, Cu, As, and V analytical data for the fill-in S500 series holes that were not available to RPA. RPA cautions that any additional data should be reviewed in detail to ensure consistency of units and correspondence between the intervals and analyses. Once compiled, the Sue D drill hole database should be thoroughly audited.

RPA recommends that any existing specific gravity data for the Sue D drill core be located and reviewed. If this is not available, RPA recommends that specific gravity measurements be done on existing core from the Sue D deposit.

RPA recommends that the MLJV evaluate the Sue D deposit for the potential to recover and realize the value from the contained nickel and cobalt if process modifications are made to the process plant.

RPA recommends that the MLJV periodically update the economic evaluations of the Sue D deposit as additional information becomes available through drilling and/or experience in the Sue A and Sue E mine operations, as well as update cost factors and uranium pricing levels.

RPA recommends that any future drilling on the Sue D deposit should employ inclined holes to better define the sub-vertical basement fault structures that host and control the distribution of uranium mineralization.

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## 24 SIGNATURE PAGE

This report titled “Technical Report on the Denison Mines Inc. Uranium Properties, Saskatchewan Prepared for Denison Mines Inc.” and dated March 31, 2006, was prepared and signed by the following authors:

Dated at Toronto, Ontario  
March 31, 2006

**(Signed & Sealed)**

James W. Hendry, P. Eng.  
Principal  
Roscoe Postle Associates Inc.  
Consulting Engineer

Dated at Toronto, Ontario  
March 31, 2006

**(Signed & Sealed)**

Richard E. Routledge, M. Sc., P. Geol.  
Roscoe Postle Associates Inc.  
Consulting Geologist

## 25 CERTIFICATE OF QUALIFICATIONS

### JAMES W. HENDRY

I, James W. Hendry, P.Eng., as an author of this report entitled “Technical Report on Sue D Uranium Deposit Mineral Resource Estimate, Saskatchewan”, prepared for Denison Mines Inc., and dated March 31, 2006, do hereby certify that:

1. I am Principal Mining Engineer with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave., Toronto, ON, M5J 2H7.
2. I am a graduate of Queen’s University, Kingston, Ontario in 1976 with a Bachelor of Science degree in Mining Engineering.
3. I am registered as a Professional Engineer in the Province of Ontario. I have worked as a mining engineer for a total of 25 years since my graduation. My relevant experience for the purpose of the Technical Report is:
  - Review and report as a consultant on numerous mining operations and projects around the world for due diligence and regulatory requirements, including:
    - Technical reports on the Sue A, Sue B, MacClean North and Caribou U deposits, McClean Lake, Saskatchewan
    - Resource estimate for Midwest U deposit, Saskatchewan
    - Review and evaluation of numerous open pit gold mine and other operations in Canada, the United States, Latin America, Russia, and Southeast Asia
    - Due diligence review of orebody block modeling, preparation of open pit optimization, mine design, capital and operating cost forecasts for a nickel mine development in Brazil
    - Due diligence review of orebody block modeling, preparation of open pit optimization, mine design, capital and operating cost forecasts for base metal mines in Canada and copper-gold mines in Argentina and Peru
  - VP Operations in charge of seven gold operations and projects in North America.
  - VP Engineering at a number of base metal and gold mining projects in Canada.
  - Senior Mining Engineer at several open pit and underground coal mines in Canada and the US.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI43-101.

5. I visited the McClean Lake operations on February 1 and 2, 2005 and the Cogema Resources Inc. offices in Saskatoon, Saskatchewan on January 31 and from February 2 to 4, 2005.
6. I am responsible for the Items 18 and 20 as well as parts of Items 1 to 8, 21 and 22.
7. I am independent of the Issuer applying the test set out in Section 1.4 of National Instrument 43-101.
8. I have had no prior involvement with the property that is the subject of the Technical Report.
9. I have read National Instrument 43-101F1, and the Technical Report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.
10. To the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated 31<sup>st</sup> day of March, 2006

**(Signed & Sealed)**

James W. Hendry, P.Eng.

**RICHARD E. ROUTLEDGE**

I, Richard E. Routledge, M.Sc., P.Geol., as an author of this report entitled "Technical Report on Sue D Uranium Deposit Mineral Resource Estimate, Saskatchewan", prepared for Denison Mines Inc. and dated March 31, 2006, do hereby certify that:

11. I am Consulting Geologist with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON, M5J 2H7.

12. I am a graduate of Sir George Williams (now Concordia) University, Montreal, Quebec, Canada in 1971 with a Bachelor of Science degree in Major Geology and McGill University, Montreal, Quebec, Canada in 1974 with a Master of Science degree in Applied Mineral Exploration.

13. I am registered as a Professional Geologist in the Northwest Territories, Canada (L744). I have worked as a geologist for a total of 32 years since my graduation. My relevant experience for the purpose of the Technical Report is:

- Review and report as a consultant on numerous exploration and mining projects around the world for due diligence and regulatory requirements, including:
  - Resource estimates for Sue A, Sue B, MacClean North and Caribou U deposits, McClean Lake, Saskatchewan
  - Resource estimate for Midwest U deposit, Saskatchewan
  - Resource estimate for Grachevskoye U. Mine, Kazakstan
  - Due diligence review of Kazakstan U projects
  - Resource estimate for Dornod U deposit, Mongolia
  - Resource estimate for Kitts U deposit, Labrador
  - Uranium resource assessment of two quadrangles in the Midwest U.S.A. for the U.S. Government
  - Uranium exploration, Athabaska Basin, Saskatchewan
- Vice President Exploration for a junior mining company in charge of diamond exploration programs in NWT and property evaluations worldwide for a variety of commodities, including gold, base metals, and diamonds.
- Senior geologist with a major Canadian mining company in charge of evaluation of advanced properties/projects and acquisitions for a broad variety of commodities.

14. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI43-101.

15. I visited the McClean Lake property on February 1 and 2, 2005 and the Cogema Resources Inc. offices in Saskatoon, Saskatchewan on January 31 and from February 2 to 4, 2005.
16. I am responsible for items 1 to 17, 19, 21 and 22 to 25 of the Technical Report. The other items of this report have been adopted from Hendry and Routledge, (2005).
17. I am independent of the Issuer applying the test set out in Section 1.4 of National Instrument 43-101.
18. I have had no prior involvement with the McClean Lake property that is the subject of the Technical Report other than has been previously reported under separate cover in November 2005.
19. I have read National Instrument 43-101F1, and the Technical Report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.
20. To the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated 31<sup>st</sup> day of March, 2006

**(Signed & Sealed)**

Richard E. Routledge, M.Sc., P.Geol.