



P&E MINING CONSULTANTS INC.  
Geologists and Mining Engineers

**TECHNICAL REPORT  
AND RESOURCE ESTIMATE  
ON THE  
ALEXO AND KELEX DEPOSITS  
ALEXO PROPERTY  
TIMMINS AREA, ONTARIO, CANADA**

**LATITUDE 48°39'29.15"N, LONGITUDE 80°48'43.21"W**

**FOR  
CANADIAN ARROW MINES LTD.**

**By**

**P&E Mining Consultants Inc.**

**NI-43-101 & 43-101F1  
TECHNICAL REPORT No. 192**

**Mr. Eugene Puritch, P. Eng.  
Dr. Wayne Ewert, P. Geo.  
Ms. Tracy Armstrong, P. Geo.  
Mr. Antoine Yassa, P. Geo.  
Mr. David Burga, P. Geo.**

**Report No. 192  
Effective Date: September 5, 2010  
Signing Date: November 3, 2010**

## **IMPORTANT NOTICE**

*This report was prepared as a National Instrument 43-101 Technical Report, in accordance with Form 43-101F1, for Canadian Arrow Mines Ltd. (“Canadian Arrow”) by P&E Mining Consultants Inc. (“P&E”). The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in the consulting services and based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended to be used by Canadian Arrow subject to the terms and conditions of its contract with P&E. This contract permits Canadian Arrow to file this report as a Technical Report with Canadian Securities Regulatory Authorities pursuant to National Instrument 43-101, Standards of Disclosure for Mineral Projects. Any other use of this report by any third party is at that party’s sole risk.*

## TABLE OF CONTENTS

<b>SUMMARY.....</b>	<b>I</b>
<b>1.0 INTRODUCTION.....</b>	<b>1</b>
<b>1.1 TERMS OF REFERENCE .....</b>	<b>1</b>
<b>1.2 SITE VISITS.....</b>	<b>1</b>
<b>1.3 UNITS AND CURRENCY .....</b>	<b>2</b>
<b>1.4 SOURCES OF INFORMATION.....</b>	<b>2</b>
<b>1.5 GLOSSARY OF TERMS .....</b>	<b>2</b>
<b>2.0 RELIANCE ON OTHER EXPERTS.....</b>	<b>5</b>
<b>3.0 PROPERTY DESCRIPTION AND LOCATION.....</b>	<b>6</b>
<b>3.1 LOCATION .....</b>	<b>6</b>
<b>3.2 PROPERTY DESCRIPTION .....</b>	<b>8</b>
<b>3.3 PRIOR AGREEMENTS.....</b>	<b>12</b>
<b>3.3.1 UNDERLYING AGREEMENT WITH NORANDA.....</b>	<b>12</b>
<b>3.3.2 UNDERLYING AGREEMENT WITH MCKINNON .....</b>	<b>12</b>
<b>3.4 PERMITS.....</b>	<b>12</b>
<b>4.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY .....</b>	<b>14</b>
<b>4.1 ACCESSIBILITY .....</b>	<b>14</b>
<b>4.2 CLIMATE.....</b>	<b>14</b>
<b>4.3 LOCAL RESOURCES AND INFRASTRUCTURE .....</b>	<b>14</b>
<b>4.4 PHYSIOGRAPHY .....</b>	<b>14</b>
<b>5.0 HISTORY .....</b>	<b>15</b>
<b>5.1 HISTORICAL RESOURCE ESTIMATE .....</b>	<b>18</b>
<b>6.0 GEOLOGICAL SETTING .....</b>	<b>19</b>
<b>6.1 REGIONAL GEOLOGY .....</b>	<b>19</b>
<b>6.2 PROPERTY GEOLOGY .....</b>	<b>21</b>
<b>7.0 DEPOSIT TYPES .....</b>	<b>23</b>
<b>7.1 MAGMATIC NI-CU DEPOSITS .....</b>	<b>24</b>
<b>7.1.1 KOMATIITE-HOSTED NI-CU DEPOSITS .....</b>	<b>25</b>
<b>8.0 MINERALIZATION .....</b>	<b>26</b>

<b>8.1</b>	<b>ALEXO DEPOSIT .....</b>	<b>26</b>
<b>8.1.1</b>	<b>ALEXO MAIN ZONE .....</b>	<b>27</b>
<b>8.1.2</b>	<b>ALEXO EAST ZONE.....</b>	<b>27</b>
<b>8.2</b>	<b>KELEX DEPOSIT .....</b>	<b>29</b>
<b>8.2.1</b>	<b>KELEX WEST ZONE .....</b>	<b>30</b>
<b>8.2.2</b>	<b>KELEX CENTRAL-WEST ZONE .....</b>	<b>30</b>
<b>8.2.3</b>	<b>KELEX CENTRAL ZONE.....</b>	<b>31</b>
<b>8.2.4</b>	<b>KELEX EAST ZONE .....</b>	<b>31</b>
<b>8.2.5</b>	<b>KELEX 1700 EAST ZONE .....</b>	<b>31</b>
<b>9.0</b>	<b>EXPLORATION .....</b>	<b>32</b>
<b>10.0</b>	<b>DRILLING.....</b>	<b>33</b>
<b>10.1</b>	<b>2004 DRILLING.....</b>	<b>33</b>
<b>10.1.1</b>	<b>ALEXO DEPOSIT DRILL PROGRAM 2004 .....</b>	<b>33</b>
<b>10.1.2</b>	<b>KELEX DEPOSIT DRILL PROGRAM 2004 .....</b>	<b>36</b>
<b>10.2</b>	<b>2005 DRILLING.....</b>	<b>42</b>
<b>10.2.1</b>	<b>KELEX DEPOSIT DRILL PROGRAM .....</b>	<b>42</b>
<b>10.3</b>	<b>DRILL HOLE COLLAR SURVEYING .....</b>	<b>43</b>
<b>11.0</b>	<b>SAMPLING METHOD AND APPROACH.....</b>	<b>44</b>
<b>12.0</b>	<b>SAMPLE PREPARATION, ANALYSES AND SECURITY .....</b>	<b>45</b>
<b>13.0</b>	<b>DATA VERIFICATION.....</b>	<b>46</b>
<b>13.1</b>	<b>P&amp;E SITE VISIT .....</b>	<b>46</b>
<b>13.2</b>	<b>QUALITY CONTROL OF SITE VISIT SAMPLES .....</b>	<b>50</b>
<b>14.0</b>	<b>ADJACENT PROPERTIES .....</b>	<b>51</b>
<b>15.0</b>	<b>METALLURGICAL PROCESSING AND METALLURGICAL TESTING .....</b>	<b>52</b>
<b>16.0</b>	<b>MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES .....</b>	<b>53</b>
<b>16.1</b>	<b>INTRODUCTION.....</b>	<b>53</b>
<b>16.2</b>	<b>DATABASE .....</b>	<b>53</b>
<b>16.3</b>	<b>DATA VERIFICATION.....</b>	<b>53</b>
<b>16.4</b>	<b>DOMAIN INTERPRETATION .....</b>	<b>53</b>
<b>16.5</b>	<b>ROCK CODE DETERMINATION .....</b>	<b>54</b>
<b>16.6</b>	<b>COMPOSITES .....</b>	<b>54</b>
<b>16.7</b>	<b>GRADE CAPPING .....</b>	<b>54</b>
<b>16.8</b>	<b>VARIOGRAPHY .....</b>	<b>55</b>
<b>16.9</b>	<b>BULK DENSITY.....</b>	<b>55</b>

<b>16.10 BLOCK MODELING.....</b>	<b>55</b>
<b>16.11 RESOURCE CLASSIFICATION .....</b>	<b>56</b>
<b>16.12 RESOURCE ESTIMATE .....</b>	<b>56</b>
<b>16.13 CONFIRMATION OF ESTIMATE.....</b>	<b>59</b>
<b>17.0 OTHER RELEVANT DATA AND INFORMATION .....</b>	<b>60</b>
<b>18.0 INTERPRETATION AND CONCLUSIONS .....</b>	<b>61</b>
<b>18.1 OPPORTUNITIES TO EXPAND RESOURCES.....</b>	<b>61</b>
<b>18.2 PRODUCTION OPPORTUNITIES .....</b>	<b>62</b>
<b>18.3 EXPLORATION POTENTIAL .....</b>	<b>62</b>
<b>19.0 RECOMMENDATIONS .....</b>	<b>63</b>
<b>20.0 REFERENCES.....</b>	<b>64</b>
<b>21.0 CERTIFICATES.....</b>	<b>66</b>
<b>APPENDIX I: DRILL HOLE PLAN .....</b>	<b>71</b>
<b>APPENDIX II: 3D DOMAINS.....</b>	<b>73</b>
<b>APPENDIX III: LOG NORMAL HISTOGRAMS .....</b>	<b>75</b>
<b>APPENDIX IV: VARIOGRAMS .....</b>	<b>82</b>
<b>APPENDIX V: NI BLOCK MODEL CROSS SECTIONS AND PLANS.....</b>	<b>84</b>
<b>APPENDIX VI: NSR BLOCK MODEL CROSS SECTIONS AND PLANS .....</b>	<b>96</b>
<b>APPENDIX VII: CLASSIFICATION BLOCK MODEL CROSS SECTIONS AND PLANS.....</b>	<b>108</b>
<b>APPENDIX VIII: OPTIMIZED PIT SHELL .....</b>	<b>120</b>

## **LIST OF FIGURES**

Figure 3-1: Location Map of the Alexo Property .....	6
Figure 3-2: Location of the Alexo and Kelex Open Pits on the Alexo Property .....	7
Figure 3-3: Alexo and Kelex Open Pits Aerial View.....	7
Figure 3-4: Location of the Patented and Leased Claims of the Alexo Property.....	9
Figure 5-1: Location of Historical Outokumpu and Hucamp Drilling on the Kelex Deposit.....	16
Figure 6-1: Regional Geology of the Timmins Area .....	20
Figure 6-2: Alexo Property Geology Map .....	22
Figure 7-1: Regional Geology and Mineral Deposits of the Timmins Region .....	23
Figure 8-1: Alexo Pit 120' Level with a Massive Sulphide Lens Separated by an Andesite Wedge.....	26
Figure 8-2: Alexo Vertical Projection.....	28
Figure 8-3: Five Zones of the Kelex Deposit Defined by Drilling .....	30
Figure 9-1: Alexo Pit.....	32
Figure 9-2: Kelex Pit .....	32
Figure 10-1: Location of Canadian Arrow's Drill Holes on the Alexo Deposit .....	35
Figure 10-2: Location of Canadian Arrow's Drill Holes on the Kelex Deposit .....	39
Figure 13-1: Site Visits 1 and 2 Results for Nickel.....	47
Figure 13-2: Site Visits 1 and 2 Results for Copper .....	47
Figure 13-3: Site Visits 1 and 2 Results for Cobalt .....	48
Figure 13-4: Site Visits 1 and 2 Results for Gold .....	48
Figure 13.5: Site Visits 1 and 2 Results for Palladium .....	49
Figure 13.6: Site Visits 1 and 2 Results for Platinum .....	49
Figure 14-1: Ni-Cu-PGE Mineralization Adjacent to the Alexo Property.....	51

## **LIST OF TABLES**

Table 3.1: Patented and Leased Claims of the Alexo Property.....	10
Table 5.1: Outokumpu Drill Results .....	17
Table 5.2: Hucamp Drilling Results.....	18
Table 10.1: 2004 Drill Program on the Alexo Deposit .....	34
Table 10.2: Significant Intersections Drilled on the Alexo Deposit, 2004 .....	36
Table 10.3: 2004 Drill Program on the Kelex Deposit .....	36
Table 10.4: Significant Intersections Drilled on the Kelex Deposit, 2004 .....	40
Table 10.5: 2005 Drill Program on the Kelex Deposit .....	42
Table 10.6: Significant Intersections Drilled on the Kelex Deposit, 2005 .....	43
Table 16.1: Grade Capping Values .....	54
Table 16.2: Block Model Interpolation Parameters .....	56
Table 16.3: Alexo and Kelex Mineral Resource Estimate (as of September 5, 2010).....	58
Table 16.4: Comparison of Weighted Average Grade of Capped Assays and Composites with Total Block Model Average Grade .....	59

## SUMMARY

This report was prepared by P&E Mining Consultants Inc. (“P&E”) at the request of Mr. Kim Tyler, President of Canadian Arrow Mines Ltd. (“Canadian Arrow”). Canadian Arrow is an Ontario based, publicly held company trading on the TSX Venture Exchange (“TSX.V”) under the symbol of CRO. The purpose of this report is to provide an independent, National Instrument (“NI”) 43-101 compliant, Technical Report and Mineral Resource Estimate (the “Report”) on the Alexo and Kelex deposits located on the Alexo Property in the Timmins area of Ontario, Canada (the “Property”).

The Property is located in the Townships of Clergue and Dundonald, approximately 45 km northeast of the Town of Timmins in the Porcupine Mining Division of Ontario. Access to the Property is via gravel roads that extend from Highway 67, a paved road that connects Highway 101 to Highway 11. Hydro lines and a spur of the Ontario Northland Railway are located less than 2 km north of the Property. The long mining history of the Timmins area is a testament to the abundance of material and human resources that are available in the region to support exploration and mining operations.

The Alexo Property comprises 20 patented claims and 29 leased claims totalling 842.74 ha held 100 % by Legendary Ore Mining Corporation (“Legendary”), a wholly owned subsidiary of Canadian Arrow. Rent on leased claims and land taxes on patented claims have been paid in the amount of \$2,721.32 for 2010 to the Ontario Ministry of Northern Development and Mines. Property taxes in the amount of \$1,707.10 for 2010 have been paid on certain patented claims to the Town of Iroquois Falls (for patents under the Noranda and Rowlandson agreements) and \$1,526.02 has been paid to the province of Ontario for property taxes on Provincial Land (for leases under the McKinnon agreement).

As of the effective date of the Report, all of the Alexo Property claims are in good standing.

Larchex Inc. (“Larchex”) was a principal shareholder of Legendary prior to selling 100 % of Legendary to Canadian Arrow on February 9, 2004. The Alexo Property claims were previously sold by Outokumpu Mines Inc. (“Outokumpu”) to Larchex dated June 1, 2002 and then subsequently vended 100 % into, and title transferred to, Legendary on April 24, 2004.

The Agreement of Purchase and Sale between and Outokumpu as of June 1, 2002 requires Larchex to make certain preproduction payments until such time Larchex places the Property into production. The preproduction payments are suspended when the Property is placed into production and remain suspended for so long as the Property remains in production. There is, at all times, a 1.5 % net smelter return (“NSR”) Royalty payable to Outokumpu on any metals production from the Property. Pursuant to two underlying agreements, and depending from where on the Property metals are produced, there may also be royalties payable to Noranda Inc. (“Noranda”) or Donald McKinnon.

The Property has been mined in three separate campaigns from 1913 to 1919, 1943 to 1944 and by Canadian Arrow from 2004 to 2005. Canadian Arrow produced 30,138 t of ore averaging 1.93 % Ni containing 1.3 Mlb of Ni from open pit mining of the Alexo and Kelex deposits. Canadian Arrow temporarily halted production in October 2005 due to low nickel prices.

Geologically, the Alexo and Kelex deposits are situated in the southwestern part of the Abitibi Subprovince greenstone belt of the Archean Superior Province. The Abitibi Subprovince is a roughly east-trending, 200 km wide belt exposed for a distance of approximately 400 km and endowed with metallic mineral deposits including the mining areas of Timmins, Kirkland Lake, Val d'Or and Noranda. Several cycles of volcanism and sedimentation are known in the southern Abitibi Subprovince with the basal komatiitic part of the volcanic cycles containing high nickel concentrations in the order of 3,000 ppm Ni. There are numerous komatiite-hosted nickel sulphide deposits and occurrences in the Timmins area.

Locally, the Alexo Property covers the northeast arm of a large 'Z'-shaped fold in the Kidd-Munro assemblage, an east-southeast striking sequence of volcanic rocks and thin sedimentary interflow layers ranging in age from 2,711 to 2,717 Ma. The rocks have been metamorphosed to greenschist facies. The Alexo and Kelex deposits are at approximately the same stratigraphic level where komatiitic flows overly a sequence of felsic pyroclastics rocks, basalt and komatiitic basalt interdigitate with thin layers of graphic argillite. There are several episodes of alternating komatiite-basalt volcanism.

The Alexo and Kelex deposits can be classified as komatiite-hosted Ni-Cu sulphide mineralization in a greenstone belt setting. Other komatiite Ni-Cu sulphide deposits located in the Abitibi Subprovince in the Timmins area include the Langmuir, Redstone and Texmont mines.

Four separate zones of komatiite associated with Ni-Cu sulphide mineralization have been identified within the Alexo Property. The Alexo and Kelex are massive, veined and disseminated pyrrhotite and pentlandite with trace chalcopyrite deposits, at the basal contact of thick komatiitic olivine cumulates and footwall andesitic volcanics.

Canadian Arrow have drilled 132 surface diamond drill holes totalling 12,710.2 m between 2004 to 2005.

From a total database of 210 diamond drill holes, data from 144 drill holes were utilized for the September 5, 2010 Mineral Resource Estimate. The database was verified in Gemcom with minor corrections made to bring it to an error free status.

The following is a summary of the mineral resource calculation prepared with respect to the Alexo Property for the Alexo and Kelex deposits. The definitions of Indicated and Inferred Resources are in compliance with the Canadian Institute of Mining, Metallurgy and Petroleum Definitions and Standards on Mineral Resources and Mineral Reserves, December 11, 2005.

The P&E September 5, 2010 Mineral Resource Estimate utilized conventional statistical analysis, variography and grade interpolation via Gemcom block modeling. Utilizing 1.0 m composites for nickel, copper, cobalt, gold, platinum and palladium, the block models, within interpreted 3-D solid domains, were coded with rock codes, bulk density and classified into Indicated and Inferred categories. For the purposes of this resource, classifications of all interpolated grade blocks were determined from the nickel interpolations for indicated and inferred due to nickel being the dominant revenue producing element in the NSR calculation.

The Mineral Resource Estimate tabulated below for the Alexo and Kelex deposits was compiled using a \$35/t NSR cut-off value for the open pit portion of the Alexo and Kelex deposits and a \$85/t NSR cut-off value for the underground portion of the Alexo and Kelex deposits.

<b>Resource Category: INDICATED</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>contained Ni lbs</b>	<b>contained Cu lbs</b>	<b>contained Co lbs</b>
Alexo Open Pit*	18,000	1.36	0.16	0.06	0.04	0.16	0.41	540,000	63,000	24,000
Kelex Open Pit*	131,000	1.1	0.04	0.04	0.01	0.03	0.06	3,177,000	116,000	115,000
<b>Total Open Pit* Indicated</b>	<b>149,000</b>	<b>1.13</b>	<b>0.05</b>	<b>0.04</b>	<b>0.01</b>	<b>0.05</b>	<b>0.1</b>	<b>3,717,000</b>	<b>179,000</b>	<b>139,000</b>
Alexo Underground	4,000	0.84	0.11	0.04	0.03	0.11	0.25	74,000	10,000	4,000
Kelex Underground	90,000	1.00	0.04	0.04	0.01	0.03	0.07	1,984,000	79,000	79,000
<b>Total Underground Indicated</b>	<b>94,000</b>	<b>0.99</b>	<b>0.04</b>	<b>0.04</b>	<b>0.01</b>	<b>0.03</b>	<b>0.08</b>	<b>2,058,000</b>	<b>89,000</b>	<b>83,000</b>
<b>Total Indicated</b>	<b>243,000</b>	<b>1.08</b>	<b>0.05</b>	<b>0.04</b>	<b>0.01</b>	<b>0.04</b>	<b>0.08</b>	<b>5,775,000</b>	<b>268,000</b>	<b>222,000</b>
<b>Resource Category: INFERRED</b>	<b>Tonnes</b>	<b>Ni %</b>	<b>Cu %</b>	<b>Co %</b>	<b>Au g/t</b>	<b>Pt g/t</b>	<b>Pd g/t</b>	<b>contained Ni lbs</b>	<b>contained Cu lbs</b>	<b>contained Co lbs</b>
Kelex Underground	<b>54,000</b>	<b>0.84</b>	<b>0.04</b>	<b>0.03</b>	<b>0.01</b>	<b>0.02</b>	<b>0.03</b>	<b>1,000,000</b>	<b>48,000</b>	<b>36,000</b>

1 \* Designates resources defined within an optimized pit shell.

2 Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues.

3 The quantity and grade of reported inferred resources in this estimation are uncertain in nature and there has been insufficient exploration to define these inferred resources as an indicated or measured mineral resource and it is uncertain if further exploration will result in upgrading them to an indicated or measured mineral resource category.

4 The mineral resources in this press release were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council December 11, 2005.

The current 2010 P&E Mineral Resource Estimate has defined Indicated and Inferred Resources for nickel, copper, cobalt, gold, platinum and palladium for the open pit and underground portions of the Alexo and Kelex deposits on the Alexo Property.

Of the 210 diamond drill holes used in the resource estimate, only 14 (7 %) extended below 100 m from surface. Opportunities exist to increase the resource estimates of the known zones with further diamond drilling below and along strike of the deposits. Close spaced drilling below the 100 m elevation at both the Kelex and Alexo deposits is recommended to upgrade the Inferred resources and explore for other mineralized horizons. Geophysical borehole techniques such as magnetic susceptibility coupled with electromagnetic should be performed on completed boreholes to better delineate mineralization geometry at both high and low grades. Metallurgical testing of the anticipated drilling is recommended.

The following program is proposed in two phases:

**Phase 1:**

Description	Units	Cost per Unit	Total
Phase 1 drill program	2,000 m	\$150/m	\$300,000
Geophysics compilation	10 days	\$1,000/day	\$10,000
Borehole Geophysics	5 days	\$2,000/day	\$10,000
Project Management / Supervision	1 month	\$15,000/mo	\$15,000
Metallurgical test work	3 months	lump sum	\$70,000
<b>Total Phase 1</b>			<b>\$405,000</b>

Pending completion of the geophysical compilation in phase 1 an assessment of regional exploration targets could be prioritized for drill testing. A second exploration phase of drilling could be proposed as follows.

**Phase 2:**

Description	Units	Cost per Unit	Total
Phase 2 drill program	10,000 m	\$150/m	\$1,500,000
Borehole Geophysics	20 days	\$2,000/day	\$40,000
Project Management/Supervision	2 months	\$15,000/mo	\$30,000
<b>Total Phase 2</b>			<b>\$1,570,000</b>

The total cost of phase 1 and 2 is \$1,975,000.

## **1.0 INTRODUCTION**

### **1.1 TERMS OF REFERENCE**

The following is a Technical Report and Resource Estimate (the “Report”) prepared by P&E Mining Consultants Inc. (“P&E”) regarding the Alexo and Kelex deposits located on the Alexo Property in the Timmins area of Ontario, Canada (the “Property”). This Report has been prepared in compliance with the requirements of Canadian National Instrument (“NI”) 43-101 and in accordance with the guidelines of the Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”), Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council December 11, 2005 (CIM 2005).

This report was prepared at the request of Mr. Kim Tyler, President of Canadian Arrow Mines Ltd. (“Canadian Arrow”). Canadian Arrow is a Sudbury, Ontario based publicly held company trading on the TSX Venture Exchange under the symbol of “CRO”, with its corporate offices at:

233 Brady Street East, Suite 8  
Sudbury, Ontario P3B 4H5  
Canada

Tel: 705 673 8259  
Fax: 705 673 5450

This report is considered current as of September 5, 2010.

The Alexo Property is located approximately 45 km northeast of the Town of Timmins in the Townships of Clergue and Dundonald, in the Porcupine Mining Division of Ontario. The Property comprises 20 patented claims and 29 leased claims totalling 842.74 ha held 100 % by Legendary Ore Mining Corporation (“Legendary”), a wholly owned subsidiary of Canadian Arrow. All claims and leases are in good standing as of the effective date of this Report.

The Alexo and Kelex deposits, located on the Alexo Property, can be classified as komatiite-hosted Ni-Cu sulphide mineralization in a greenstone belt setting. The deposits are composed of massive to semi-massive nickel sulphide accumulations inhabiting basal embayments along the footwalls of two parallel, but separate, steeply dipping komatiitic peridotite volcanic flows. Between 2004 and 2005, Canadian Arrow produced 30,138 t of ore averaging 1.93 % Ni containing 1.3 Mlb of nickel from open pit mining of the Alexo and Kelex deposits.

### **1.2 SITE VISITS**

Site visits to the Property on May 4, 2010 have been carried out by Mr. Eugene Puritch, P. Eng. and Mr. David Burga, P. Geo. and on May 17 to 18, 2010 by Mr. Antoine Yassa, P. Geo., all of P&E, and qualified persons under the terms of the NI 43-101 who have provided specific input to this Report.

## **1.3 UNITS AND CURRENCY**

Metric units of measure have been used throughout this Report, unless noted otherwise. Costs are reported in Canadian dollars (“CND\$”) unless otherwise stated. Metal values are reported in percentage (“%”), grams per metric tonne (“g/t”), and ounces (“oz”).

The coordinate system used by Canadian Arrow for locating and reporting drill hole information is UTM / PSAD 56, zone 17. Maps in this Report use either this coordinate system or latitude and longitude.

## **1.4 SOURCES OF INFORMATION**

This Report is based, in part, on internal company technical reports, and maps, published government reports, company letters and memoranda, and public information as listed in Section 20.0 at the conclusion of this Report. Several sections from reports authored by other consultants have been directly quoted or summarized in this Report, and are so indicated where appropriate.

It should be noted that the authors have relied heavily upon selected portions or excerpts from material contained in the following NI 43-101 compliant technical reports. The report is publicly available on SEDAR ([www.sedar.com](http://www.sedar.com)):

A Report to NI 43-101 Standards on the Timmins Area Nickel Properties of Legendary Ore Mining Corporation to be Acquired by Canadian Arrow Mines Ltd., Ontario, Canada. NI 43-101 report prepared by MPH Consulting Limited for Canadian Arrow Mines Ltd., dated February 2, 2004.

## **1.5 GLOSSARY OF TERMS**

<b>Abbreviation</b>	<b>Description</b>
°C	Degrees Celsius
<	Less than
%	Percentage
\$	Dollar (Canadian)
3-D	Three dimensions
AGAT	AGAT Laboratories Ltd.
asl	Above sea level
Au	Gold
Bradley Bros.	Bradley Bros. Limited
Canadian Arrow	Canadian Arrow Mines Ltd.
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
cm	Centimetre
CND\$	Canadian dollar
Co	Cobalt
Cu	Copper
DDH	Diamond drill hole

<b>Abbreviation</b>	<b>Description</b>
E	East
EM	Electromagnetic
Fe	Iron
ft	Foot / feet
g	Gram
G&A	General and administration
g/t	Grams per tonne
ha	Hectare
HLEM	Horizontal Loop Electromagnetic (System)
Hucamp	Hucamp Mines Ltd.
km	Kilometre
lb	Pound
Larchex	Larchex Inc.
Legendary	Legendary Ore Mining Corporation
m	Metre
$m^2$	Squared metres
$m^3$	Cubic metres
M	Million
Ma	Millions of years
Mg	Magnesium
MgO	Magnesium Oxide
Mlb	Million pounds
mm	Millimetre
MPH	MPH Consulting Limited
N	North
NE	Northeast
NI	National Instrument (43-101)
Ni	Nickel
Noranda	Noranda Inc.
NSR	Net smelter return
NW	Northwest
OGS	Ontario Geological Survey
Outokumpu	Outokumpu Mines Inc.
oz	Ounces
P&E	P&E Mining Consultants Inc.
Pd	Palladium
PGE	Platinum Group Elements
ppm	Parts per million
Pt	Platinum

<b>Abbreviation</b>	<b>Description</b>
QA/QC	Quality assurance / quality control
QC	Quality control
QP	Qualified person
RQD	Rock quality designation
S	South
SE	Southeast
SEDAR	System for Electronic Document Analysis and Retrieval
SGS	SGS Laboratory
SW	Southwest
t	Tonnes (metric measurement)
t/m <sup>3</sup>	Tonnes per cubic metre
tons	Short tons
TSX	Toronto Stock Exchange
US\$	United States dollar
UTM	Universal Transverse Mercator
W	West

## **2.0 RELIANCE ON OTHER EXPERTS**

P&E has assumed, and relied on the fact, that all the information and existing technical documents listed in the References section of this Report are accurate and complete in all material aspects. While we carefully reviewed all the available information presented to us, we cannot guarantee its accuracy and completeness. We reserve the right, but will not be obligated to revise our Report and conclusions if additional information becomes known to us subsequent to the date of this Report.

Although copies of the tenure documents, operating licenses, permits, and work contracts were reviewed, an independent verification of land title and tenure was not performed. P&E has not verified the legality of any underlying agreement(s) that may exist concerning the licenses or other agreement(s) between third parties but has relied on the clients solicitor's to have conducted the proper legal due diligence. Information on tenure and permits was obtained from Canadian Arrow and the Ontario government website.

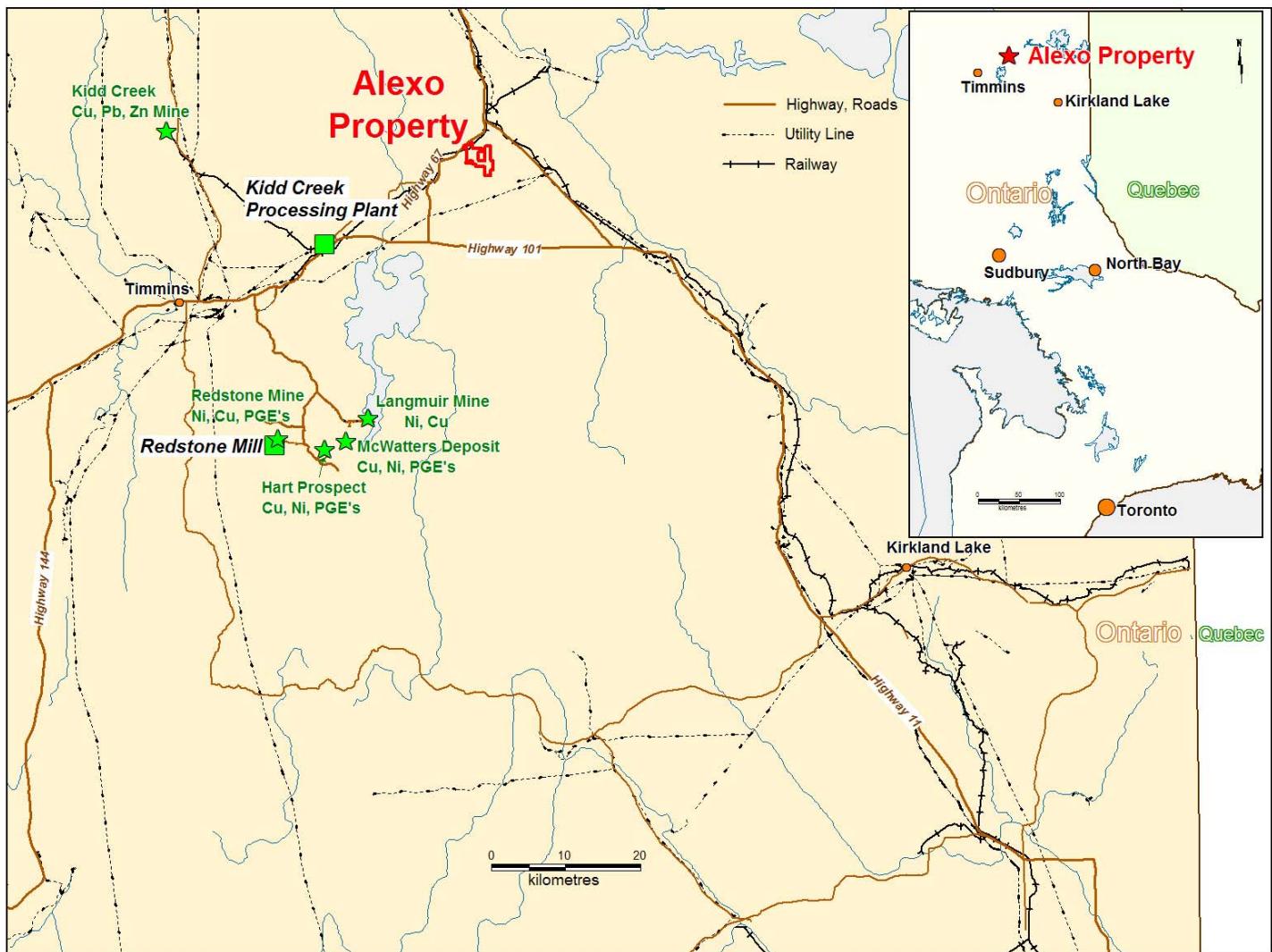
A draft copy of the Report has been reviewed for factual errors by the client and P&E has relied on Canadian Arrow's historical and current knowledge of the Property in this regard. Any statements and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and misleading at the date of this Report.

## 3.0 PROPERTY DESCRIPTION AND LOCATION

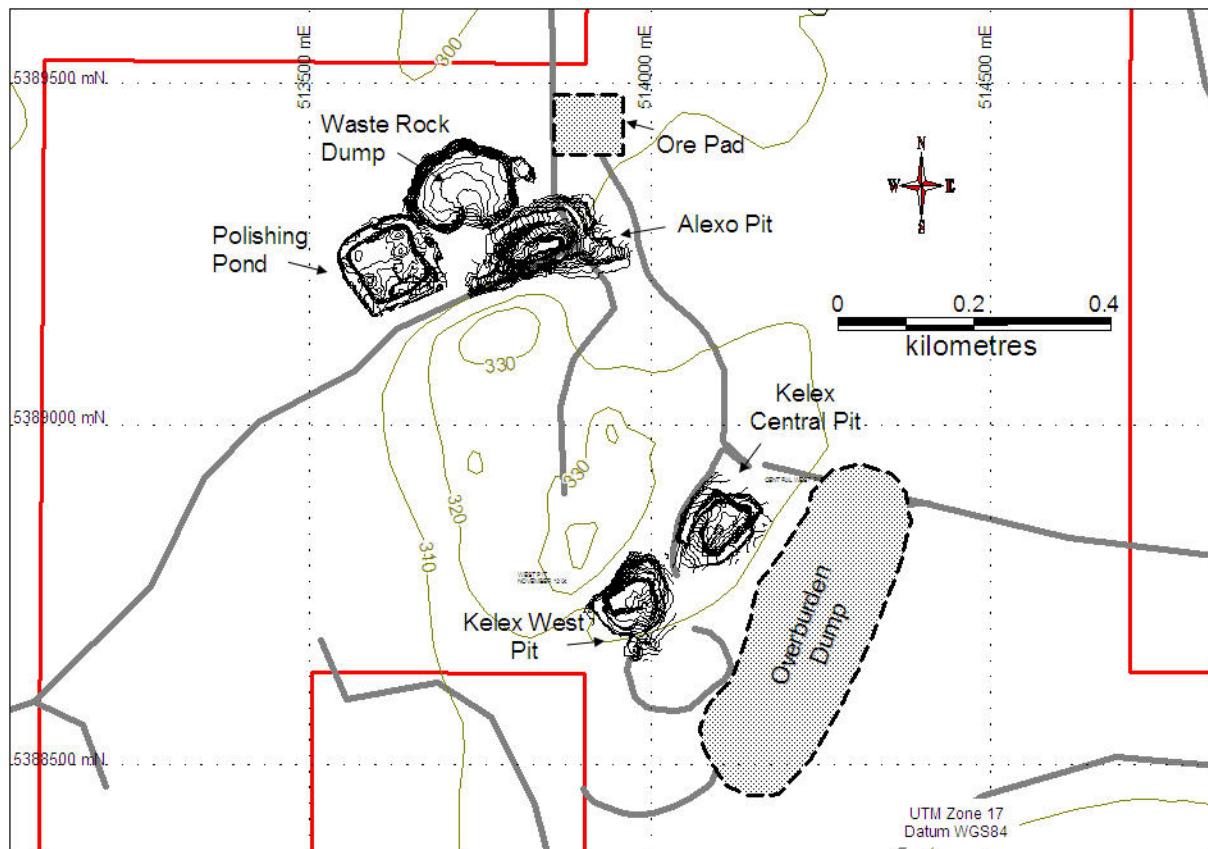
### 3.1 LOCATION

The Alexo Property is located in the Townships of Clergue and Dundonald, approximately 45 km northeast of the Town of Timmins, in the Porcupine Mining Division of Ontario (Figure 3-1). The Alexo Shaft is located on the Property at approximately latitude 48°39'29.15"N and longitude 80°48'43.21"W (Figures 3-2 and 3-3).

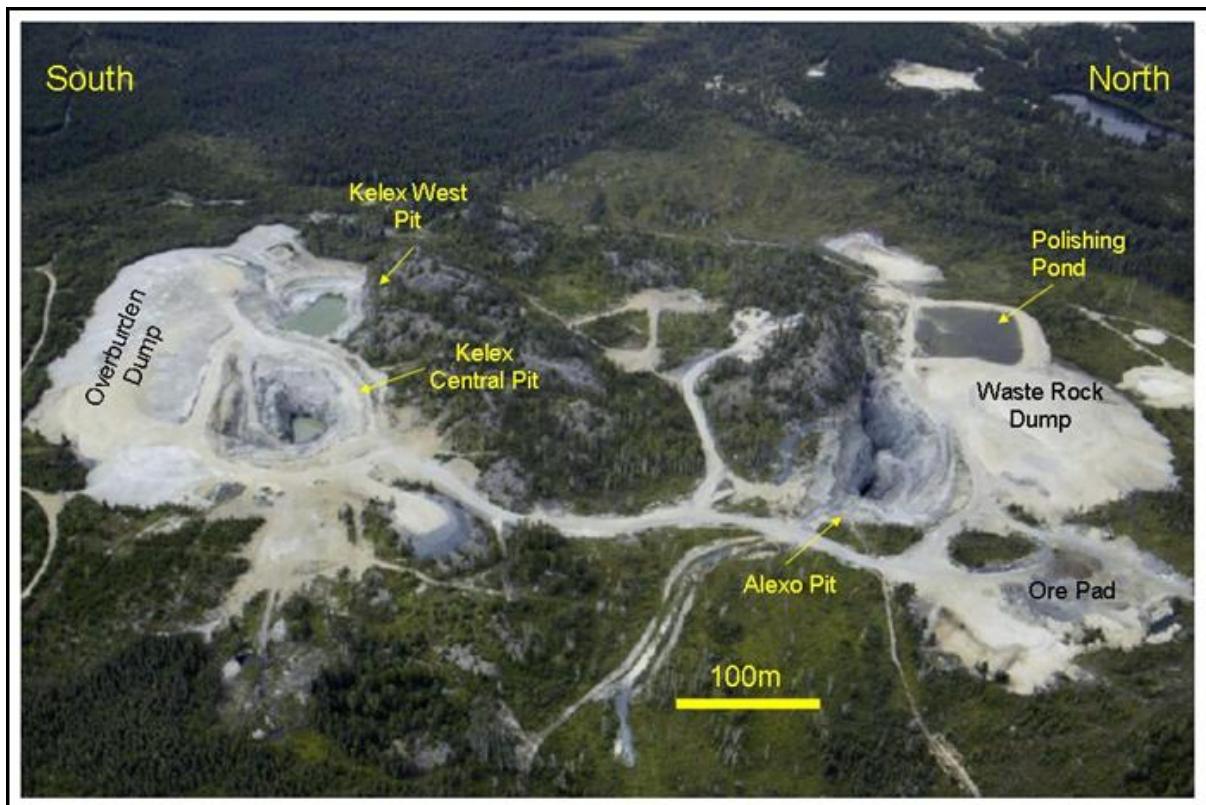
**Figure 3-1: Location Map of the Alexo Property**



**Figure 3-2: Location of the Alexo and Kelex Open Pits on the Alexo Property**



**Figure 3-3: Alexo and Kelex Open Pits Aerial View**



### **3.2 PROPERTY DESCRIPTION**

The Alexo Property comprises 20 patented claims and 29 leased claims totalling 842.74 ha held 100 % by Legendary Ore Mining Corporation (“Legendary”), a wholly owned subsidiary of Canadian Arrow (Figure 3-4 and Table 3.1). The Property claims are defined by specific lot and concession positions, as the surveyed Townships of Dundonald and Clergue have been subdivided into 12 north-south lots and 6 east-west concessions. Boundaries of individual claims can be identified in the field by locating the survey pins.

Rent on leased claims and land taxes on patented claims have been paid in the amount of \$2,721.32 for 2010 to the Ontario Ministry of Northern Development and Mines. Property taxes in the amount of \$1,707.10 for 2010 have been paid on certain patented claims to the Town of Iroquois Falls (for patents under the Noranda and Rowlandson agreements) and \$1,526.02 has been paid to the province of Ontario for property taxes on Provincial Land (for leases under the McKinnon agreement). As of the effective date of the report, all of the Alexo Property claims are in good standing.

The Agreement of Purchase and Sale between Larchex Inc. (“Larchex”) of Timmins and Outokumpu Mines Inc. (“Outokumpu”) as of June 1, 2002 requires Larchex to make certain pre-production payments until such time Larchex places the Property into production. The pre-production payments are suspended when the Property is placed into production and remain suspended for so long as the Property remains in production. There is, at all times, a 1.5 % net smelter return (“NSR”) royalty payable to Outokumpu on any metals production from the Property. Pursuant to two underlying agreements, and depending from where on the Property metals are produced, there may also be royalties’ payable to Noranda Inc. (“Noranda”) or Donald McKinnon as discussed in the following sections.

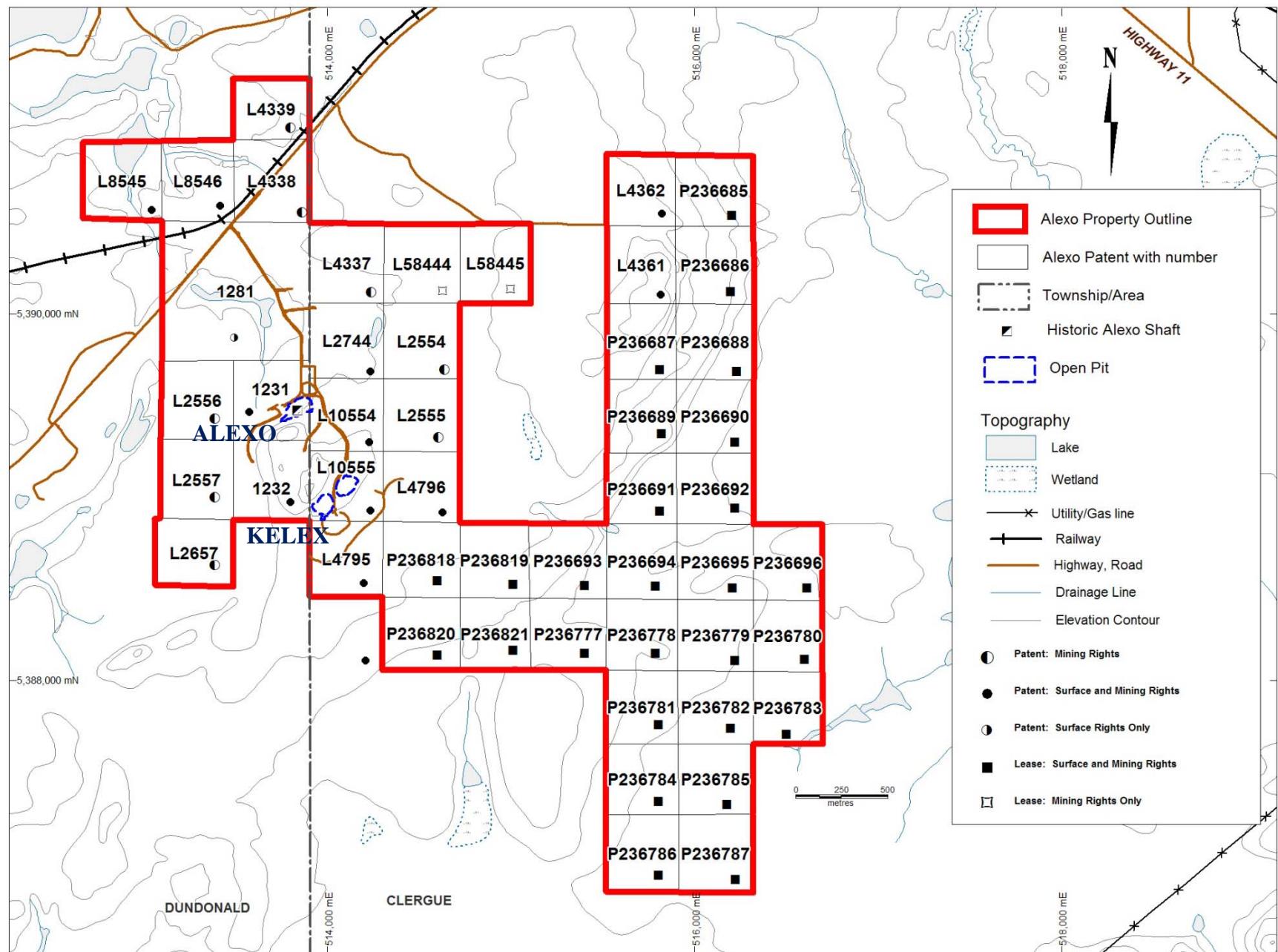
The pre-production payments required to be made by Larchex to Outokumpu are as follows:

- \$5,000 per month commencing September 1, 2002, payment on the first day of each and every month thereafter;
- \$10,000 per month commencing January 1, 2003, payment on the first day of each and every month until such time as the Property has been placed into production; and
- \$20,000 per month commencing January 1, 2004, payment on the first day of each and every month for so long as the Property has not been placed into production by Larchex.

Larchex has made the pre-production payments as required. Under the terms of the Outokumpu agreement, the property officially went into production in October 2003. Ongoing work and payments continued until temporary suspension of operations in October 2005. Under section 16 of the agreement Larchex (Legendary) is not obliged to make payments if production has not ceased for a period longer than 30 days within two years of commencement of production. Legendary has fulfilled this requirement and no longer obliged to provide pre-production payments.

Larchex was a principal shareholder of Legendary prior to selling 100 % of Legendary to Canadian Arrow on February 9, 2004. The Alexo Property claims had previously been sold by Outokumpu to Larchex dated June 1, 2002 and were then vended 100 % into, and title transferred to, Legendary on April 24, 2004.

**Figure 3-4: Location of the Patented and Leased Claims of the Alexo Property**



**Table 3.1: Patented and Leased Claims of the Alexo Property**

Claim / Lease No.	Type	Lease No.	Parcel No.	Lot	Conc.	Area (ha)	Recording Date	Lease Expiry	Rights <sup>1</sup>	Lease Rent and Land Taxes (2010)	Property Tax (2010)	Underlying Agreement
L2744	Patent		1697SEC	SW 1/4, N1/2, Lot 12	III	16.592			S&M	\$70.35	\$128.09	Noranda
L4361	Patent		2042SEC	NW 1/4, N1/2, Lot 10	III	16.238			S&M	\$68.85	\$128.09	Noranda
L4362	Patent		11800SEC	SW 1/4, S1/2, Lot 10	IV	14.265			S&M	\$60.48	\$123.67	Noranda
L10554	Patent		826SEC	NW 1/4, S1/2, Lot 12	III	16.592			S&M	\$70.35	\$128.09	Noranda
L10555	Patent		825SEC	SW 1/4, S1/2, Lot 12	III	16.592			S&M	\$70.35	\$128.09	Noranda
L58444	Lease	105425	387SEC	NE 1/4, N1/2, Lot 12	III	16.592	1/11/1989	31/10/2010 <sup>2</sup>	M	\$49.78		Noranda
L58445	Lease	105424	388SEC	NW 1/4, N1/2, Lot 11	III	16.238	2/11/1989	31/10/2010 <sup>2</sup>	M	\$48.71		Noranda
L8545	Patent		4182SEC	SW 1/4, S1/2, Lot 1	IV	16.187			S&M	\$68.64	\$126.98	Noranda
L8546	Patent		4183SEC	SE 1/4, S1/2, Lot 2	IV	16.187			S&M	\$68.64	\$126.98	Noranda
1231	Patent		1231SEC	NE 1/4, S1/2, Lot 1	III	16.187			S&M	\$68.64	\$126.98	Noranda
1232	Patent		1232SEC	SE 1/4, S1/2, Lot 1	III	16.187			S&M	\$68.64	\$126.98	Noranda
1281	Patent		1281SEC	N1/2, Lot 1	III	63.584			S		\$306.97	Noranda
L4795	Patent		2356SEC	NW 1/4, N1/2, Lot 12	II	16.542			S&M	\$70.14	\$128.09	Rowlandson
L4796	Patent		2355SEC	SE 1/4, S1/2, Lot 12	III	16.592			S&M	\$70.35	\$128.09	Rowlandson
L2554	Patent		16029SEC	SE 1/4, N1/2, Lot 12	III	16.592			M	\$70.35		McKinnon
L2555	Patent		16028SEC	NE 1/4, S1/2, Lot 12	III	16.592			M	\$70.35		McKinnon
L4337	Patent		16027SEC	NW 1/4, N1/2, Lot 12	III	16.592			M	\$70.35		McKinnon
L2556	Patent		16022SEC	NW 1/4, S1/2, Lot 1	III	16.187			M	\$68.64		McKinnon
L2557	Patent		16023SEC	SW 1/4, S1/2, Lot 1	III	16.187			M	\$68.64		McKinnon
L2657	Patent		16026SEC	NW 1/4, N1/2, Lot 1	II	16.187			M	\$68.64		McKinnon
L4338	Patent		16025SEC	SE 1/4, S1/2, Lot 1	IV	16.187			M	\$68.64		McKinnon
L4339	Patent		16024SEC	NE 1/4, S1/2, Lot 1	IV	16.187			M	\$68.64		McKinnon
P236685	Lease	107173	1135	SE 1/4, S1/2, Lot 10	IV	16.238	1/05/1998	30/04/2019	S&M		\$128.09	McKinnon
P236686	Lease	107173	1135	NE 1/4, N1/2, Lot 10	III	16.238	1/05/1998	30/04/2019	S&M			McKinnon
P236687	Lease	107173	1135	SW 1/4, N1/2, Lot 10	III	16.238	1/05/1998	30/04/2019	S&M		\$156.80	McKinnon
P236688	Lease	107173	1135	SE 1/4, N1/2, Lot 10	III	16.238	1/05/1998	30/04/2019	S&M			McKinnon
P236689	Lease	107173	1135	NW 1/4, S1/2 Lot 10	III	16.187	1/05/1998	30/04/2019	S&M			McKinnon
P236690	Lease	107173	1135	NE 1/4, S1/2 Lot 10	III	16.187	1/05/1998	30/04/2019	S&M			McKinnon
P236691	Lease	107173	1135	SW 1/4, S1/2, Lot 10	III	16.187	1/05/1998	30/04/2019	S&M			McKinnon
P236692	Lease	107173	1135	SE 1/4, S1/2, Lot 10	III	16.187	1/05/1998	30/04/2019	S&M			McKinnon
P236694	Lease	107173	1135	NW 1/4, N1/2, Lot 10	II	16.187	1/05/1998	30/04/2019	S&M			McKinnon
P236695	Lease	107173	1135	NE 1/4, N1/2, Lot 10	II	16.187	1/05/1998	30/04/2019	S&M			McKinnon
P236778	Lease	107173	1135	SW 1/4, N1/2, Lot 10	II	16.187	1/05/1998	30/04/2019	S&M			McKinnon
P236779	Lease	107173	1135	SE 1/4, N1/2, Lot 10	II	16.187	1/05/1998	30/04/2019	S&M			McKinnon

Claim / Lease No.	Type	Lease No.	Parcel No.	Lot	Conc.	Area (ha)	Recording Date	Lease Expiry	Rights <sup>1</sup>	Lease Rent and Land Taxes (2010)	Property Tax (2010)	Underlying Agreement
P236696	Lease	107173	1135	NW 1/4, N1/2, Lot 9	II	16.086	1/05/1998	30/04/2019	S&M	\$144.65	McKinnon	McKinnon
P236780	Lease	107173	1135	SW 1/4, N1/2, Lot 9	II	16.086	1/05/1998	30/04/2019	S&M			
P236781	Lease	107173	1135	NW 1/4, S1/2 Lot 10	II	16.187	1/05/1998	30/04/2019	S&M			
P236782	Lease	107173	1135	NE 1/4, S1/2 Lot 10	II	16.187	1/05/1998	30/04/2019	S&M			
P236784	Lease	107173	1135	SW 1/4, S1/2, Lot 10	II	16.187	1/05/1998	30/04/2019	S&M			
P236785	Lease	107173	1135	SE 1/4, S1/2, Lot 10	II	16.187	1/05/1998	30/04/2019	S&M			
P236783	Lease	107173	1135	NW 1/4, S1/2 Lot 9	II	16.086	1/05/1998	30/04/2019	S&M			\$126.98
P236786	Lease	107173	1135	NW 1/4, N1/2, Lot 10	I	16.086	1/05/1998	30/04/2019	S&M			\$144.65
P236787	Lease	107173	1135	NE 1/4, N1/2, Lot 10	I	16.086	1/05/1998	30/04/2019	S&M			McKinnon
P236818	Lease	107173	1135	NE 1/4, N1/2, Lot 12	II	16.542	1/05/1998	30/04/2019	S&M			\$144.65
P236820	Lease	107173	1135	SE 1/4, N1/2, Lot 12	II	16.542	1/05/1998	30/04/2019	S&M			McKinnon
P236693	Lease	107173	1135	NE 1/4, N1/2, Lot 11	II	16.187	1/05/1998	30/04/2019	S&M	\$170.05	McKinnon	McKinnon
P236777	Lease	107173	1135	SE 1/4, N1/2, Lot 11	II	16.187	1/05/1998	30/04/2019	S&M			
P236819	Lease	107173	1135	NW 1/4, N1/2, Lot 11	II	16.187	1/05/1998	30/04/2019	S&M			
P236821	Lease	107173	1135	SW 1/4, N1/2, Lot 11	II	16.187	1/05/1998	30/04/2019	S&M			
<b>TOTAL</b>	<b>29 Leases and 20 Patents</b>					<b>842.744</b>				<b>\$2,721.32</b>	<b>\$3,233.12</b>	

1. S = surface rights only, M = mining rights only, S&M = surface and mining rights

2. Leases L58444 and L58445 are currently in the process of being renewed for a further 21 years (tentative expiry date of 2031). Canadian Arrow have submitted an application form for renewal to the Ontario's Ministry of Northern Development, Mines and Forestry which was received on September 28, 2010. Approval of renewal is estimated by the government to take up to two months.

### **3.3 PRIOR AGREEMENTS**

Prior agreements affect patented and leased claims on the Property as detailed below.

#### **3.3.1 UNDERLYING AGREEMENT WITH NORANDA**

Subject to an Agreement dated December 1, 1997, Noranda conveyed to Outokumpu 100 % of its right, title and interest in 8 patented claims and 2 leased claims (Table 3.1), to an irrevocable option granted by Outokumpu to Noranda, whereby Noranda has the right to:

- earn a 50 % interest in the claims by notifying Outokumpu within 6 months of the delivery of a feasibility study that it elects to participate in a 50:50 operating joint venture with Outokumpu and by paying to Outokumpu two times Outokumpu's total expenditures as at the date the feasibility study is presented to Noranda; or
- collect a 2 % NSR royalty on production from the Property of which Outokumpu can purchase up to one half of the NSR at any time for \$1,000,000.

The Alexo and Kelex deposits are on claims affected by the Noranda agreement such that a 2 % NSR is payable to Noranda, in addition to the 1.5 % NSR to Outokumpu, on any production from these deposits.

#### **3.3.2 UNDERLYING AGREEMENT WITH MCKINNON**

Subject to a Purchase and Sale Agreement dated December 31, 1997, Donald McKinnon of Timmins representing 695202 Ontario Inc. sold 100 % of the mineral rights to 8 patented claims and 27 unpatented claims (Table 3.1) to Outokumpu for \$100,000 subject to a 5 % Net Profit Interest Royalty which can be purchased at any time by Outokumpu for \$2,000,000.

### **3.4 PERMITS**

Certain permits have been obtained to facilitate on-going developments at the Alexo Property as follows:

- The amended C. of A. industrial sewage works 2658\_6D7QA2 was granted on February 6, 2006 and has no expiry date. The permit is held by Legendary.
- Kelex PTTW 2455\_7BJJTQ permit to take water was granted on February 8, 2008 and expires on February 8, 2018. The permit is held by Legendary.
- The closure plan for 'Advanced Exploration' was amended to 'Mining and Development' for Alexo and Kelex was accepted and filed on January 24, 2005 (Martin Consultants 2004). The closure plan is in the name of Legendary.
- The Property has been under 'Temporary Suspension' status effective October 2005. A Notice of Project Status to 'Mine Production' was issued on July 1, 2010.

Closure, reclamation and decommissioning plans have been put in place by Canadian Arrow on the Alexo Property. The costs associated with reclamation and decommissioning have been accounted for in Canadian Arrow's Certified Closure Plan and financial assurance has been provided to the Ontario Government to ensure the Alexo Property is progressively rehabilitated to a natural condition. Decommissioning and reclamation costs may increase over time due to increasingly stringent regulatory requirements.

Surface infrastructure constructed during the operational phase includes a waste rock dump for non potential acid rock drainage waste rock and an overburden dump. Water handling facilities including a polishing pond and drainage network were constructed and remain intact. A closure bond totalling \$285,000 remains in place. Progressive reclamation has been undertaken including securing access to the mine workings, re-sloping and reclamation of overburden and waste rock dumps.

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

The following is sourced from the previous technical report by Brereton (2004).

### **4.1 ACCESSIBILITY**

There is good access to the Alexo Property. The Property is located within 2 km of Highway 67, a paved road that connects Highway 101 to Highway 11 (Figures 3-1 and 3-4). A gravel road extends south from Highway 67 onto the northern portion of the Property. Another gravel road, further to the east, accesses the eastern and southern portion of the Property. Hydro lines are located less than 2 km north of the Property boundary running parallel to Highway 67. In addition, a spur of the Ontario Northland Railway, which services the Kidd Creek metallurgical complex, passes 2 km north of the Property and joins the main line approximately 5 km to the east.

### **4.2 CLIMATE**

Average daily temperatures in the Timmins area vary from a low of -24°C in the winter to +24°C in the summer. Average annual precipitation is 581 mm of rain and 352 cm of snow. Most of the precipitation occurs between June and November.

### **4.3 LOCAL RESOURCES AND INFRASTRUCTURE**

The full range of equipment, supplies and services required for any mining development is available in Timmins, population 50,000. The general Timmins area also possesses a skilled mining work force from which personnel could be sourced for any new mine development.

Regional power lines extend northeast of Timmins in close proximity to the Alexo Property.

Abundant water resources are present in the lakes, rivers, creeks, and beaver ponds throughout the area. There would appear to be ample room on or about all of the Properties to build a mine and mill should this eventuality arise. Likewise, any number of locations would appear to offer potential to construct environmentally sound tailings disposal area(s).

### **4.4 PHYSIOGRAPHY**

As a general statement, the Timmins area is within the Great Clay Belt of the Canadian Shield and consists of local islands of higher ground, either bedrock-cored or as glacial deposits such as eskers, within large areas of spruce, alder and cedar swamp. Eskers typically trend north-south. The areas of higher ground are covered variably by jack pine, balsam and poplar forests with locally thick underbrush of species such as moose maple. Relief is generally low with some local higher relief bedrock ridges, for example the Dundonald Sill in the area of the Alexo Property, being present. The area in general is poorly drained, a reflection of the low relief. Mean elevation in the area is on the order of 300 m asl. Outcrop exposure overall averages less than 5 % and is 0 % over large areas, particularly north of Timmins.

The Alexo Property is underlain by sandy glacio-fluvial outwash material, which supports mature jack pine forest. There is some outcrop in the area of the old Alexo Mine workings. Much of the Alexo Property has been recently logged.

## 5.0 HISTORY

The following is sourced and summarized from the technical report by Brereton (2004) and references mentioned below.

Alexo Kelso discovered what became the Alexo Mine in 1907. The Property has been mined in three separate campaigns from 1913 to 1919, 1943 to 1944 and by Canadian Arrow from 2004 to 2005.

In 1912, a 130 ton sample was sent testing. The Alexo Mining Company (“Alexo Mining”) mined 51,857 tons of material between 1912 and 1919, which was shipped to the Mond Nickel Company in Sudbury, with an average grade of the material processed of 4.4 % Ni and 0.6 % Cu (Burrows and Rickaby 1935). Sixty thousand tons of ore was outlined in 1915 above the 36.5 m (120 ft) level. All production was restricted to above the 38.1 m (125 ft) level (Coad 1979).

Pumping out part of the mine and sampling was undertaken by Cuniptau Mines Limited in 1936 (Sinclair et al. 1937).

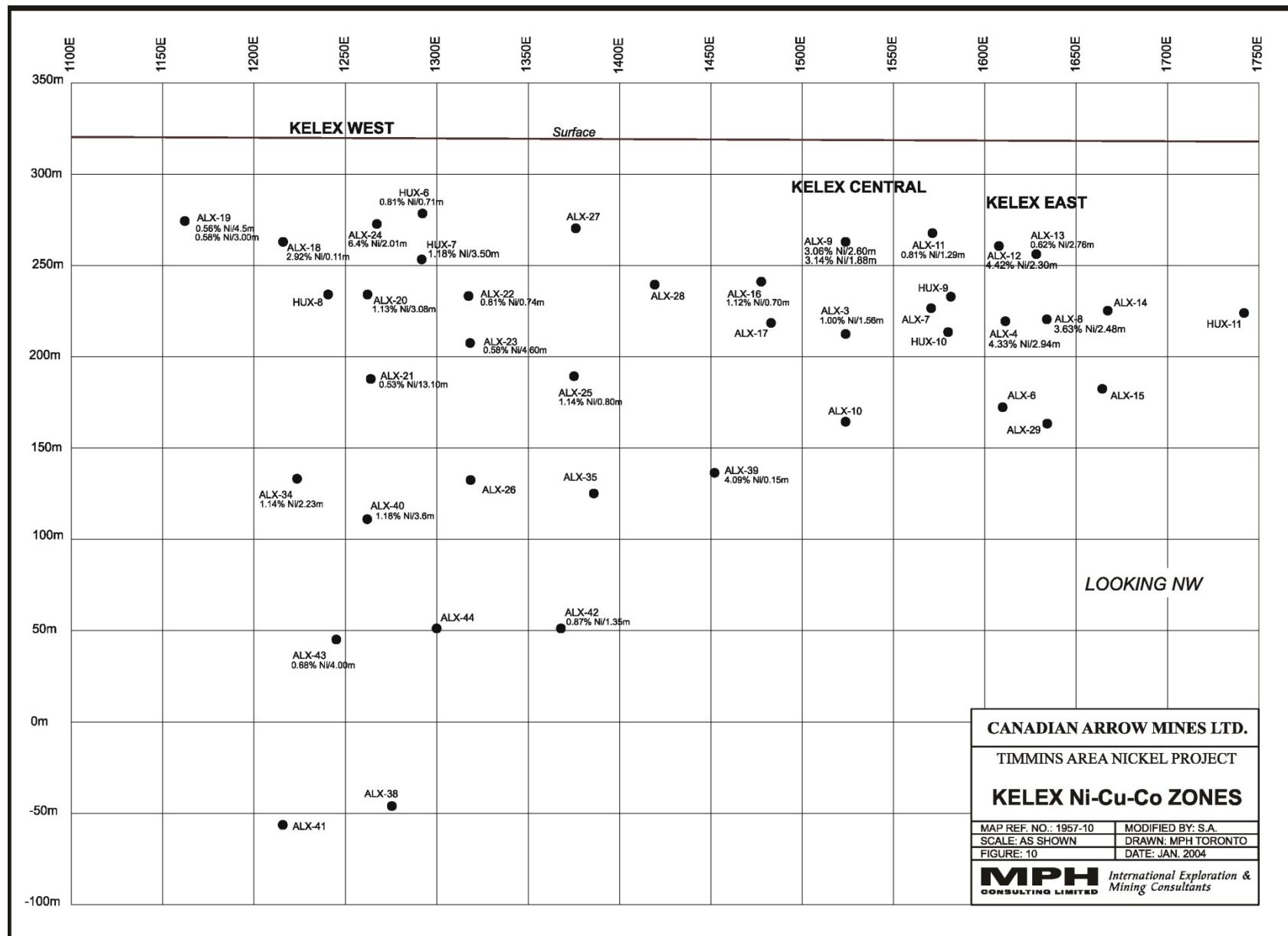
In 1943 and 1944, Harlin Nickel Mines Limited (“Harlin”) operated the Property and recovered several thousand tons of ore left by earlier operators on the surface and pillars underground. Underground development works totalled 520 m and Harlin drilled 26 underground diamond drill holes with a combined total length of 380 m (Shklanka 1969). Ontario Nickel Mines Limited secured an option on the Property in 1952, however, exploration failed to delineate any new ore bodies. In 1952, the Property was purchased from Alexo Mining by Noranda Mines Limited (“Noranda”). Noranda drilled numerous diamond drill holes and completed a ground magnetometer survey in 1976, however, results were unavailable (Coad 1979).

The Ontario Geological Survey (“OGS”) completed airborne electromagnetic (“EM”) and total field magnetic surveys in 1984 and 1988 (OGS 1984 and 1988) over the general Property area. The airborne surveys identified several magnetic anomalies associated with komatiitic sequences and a magnetic anomaly identified as the Dundonald Sill. Several EM conductors, parallel to the stratigraphy, were also identified by the survey.

In 1991, Noranda completed three diamond drill holes in an attempt to intersect the northeast extension of the Terminus base metals zone onto the Alexo Property from the Falconbridge Limited Dundonald property to the southwest. The Alexo Mine horizon was also tested at the same time. A total of 854.6 m of NQ diamond drill core was completed, intersecting a series of komatiitic olivine cumulates, spinifex-textured flows, mafic to felsic volcanic rocks, and graphitic interflow sedimentary rocks. No anomalous Fe-Ni-Cu sulphide mineralization was encountered in any of the drill holes.

Outokumpu optioned the Alexo Property in the fall of 1996. Exploration work completed on the Property in the period from November to February 1999 included: line cutting (79.02 km); ground magnetometer, HLEM, pulse EM, and mise a la masse geophysical surveys; down hole pulse EM surveys; geological mapping; whole rock analysis; enzyme leach and mobile metal ion soil geochemical survey; and 10,859 m of diamond drilling in 49 holes (Davis 1999). Outokumpu’s exploration work led to the discovery of the Kelex Ni-Cu deposit, located to the southeast of the old Alexo Mine. The location of the Outokumpu drilling on the Kelex deposit is shown in Figure 5-1. A list of significant intersections for the Outokumpu drilling is given in Table 5.1.

**Figure 5-1: Location of Historical Outokumpu and Hucamp Drilling on the Kelex Deposit**



Taken from Brereton (2004)

**Table 5.1: Outokumpu Drill Results**

Hole	Deposit	From (m)	To (m)	Core Length (m)	Ni (%)
ALX-96-1	Alexo	468.30	469.07	0.77	2.51
ALX-96-4	Kelex	120.50	123.44	2.94	4.33
ALX-97-8	Kelex	115.40	118.40	3.00	3.07
ALX-97-9	Kelex	75.25	77.85	2.60	3.06
ALX-97-9	Kelex	82.60	84.48	1.88	3.14
ALX-97-11	Kelex	68.25	73.63	5.38	0.52
ALX-97-12	Kelex	78.30	81.73	3.43	3.16
ALX-97-19	Kelex	75.50	80.00	4.50	0.56
ALX-97-20	Kelex	112.80	126.40	13.60	0.72
ALX-97-21	Kelex	140.00	153.10	13.10	0.53
ALX-97-24	Kelex	46.63	60.62	13.99	1.33
*incl	Kelex	58.61	60.62	2.01	6.40
ALX-98-34	Kelex	239.10	242.10	3.00	1.04
ALX-98-40	Kelex	295.70	304.30	8.60	0.75
ALX-98-42	Kelex	335.10	349.70	14.60	0.41
ALX-98-43	Kelex	284.00	288.00	4.00	0.68

Hucamp Mines Ltd. (“Hucamp”) completed 2,802 m in 29 diamond drill holes on the Property from February to April 2001 and assayed 348 core samples for nickel, copper, cobalt, platinum, palladium and gold (Davis 2001). Platinum and palladium analysis indicate that there are appreciable concentrations of platinum and palladium associated with high grade iron-nickel-copper sulphide mineralization in the Alexo Mine sulphide zone. Holes were drilled on the old Alexo Mine horizon (21 drill holes), on the Kelex deposit (7 drill holes) and one hole was drilled to test an EM anomaly. The location of the Hucamp drilling on the Kelex deposit is shown in Figure 5-1. Hucamp also stripped approximately 5000 m<sup>2</sup> of overburden along the eastern and western extensions of the Alexo Mine horizon and succeeded in exposing massive sulphide material. The stripped area was mapped and channel sampled at regular intervals. Hucamp also completed 1,321 m of down-hole pulse EM surveys on 10 holes drilled at the Alexo Mine and Kelex deposit. A down-hole mise a la masse survey completed between drill holes HUX-3-01 and HUX-4-01 by Exsics Exploration of Timmins for Hucamp, suggested continuity of the sulphide mineralization between these two holes. HUX-16-01 broke into the old Alexo Mine workings at 44 m and drill holes HUX-13-01, -17-01, -19-01, -20-01, -21-01, -22-01, -23-01 and -27-01, which were drilled below the mineralized channel at Alexo, returned no values of economic significance. HUX-28-01 drilled into a peripheral EM conductor returned no values of economic significance. The 7 drill holes completed on the Kelex deposit failed to produce any results.

A list of significant intersections for the Hucamp drilling on the Alexo deposit is given in Table 5.2.

**Table 5.2: Hucamp Drilling Results**

<b>Hole No</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Width (m)</b>	<b>Ni (%)</b>	<b>Pt+Pd (g/t)</b>
HUX-2-01 Incl	55.80	60.40	4.60	1.88	1.29
	56.60	59.00	2.40	2.26	1.80
HUX-3-01 Incl Incl	58.50	68.05	9.55	2.10	0.78
	60.50	64.10	3.60	3.79	1.24
	61.50	63.00	1.50	4.67	1.62
HUX-4-01 and	163.00	164.30	1.30	1.72	0.45
	169.40	172.70	3.30	0.85	0.34
HUX-12-01 Incl	62.70	69.30	6.60	1.60	0.76
	65.30	66.80	1.50	2.45	0.89
Hux-14-01 Incl Incl	61.85	67.60	5.75	2.41	1.09
	62.50	63.70	1.20	3.97	1.43
	65.40	66.40	1.00	4.06	1.22
HUX-15-01	63.50	68.30	4.80	1.28	0.60
HUX-16-01	43.30	44.00	0.70	5.15	1.72
HUX-18-01	56.70	60.00	3.30	1.02	0.48
HUX-24-01	53.90	56.70	2.80	2.02	1.18
HUX-25-01	64.25	67.20	2.95	1.58	0.68
HUX-26-01	67.40	69.00	1.60	1.91	0.57

## 5.1 HISTORICAL RESOURCE ESTIMATE

The following mineral resource estimate in this section is historical in nature, and as such, is based on prior data and reports prepared by previous operators. The mineral resource estimate has not been verified by P&E and the mineral resource estimate, therefore, cannot be treated as NI 43-101 defined resource verified by a qualified person. The historical mineral resource estimate should not be relied upon, and there can be no assurance that any of the mineral resource estimate, in whole or in part, will ever become economically viable.

A historical resource estimate for the Alexo Deposit of 57,000 t at 3.58 % Ni was reported in Eckstrand (1996). The date of the historical resource estimate is unknown.

## **6.0 GEOLOGICAL SETTING**

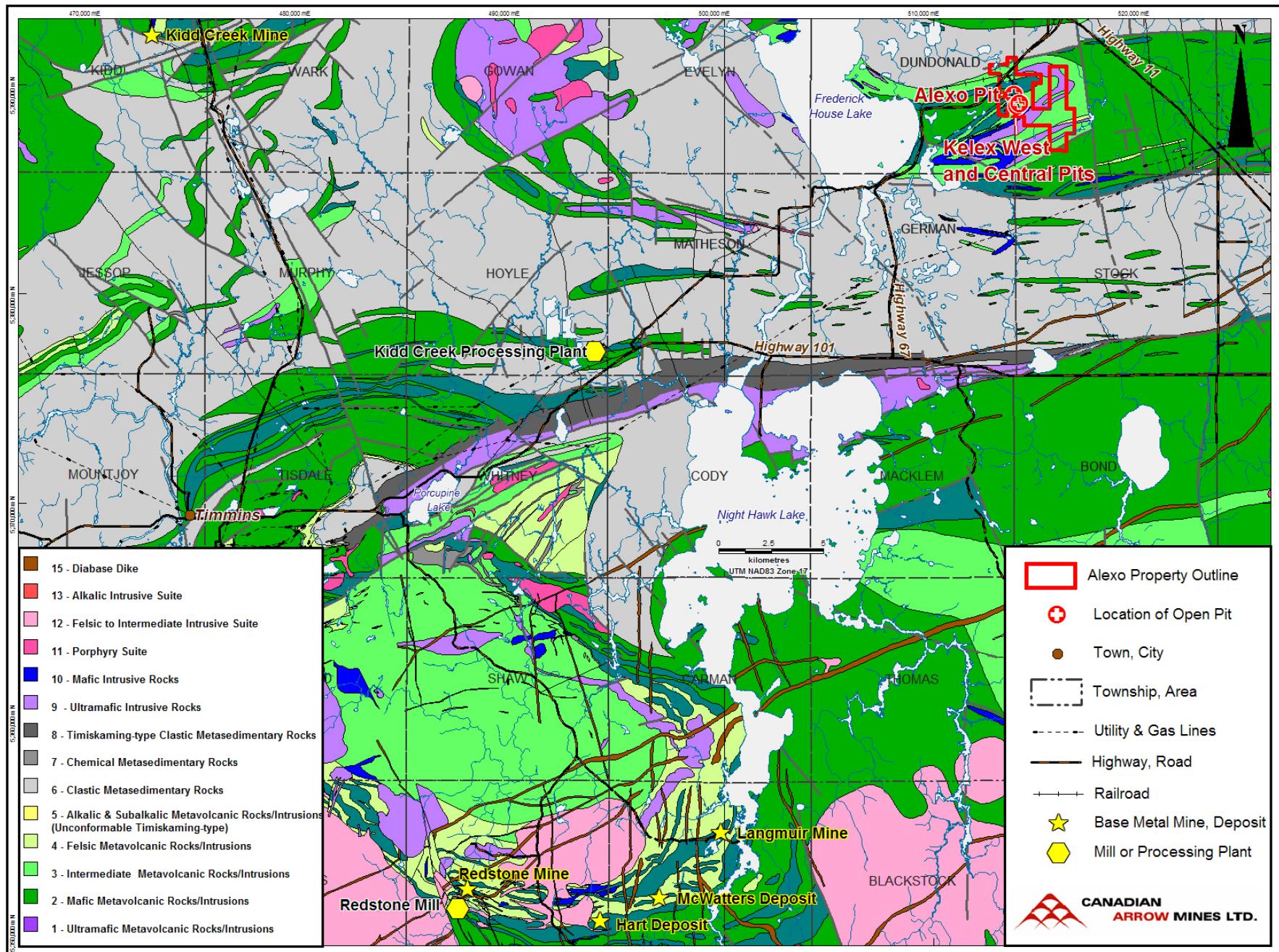
The following is sourced from the previous technical report on the Property by Brereton (2004).

### **6.1 REGIONAL GEOLOGY**

The Property is located in the southwestern part of the Abitibi Subprovince (Terrane) greenstone belt of the Archean Superior Province (Figure 6-1). The Abitibi Subprovince is comprised of volcanic, sedimentary and intrusive rocks deformed into a roughly east-trending, 200 km wide belt exposed from the Kapuskasing structure in Ontario to the Greenville orogen in Québec, a distance of approximately 400 km. The Subprovince is endowed with metallic mineral deposits including the mining areas of Timmins (base metals and gold), Kirkland Lake (gold), Val d'Or (base metals and gold) and Noranda (base metals and gold) (Percival 2007).

Several cycles of volcanism and sedimentation are known in the southern Abitibi Subprovince. These sequences usually begin with the deposition of ultramafic flows and intrusions and tholeiitic basalts, which have interflow argillaceous sediments. The cycles then typically evolve into calc-alkaline flows, pyroclastic rocks and epiclastic sedimentary rocks deposited into marine and fluvial basins. The layered stratigraphy is intruded by gabbroic to granitic plutons during and after deformation and metamorphism. The basal komatiitic part of the volcanic cycles contains high nickel concentrations, typically on the order of 3,000 ppm Ni. There are numerous komatiite-hosted nickel sulphide deposits and occurrences in the Timmins area including the Redstone, Langmuir, Texmont and the Alexo mines (Eckstrand and Hulbert 2007).

Figure 6-1: Regional Geology of the Timmins Area



## 6.2 PROPERTY GEOLOGY

The rocks in the Dundonald and Clergue Townships are part of the Kidd-Munro assemblage (OGS 1991). Jackson and Fyon (1991) described the Kidd-Munro assemblage as an east-southeast striking sequence that extends from the Kidd Township in the west to the Grenville Orogen in Québec which ranges in age from 2,711 to 2,717 Ma (Corfu 1993). The assemblage is a sequence of volcanic rocks including: komatiitic dunite; peridotite; pyroxenite; basalts which range from high-magnesium iron-rich tholeiitic picrites to high-aluminium basalts; and intermediate to felsic andesite and rhyolite. Sedimentary rocks are commonly thin interflow layers of graphitic argillite with varying amounts of chert and sulphide minerals. Intrusive rocks in the Kidd-Munro assemblage include: differentiated syn-volcanic tholeiitic and komatiitic sills; late to post-tectonic intermediate to felsic plutons; and Proterozoic dolerite dykes. The rocks have been metamorphosed to greenschist facies with minor isolated areas of prehnite-pumpellyite facies and local amphibolite facies at the contact of intrusions. Ultramafic rocks may have abundant secondary metamorphic talc / serpentine with or without magnetite, calcite, tremolite and chlorite.

The Alexo Property covers the northeast arm of a large ‘Z’-shaped fold in the Kidd-Munro assemblage (Figure 6-2). The northeast trending fold has a wavelength of 2.5 km and amplitude of 6 km and is defined by the mapped distribution of the Dundonald sill.

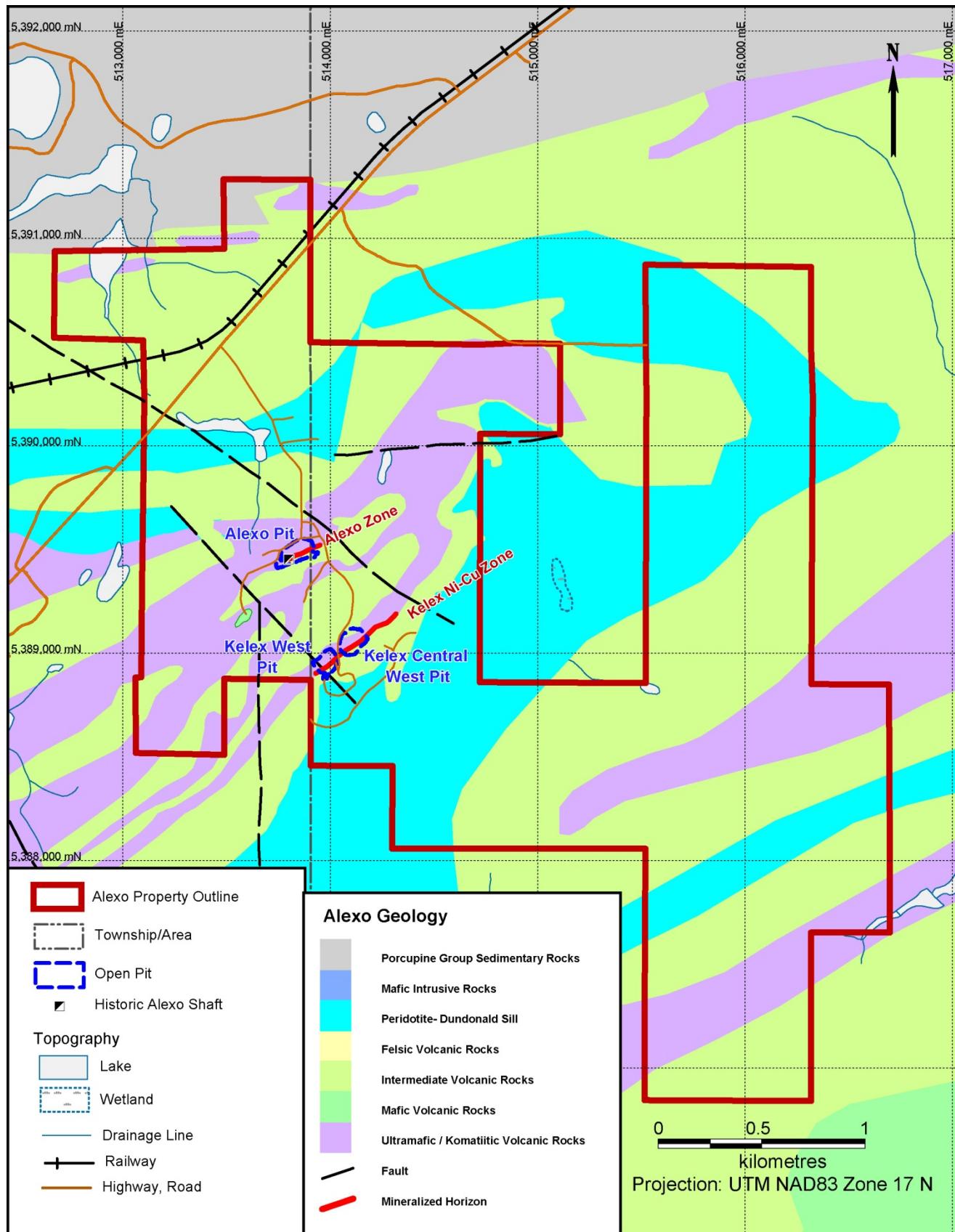
The Alexo and Kelex deposits are at approximately the same stratigraphic level where komatiitic flows overly a sequence of felsic pyroclastic rocks, basalt and komatiitic basalt interdigitate with thin layers of graphic argillite. There are several episodes of alternating komatiite-basalt volcanism.

At the Alexo deposit, there are four separate komatiite sequences interlayered with calc-alkaline volcanics with a northeasterly strike and dipping steeply to the north (Davis 1999). Spinifex textured flow tops indicate the northward facing direction of the sequence at Alexo. The volcanic sequence is a mixture of flows with pillowed, fragmental hyaloclastic and massive textures with individual flows that can be traced for 10’s to 100’s of metres. The calc-alkaline volcanics range in composition from rhyolite to basalt and contain variable amounts of pyrite, pyrrhotite and thin (< 1 m) layers of black graphitic argillite.

Ultramafic rocks range in composition from komatiitic basalt to dunite (Davis 1998). The komatiitic sequences contain multiple flows that range from several hundreds of metres to less than 2 m in thickness and have brecciated flow tops, spinifex-textured zones, pyroxene and olivine orthocumulate, mesocumulate and adcumulate rocks. Thin layers of graphitic argillite occur between thin komatiitic flows in some areas. Flows with a basaltic or pyroxenite composition tend to alter to chlorite-tremolite whereas flows rich in olivine are altered to serpentine and magnetite. Large accumulations of olivine mesocumulate to adcumulate occur within the komatiitic sequence locally where they are prospective channelized flows within footwall embayments.

The Dundonald sill is a differentiated tholeiitic intrusion varying from peridotite to dunite olivine mesocumulate to adcumulate to pyroxenitic cumulate with diopside and olivine phenocrysts into a thick sequence of fine to coarse grained gabbro. The gabbroic portion of the sill is the thickest part.

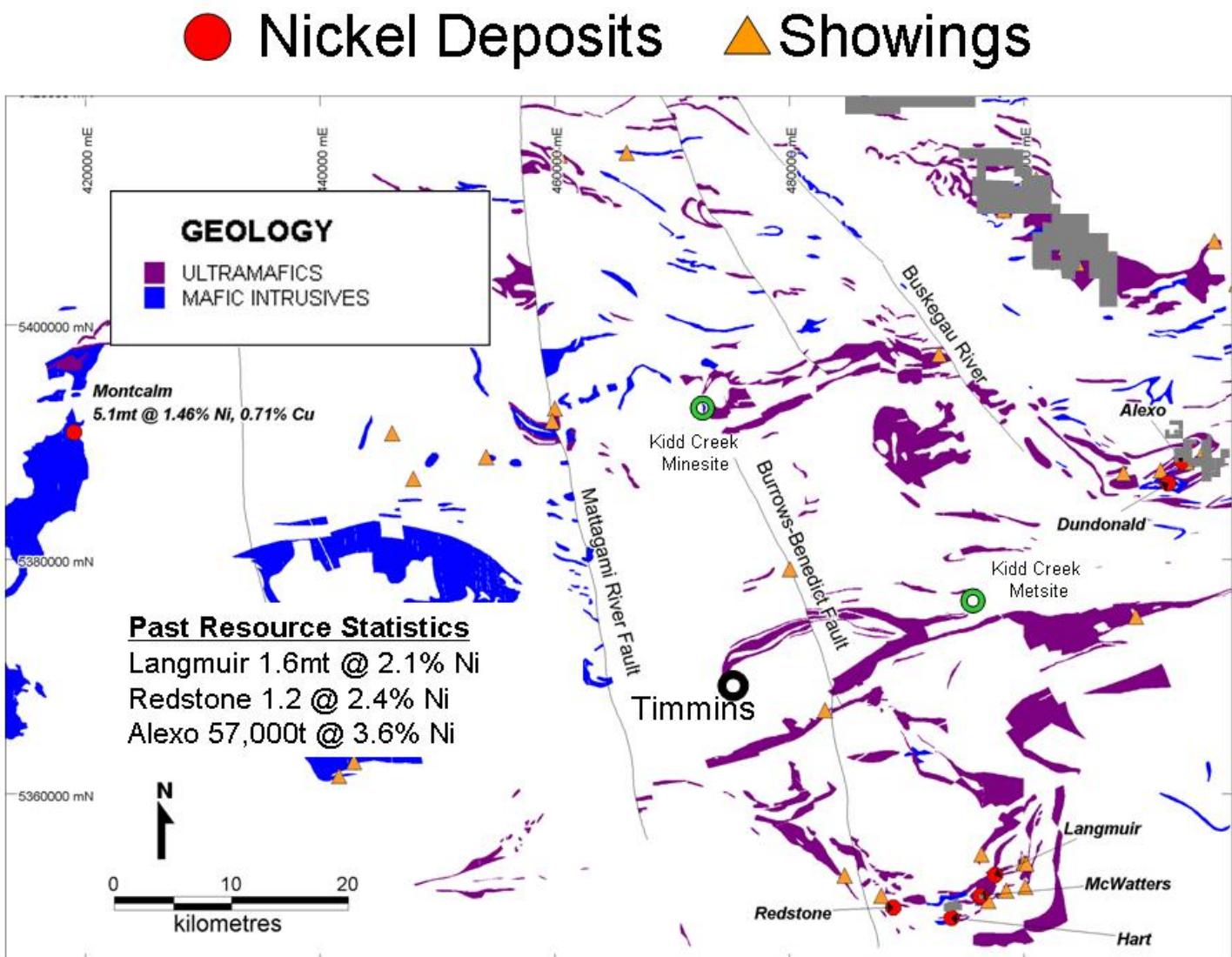
**Figure 6-2: Alexo Property Geology Map**



## 7.0 DEPOSIT TYPES

The Alexo and Kelex deposits can be classified as komatiite-hosted Ni-Cu sulphide mineralization in a greenstone belt setting. Other komatiite Ni-Cu sulphide deposits located in the Abitibi Subprovince greenstone belt in the Timmins area include the Langmuir, Redstone and Texmont mines (Figure 7-1).

**Figure 7-1: Regional Geology and Mineral Deposits of the Timmins Region**



Resource statistics from Eckstrand (1996). The mineral resource estimates in Figure 7-1 are historical in nature, and as such, are based on prior data and reports prepared by previous operator. The mineral resource estimates have not been verified by P&E and the mineral resource estimates, therefore, cannot be treated as NI 43-101 defined resource verified by a qualified person. The historical mineral resource estimates should not be relied upon, and there can be no assurance that any of the mineral resource estimates, in whole or in part, will ever become economically viable.

## 7.1 MAGMATIC NI-CU DEPOSITS

The following is sourced from Eckstrand (1996), Brereton (2004) and Eckstrand and Hulbert (2007).

Magmatic Ni-Cu-platinum-group-elements (“PGE”) deposits are consistently found in association with mafic and / or ultramafic magmatic bodies and can occur in diverse geological settings predominantly of Archean and Paleoproterozoic age.

The Ni-Cu-PGE deposits can be divided into two types. Ni-Cu deposits are characterized by an abundance of sulphide with nickel as the principal economic mineral. The host bodies have been classified based on the nature of the confining magmatic environment. The second type of Ni-Cu-PGE deposit is exploited principally for PGE, and are associated with sparsely dispersed sulphides in very large to medium-sized, typically mafic / ultramafic layered intrusions.

Ni-Cu sulphide deposits provide most of the nickel produced in the world and continue to have substantial reserves. Deposits can occur as individual sulphide bodies associated with magmatic mafic and / or ultramafic bodies. Others occur as groups of sulphide bodies associated with one or more related magmatic bodies in areas or belts up to tens, even hundreds of kilometres long (e.g. Sudbury, Thompson, Noril'sk-Talnakh, Kambalda and Raglan districts).

Ni-Cu deposits have been divided into four sub-types on the basis of magmatic environment of the host body by Eckstrand (1996) and Eckstrand and Hulbert (2007) as follows:

- **A meteorite-impact mafic melt sheet that contains basal sulphide ores** (Sudbury, Ontario is the only known example of this type).
- **Rift and continental flood basalt-associated mafic sills and dyke-like bodies** (e.g. Noril'sk-Talnakh, Russia; Jinchuan, China; Duluth Complex, Minnesota; Muskox, Nunavut; and Crystal Lake, Ontario).
- **Komatiitic (magnesium-rich) volcanic flows and related sill-like intrusions** (e.g. Thompson, Manitoba; Raglan and Marbridge, Québec; Alexo and Langmuir, Ontario; Kambalda and Agnew, Australia; Pechenga, Russia; and Shangani, Trojan and Hunter's Road, Zimbabwe).
- **Other mafic / ultramafic intrusions** (Voisey's Bay, Labrador; Lynn Lake, Manitoba; Giant Mascot, British Columbia; Kotalahti, Finland; Råna, Norway; and Selebi-Phikwe, Botswana).

Only the komatiite-hosted Ni-Cu deposit sub-type is discussed in detail in the following section.

### **7.1.1 KOMATIITE-HOSTED NI-CU DEPOSITS**

Komatiitic subtype of Ni-Cu deposits occur mostly in two different settings, as either komatiitic volcanic flows and sills in mostly Neoarchean greenstone belts or as Paleoproterozoic komatiitic sills associated with rifting at cratonic margins. Examples of greenstone belt deposits include the Kambalda district and the Mt. Keith deposit in Western Australia as well as the Abitibi Greenstone Belt, nickel mines in the Timmins area, Ontario and the Marbridge mine in the Val d'Or area in Canada, however, the deposits in Western Australia are much larger and more economically significant. Rift-related deposits include the Raglan horizon in the Cape Smith-Wakeham Bay Belt of Ungava, Québec and the Thompson Nickel Belt of northern Manitoba.

The liquid-equivalent portions of ultramafic komatiitic rocks are magnesium-rich (18 to 32 % MgO) and therefore the precursor magmas are very hot and fluid. Because of their primitive composition (high Mg, Ni), the Ni:Cu ratio of the associated sulphide ores is high, in many cases 10:1 or more. The sulphur in the sulphide ores has been derived by contamination from sulphidic wallrocks. The commonly observed close spatial association of these deposits and their hosts with sulphidic sedimentary footwall rocks and the similarity of sulphur isotopes and other chemical parameters of the magmatic and sedimentary sulphides suggest the sulphur in these deposits was locally derived from the sediments (Lesher and Keays 2002 and Eckstrand and Hulbert 2007).

Two types of Ni-Cu sulphide ore, noted by Eckstrand and Hulbert (2007), characterize these deposits. Sulphide-rich ore comprising massive, breccia and matrix-textured ore and consisting of pyrrhotite, pentlandite and chalcopyrite occurs at the basal contact of the hosting ultramafic flows and sills. The deposits are generally in the order of few million tonnes with grade in the 1.5 to 4 % range. The rich concentrations of this type appear to result from significant contamination and assimilation of sulphur from the host rock. The second type, sulphide-poor, disseminated ore forms internal lens-like zones of sparsely dispersed sulphide blebs that consist mainly of pyrrhotite-pentlandite. Deposits of this type occur in both sills and flows but the largest are in sills with tonnages of tens to hundreds of millions although grades range from 0.6 to 0.9 % Ni.

Similarly, Lesher and Keays (2002) further subdivided komatiite-hosted Ni-Cu deposits into two types; Type I: Kambalda, channelized flow theory and Type II: Mt. Keith, sheet flow theory. Komatiitic eruptions have been envisaged to have a high effusion rate and involve large volumes of lava. Mt Keith-style of deposits are associated with sheet flows several hundreds of metres thick by several kilometres to tens of kilometres long and are composed primarily of olivine adcumulate to mesocumulate. Further down stream, more distal from the eruptive source, the komatiitic flows become channelized and begin to erode the substrate forming more defined channel features. Channelization is associated with Kambalda type whereby denser sulphides tend to accumulate in the bottom of the channel-like features under the influence of gravity.

## **8.0 MINERALIZATION**

The following section is sourced from Davis (2001) and Brereton (2004) and updated with the drill and exploration results from Canadian Arrow.

The Alexo and Kelex deposits are composed of massive to semi-massive nickel sulphide accumulations inhabiting basal embayments along the footwalls of two parallel, but separate, steeply dipping komatiitic peridotite volcanic flows identified as the “Alexo” and “Kelex” flows respectively. Massive to semi-massive sulphide lenses strung along the footwall contacts occupying what are interpreted to be thermal erosion channels are overlain by stringer, net-textured, blebby and lower grade disseminated sulphide haloes extending upwards and away from the contact. The zones are composed of massive, veined and disseminated pyrrhotite and pentlandite with trace chalcopyrite. The flows contact with, and are separated by, intermediate volcanic country rocks. Other known occurrences in the local area and within the same geologic package are the Dundonald Beach, Dundonald South, and Dundeal deposits, located 2-3 km along strike from the Alexo deposit.

### **8.1 ALEXO DEPOSIT**

Sulphur is concentrated at the historical Alexo Mine in footwall embayments of a komatiitic peridotite / dunite unit. Massive and semi-massive sulphide also extends into the footwall andesite (Figure 8-1). Massive and semi-massive lenses of sulphide minerals range in thickness from a few centimetres to greater than 12 m with an aureole of net-textured and disseminated sulphides. The disseminated sulphides extend laterally and vertically from the massive zones for several tens of metres. The massive ore consists of approximately 15 to 20 % pentlandite, 80 to 85 % pyrrhotite, with trace chalcopyrite unevenly distributed throughout (Lowther 1950). The nickel content of the sulphides ranges between 7 to 10 % in 100 % sulphide.

**Figure 8-1: Alexo Pit 120' Level with a Massive Sulphide Lens Separated by an Andesite Wedge**



The specific channel or lens previously mined at Alexo appears to continue substantially to the east at a shallow plunge based on work by Hucamp during 2000-2001. In particular, down hole mise a la masse geophysical surveying strongly suggests that the sulphides intersected in Hucamp drill hole HUX-4-01 (1.72 % over 1.3 m) are electrically continuous with those beneath the old mine workings 160 m to the west. The Alexo sulphide zone is truncated in the west by a thick, komatiitic olivine adcumulate flow.

There is indication of another Ni-sulphide bearing channel at depth, beneath the Alexo channel, based on a drill hole in 1918 which intersected 1.2 m of disseminated ore at a vertical depth of 15.2 m approximately 275 m west of the Alexo shaft. There is also an unexplained 1988 airborne anomaly in this general area.

The embayments at Alexo have been interpreted by Brereton (2004) as thermal erosion channels similar to those described in Kambalda, Western Australia (e.g. Lesher 1989) whereby sulphides tend to be confined to footwall embayments and have wide variations in thickness and grade over short distances. The sulphide-filled basal embayments at Alexo as illustrated in Figure 8-2 are an example of this ore deposit model.

Drilling on the Property by Canadian Arrow and previous operators has identified two mineralized zones comprising the Alexo deposit: the Alexo Main zone and its eastern extension, the Alexo East zone (Canadian Arrow News Release July 21, 2010).

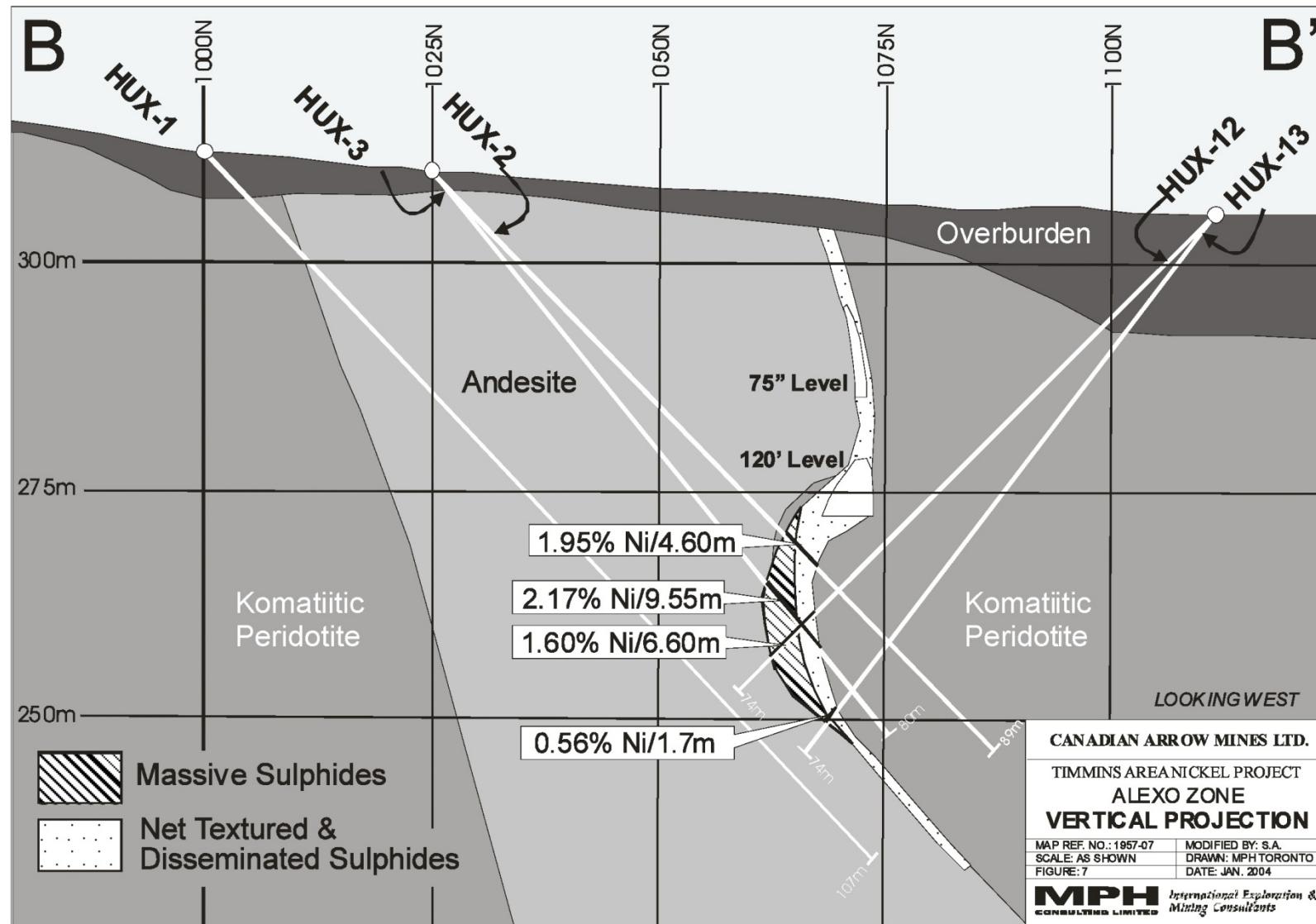
### **8.1.1 ALEXO MAIN ZONE**

Drilling designed to test the eastern extension of the Alexo Main Zone below the 40 m level intersected massive and net-textured sulphide mineralization an additional 45 m to the east of the previously defined mineralization. Twenty two holes comprising 1,954 m of drilling were drilled on tight 15 m section spacings intended for ore definition for subsequent mining. Mineralization 125 m beyond to the Alexo East Zone remains untested. Alexo is further enhanced by significant copper, cobalt, platinum and palladium values.

### **8.1.2 ALEXO EAST ZONE**

A down-hole mise a la masse geophysical survey was completed in 2001 by Hucamp between holes HUX-03-01 within the Alexo Main sulphide body and HUX-04-01 located approximately 120 m east and down plunge of HUX-03-01 on section 1650E. HUX-03-01 intercepted 9.5 m averaging 2.10 % Ni and 0.78 g/t Pt+Pd while HUX-04-01 intercepted two separate sections averaging 1.72 % Ni over 1.3 m and 0.85 % Ni over 3.3 m respectively. The survey indicated the sulphide zones are connected. No drilling has been conducted over the 120 m strike length in between. Canadian Arrow drill hole LAX-26-04 intersected 0.6 m of 3.8 % Ni approximately 125 m east of the Alexo open pit at a vertical depth of 100 m. Similarly, hole LAX-24-04 intersected 0.2 m of 2.1 % Ni approximately 40 m above LAX-26-04. Even though these intersections are limited in width, the occurrence of high grade nickel sulphides along strike and down plunge of the known nickel sulphide zones at Alexo indicates the great potential of the eastern plunge extension to host significant nickel intersections below 100 m vertical depth.

Figure 8-2: Alexo Vertical Projection



## 8.2 KELEX DEPOSIT

The Kelex deposit is located at the footwall contact of the lowermost known komatiitic peridotite in the sequence. There are a series of massive sulphide lenses that have aureoles of disseminated and net-textured sulphides extending laterally along strike for greater than 600 m as indicated by HLEM and Pulse EM geophysical surveys and recent drilling (Davis 1999). Interpretation of drill results indicates the massive sulphides sub-crop at the bedrock overburden interface. The sulphides are composed of 10 to 20 % pentlandite, 80 to 90 % pyrrhotite and trace chalcopyrite. Some of the sulphides have been replaced by magnetite. Based on the Pulse EM surveys, the massive sulphide appear to plunge to the northeast but magnetic interpretations indicate that the channels may plunge more north or northwest.

The laterally extensive disseminated sulphides can be separated into two groups. The first group is the net-textured to heavily disseminated sulphides. The nickel content of the sulphides ranges between 4 to 15 % Ni in 100 % sulphide usually averages 6 %. The sulphide zone often contains sulphide veins with pseudo-spinifex textures. An interpretation proposed by Brereton (2004) is that the sulphide veins may have been pushed out of the massive sulphide lenses into the disseminated zones from the weight of the overlying olivine cumulates.

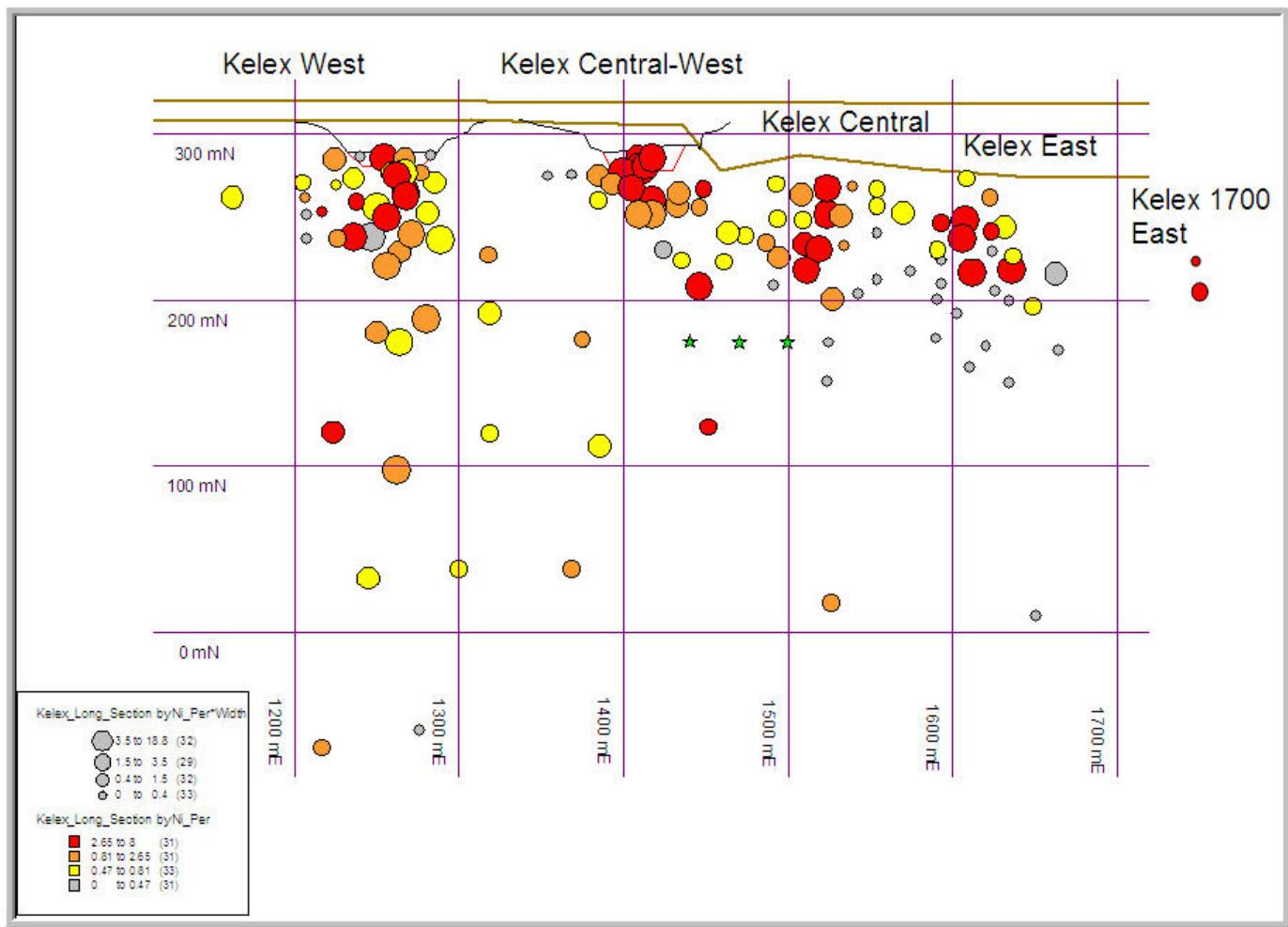
The second type of sulphide mineralization is blebby, disseminated and vein sulphide west and stratigraphically above the Kelex zone. These sulphides have a high nickel content that ranges between 25 to 35 % Ni in 100 % sulphides and are composed primarily of pentlandite and a grey nickel mineral with minor pyrrhotite. These sulphides appear to have been enriched in nickel during the serpentinization process and the sulphides may contain lesser proportions of the nickel sulphide mineral, millerite.

Results of historical drilling indicated that there are two or three lenses of higher grade nickel sulphides at relatively shallow depth that require further exploration.

The massive to semi-massive sulphide lenses have the appearance of ‘pinch and swell’ but are more correctly manifested as sulphide traps in troughs and hollows along a thermal erosion channel that plunges shallowly to the east, although historical drilling did not any indicate any kind of coherent lenses or channels. Previous reports suggest that undiscovered parallel thermal channels may well occur below and above the known ones (Davis, 2001). Potential within and below this horizon remains unexplored at depth and along strike. Widths and continuity of the Kelex zones indicate amenability for bulk minable open pit and selective underground extraction.

Drilling on the Property by Canadian Arrow and previous operators has identified five mineralized zones of higher grade massive sulphides within a broader and more continuous lower grade halo of stringer and disseminated sulphides occurring within the Kelex komatiitic peridotite unit comprising the Kelex deposit: Kelex west, Kelex central-west, Kelex central, Kelex east and Kelex 1700 east zones (Canadian Arrow News Release July 21, 2010) (Figure 8-3).

**Figure 8-3: Five Zones of the Kelex Deposit Defined by Drilling**



### 8.2.1 KELEX WEST ZONE

A total of 26 holes comprising a total 2,405.5 m were completed on the Kelex west zone between local grid sections 1200E and 1300E. Holes LOX-01-04, -03-04 and -08-04 were drilled to expand the known nickel sulphide mineralization on the Kelex west zone around a 1997 diamond drill hole, ALX-24-97, that had intersected 2.0 m at 6.40 % Ni. The new drilling intersected near surface high grade massive sulphide with associated disseminated sulphides. Kelex west mineralization extends over a strike length of 70 m, a down dip length ranging between 260 m to 60 m and true widths ranging between 0.5 m to 12.5 m. The Kelex west zone displays a wider, more pervasive, lower grade halo around a higher grade massive sulphide core.

### 8.2.2 KELEX CENTRAL-WEST ZONE

Results of drilling completed between February and July 2004 intersected a new fourth nickel sulphide lens discovery along the Kelex trend. The central west zone was defined by 1,628 m in 24 drill holes between local grid sections 1390E and 1449E and is located about 100 m east of the Kelex west zone. Kelex central west mineralization extends over a strike length of 60 m, a down dip component ranging between 120 m to 42 m and true widths ranging between 1.3 m to 10.0 m.

### **8.2.3 KELEX CENTRAL ZONE**

Canadian Arrow drilled adjacent to previously drilled hole ALX-09-97 on the Kelex central zone which intersected two zones of massive sulphide grading 3.06 % Ni over 2.6 m and 3.14 % Ni over 1.9 m. Kelex central mineralization extends over a strike length of 76 m, a down dip length ranging between 43 m to 10 m and true widths ranging between 1.5 m to 8.5 m.

### **8.2.4 KELEX EAST ZONE**

Drilling centred on section 1610E and previously drilled holes ALX-04-97 and ALX-12-97 which intersected 4.3 % Ni over 2.9 m and 4.4 % Ni over 2.3 m respectively. Kelex east mineralization extends over a continuous strike length of 43 m, a down dip length ranging between 62 m to 25 m and true widths ranging between 1.5 m to 3.0 m.

### **8.2.5 KELEX 1700 EAST ZONE**

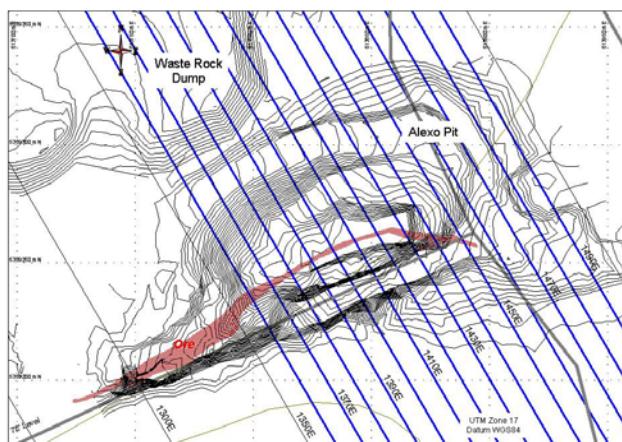
Canadian Arrow drilling identified a new zone located approximately 80 m beyond the eastward strike extension of the Kelex east zone. The drilling had been completed to test geophysical conductors identified through the PEM-SQUID geophysical survey. Hole LOX-95-05 intercepted 0.5 m of massive sulphide and hole LOX-96-05 intercepted 1.15 m of massive sulphide, both intercepts were flanked by disseminated, blebby and stringer style sulphide mineralization.

## 9.0 EXPLORATION

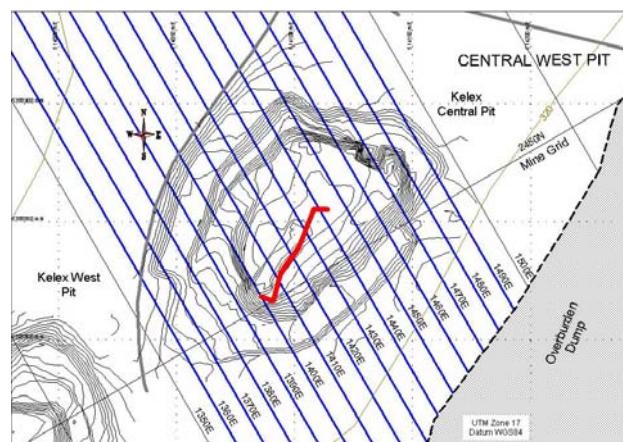
The main focus was to complete the mining of the surface pits on the Alexo Property and to continue exploration for additional nickel sulphide zones along the Kelex horizon.

Between 2004 and 2005, Canadian Arrow produced 30,138 t of ore averaging 1.93 % Ni containing 1.3 Mlb of Ni from open pit mining of the Alexo and Kelex deposits (Canadian Arrow News Release, May 12, 2010) (Figures 9-1 and 9-2). Unprocessed ore was shipped to the Xstrata's Nickel Strathcona mill located near Sudbury, Ontario. A total of 26,224 t grading 1.97 % Ni and 0.20 % Cu were produced from the Alexo pit and 3,900 t grading 1.68 % Ni and 0.18 % Cu were produced from the Kelex pit. Canadian Arrow temporarily halted production in October 2005 due to low nickel prices.

**Figure 9-1: Alexo Pit**



**Figure 9-2: Kelex Pit**



A total of 12,710.2 m of drilling in 132 holes was completed in 2004-2005 on the Alexo Property by Canadian Arrow, the details of which are discussed in Section 10 of this Report.

Canadian Arrow completed 40 km of line cutting and a high resolution magnetometer survey on a 50 m line interval on the prospective komatiitic flows on the Property. Crone Geophysics & Exploration Ltd., of Mississauga, Ontario was contracted to complete a surface PEM-SQUID survey that commenced in October 2004 and concluded in January 2005.

The PEM-SQUID is a new way of performing time-domain electromagnetic ("TDEM") surveys and is especially useful for detecting highly conductive bodies such as nickel deposits. It has been extensively used in Western Australia and Raglan, Québec for the exploration of high grade nickel sulphide deposits (Canadian Arrow News Release, November 15, 2004).

Six transmitter loops were completed over the Property at variable currents between 16 A and 20 A and time base intervals between 50-150 ms. Results from the PEM-SQUID survey indicated a conductor with similar characteristics to the known Kelex deposit extending along strike and approximately 200 m east of the nearest known lens of the Kelex massive sulphide. The anomalies were interpreted to represent an eastern extension of the known sulphide mineralization defined in 2004. Follow up drilling in 2005 confirmed the existence of nickel sulphide mineralization at the Kelex 1700 East zone.

## **10.0 DRILLING**

A total of 12,710.2 m of drilling in 132 diamond drill holes was completed in 2004-2005 on the Alexo Property by Canadian Arrow, with drilling on both the Alexo and Kelex deposits.

### **10.1 2004 DRILLING**

The 2004 program commenced in January 28 and was completed in September 15, and comprised 120 holes drilled on both the Alexo and Kelex deposits totalling 11,331.2 m. NQ-sized holes were drilled by Bradley Bros. Limited (“Bradley Bros.”) of Val D’Or, Québec using a Boyles Model 17A drill. A single drill was initially used with a second unit brought on to the Property in June to test the eastern down-plunge extension of the Alexo deposit.

Down-hole azimuth and dip surveys were completed using a Reflex EZShot<sup>tm</sup> borehole survey instrument performed by trained drill personnel. Initial surveys were taken below casing at the bedrock / overburden interface.

#### **10.1.1 ALEXO DEPOSIT DRILL PROGRAM 2004**

A total of 2,581.4 m of drilling in 27 holes was completed on the Alexo deposit by Canadian Arrow in 2004 (Table 10.1 and Figure 10-1).

The drill program was designed to test the down plunge extension of the Alexo deposit around known drill intersection from the Hucamp drill hole HUX-4-01, which intersected 1.3 m grading 1.7 % Ni approximately 125 m to the east of the previously drilled massive nickel sulphide mineralization. Nickel-bearing massive sulphides were successfully intercepted around the HUX-04-01 intersection. Only one section of holes were drilled on the section 1650E, and the entire 125 m interval between the zones, Main and East, remains untested by drilling.

Drilling was also designed to define minable ore at 15 m sections in the upper 100 m of the overburden / bedrock interface.

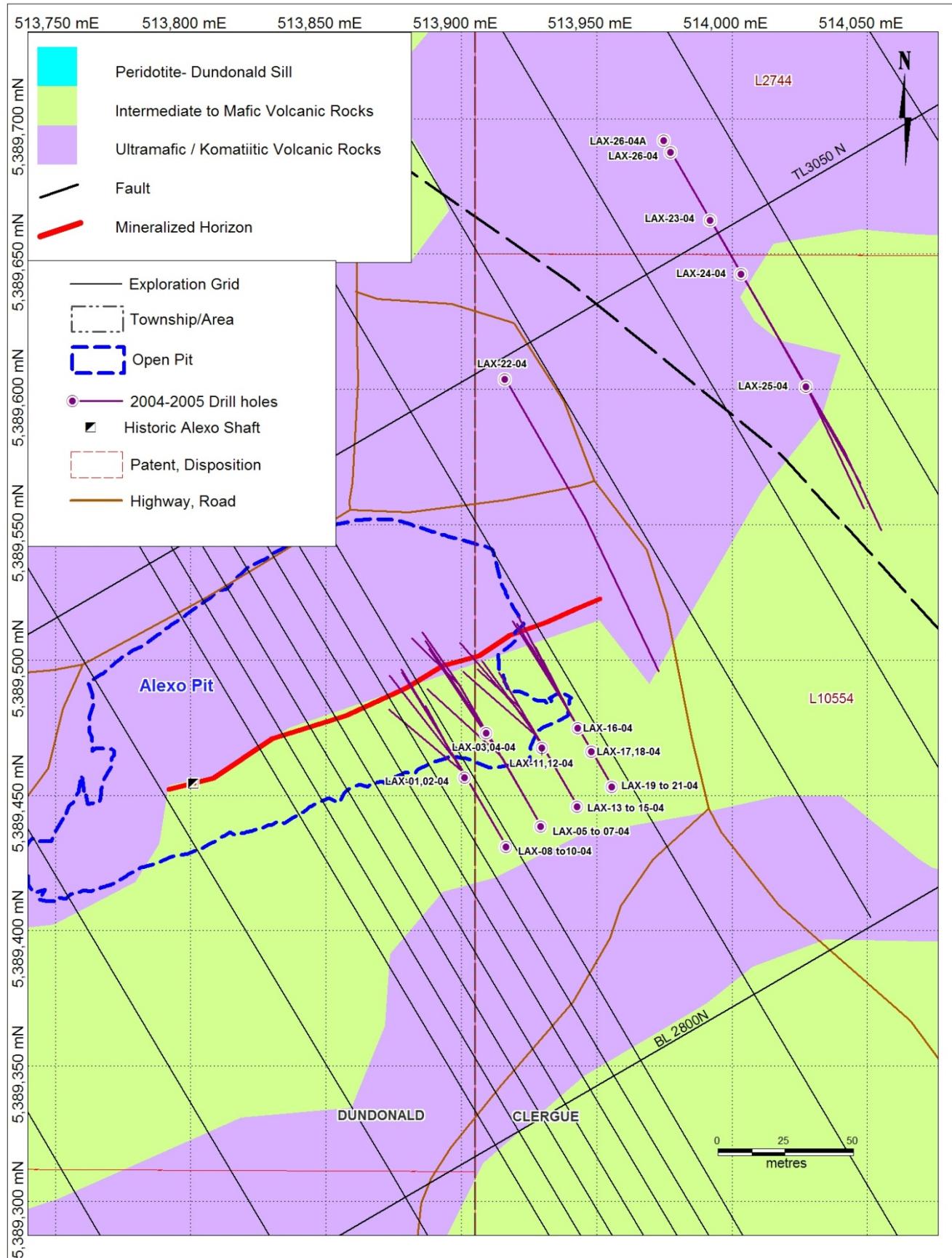
The drill program also tested the eastern extent of the Alexo deposit below the 40 m level. Drilling intersected massive and net-texture sulphide mineralization extending an additional 45 m to the east of the previously defined sulphide mineralization. LAX-13-04, located approximately 45 m to the west of drilling completed in 2001, intersected 4.5 m of 2.2 % Ni including 1.3 m of 4.7 % Ni. LAX-05-04, located approximately 30 m to the east, intersected 4.9 m of 2.3 % Ni including 0.9 m of 6.5 % Ni (Canadian Arrow News Release, September 21, 2004).

Hole LAX-26-04 intersected 0.6 m of 3.8 % Ni approximately 125 m east of the Alexo open pit at a vertical depth of 100 m. Similarly, drill hole LAX-24-04 intersected 0.2 m of 2.1 % Ni approximately 40 m above LAX-26-04. Even though these intersections are limited in width, the occurrence of high-grade nickel sulphides along strike and down plunge of the known nickel sulphide zones at Alexo indicates the great potential of the eastern plunge extension to host significant nickel intersections below 100 m vertical depth (Canadian Arrow News Release, February 17, 2005).

**Table 10.1: 2004 Drill Program on the Alexo Deposit**

<b>DDH No.</b>	<b>UTM East (Nad 83)</b>	<b>UTM North (Nad 83)</b>	<b>Elevation (m)</b>	<b>Azimuth</b>	<b>Dip</b>	<b>Depth (m)</b>
LAX-01-04	513901.40	5389456.90	304.00	330.00	-45	65.0
LAX-02-04	513901.40	5389456.90	304.00	330.00	-50	46.0
LAX-03-04	513909.40	5389473.30	303.50	330.00	-45	62.0
LAX-04-04	513909.40	5389473.30	303.50	330.00	-50	71.0
LAX-05-04	513929.50	5389438.70	304.00	330.00	-40	105.0
LAX-06-04	513929.50	5389438.70	304.00	330.00	-53	104.0
LAX-07-04	513929.50	5389438.70	304.00	330.00	-51	130.0
LAX-08-04	513916.60	5389431.10	304.50	330.00	-40	89.0
LAX-09-04	513916.60	5389431.10	304.50	330.00	-45	110.0
LAX-10-04	513916.60	5389431.10	304.50	330.00	-51	119.0
LAX-11-04	513930.00	5389467.70	302.50	330.00	-40	50.0
LAX-12-04	513930.00	5389467.70	302.50	330.00	-50	50.0
LAX-13-04	513942.90	5389445.90	303.50	330.00	-40	83.0
LAX-14-04	513942.90	5389445.90	303.50	330.00	-46	101.0
LAX-15-04	513942.90	5389445.90	303.50	330.00	-51	119.0
LAX-16-04	513943.10	5389475.10	302.50	330.00	-40	44.0
LAX-17-04	513948.10	5389466.30	303.00	330.00	-40	50.0
LAX-18-04	513948.10	5389466.30	303.00	330.00	-46	65.0
LAX-19-04	513955.60	5389453.30	303.50	330.00	-40	95.0
LAX-20-04	513955.60	5389453.30	303.50	330.00	-47	104.0
LAX-21-04	513955.60	5389453.30	303.50	330.00	-51	116.0
LAX-22-04	513916.20	5389603.90	299.00	150.00	-45	176.0
LAX-23-04	513992.00	5389662.60	299.00	150.00	-45	161.0
LAX-24-04	514003.50	5389642.70	299.00	150.00	-45	140.0
LAX-25-04	514027.50	5389601.20	299.00	150.00	-52	95.4
LAX-26-04	513977.50	5389687.80	299.00	150.00	-45	67.0
LAX-26-04A	513975.00	5389692.10	299.00	150.00	-45	164.0
<b>TOTAL</b>	<b>27</b>					<b>2,581.4</b>

**Figure 10-1: Location of Canadian Arrow's Drill Holes on the Alexo Deposit**



A summary of significant intercepts for the 2004 drill program on the Alexo Deposit is detailed in Table 10.2 below.

**Table 10.2: Significant Intersections Drilled on the Alexo Deposit, 2004**

Hole-ID	From (m)	To (m)	Width (m)*	Ni (%)	Zone
LAX-01-04	40.40	42.80	2.40	1.70	Main
LAX-05-04	64.60	69.50	4.90	2.30	Main
<i>Includes</i>	64.60	65.50	0.90	6.50	
LAX-08-04	75.90	77.50	1.60	1.00	
LAX-09-04	82.90	84.70	1.80	1.70	Main
LAX-13-04	62.20	66.70	4.50	2.20	Main
<i>Includes</i>	62.80	64.10	1.30	4.70	
LAX-24-04	72.60	72.80	0.20	2.13	East
LAX-26-04	130.50	131.00	0.50	3.79	East

\* True width of the mineralization is unknown.

### 10.1.2 KELEX DEPOSIT DRILL PROGRAM 2004

A total of 8,749.8 m of drilling in 93 diamond drill holes was completed on the Kelex deposit by Canadian Arrow in 2004 (Table 10.3 and Figure 10-2).

**Table 10.3: 2004 Drill Program on the Kelex Deposit**

DDH No.	UTM East (Nad 83)	UTM North (Nad 83)	Elevation (m)	Azimuth	Dip	Depth (m)
LOX-01-04	513948.50	5388962.90	308.50	119.00	-40	45.0
LOX-02-04	513948.50	5388962.90	308.50	104.36	-49	47.0
LOX-03-04	513974.50	5388977.90	308.50	150.00	-44	45.0
LOX-04-04	513948.50	5388962.90	308.50	150.00	-45	45.0
LOX-05-04	513974.50	5388977.90	308.50	131.18	-57	59.0
LOX-06-04	513974.50	5388977.90	308.50	119.04	-40	50.0
LOX-07-04	513974.50	5388977.90	308.50	150.00	-53	42.0
LOX-08-04	513974.50	5388977.90	308.50	170.32	-56	46.0
LOX-09-04	514030.50	5389036.80	309.00	123.43	-46	51.0
LOX-10-04	514030.50	5389036.80	309.00	176.57	-46	54.0
LOX-11-04	514030.50	5389036.80	309.00	150.00	-49	54.0
LOX-12-04	514069.50	5389059.30	308.00	123.43	-46	41.0
LOX-13-04	514069.50	5389059.30	308.00	123.43	-52	50.0
LOX-14-04	514069.50	5389059.30	308.00	150.00	-49	46.0
LOX-15-04	514069.50	5389059.30	308.00	176.57	-46	50.0
LOX-16-04	514069.50	5389059.30	308.00	165.00	-61	65.0
LOX-17-04	514069.50	5389059.30	308.00	135.00	-61	56.0
LOX-18-04	514069.50	5389059.30	308.00	114.00	-56	72.0
LOX-19-04	514069.50	5389059.30	308.00	100.00	-55	70.0
LOX-20-04	514069.50	5389059.30	308.00	110.00	-40	52.0
LOX-21-04	514063.50	5389032.70	307.00	105.00	-40	65.0
LOX-22-04	514073.20	5389101.80	309.20	150.00	-45	80.0
LOX-23-04	514073.20	5389101.80	309.20	150.00	-53	80.0

<b>DDH No.</b>	<b>UTM East (Nad 83)</b>	<b>UTM North (Nad 83)</b>	<b>Elevation (m)</b>	<b>Azimuth</b>	<b>Dip</b>	<b>Depth (m)</b>
LOX-24-04	514056.70	5389100.40	310.30	150.00	-45	95.0
LOX-25-04	514088.20	5389075.90	310.30	150.00	-45	65.0
LOX-26-04	514082.70	5389115.40	310.00	150.00	-45	80.0
LOX-27-04	514082.70	5389115.40	310.00	150.00	-54	74.0
LOX-28-04	514082.70	5389115.40	310.00	150.00	-62	104.0
LOX-29-04	514109.20	5389099.50	307.50	150.00	-45	41.0
LOX-30-04	514099.20	5389116.80	308.30	150.00	-53	86.0
LOX-31-04	514099.20	5389116.80	308.00	150.00	-64	120.0
LOX-32-04	514160.50	5389140.70	308.50	150.00	-64	107.0
LOX-33-04	514160.50	5389140.70	308.50	150.00	-57	80.0
LOX-34-04	514160.50	5389140.70	308.50	150.00	-66	92.0
LOX-35-04	514150.50	5389158.00	310.00	150.00	-66	116.0
LOX-36-04	514151.00	5389127.10	308.00	150.00	-45	71.0
LOX-37-04	514151.00	5389127.10	308.00	150.00	-57	83.0
LOX-38-04	514151.00	5389127.10	308.00	150.00	-66	101.0
LOX-39-04	514134.50	5389125.70	308.20	150.00	-45	77.0
LOX-40-04	514134.50	5389125.70	308.20	150.00	-57	95.0
LOX-41-04	514104.20	5389108.20	308.30	150.00	-58	77.0
LOX-42-04	514117.20	5389115.70	308.50	150.00	-40	68.0
LOX-43-04	514117.20	5389115.70	308.50	150.00	-55	83.0
LOX-44-04	514107.20	5389133.00	310.00	150.00	-45	119.0
LOX-45-04	514107.20	5389133.00	310.00	150.00	-45	110.0
LOX-46-04	514013.80	5388934.70	307.00	330.00	-45	116.0
LOX-47-04	513998.30	5388931.60	307.00	330.00	-45	89.0
LOX-48-04	513985.30	5388924.10	307.00	330.00	-45	100.5
LOX-49-04	513985.30	5388924.10	307.00	330.00	-51	116.0
LOX-50-04	513969.80	5388920.90	307.00	330.00	-45	91.0
LOX-51-04	513969.80	5388920.90	307.00	330.00	-51	110.0
LOX-52-04	513974.80	5388912.20	307.00	330.00	-56	104.0
LOX-53-04	513992.80	5388911.10	307.00	330.00	-52	170.0
LOX-54-04	513992.80	5388911.10	307.00	330.00	-60	155.5
LOX-55-04	514013.80	5388934.70	307.00	330.00	-52	151.5
LOX-56-04	514013.80	5388934.70	307.00	330.00	-58	179.0
LOX-57-04	514013.80	5388934.70	307.00	330.00	-40	80.0
LOX-58-04	513961.80	5388904.70	307.00	330.00	-50	98.0
LOX-59-04	513961.80	5388904.70	307.00	330.00	-58	131.0
LOX-60-04	513911.00	5388951.20	307.00	150.00	-40	71.0
LOX-61-04	513911.00	5388951.20	307.00	150.00	-52	86.0
LOX-62-04	513911.00	5388951.20	307.00	150.00	-62	83.0
LOX-63-04	513911.00	5388951.20	307.00	150.00	-71	95.0
LOX-64-04	514156.00	5389178.50	311.00	150.00	-50	119.0
LOX-65-04	514146.70	5389195.50	313.50	150.00	-61	173.0
LOX-66-04	514179.00	5389168.70	310.00	150.00	-50	107.0
LOX-67-04	514179.00	5389168.70	310.00	150.00	-61	116.0
LOX-68-04	514179.00	5389168.70	310.00	150.00	-72	80.0
LOX-69-04	514176.00	5389143.80	308.80	150.00	-48	78.0
LOX-70-04	514189.00	5389151.30	308.80	150.00	-48	78.0

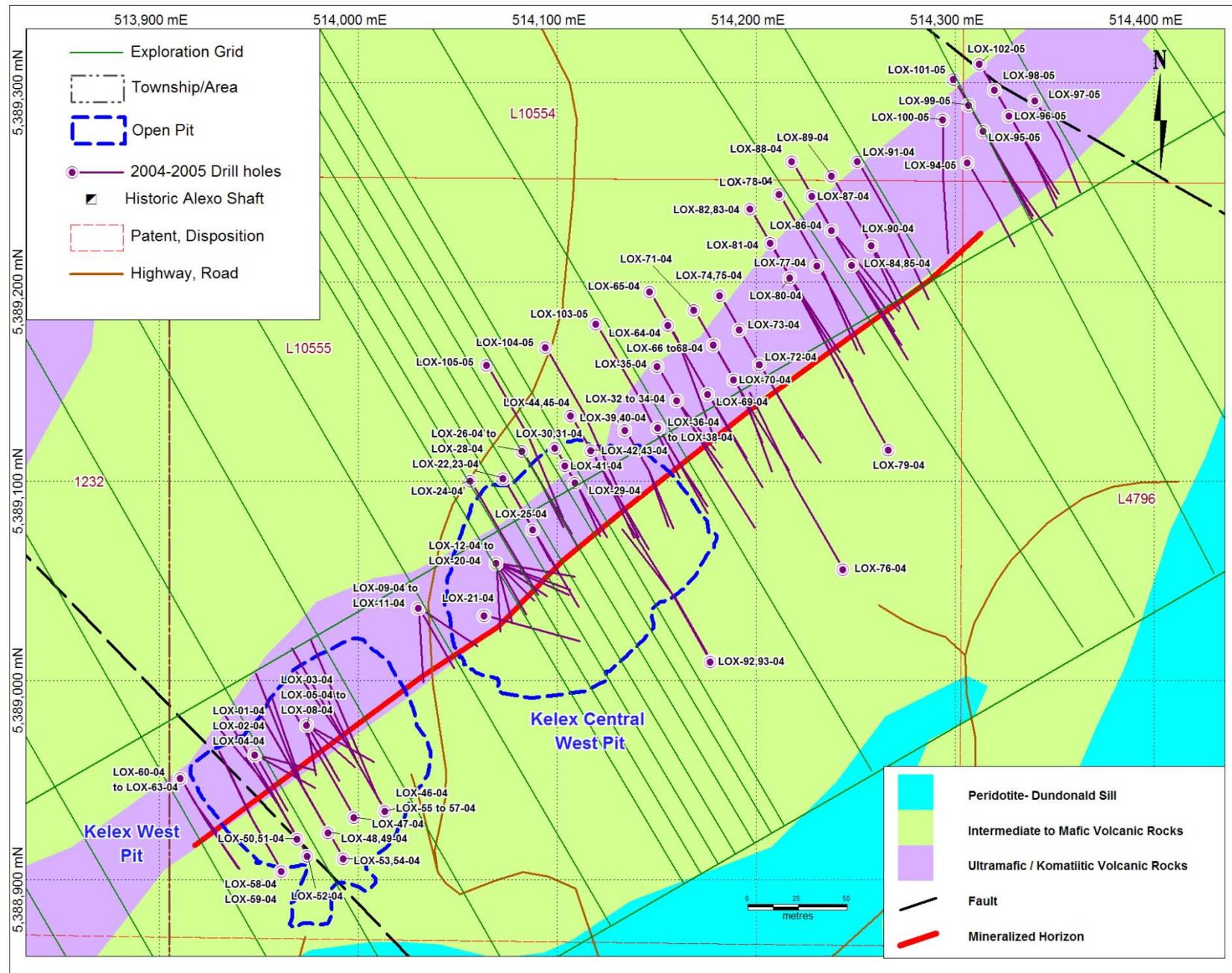
<b>DDH No.</b>	<b>UTM East (Nad 83)</b>	<b>UTM North (Nad 83)</b>	<b>Elevation (m)</b>	<b>Azimuth</b>	<b>Dip</b>	<b>Depth (m)</b>
LOX-71-04	514169.00	5389186.00	311.00	150.00	-61	92.0
LOX-72-04	514201.90	5389158.80	308.80	150.00	-48	89.0
LOX-73-04	514191.90	5389176.20	310.00	150.00	-50	95.0
LOX-74-04	514181.90	5389193.50	311.00	150.00	-50	110.0
LOX-75-04	514181.90	5389193.50	311.00	150.00	-63	128.0
LOX-76-04	514244.00	5389056.10	306.50	330.00	-45	145.0
LOX-77-04	514230.90	5389208.50	309.30	150.00	-58	95.0
LOX-78-04	514211.80	5389244.20	311.00	150.00	-55	152.0
LOX-79-04	514266.80	5389115.90	307.50	330.00	-50	77.0
LOX-80-04	514217.30	5389202.30	309.60	150.00	-50	95.0
LOX-81-04	514207.30	5389219.60	311.70	150.00	-51	119.0
LOX-82-04	514197.30	5389237.00	311.70	150.00	-53	152.0
LOX-83-04	514197.30	5389237.00	311.17	150.00	-60	167.0
LOX-84-04	514248.20	5389208.70	306.40	150.00	-45	78.0
LOX-85-04	514248.20	5389208.70	306.40	150.00	-60	92.0
LOX-86-04	514238.20	5389226.00	307.50	150.00	-58	113.0
LOX-87-04	514228.20	5389243.30	307.50	150.00	-58	137.0
LOX-88-04	514218.20	5389260.60	306.60	150.00	-57	164.0
LOX-89-04	514238.20	5389253.30	304.90	150.00	-59	140.0
LOX-90-04	514258.20	5389218.60	304.90	150.00	-62	100.3
LOX-91-04	514251.20	5389260.80	304.90	150.00	-55	134.0
LOX-92-04	514177.70	5389010.10	307.00	330.00	-55	134.0
LOX-93-04	514177.30	5389009.80	307.00	330.00	-60	155.0
<b>TOTAL</b>	<b>93</b>					<b>8,749.8</b>

Diamond drilling commenced on the Kelex deposit on April 15, 2004, to define the extent of the nickel sulphide mineralization identified in the near surface holes drilled by previous operators. The Canadian Arrow drill program was designed to test off-hole and surface EM anomalies associated with the Kelex deposit. Drilling was also completed on a nominal 15 m section spacing and 30 m down dip spacing in order to define ore reserves for further production.

The Kelex deposit consists of four separate lenses of massive nickel sulphide that occur within a single komatiitic peridotite unit over a 500 m strike length, the massive sulphides associated with the deposit appear to sub-crop at the bedrock-overburden interface. The deposit appears to be a series of higher grade massive sulphide lenses (e.g. LOX-25-04 intersected 1.4 m of 4.3 % Ni) each with a larger halo of lower grade disseminated and veined sulphides (e.g. LOX-56-04 intersected 24.7 m of 0.9 % Ni including a zone of 7.5 m of 1.1 % Ni) (Canadian Arrow, News Release, September 21, 2004). Drilling at the Kelex deposit outlined nickel sulphide lens to a depth of 125 m from surface.

Holes LOX-01-04, 03-04 and 08-04 were drilled in order to expand the known nickel sulphide mineralization on the Kelex west lens around a 1997 Outokumpu diamond drill hole, ALX-24-97 that intersected 2.0 m of 6.4 % Ni. The drilling intersected near surface high grade massive sulphides with associated disseminated sulphides.

**Figure 10-2: Location of Canadian Arrow's Drill Holes on the Kelex Deposit**



Holes LOX-12-04, 13-04, 14-04 and 15-04 were targeted on an untested previously identified EM anomaly. All four holes intersected massive sulphide mineralization at the basal contact of the host komatiitic peridotite and the footwall andesites. Hole LOX-14-04 intersected 9.6 m grading 2.38 % Ni including a higher grade portion of 3.5 m of 5.35 % Ni (Canadian Arrow, News Release, April 21, 2004).

Holes drilled on the central west lens of the Kelex deposit include: LOX-22-04 intersected 12.7 m of 1.1 % Ni which includes a high grade intersection of 3.0 m of 3.1 % Ni; LOX-18-04 intersected 4.1 m of 3.7 % Ni; and LOX-17-04 intersected 2.1 m of 3.4 % Ni (Canadian Arrow News Release, July 7, 2004).

Five holes (LOX-32-04, LOX-35-04, LOX-64-04, LOX-66-04 and LOX-69-04) were systematically drilled on the central lens at the Kelex deposit around Outokumpu drill hole ALX-09-97 that intersected two zones of massive sulphide that graded 3.1 % Ni over 2.6 m and 3.1 % Ni over 1.9 m (Canadian Arrow, News Release, October 19, 2004).

High grade nickel sulphide mineralization was intersected at the newly discovered west lens of the Kelex deposit. LOX-47-04 intersected 21.1 m of 1.3 % Ni which includes a high grade intersection of 3.0 m of 5.7 % Ni and LOX-49-04 intersected 18.2 m of 1.4 % Ni including 4.7 m of 3.6 % Ni (Canadian Arrow, News Release, August 3, 2004).

Drilling in late 2004 focussed on the upper 100 m of the deposit to define the extent of the near surface nickel sulphide mineralization. Hole LOX-77-04 was completed on the Kelex east lens and intersected 4.9 % Ni over 2.2 m and was positioned on local grid section 1610 east between holes ALX-4-97 and ALX-12-97 drilled by Outokumpu that intersected 4.3 % Ni over 2.9 m and 4.4 % Ni over 2.3 m respectively (Canadian Arrow, News Release, November 15, 2004).

A summary of significant intercepts for the 2004 drill program on the Kelex Deposit is detailed in Table 10.4 below.

**Table 10.4: Significant Intersections Drilled on the Kelex Deposit, 2004**

Hole-ID	From (m)	To (m)	Width (m)*	Ni (%)	Zone
LOX-01-04	34.00	35.90	1.90	4.10	West
LOX-03-04	31.20	32.20	1.00	2.74	West
LOX-08-04 <i>Includes</i>	38.70	40.60	1.90	2.79	
	39.90	40.60	0.70	7.80	
LOX-12-04	28.60	29.80	1.20	2.56	Central West
LOX-13-04	32.20	33.00	0.80	3.59	Central West
LOX-14-04 <i>Includes</i> <i>Includes</i>	31.90	41.50	9.60	2.38	Central West
	38.00	41.50	3.50	5.35	
	39.50	40.50	1.00	7.97	
LOX-15-04	44.40	45.50	1.10	2.47	Central West
LOX-16-04	47.20	48.90	1.70	1.90	Central West
LOX-17-04 <i>Includes</i>	41.20	46.20	5.00	2.00	Central West
	44.10	46.15	2.05	3.40	
LOX-18-04 <i>Includes</i>	33.60	37.70	4.10	3.70	Central West
	34.60	37.70	3.10	4.50	
LOX-19-04	31.10	32.75	1.65	3.30	Central West

Hole-ID	From (m)	To (m)	Width (m)*	Ni (%)	Zone
LOX-22-04 <i>Includes</i>	56.40	69.10	12.70	1.10	Central West
	66.10	69.10	3.00	3.10	
LOX-23-04	62.00	65.00	3.00	0.66	Central West
	69.80	72.10	2.30	1.70	
LOX-24-04	77.40	81.40	4.00	1.00	Central West
LOX-25-04	32.40	33.80	1.40	4.30	
LOX-26-04	63.10	65.00	1.90	1.60	Central West
LOX-27-04	65.00	66.30	1.30	1.80	Central West
LOX-30-04	50.60	51.00	0.40	3.20	Central West
LOX-31-04 <i>Includes</i>	103.50	109.70	6.20	1.10	Central West
	108.50	109.70	1.20	3.00	
LOX-32-04	65.60	66.70	1.10	2.30	Central
LOX-34-04	81.20	84.40	3.20	1.18	Central
LOX-35-04	101.80	102.80	1.00	6.70	Central
LOX-38-04	88.20	90.30	2.10	1.40	Central/East
LOX-41-04	61.60	62.30	0.70	1.70	East
LOX-46-04	88.20	90.50	2.30	0.70	
LOX-47-04 <i>Includes</i>	58.90	80.00	21.10	1.30	West
	58.90	61.90	3.00	5.67	
LOX-48-04	72.30	83.20	10.90	0.50	
LOX-49-04 <i>Includes</i>	74.20	92.40	18.20	1.40	West
	74.20	78.90	4.70	3.60	
LOX-52-04 <i>Includes</i>	82.90	87.90	5.00	1.00	
	82.90	83.50	0.60	5.30	
LOX-53-04 <i>Includes</i>	125.70	144.00	18.30	0.80	West
	127.00	135.50	8.50	1.10	
LOX-54-04	146.00	147.50	1.50	1.30	East
LOX-56-04 <i>Includes</i> <i>Includes</i>	133.30	158.00	24.70	0.90	West
	135.30	138.50	3.20	1.20	
	149.60	157.10	7.50	1.10	
LOX-56-04	164.40	165.50	1.10	1.10	
LOX-64-04 <i>Includes</i>	101.50	105.70	4.20	2.00	Central
	104.30	105.70	1.40	4.90	
LOX-66-04	76.80	77.70	0.90	2.60	Central
LOX-69-04	55.20	57.80	2.60	3.90	Central
LOX-74-04	89.00	89.40	0.40	1.40	Central
LOX-77-04	82.35	84.50	2.15	4.90	East
LOX-85-04	72.10	75.10	3.00	0.56	East

\* True width of the mineralization is unknown.

## **10.2 2005 DRILLING**

The 2005 program commenced in March 16 and was completed in April 8, 2005 and comprised 12 diamond drill holes drilled on the Kelex deposit, totalling 1,379 m. NQ-sized holes were drilled by Bradley Bros. using a Boyles Model 17A drill.

Down-hole azimuth and dip surveys were completed using a Reflex EZShot<sup>TM</sup> borehole survey instrument performed by trained drill personnel. Initial surveys were taken below casing at the bedrock / overburden interface.

### **10.2.1 KELEX DEPOSIT DRILL PROGRAM**

A total of 1,379 m of drilling in 12 drill holes was completed on the Kelex deposit by Canadian Arrow in 2005 (Table 10.5).

The program was principally designed to follow up on the results of the PEM-SQUID geophysical survey completed in January 2005.

A summary of significant intercepts for the 2005 drill program on the Kelex Deposit is detailed in Table 10.6.

**Table 10.5: 2005 Drill Program on the Kelex Deposit**

<b>DDH No.</b>	<b>UTM East (Nad 83)</b>	<b>UTM North (Nad 83)</b>	<b>Elevation (m)</b>	<b>Azimuth</b>	<b>Dip</b>	<b>Depth (m)</b>
LOX-94-05	514306.50	5389259.90	306.00	150.00	-50	77.0
LOX-95-05	514314.50	5389276.10	306.00	150.00	-50	100.0
LOX-96-05	514327.50	5389283.60	306.00	150.00	-50	83.0
LOX-97-05	514340.50	5389291.10	306.00	150.00	-50	80.0
LOX-98-05	514320.00	5389296.60	306.00	150.00	-50	101.0
LOX-99-05	514307.00	5389289.10	306.00	150.00	-50	101.0
LOX-100-05	514294.00	5389281.60	306.00	180.00	-50	110.0
LOX-101-05	514299.50	5389302.10	306.00	150.00	-50	128.0
LOX-102-05	514312.50	5389309.60	306.00	150.00	-50	122.0
LOX-103-05	514119.80	5389179.30	314.00	150.00	-57	161.0
LOX-104-05	514094.30	5389167.50	315.00	150.00	-57	152.0
LOX-105-05	514064.80	5389158.50	318.00	150.00	-58	164.0
<b>TOTAL</b>	<b>12</b>					<b>1,379.0</b>

**Table 10.6: Significant Intersections Drilled on the Kelex Deposit, 2005**

Hole-ID	From (m)	To (m)	Width (m)*	Ni (%)	Zone
LOX-95-05	63.00	70.80	7.80	0.63	East 1700
<i>Includes</i>	70.30	70.80	0.50	2.46	
LOX-96-05	60.40	64.20	3.80	0.98	East 1700
<i>Includes</i>	62.00	63.20	1.20	2.74	
LOX-99	86.00	90.80	4.80	0.60	East 1700
LOX-103-05	114.90	117.80	2.90	1.63	Central
<i>Includes</i>	117.20	117.80	0.60	5.20	

\* True width of the mineralization is unknown.

With regards to both the 2004 and 2005 drill programs on the Kelex deposit, the programs have successfully identified a string of five lenses of higher grade massive sulphide within a broader and more continuous lower grade halo of stringer and disseminated sulphides occurring within a komatiitic peridotite unit. The sulphide mineralization envelope with associated high grade nickel mineralization extends along a 600 m strike length and to 100 m below the bedrock surface. Drilling was focused on the upper 100 m of the trend to define the extent of the near-surface nickel sulphide mineralization. Interpretation of drill results indicates the massive sulphides sub-crop at the bedrock-overburden interface. Drill coverage in the upper 100 m was on 15 m section spacing. Below the 100 m horizon, additional mineralization has been intercepted to the 350 m elevation with minimal drilling over wider drill spacings averaging 75 m.

The massive to semi-massive sulphide lenses have the appearance of ‘pinch and swell’ but are more correctly manifested as sulphide traps in troughs and hollows along a thermal erosion channel that plunges shallowly to the east. Previous reports suggest that undiscovered parallel thermal channels may well occur below and above the known ones (Davis 2001). Potential within and below this horizon remains unexplored at depth and along strike. Widths and continuity of the Kelex zones indicate amenability for bulk minable open pit and selective underground extraction.

### 10.3 DRILL HOLE COLLAR SURVEYING

Casings remain in place for previously drilled Outokumpu (ALX- series) and Hucamp (HUX-series) holes and Canadian Arrow (LAX- series) holes drilled in 2004. The collars of these drill holes were surveyed by Talbot Engineering Services (“Talbot”) of Timmins, Ontario in 2004. Where multiple LAX- series holes were drilled from the same set-up, one casing was left in place. Canadian Arrow LOX- series holes were surveyed by Canadian Arrow technical personnel using a hand held Magellan Lazer 12 handheld GPS unit as each hole was completed during 2004-05. Holes surveyed in this way were calibrated with base stations (cased boreholes), previously surveyed in the Talbot survey. All drill hole collars were recorded in UTM NAD83 coordinates. Casing was removed shortly after surveying for most LOX- series holes as mining activities were taking place in the vicinity at the same time.

## **11.0 SAMPLING METHOD AND APPROACH**

The data reviewed for this Report and used for geological modelling and resource estimation were the product of various phases of historical and recent exploration by various companies. The core handling, logging and sampling procedures implemented for the Outokumpu, (ALX series) and Hucamp (HUX series) were reviewed through discussions with former Outokumpu and Hucamp personnel.

The ALX series core was transferred to the Outokumpu secure office facility located in Timmins, Ontario. The ALX series holes were logged and the sampling supervised by Paul Davis, M.Sc., P. Geo., who also supervised protocols for the HUX, LAX and LOX series programs thus maintaining continuity / consistency throughout all programs. Packaged samples were directly transported to laboratory shipping centres.

Criteria for core selected for sampling were based on observable sulphide content and host lithology. Nominal sample lengths ranged from 1.0 to 1.5 m in the broader, more homogeneous disseminated style mineralization to as small as 5 cm across massive stringer mineralization. Higher grade intervals were sampled at shorter lengths consistent with mineralization style and / or content. Care was taken not to have sample intervals cross lithologic or mineralization style boundaries. The estimated sulphide species and content correlating to each sample interval were recorded in the core logs. The protocol used a three tag / common number system. One tag went into the sample bag, one tag stayed in the core box and the sample book with the third tag was stored in the office. Core markers were placed at 3 m intervals.

With respect to the Hucamp HUX drill program, the core was logged and sawn in half at a secure facility outside of Porcupine, Ontario by MPH Consulting Limited (“MPH”). Most of the core was returned to the Alexo site, the rest was lost.

The LAX and LOX series holes were logged and sampled onsite. Logging was done by Brian Rigg under the supervision of Mr. Davis. The core was sawn in half with one half retained in the core box and stored onsite. The other half was placed in plastic sample bags with tags and sent directly to the assay laboratory shipping centre in Timmins.

All core is currently stored onsite with the exception of the lost HUX series holes. The site is secured by a locked gate at the entrance to the Property off highway 67.

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

All aspects of the ALX, HUX, LAX and LOX series sample preparation were under the direction of Paul Davis, M.Sc., P. Geo. All programs prepared the core by sawing in half with one half placed in plastic sample bags and immediately shipped to a laboratory for assay.

The ALX series samples were shipped to the Chimitec-Bondar Clegg Laboratory (now ALS Chemex) in Val d'Or, Québec ("C-BC") for assay. Analyses consisted of acid digestion with an atomic absorption finish for nickel copper and cobalt (Paul Davis, pers. comm.). Precious metals were not assayed. No sample standards or blanks were used. ALS Chemex is a Standards Council of Canada accredited laboratory conforming to the requirements of CAN-P-1579 and CAN-P-4E (ISO/IEC 17025:2005).

With respect to the HUX series, half of the core was retained at the MPH facility and half was sent to C-BC for assay. Nickel, copper and cobalt were determined by atomic absorption after HCL: HNO<sub>3</sub> digestion and Au, Pt and Pd by fire assay-ICP. Hucamp had a check assay protocol whereby a representative number of sample pulps were checked by Swastika Laboratories Limited ("Swastika") for the above elements. Samples checked within reasonable limits in all cases. No sample standards or blanks were used (K. Montgomery, pers. comm.). Swastika is a Standards Council of Canada accredited laboratory conforming to the requirements of ISO 17043 (CAN-P-43), CAN-P-1579.

The LAX and LOX series samples were sawn in half with one half retained in the core box and stored onsite and the other half placed in plastic sample bags with the respective tag and transferred to the SGS Canada Inc. ("SGS") in Rouyn Noranda, Quebec. Each entire sample was crushed to -10 mesh then a 200 g split was ring pulverized to 85 % passing 75 microns. Gold, platinum and palladium were assayed with a full 30 g assay ton lead collection fire assay-ICP-ES finish. Nickel, copper and cobalt were assayed by sodium peroxide fusion ICP-ES finish. Quality assurance / quality control ("QA/QC") consisted of inserting blanks and standards every 50 samples (Paul Davis, pers. comm.). Every 10th sample was re-assayed for the duplicate. The core was also photographed.

SGS is a Standards Council of Canada accredited laboratory conforming to the requirements of CAN-P-1579 and CAN-P-1579 (ISO/IEC 17025:2005).

Assay certificates of the ALX series and most of the HUX series assays have not been located due to a number of changes in ownership, office moves and changes in management over the years. All logs, assays and survey data were recorded in the Dhlogger™ drill core data management system however, from which the data used in this resource estimate were derived.

P&E conducted a duplicate sampling audit during two site visits in 2010 to facilitate the QA/QC component that is discussed in Section 13 of this Report.

It is the author's opinion that the sample preparation, security and analytical procedures used in these programs are adequate.

## **13.0 DATA VERIFICATION**

### **13.1 P&E SITE VISIT**

Mr. Eugene Puritch P. Eng., and Mr. David Burga P. Geo. of P&E, conducted the first site visit to the Alexo Property on May 5, 2010 at which time they collected nine samples by quarter sawing the half core remaining in the core box. The drill holes sampled were drilled in 2004. After being on site and discussing the project with Canadian Arrow, it was decided a second site visit was necessary in order to do an extensive core re-sampling program. The decision was made to re-sample a representative 10 % of the samples comprised in the constrained model due to the fact that there had been no quality control (“QC”) procedures in place for the drill programs.

Mr. Antoine Yassa, P. Geo. of P&E, made a second visit to the Property on May 17 to 18, 2010. During Mr. Yassa’s visit a total of 62 samples were collected by quarter sawing the half core remaining in the core box. The drill holes sampled were drilled in 1997, 2001 and 2004.

Samples were selected through a range of grades from high to low. At no time were any officers or employees of Canadian Arrow advised as to the identification of samples to be selected.

During both site visits, samples were tagged with unique sample numbers and bagged. Mr. Puritch and Mr. Burga brought the samples back with them to the offices of P&E in Brampton, Ontario and sent them via courier to AGAT Laboratories Ltd. (“AGAT”) in Toronto.

Mr. Yassa brought the samples from the second site visit to Dicom courier in Rouyn-Noranda, Québec. From there they were shipped to the offices of P&E, who took them to AGAT.

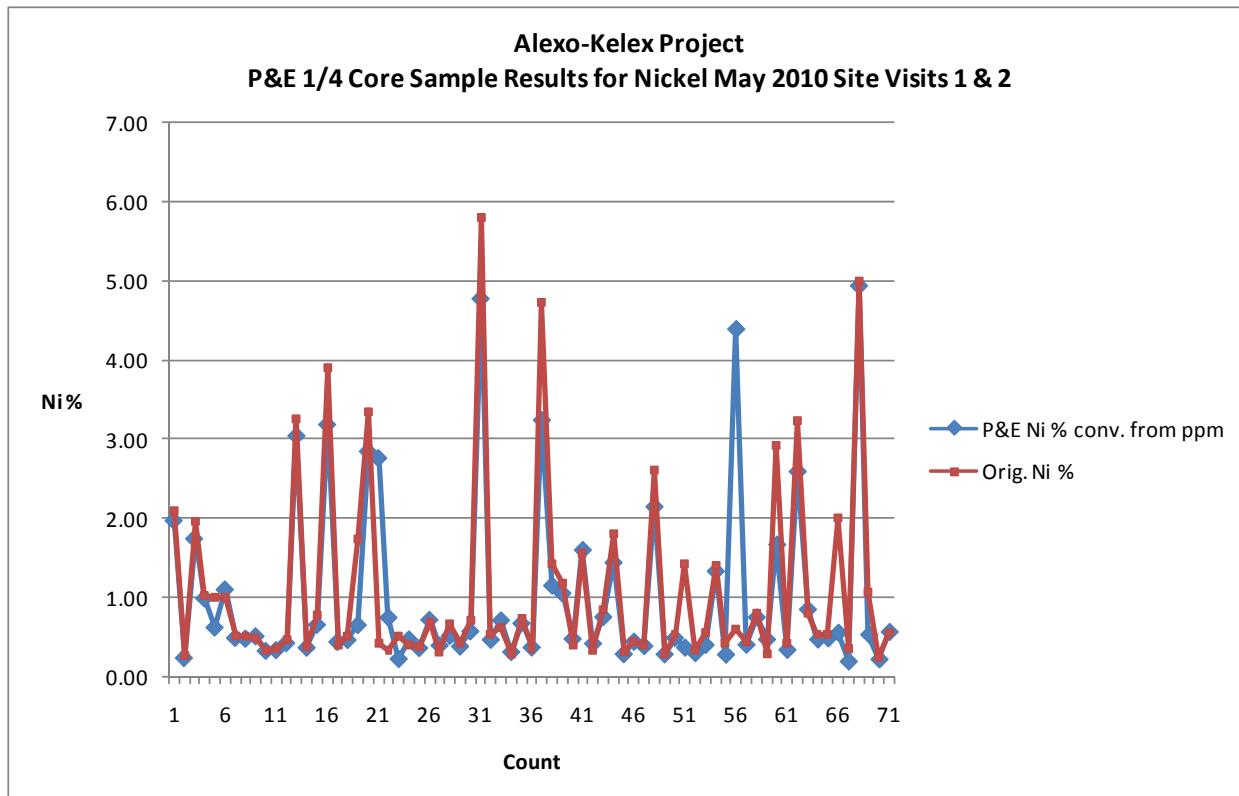
AGAT is accredited by the Standards Council of Canada, and conforms to the requirements of CAN-P-1579: Requirements for the Accreditation of Mineral Analysis Testing Laboratories. The latest certificate for proficiency testing was issued on October 21, 2010.

Gold, platinum and palladium were analyzed using lead collection fire assay with ICP-OES finish. Nickel, copper and cobalt were analyzed using four-acid digest and AAS finish.

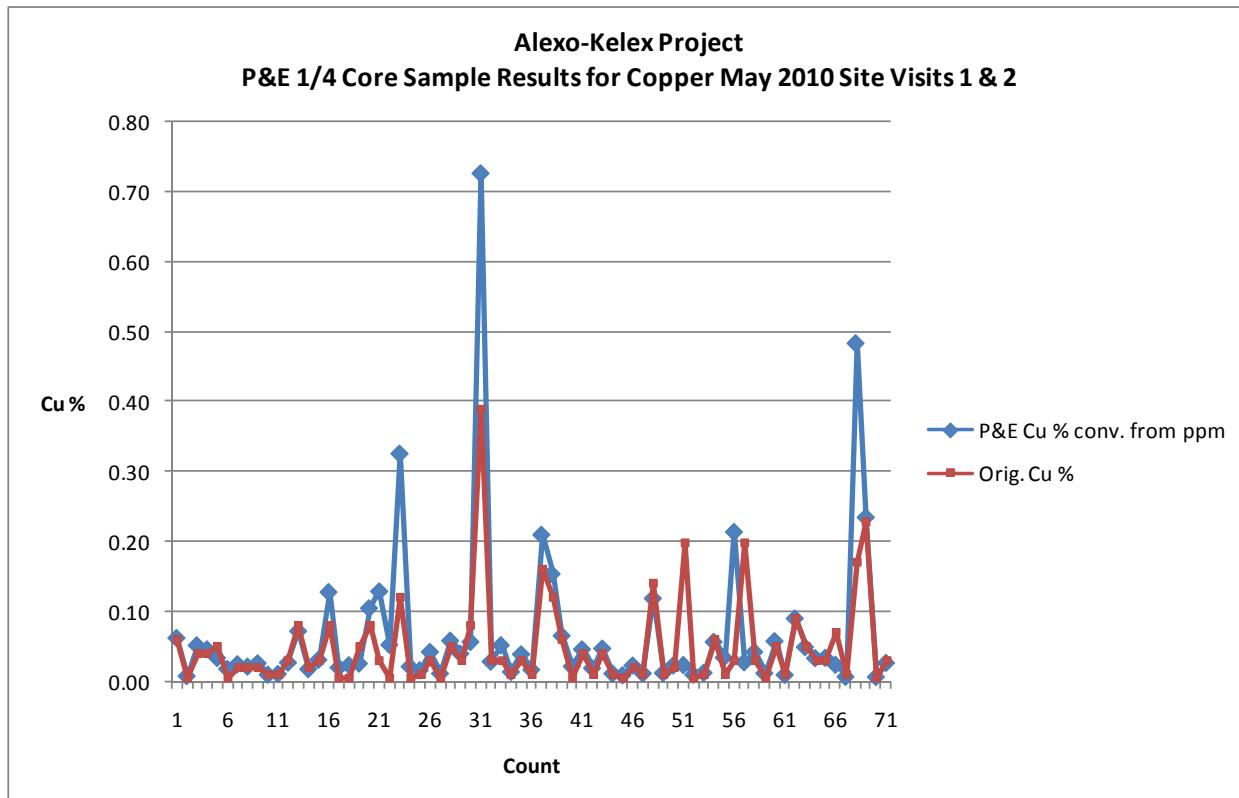
Graphs of all values for samples taken during the site visits (shown combined) versus the original sample values can be seen in Figures 13-1 through 13-6.

Considering the site visit samples were quarter core and therefore weighed less than the original half core, (i.e. difference in sample volume) and considering the fact that core duplicates can’t be expected to have excellent precision due to inherent geologic variability, the comparison between the original results and the P&E results demonstrates that the tenor for the six metals are similar.

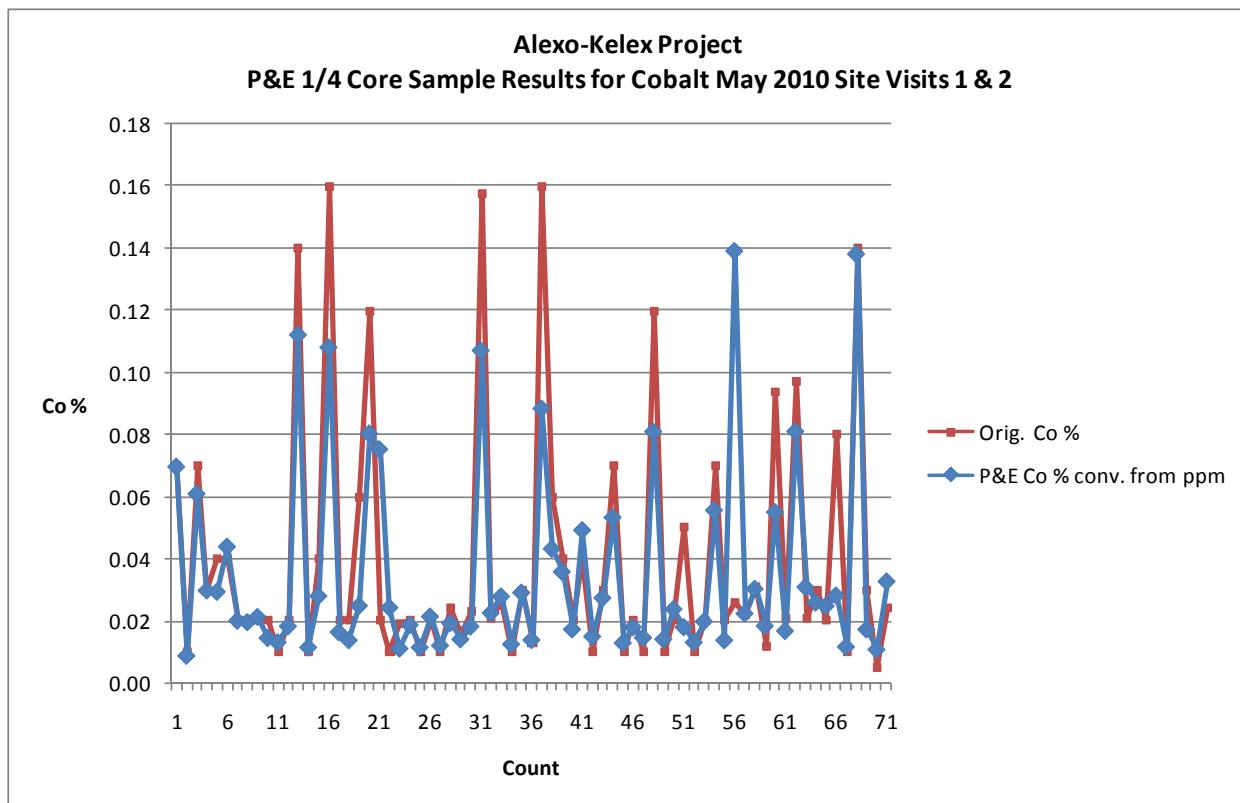
**Figure 13-1: Site Visits 1 and 2 Results for Nickel**



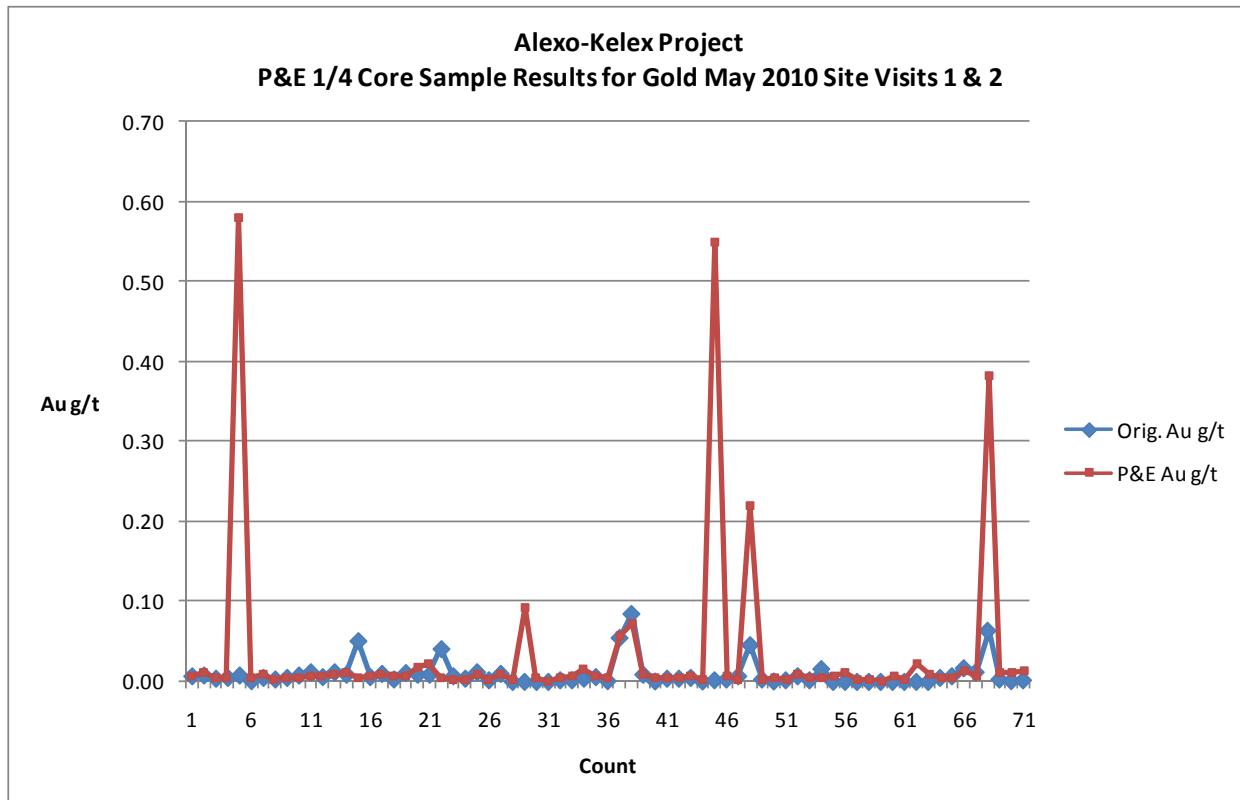
**Figure 13-2: Site Visits 1 and 2 Results for Copper**



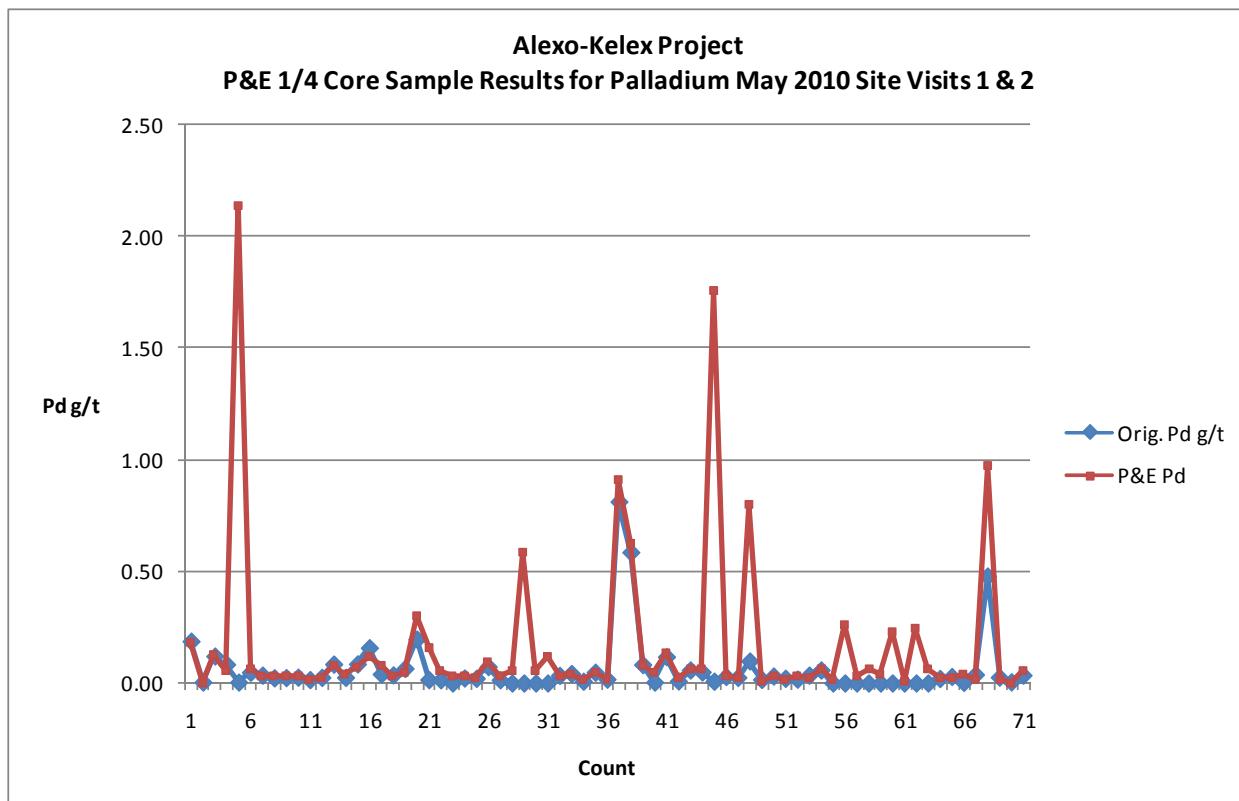
**Figure 13-3: Site Visits 1 and 2 Results for Cobalt**



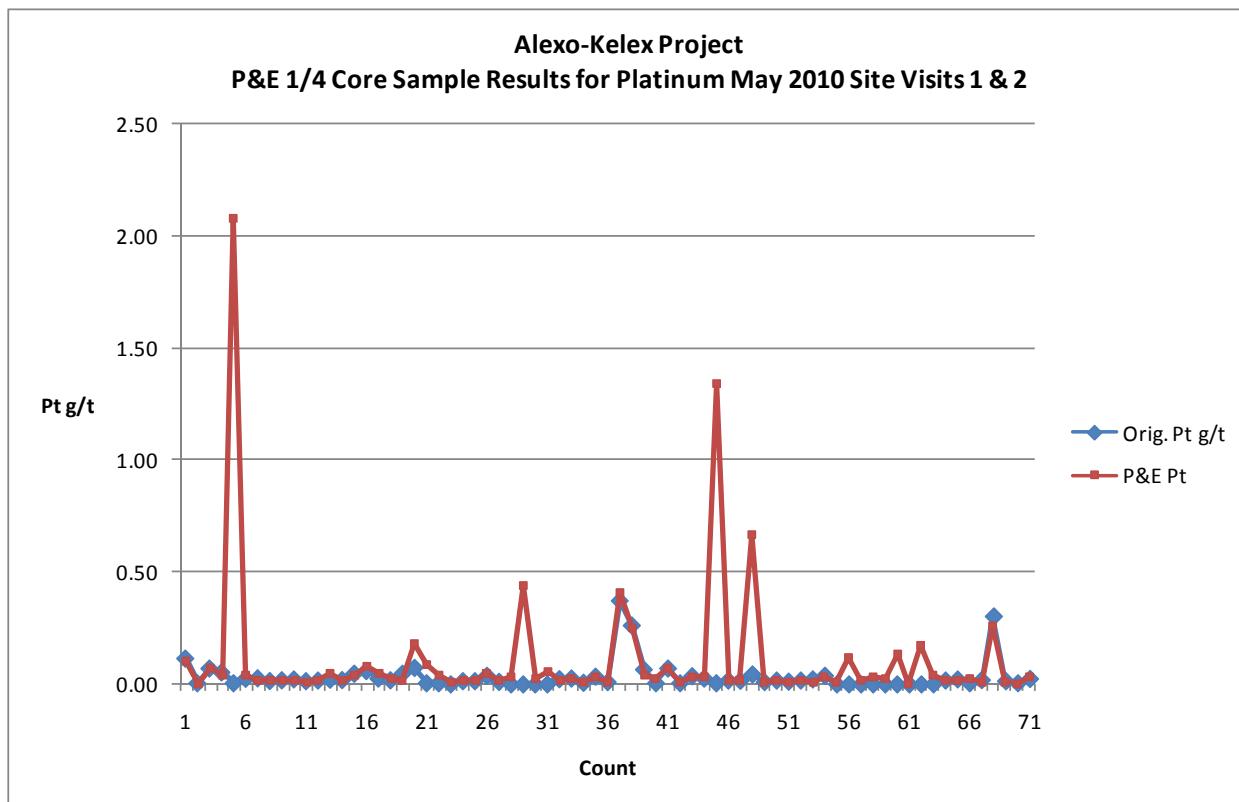
**Figure 13-4: Site Visits 1 and 2 Results for Gold**



**Figure 13.5: Site Visits 1 and 2 Results for Palladium**



**Figure 13.6: Site Visits 1 and 2 Results for Platinum**



An examination of the core and review of the core logs by the authors assessed that the quality of the samples was excellent, they were representative and there was no indication that core recovery or any other factor that may have resulted in sample bias was present. Rock quality designation (“RQD”) of the core in general was quite good.

### **13.2 QUALITY CONTROL OF SITE VISIT SAMPLES**

Four reference materials certified for nickel, copper and cobalt only, were inserted with the 62 samples taken during the second site visit. The author of this section reviewed the results from these, as well as the laboratories internal quality control, (standards, blanks and duplicates) for all six metals and reports that they reflect accurate and precise results. The laboratories internal QC was also examined for the nine samples collected during the first site visit and these data also reflect accurate and precise results.

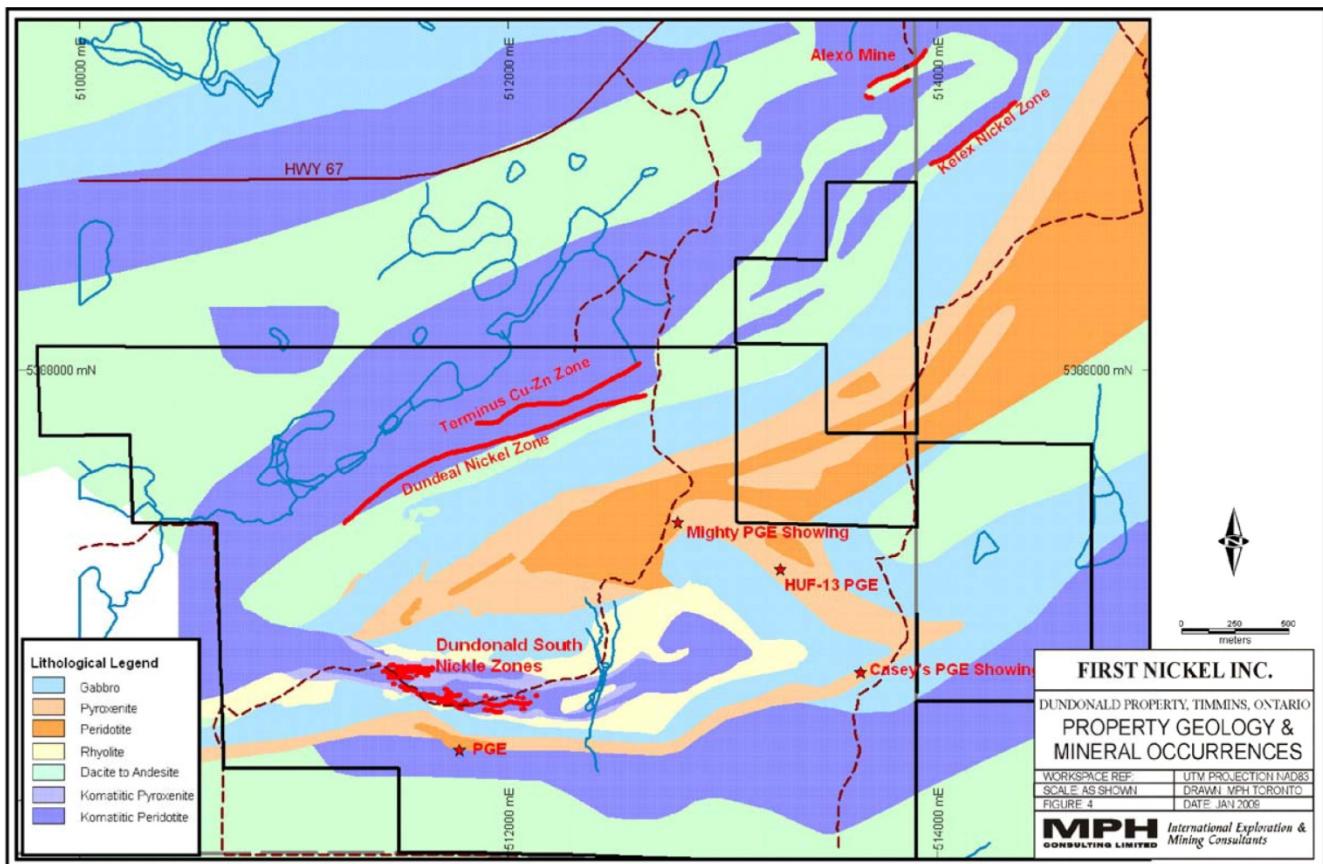
The author of this section believes that the results of the resampling of 10 % of the samples in the constrained model demonstrates that that the original data are satisfactory for use in the current resource estimate.

## 14.0 ADJACENT PROPERTIES

First Nickel Inc.'s ("First Nickel") Dundonald property lies immediately adjacent to the southeastern boundaries of the Alexo Property. Two areas of Ni-Cu 'Kambalda-style' mineralization are being explored within 9.5 km-striking komatiitic host rocks on the Dundonald property. The 2004-2005 First Nickel exploration program outlined an Inferred mineral resource of 116,000 t grading at 3.16 % Ni in the Dundonald South nickel zones. The majority of the resource is situated between vertical depths of 50 to 150 m and is open at depth (Harron 2009).

P&E has been unable to verify the information on the Dundonald property and the reader is cautioned that the above information is not necessarily indicative of the mineralization on Canadian Arrow's Alexo Property. P&E are not aware of any other exploration work being carried out on lands surrounding the Property.

**Figure 14-1: Ni-Cu-PGE Mineralization Adjacent to the Alexo Property**



Taken from Harron (2009)

## **15.0 METALLURGICAL PROCESSING AND METALLURGICAL TESTING**

To date, very little information exists on metallurgy and mineral processing on the Alexo and Kelex deposits. Prior to 2004, a 10,000 t bulk sample taken from the Alexo deposit confirmed that mining and custom milling of the mineralized zone was economic. The grade of the first 6,000 t of the bulk sample assayed 2.46 % Ni, 0.31 % Cu and 0.07 % Co (Martin Consultants 2004). During the mining of the Alexo bulk sample, all of the low grade and high grade ore mined was shipped to Falconbridge in Sudbury for metallurgical testing.

At the time of this report writing, it is anticipated that there will be no mineral processing on site, therefore there will be no tailings or processing facilities on the Property. There are no historical tailing areas on site (Martin Consultants 2004).

Due to the lack of metallurgical testwork results and limited bulk sample analyses, P&E utilized process recoveries, smelter payables, refining charges and smelter treatment charges based on their experience with other similar Canadian Ni-Cu-PGE projects at advanced metallurgical testing study levels to calculate the Alexo and Kelex deposit's NSR \$/t values.

## **16.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES**

### **16.1 INTRODUCTION**

The purpose of this section is to delineate mineral resources for the Alexo and Kelex deposits in compliance with NI 43-101 and CIM standards. This resource estimate was undertaken by Eugene Puritch, P. Eng. and David Burga, P. Geo. of P&E of Brampton Ontario. The effective date of this resource estimate is September 5, 2010.

### **16.2 DATABASE**

All drilling data was provided by Canadian Arrow in the form of Excel files, drill logs and assay certificates. Forty two (42) drill cross sections were developed on a local grid looking northeast on an azimuth of 60° on a 15 m spacing named from 135-NE to 750-NE. A Gemcom database was developed that contained 210 diamond drill holes of which 144 were utilized in the resource calculation. The remaining data were not in the area that was modelled for this resource estimate. A surface drill hole plan is shown in Appendix I and Figures 10-1 and 10-2.

The database was validated in Gemcom with minor corrections required. The assay table of the database contained 2,840 assays for nickel, copper and cobalt and 1,868 assays for gold, platinum and palladium. All data are expressed in metric units and grid coordinates are in the NAD83 UTM system.

### **16.3 DATA VERIFICATION**

Verification of assay data entry was performed on 430 assay intervals for nickel, copper, cobalt, gold, platinum and palladium. A few very minor data entry errors were observed and corrected. The 430 verified intervals were checked against assay laboratory certificates from SGS. The checked assays represented 68 % of the data to be used for the resource estimate and approximately 15 % of the entire database.

### **16.4 DOMAIN INTERPRETATION**

Domain boundaries were determined from lithology, structure and Ni/NSR boundary interpretation from visual inspection of drill hole sections. Two domains were developed and named as Alexo and Kelex. These domains were created with computer screen digitizing on drill hole sections in Gemcom by the authors of this report. The outlines were influenced by the selection of mineralized material that demonstrated nickel grades above 0.25 % Ni, and zonal continuity along strike and down dip. In a very few cases, some mineralization below 0.25 % Ni was included for the purpose of maintaining zonal continuity. Smoothing was utilized to remove obvious jogs and dips in the domains and incorporated a minor addition of inferred mineralization. This exercise allowed for easier domain creation without triangulation errors from solids validation.

On each section, polyline interpretations were digitized from drill hole to drill hole but not extended more than 50 m into untested territory. Minimum constrained true width for interpretation was 2.0 m. The interpreted polylines from each section were “wireframed” in Gemcom into 3-D domains. The resulting solids (domains) were used for statistical analysis, grade interpolation, rock coding and resource reporting purposes (Appendix II).

## **16.5 ROCK CODE DETERMINATION**

The rock codes used for the resource model were derived from the mineralized domain solids that were developed to control grade block model limits. The list of rock codes used follows:

### **Rock Code Description**

- 0.....Air
- 10.....Alexo Domain
- 20.....Kelex Domain
- 99.....Waste Rock
- 100.....Overburden

## **16.6 COMPOSITES**

Length weighted composites were generated for the drill hole data that fell within the constraints of the above-mentioned domains. These composites were calculated for nickel, copper, cobalt, gold, platinum and palladium over 1.0 m lengths starting at the first point of intersection between assay data hole and hanging wall of the 3-D zonal constraint. The compositing process was halted upon exit from the footwall of the aforementioned constraint. Un-assayed intervals were given a half assay detection limit value. Any composites calculated that were less than 0.3 m in length, were discarded so as to not introduce a short sample bias in the interpolation process. The composite data were transferred to Gemcom extraction files for the grade interpolation as X, Y, Z, Ni, Cu, Co, Au, Pt, Pd files.

## **16.7 GRADE CAPPING**

Grade capping was investigated on the raw assay values in the mineralized domains to ensure that the possible influence of erratic high values did not bias the database (Table 16.1). Extraction files were created for constrained nickel, copper, cobalt, gold, platinum and palladium data within each mineralized domain. From these extraction files, log-normal histograms were generated. The reader is referred to Appendix III for the graphs.

**Table 16.1: Grade Capping Values**

Kelex Domain					
Element	Capping Value	Number of Assays Capped	Cumulative Percent for Capping	Raw Coefficient of Variation	Capped Coefficient of Variation
Ni	5 %	12	98.6	1.32	1.22
Cu	No Cap	0	100	1.4	1.4
Co	No Cap	0	100	1.17	1.17
Au	No Cap	0	100	2.08	2.08
Pt	0.5 g/t	1	99.8	1.79	1.41
Pd	No Cap	0	100	2.11	2.11

Grade capping was not required for the Alexo Domain.

## **16.8 VARIOGRAPHY**

Variography was carried out on the constrained composites within the mineralized domains of the deposit model. Both Alexo and Kelex variography yielded discernable nickel omnivariograms which enabled the classification of Indicated and Inferred mineral resources. Due to the low grades for copper, cobalt, gold, platinum and palladium, variography on these elements was not successful, leading to the use of the nickel variograms to dictate non nickel search ellipse ranges (Appendix IV).

## **16.9 BULK DENSITY**

The bulk density used for the resource model was derived from measurements performed by AGAT on sixty two representative samples collected by Antoine Yassa, P. Geo of P&E. The resulting average bulk density model within the constraining domain created from these samples was calculated to be 3.11 t/m<sup>3</sup>. Overburden was assigned a bulk density of 1.8 t/m<sup>3</sup>.

## **16.10 BLOCK MODELING**

The resource model was divided into a 3D block model framework. The block model has 8,031,360 blocks that were 5 m in the X direction, 1.5 m in the Y direction and 5 m in the Z direction. There were 160 columns (X), 534 rows (Y) and 94 levels. The block model was rotated 30 degrees counter-clockwise. Separate block models were created for rock type, density, percent, class, nickel, copper, cobalt, gold, platinum and palladium.

The percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside each constraining domain. As a result, the domain boundaries were properly represented by the percent model's ability to measure infinitely variable inclusion percentages within a particular domain.

The nickel, copper, cobalt, gold, platinum and palladium composites were extracted from the Microsoft Access database composite table into separate files for each mineralized zone. Inverse distance squared (1/d<sup>2</sup>) grade interpolation was utilized. There were two interpolation passes performed on each domain for each element for the Indicated and Inferred classifications. The resulting Ni and NSR blocks can be seen on the block model cross-sections and plans in Appendix V and VI. The grade blocks within the domain were interpolated using the following parameters outlined in Table 16.2.

**Table 16.2: Block Model Interpolation Parameters**

Ni, Cu, Co, Au, Pt and Pd Indicated									
Domain	Dip Dir.	Strike	Dip	Dip Range	Strike Range	Across Dip Range	Max # per Hole	Min # Sample	Max # Sample
Alexo	330°	60°	-90°	20 m	20 m	20 m	3	5	20
Kelex	330°	60°	-70°	30 m	30 m	30 m	3	5	20
Ni, Cu, Co, Au, Pt and Pd Inferred									
Domain	Dip Dir.	Strike	Dip	Dip Range	Strike Range	Across Dip Range	Max # per Hole	Min # Sample	Max # Sample
Alexo	330°	60°	-90°	100 m	100 m	50 m	3	1	20
Kelex	330°	60°	-70°	100 m	100 m	50 m	3	1	20

## 16.11 RESOURCE CLASSIFICATION

For the purposes of this resource, classifications of all interpolated grade blocks were determined from the nickel interpolations for indicated and inferred due to nickel being the dominant revenue producing element in the NSR calculation. See block model classification cross-sections and plans in Appendix VII.

## 16.12 RESOURCE ESTIMATE

The resource estimate was derived from applying an NSR cut-off grade to the block model and reporting the resulting tonnes and grade for potentially mineable areas. The following calculations demonstrate the rationale supporting the NSR cut-off grade that determines the potentially economic portion of the mineralized domains.

### NSR Cut-Off Grade Calculation Components (All currency CDN\$ unless stated otherwise)

CDN\$/US\$ (Exchange Rate) .....	\$0.950
Ni Price.....	US\$9.00/lb
Cu Price .....	US\$3.00/lb
Co Price .....	US\$20/lb
Au Price.....	US\$1,092/oz
Pt Price .....	US\$1,454/oz
Pd Price .....	US\$389/oz
Ni Flotation Recovery .....	85 %
Cu Flotation Recovery .....	90 %
Co Flotation Recovery .....	40 %
Au Flotation Recovery .....	50 %
Pt Flotation Recovery .....	50 %
Pd Flotation Recovery .....	50 %
Concentration Ratio.....	13:1
Ni Smelter Payable.....	85 %
Cu Smelter Payable .....	90 %
Co Smelter Payable .....	50 %

Au Smelter Payable .....	80 %
Pt Smelter Payable .....	80 %
Pd Smelter Payable.....	80 %
Ni Refining Charges.....	US\$0.60/lb
Cu Refining Charges .....	US\$0.20/lb
Co Refining Charges .....	US\$2.50/lb
Au Refining Charges.....	US\$15.00/oz
Pt Refining Charges .....	US\$15.00/oz
Pd Refining Charges.....	US\$15.00/oz
Ni Smelter Treatment Charges .....	US \$225/t

The above data were derived from other projects similar to the Alexo and Kelex deposits.

**In the anticipated open pit portion of the Alexo and Kelex deposits, the ore crushing, transport, processing and general and administration (“G&A”) costs combine for a total of (\$3 + \$8 + \$20 + 4) = \$35/t milled which became the open pit internal NSR cut-off value.**

In order for the constrained mineralization in the Alexo and Kelex deposit models to be considered as an open pit resource, which is potentially economic, a first pass Whittle 4X pit optimization was carried out utilizing the following criteria:

Waste mining cost per tonne .....	\$2.75
Ore mining cost per tonne .....	\$3.50
Overburden mining cost per tonne .....	\$2.00
Ore transport to process plant cost per tonne .....	\$3.00
Process cost per tonne .....	\$22.00
G\$A cost per ore tonne.....	\$5.00
Process production rate (ore tonnes per year) .....	100,000
Pit slopes (inter ramp angle).....	50°
Sulphide Bulk Density .....	3.11 t/m <sup>3</sup>
Waste Rock Bulk Density .....	2.80 t/m <sup>3</sup>
Overburden Bulk Density.....	1.80 t/m <sup>3</sup>

The reader is referred to the optimized pit shell in Appendix VIII.

**In the anticipated underground portion of the Alexo and Kelex deposits, the ore mining, crushing, transport, processing and G&A costs combine for a total of (\$45 + \$3 + \$8 + \$20 + \$9) = \$85/t milled which became the underground NSR cut-off value.**

The resulting open pit and underground resource estimate can be seen in Table 16.3.

**Table 16.3: Alexo and Kelex Mineral Resource Estimate (as of September 5, 2010)**

Resource Category: INDICATED	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	contained Ni (lb)	contained Cu (lb)	contained Co (lb)
Alexo Open Pit*	18,000	1.36	0.16	0.06	0.04	0.16	0.41	540,000	63,000	24,000
Kelex Open Pit*	131,000	1.1	0.04	0.04	0.01	0.03	0.06	3,177,000	116,000	115,000
<b>Total Open Pit* Indicated</b>	<b>149,000</b>	<b>1.13</b>	<b>0.05</b>	<b>0.04</b>	<b>0.01</b>	<b>0.05</b>	<b>0.1</b>	<b>3,717,000</b>	<b>179,000</b>	<b>139,000</b>
Alexo Underground	4,000	0.84	0.11	0.04	0.03	0.11	0.25	74,000	10,000	4,000
Kelex Underground	90,000	1.00	0.04	0.04	0.01	0.03	0.07	1,984,000	79,000	79,000
<b>Total Underground Indicated</b>	<b>94,000</b>	<b>0.99</b>	<b>0.04</b>	<b>0.04</b>	<b>0.01</b>	<b>0.03</b>	<b>0.08</b>	<b>2,058,000</b>	<b>89,000</b>	<b>83,000</b>
<b>Total Indicated</b>	<b>243,000</b>	<b>1.08</b>	<b>0.05</b>	<b>0.04</b>	<b>0.01</b>	<b>0.04</b>	<b>0.08</b>	<b>5,775,000</b>	<b>268,000</b>	<b>222,000</b>
Resource Category: INFERRED	Tonnes	Ni %	Cu %	Co %	Au g/t	Pt g/t	Pd g/t	contained Ni lbs	contained Cu lbs	contained Co lbs
Kelex Underground	<b>54,000</b>	<b>0.84</b>	<b>0.04</b>	<b>0.03</b>	<b>0.01</b>	<b>0.02</b>	<b>0.03</b>	<b>1,000,000</b>	<b>48,000</b>	<b>36,000</b>

1 \* Designates resources defined within an optimized pit shell.

2 Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues.

3 The quantity and grade of reported inferred resources in this estimation are uncertain in nature and there has been insufficient exploration to define these inferred resources as an indicated or measured mineral resource and it is uncertain if further exploration will result in upgrading them to an indicated or measured mineral resource category.

4 The mineral resources in this press release were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council December 11, 2005.

## 16.13 CONFIRMATION OF ESTIMATE

As a test of the reasonableness of the estimate, the block model was queried at a 0.01 % Ni cut-off grade with blocks in all classifications summed and their grades weight averaged. This average is the average grade of all blocks within the mineralized domains. The values of the interpolated grades for the block model were compared to the length weighted capped average grades and average grade of composites of all samples from within the domain. The results are presented below.

**Table 16.4: Comparison of Weighted Average Grade of Capped Assays and Composites with Total Block Model Average Grade**

Net Textured Sulphide Domain						
Category	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Capped Assays	0.76	0.04	0.03	0.01	0.03	0.06
Composites	0.70	0.04	0.03	0.01	0.03	0.05
Block Model	0.65	0.03	0.02	0.01	0.02	0.04

The comparison above shows the average grade of the nickel and palladium blocks to be somewhat lower than the capped assays and composites. This is due to localized clustering of data which is smoothed out by the block model grade interpolation process. The copper, cobalt, gold and platinum blocks were similar to the weighted average of all capped assays and composites used for grade estimation.

In addition, a volumetric comparison was performed with the block volume of the model versus the geometric calculated volume of the domain solids.

### Net Textured Sulphide Domain

Block Model Volume .....	493,272 m <sup>3</sup>
Geometric Domain Volume .....	493,574 m <sup>3</sup>
Difference.....	0.06 %

## **17.0 OTHER RELEVANT DATA AND INFORMATION**

There are no other data considered relevant to this Report that have not previously been included.

## **18.0 INTERPRETATION AND CONCLUSIONS**

Based on all exploration work completed to the end of 2005, two geological block models and NI 43-101 compliant mineral resources were prepared for the Alexo and Kelex deposits. The P&E quoted resources contain 243,000 t grading 1.08 % Ni, 0.05 % Cu, 0.04 % Co, 0.05 g/t Pt and 0.10 g/t Pd of indicated resources and 54,000 t grading 0.84 % Ni, 0.04 % Cu, 0.03 % Co of inferred resources.

The study included an open pit optimization that defined 149,000 t of the indicated resources grading 1.13 % Ni, 0.05 % Cu, 0.04 % Co, 0.05 g/t Pt, and 0.10 g/t Pd are amenable to open pit mining at an NSR cut-off of \$35/t. The study concluded that an additional 94,000 t grading 0.99 % Ni, 0.04 % Cu, 0.04 % Co of indicated resources and 54,000 t grading 0.84 % Ni, 0.04 % Co and 0.03 % Cu of inferred resources were amenable to underground mining at an NSR cut-off of \$85/t.

### **18.1 OPPORTUNITIES TO EXPAND RESOURCES**

The high underground NSR cut-off used in this study assumes only high cost selective mining methods to be employed. Widths and continuity of both the Kelex West and Central West zones indicate amenability for low-cost bulk minable underground extraction as well as higher cost selective extraction. Mine design and engineering trade-off studies would investigate a potential for lower cut-offs, improved economics and increased resources.

Drilling to date has focused on the surface to upper 100 m horizon of the deposits at a 15 m section drill density to delineate the near-surface nickel sulphide resource. The surface to 100 m depth comprises the bulk of the indicated resource. Drilling below the 100 m horizon comprises the bulk of the inferred resource. Of the 210 diamond drill holes used in the resource estimate, only 14 (7 %) extended below 100 m from surface. Opportunities exist to increase the resource estimates of the known zones with further diamond drilling below and along strike of the deposits.

Alexo drill programs and past production have defined a 45 m eastern plunge extension of the Alexo Main zone sulphide lens to the 120 m depth. No drilling or exploration has been conducted below this elevation. Nickel-bearing massive sulphide mineralization was also intercepted in the Alexo East zone located approximately 125 m east of the Alexo Main zone extension. The 125 m plunge interval between the Main zone extension and the East zone remains untested by drilling although a down hole mise-a-la-masse geophysical survey conducted in 2001 indicated the two zones were conductively connected. Drilling beyond the East zone is limited. Alexo is further enhanced by significant copper, cobalt, platinum and palladium values.

The Kelex deposit zones discovered to date are defined by a string of five lenses of higher grade massive sulphides within a broader lower-grade nickel sulphide halo that extend along a 600 m strike length and to 100 m below surface. Below the 100 m horizon, additional mineralization has been intercepted to the 350 m elevation with drilling over wider drill spacings averaging 75 m. Potential within and below this horizon remains unexplored at depth and along strike.

## **18.2 PRODUCTION OPPORTUNITIES**

The deposits have demonstrated low risk, near term, small-scale production success. Between 2004 and 2005, Canadian Arrow produced 30,138 t of ore averaging 1.93 % Ni containing 1.3 Mlb of nickel from open pit mining of the Alexo and Kelex deposits. Canadian Arrow temporarily suspended production at that time following a decline in nickel price to about the US\$5.00/lb level coupled with the high cost of direct shipping production a 400 km distance to the Xstrata Nickel Strathcona processing facility near Sudbury, Ontario. Permits including Closure Plan, Permit to Take Water and Industrial Sewage Works remain in place, as do water treatment infrastructure including settling and polishing ponds. The opportunity exists to re-start production rapidly under the terms of the existing permits. The permitting baseline work already completed would significantly expedite plans to expand the scope of production plans for larger resources.

Canadian Arrow is reviewing re-starting production following the steady two year increase in nickel price to a current one month average exceeding US\$11/lb and a 12 month trailing average nickel price exceeding US\$9/lb. The projected economics are further enhanced by the presence of two nearby nickel processing facilities (Liberty Mines Inc. Redstone mill and Xstrata's Kidd Creek mill, refer to Figures 3-1 and 6-1 for the mill locations relative to the Alexo Property). These occur within a 30-70 km haul distance and may make attractive alternatives to direct ore shipments 400 km south to Sudbury, Ontario given favourable milling terms.

## **18.3 EXPLORATION POTENTIAL**

There is a high potential of discovering other deposits on the Property as well. Komatiite-hosted Ni-Cu deposits such as Alexo and Kelex commonly occur in clusters. In particular, hole ALX-01-96 intercepted 1.27 % Ni over 1.7 m between 467.4-469.1 m. This hole is located 200 m west along strike and 240 m below the Alexo deposit. It is also most significantly, the only hole drilled west of, or below, the Main Alexo horizon.

Further evidence of the clustered mineral potential is the existence to the west of the Property of nickel occurrences and deposits located approximately 2 to 3 km west along strike of the Alexo deposit.

## **19.0 RECOMMENDATIONS**

Increasing the resource base would not only increase the project economics but would greatly enhance the attractiveness to a custom milling facility and provide better custom milling terms. Additionally further close spaced drilling below the 100 m elevation at both the Kelex and Alexo deposits is recommended to upgrade the inferred resources and explore for other mineralized horizons.

Geophysical borehole techniques such as magnetic susceptibility coupled with electromagnetic should be performed on completed boreholes to better delineate mineralization geometry at both high and low grades. Any new drilling should have casing left in the hole for that purpose. Borehole geophysics is also recommended to seek out other mineralized channels lying below or at depth adjacent to the known mineralized pods and channels.

Metallurgical testing of the anticipated production should be completed. Sampling from selected boreholes statistically representing the potential ore regime would be processed at a suitable laboratory.

A significant number of geophysical surveys have been completed on the Property but require compilation and re-interpretation in light of the recent drill successes and geological block modelling related in this Report. Conversion of geophysical interpretation to 3-D computer modelling should be done. The proposed program would be as follows:

### **Phase 1:**

<b>Description</b>	<b>Units</b>	<b>Cost per Unit</b>	<b>Total</b>
Phase 1 drill program	2,000 m	\$150/m	\$300,000
Geophysics compilation	10 days	\$1,000/day	\$10,000
Borehole Geophysics	5 days	\$2,000/day	\$10,000
Project Management / Supervision	1 month	\$15,000/mo	\$15,000
Metallurgical test work	3 months	lump sum	\$70,000
<b>Total Phase 1</b>			<b>\$405,000</b>

Pending completion of the geophysical compilation in phase 1 an assessment of regional exploration targets could be prioritized for drill testing. A second exploration phase of drilling could be proposed as follows.

### **Phase 2:**

<b>Description</b>	<b>Units</b>	<b>Cost per Unit</b>	<b>Total</b>
Phase 2 drill program	10,000 m	\$150/m	\$1,500,000
Borehole Geophysics	20 days	\$2,000/day	\$40,000
Project Management / Supervision	2 months	\$15,000/month	\$30,000
<b>Total Phase 2</b>			<b>\$1,570,000</b>

The total cost of phase 1 and 2 is \$1,975,000.

## 20.0 REFERENCES

- B.H. Martin Consultants Ltd. (2004) Legendary Ore Mining Corporation, Alexo Project Revised Production Closure Plan (Revisions to August 2004 Submission). Prepared for Legendary Ore Mining Corporation by B.H. Martin Consultants Ltd., December 2004.
- Brereton, W.E. (2004) A Report to NI 43-101 Standards on the Timmins Area Nickel Properties of Legendary Ore Mining Corporation to be Acquired by Canadian Arrow Mines Ltd., Ontario, Canada. NI 43-101 technical report prepared by MPH Consulting Limited for Canadian Arrow Mines Ltd., February 2, 2004.
- Burrows, A.G. and Rickaby, H.C. (1935) Sudbury Nickel Field Restudied. Ontario Department of Mines, vol. 43, pt. II, p. 6.
- CIM (2005) NI 43-101, Standards of Disclosure for Mineral Projects, including Form F1, technical report and companion policy, dated December 30, 2005, CIM website ([www.cim.org](http://www.cim.org)).
- Coad, P.R. (1979) Nickel Sulphide Deposits Associated with Ultramafic Rocks of the Abitibi Belt and Economic Potential of Mafic-Ultramafic Intrusions. Ontario Geological Survey, Study 20, 84p.
- Corfu, F. (1993) The Evolution of the Southern Abitibi Greenstone Belt in Light of Precise U-Pb Geochronology. *Economic Geology*, v. 88, p. 1323-1340.
- Davis, P.C. (1998) Volcanic Stratigraphy of the Late Archean Kidd-Munro Assemblage in Dundonald and Munro Townships and Genesis of Associated Nickel and Copper-Zinc Volcanogenic Massive Sulphide Deposits. University of Alabama, M.S. Thesis, 284p.
- Davis, P.C. (1999) Alexo Project. Summary report prepared on behalf of Outokumpu Mines Ltd., 38p.
- Davis, P.C. (2001) Alexo Nickel Property. Report of exploration April 2000 to April 2001 prepared on behalf of Hucamp Mines Ltd.
- Eckstrand, O.R. (1996) Magmatic Nickel-Copper-Platinum Group Elements. In Eckstrand, O.R., Sinclair, W.D. and Thorpe, R.I. (eds) *Geology of Canadian Mineral Deposit Types*. Geological Survey of Canada, *Geology of Canada*, no. 8, p. 583-605.
- Eckstrand, O.R. and Hulbert, L.J. (2007) Magmatic Nickel-Copper-Platinum Group Element Deposits. In Goodfellow, W.D. (ed) *Mineral Deposits of Canada: A Synthesis of Major Deposit Types, District Metallogeny, the Evolution of Geological Provinces and Exploration Models*. Geological Association of Canada, Mineral Deposit Division, Special Publication No. 5, p. 2015-222.
- Harron, G.A. (2009) Technical Report on the Dundonald Project, Dundonald & Clergue Townships, Porcupine Mining Division, Ontario for First Nickel Inc. NI 43-101 technical report prepared by MPH Consulting Limited for First Nickel Inc., January 30, 2009.

Jackson, S.L. and Fyon, J.A. (1991) The Western Abitibi Subprovince in Ontario. *In* Thurston, P.C., Williams, H.R., Sutcliffe, R.H. and Stott, G.M. (eds) Geology of Ontario. Special volume 4, part 1, p. 405-482.

Lesher, C.M. (1989) Komatiite-Associated Nickel Sulphide Deposits. *In:* Witney, J.A. and Naldrett, A.J. (eds) Ore Deposition Associated with Magmas. Reviews in Economic Geology, vol. 4, p. 45-102.

Lesher, C.M. and Keays, R.R. (2002) Komatiite-Associated Ni-Cu-PGE Deposits: Geology, Mineralogy, Geochemistry and Genesis. *In:* Cabri L.J. (ed) The Geology, Geochemistry, Mineralogy and Mineral Beneficiation of Platinum-Group Elements. Canadian Institute of Mining, Metallurgy and Petroleum, special volume 54, p. 579-617.

Lowther, H.C. (1950) Geology of the Alexo Occurrence Area, Clergue-Dundonald Townships, District of Cochrane, Ontario. Thesis, University of Western Ontario, London, Ontario.

Ontario Geological Survey (1984) Airborne Electromagnetic and Total Intensity Magnetic Survey, Matheson-Black River Area, Clergue Township, District of Cochrane by Questor Surveys Limited for the Ontario Geological Survey. Map 80572 Geophysical / Geochemical Series, scale 1:20,000, survey and compilation, March to July 1983.

Ontario Geological Survey (1988) Airborne Electromagnetic and Total Intensity Survey, Timmins Area, Dundonald Township, District of Cochrane and Timiskaming, Ontario by Geoterrex Limited for Ontario Geological Survey. Map 81066 Geophysical / Geochemical Series, scale 1:20,000, survey and compilation, March to October 1987.

Ontario Geological Survey (1991) Bedrock Geology of Ontario, East-Central Sheet. Ontario Geological Survey, Map 2543, scale 1:1,000,000.

Percival, J.A. (2007) Geology and Metallogeny of the Superior Province, Canada. *In* Goodfellow, W.E. (ed) Mineral Deposits of Canada: A Synthesis of Major Deposit-Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods. Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, p. 903-928.

Shklanka, R. (ed) (1969) Copper, Nickel, Lead and Zinc Deposits of Ontario. Ontario Department of Mines, Mineral Resources Circular 12, 394p. Reprinted 1989.

Sinclair, D.G., Tower, W.O., Bayne, A.S., Cooper, D.F., Weir, E.B. and Webster, A.R. (1937) Mines of Ontario in 1936. Ontario Department of Mines, vol. 46, pt. 1, p. 222-3.

## **21.0 CERTIFICATES**

### **CERTIFICATE OF QUALIFIED PERSON**

**EUGENE J. PURITCH, P. ENG.**

I, Eugene J. Puritch, P. Eng., residing at 44 Turtlecreek Blvd., Brampton, Ontario, L6W 3X7, do hereby certify that:

1. I am an independent mining consultant and President of P&E Mining Consultants Inc.
2. This certificate applies to the technical report titled "Technical Report and Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada" (the "Technical Report"), with an effective date of September 5, 2010.
3. I am a graduate of The Haileybury School of Mines, with a Technologist Diploma in Mining, as well as obtaining an additional year of undergraduate education in Mine Engineering at Queen's University. In addition I have also met the Professional Engineers of Ontario Academic Requirement Committee's Examination requirement for Bachelor's Degree in Engineering Equivalency. I am a mining consultant currently licensed by the Professional Engineers of Ontario (License No. 100014010) and registered with the Ontario Association of Certified Engineering Technicians and Technologists as a Senior Engineering Technologist. I am also a member of the National and Toronto Canadian Institute of Mining and Metallurgy.

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

I have practiced my profession continuously since 1978. My summarized career experience is as follows:

- Mining Technologist - H.B.M.& S. and Inco Ltd., ..... 1978-1980
- Open Pit Mine Engineer – Cassiar Asbestos/Brinco Ltd., ..... 1981-1983
- Pit Engineer/Drill & Blast Supervisor – Detour Lake Mine, ..... 1984-1986
- Self-Employed Mining Consultant – Timmins Area, ..... 1987-1988
- Mine Designer/Resource Estimator – Dynatec/CMD/Bharti, ..... 1989-1995
- Self-Employed Mining Consultant/Resource-Reserve Estimator, ..... 1995-2004
- President – P&E Mining Consultants Inc, ..... 2004-Present

4. I have visited the Alexo Property on May 4, 2010.
5. I am responsible for authoring Section 15 in its entirety and co-authoring the executive summary and Sections 16, 18 and 19 of the Technical Report.
6. I am independent of Issuer applying the test in Section 1.4 of NI 43-101.
7. I have had no prior involvement with the Property that is the subject of this Technical Report.
8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
9. As of the date of this certificate, 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.

Effective Date: September 5, 2010

Signed Date: November 3, 2010

**{SIGNED AND SEALED}**

[Eugene Puritch]

---

Eugene J. Puritch, P. Eng.

## CERTIFICATE OF QUALIFIED PERSON

WAYNE D. EWERT, P. GEO.

I, Wayne D. Ewert, P. Geo., residing at 10 Langford Court, Brampton, Ontario, L6W 4K4, do hereby certify that:

1. I am a principal of P&E Mining Consultants Inc. who has been contracted by Canadian Arrow Mines Ltd.
2. This certificate applies to the technical report titled "Technical Report and Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada" (the "Technical Report") with an effective date of September 5, 2010.
3. I graduated with an Honours Bachelor of Science degree in Geology from the University of Waterloo in 1970 and with a PhD degree in Geology from Carleton University in 1977. I have worked as a geologist for a total of 39 years since obtaining my B.Sc. degree. I am a P. Geo., registered in the Province of Saskatchewan (APEGS No. 16217), British Columbia (APEGBC No. 18965), and the Province of Ontario (APGO No. 0866).

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

My relevant experience for the purpose of the Technical Report is:

- Principal, P&E Mining Consultants Inc.....2004 – Present
- Vice-President, A.C.A. Howe International Limited .....1992 – 2004
- Canadian Manager, New Projects, Gold Fields Canadian Mining Limited .....1987 – 1992
- Regional Manager, Gold Fields Canadian Mining Limited .....1986 – 1987
- Supervising Project Geologist, Getty Mines Ltd.....1982 – 1986
- Supervising Project Geologist III, Cominco Ltd.....1976 – 1982

4. I have not visited the Alexo Property.
5. I am responsible for authoring Sections 1 to 10, 14, 17 and 20 in their entirety and co-authoring the executive summary and Sections 18 and 19 of the Technical Report.
6. I am independent of the Issuer applying the test in Section 1.4 of NI 43-101.
7. I have had no prior involvement with the Alexo Property that is the subject of this Technical Report.
8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.
9. As of the date of this certificate, 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.

Effective Date: September 5, 2010

Signed Date: November 3, 2010

**{SIGNED AND SEALED}**

[Wayne Ewert]

---

Dr. Wayne D. Ewert, P. Geo.

## CERTIFICATE OF QUALIFIED PERSON

**TRACY J. ARMSTRONG, P. GEO.**

I, Tracy J. Armstrong, P. Geo., residing at 2007 Chemin Georgeville, res. 22, Magog, QC J1X 0M8, do hereby certify that:

1. I am an independent geological consultant contracted by P&E Mining Consultants Inc.
2. This certificate applies to the technical report entitled "Technical Report and Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada" (the "Technical Report") with an effective date of September 5, 2010.
3. I am a graduate of Queen's University at Kingston, Ontario with a B.Sc (HONS) in Geological Sciences (1982). I have worked as a geologist for a total of 24 years since obtaining my B.Sc. degree. I am a geological consultant currently licensed by the Order of Geologists of Québec (License No. 566), the Association of Professional Geoscientists of Ontario (License No. 1204) and the Association of Professional Engineers and Geoscientists of British Columbia (License No. 34720).

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

My relevant experience for the purpose of the Technical Report is:

- Underground production geologist, Agnico-Eagle Laronde Mine 1988-1993
  - Exploration geologist, Laronde Mine 1993-1995
  - Exploration coordinator, Placer Dome 1995-1997
  - Senior Exploration Geologist, Barrick Exploration 1997-1998
  - Exploration Manager, McWatters Mining 1998-2003
  - Chief Geologist Sigma Mine 2003
  - Consulting Geologist 2003-2010.
4. I have not visited the Alexo Property.
  5. I am responsible for authoring Sections 11 and 12 in their entirety and co-authoring Section 13 of the Technical Report.
  6. I am independent of the Issuer applying the test in Section 1.4 of NI 43-101.
  7. I have had no prior involvement with the Alexo Property that is the subject of this Technical Report.
  8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.
  9. As of the date of this certificate, 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.

Effective date: September 5, 2010

Signing Date: November 3, 2010

***{SIGNED AND SEALED}***

[Tracy Armstrong]

---

Tracy J. Armstrong, P. Geo.

## CERTIFICATE OF QUALIFIED PERSON

ANTOINE R. YASSA, P. GEO.

I, Antoine R. Yassa, P. Geo., residing at 241 Rang 6 West, Evain, Quebec, do hereby certify that:

1. I am an independent geological consultant contracted by P&E Mining Consultants Inc.
2. This certificate applies to the technical report titled "Technical Report and Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada" (the "Technical Report"), with an effective date of September 5, 2010.
3. I am a graduate of Ottawa University at Ottawa, Ontario with a B.Sc (HONS) in Geological Sciences (1977). I have worked as a geologist for a total of 30 years since obtaining my B.Sc. degree. I am a geological consultant currently licensed by the Order of Geologists of Québec (License No 224) and a practising member of the APGO (Registration Number 1890).

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

My relevant experience for the purpose of the Technical Report is:

- Minex Geologist (Val d'Or), 3D Modeling (Timmins), Placer Dome..... 1993-1995
  - Database Manager, Senior Geologist, West Africa, PDX..... 1996-1998
  - Senior Geologist, Database Manager, McWatters Mine..... 1998-2000
  - Database Manager, Gemcom modeling and Resources Evaluation (Kiena Mine) QAQC Manager (Sigma Open pit), McWatters Mines ..... 2001-2003
  - Database Manager and Resources Evaluation at Julietta Mine, Far-East Russia, Bema Gold Corporation ..... 2003-2006
  - Consulting Geologist ..... since 2006
4. I have visited the Alexo Property on May 17 to 18, 2010.
  5. I am responsible for co-authoring Section 13 of the Technical Report.
  6. I am independent of the Issuer applying the test in Section 1.4 of NI 43-101.
  7. I have had no prior involvement with the Property that is the subject of this Technical Report.
  8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
  9. As of the date of this certificate, 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.

Effective Date: September 5, 2010

Signed Date: November 3, 2010

**{SIGNED AND SEALED}**

[Antoine Yassa]

---

Antoine R. Yassa, P. Geo.

## CERTIFICATE OF QUALIFIED PERSON

**DAVID BURGA, P. GEO.**

I, David Burga, P. Geo., residing at 3884 Freeman Terrace, Mississauga, Ontario, do hereby certify that:

1. I am an independent geological consultant contracted by P&E Mining Consultants Inc.
2. This certificate applies to the technical report titled "Technical Report and Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada" (the "Technical Report"), with an effective date of September 5, 2010.
3. I am a graduate of the University of Toronto with a Bachelor of Science degree in Geological Sciences (1997). I have worked as a geologist for a total of 12 years since obtaining my B.Sc. degree. I am a geological consultant currently licensed by the Association of Professional Geoscientists of Ontario (License No 1836).

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

My relevant experience for the purpose of the Technical Report is:

- Exploration Geologist, Cameco Gold ..... 1997-1998
- Field Geophysicist, Quantec Geoscience ..... 1998-1999
- Geological Consultant, Andeburg Consulting Ltd. .... 1999-2003
- Geologist, Aeon Egmond Ltd. ..... 2003-2005
- Project Manager, Jacques Whitford ..... 2005-2008
- Exploration Manager – Chile, Red Metal Resources ..... 2008-2009
- Consulting Geologist ..... 2009-Present

4. I have visited the Alexo Property on May 10, 2010.
5. I am responsible for co-authoring Sections 13 and 16 of the Technical Report.
6. I am independent of the Issuer applying the test in Section 1.4 of NI 43-101.
7. I have had no prior involvement with the Property that is the subject of this Technical Report.
8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
9. As of the date of this certificate, 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.

Effective Date: September 5, 2010

Signed Date: November 3, 2010

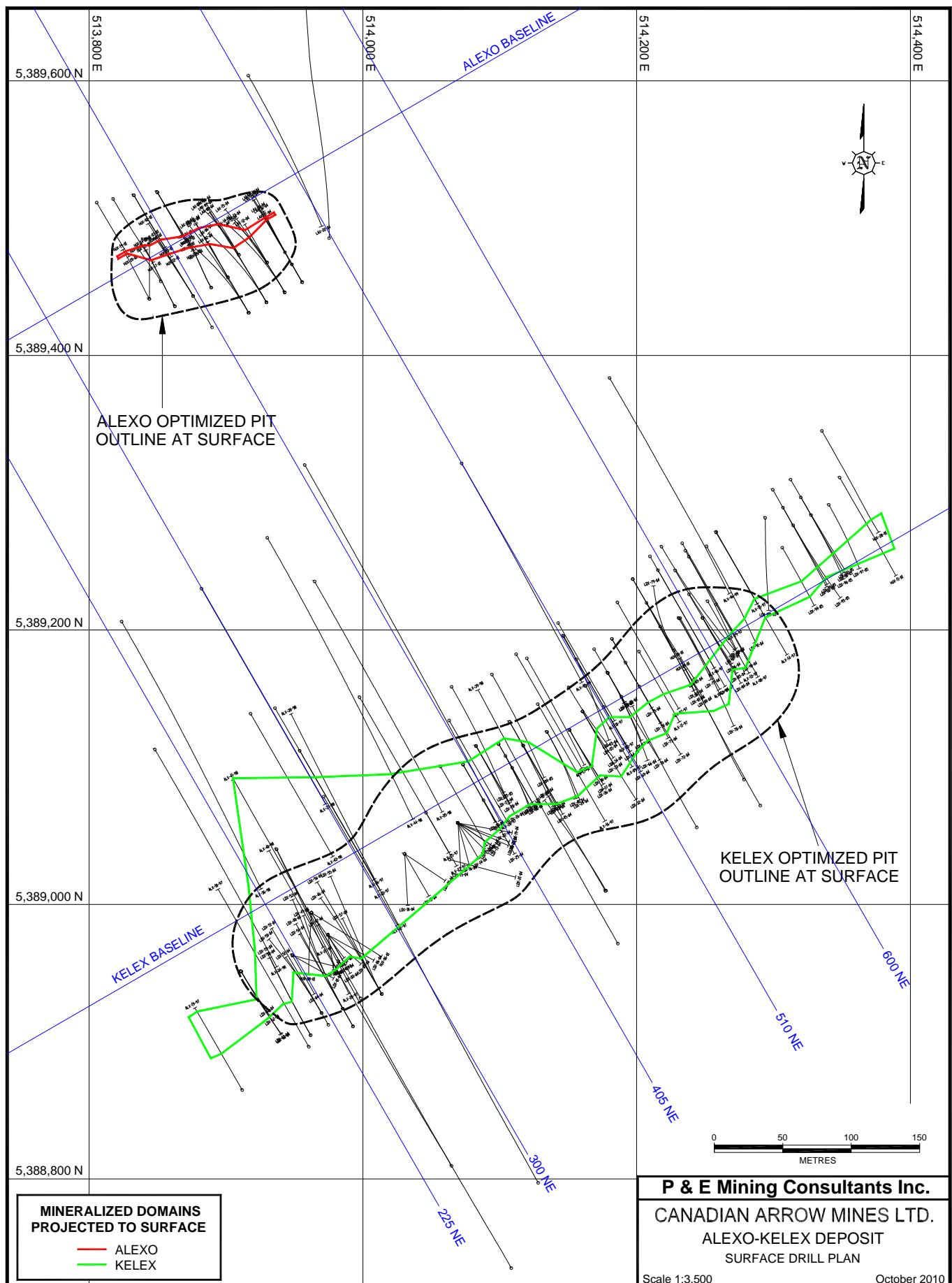
***{SIGNED AND SEALED}***

David Burga

---

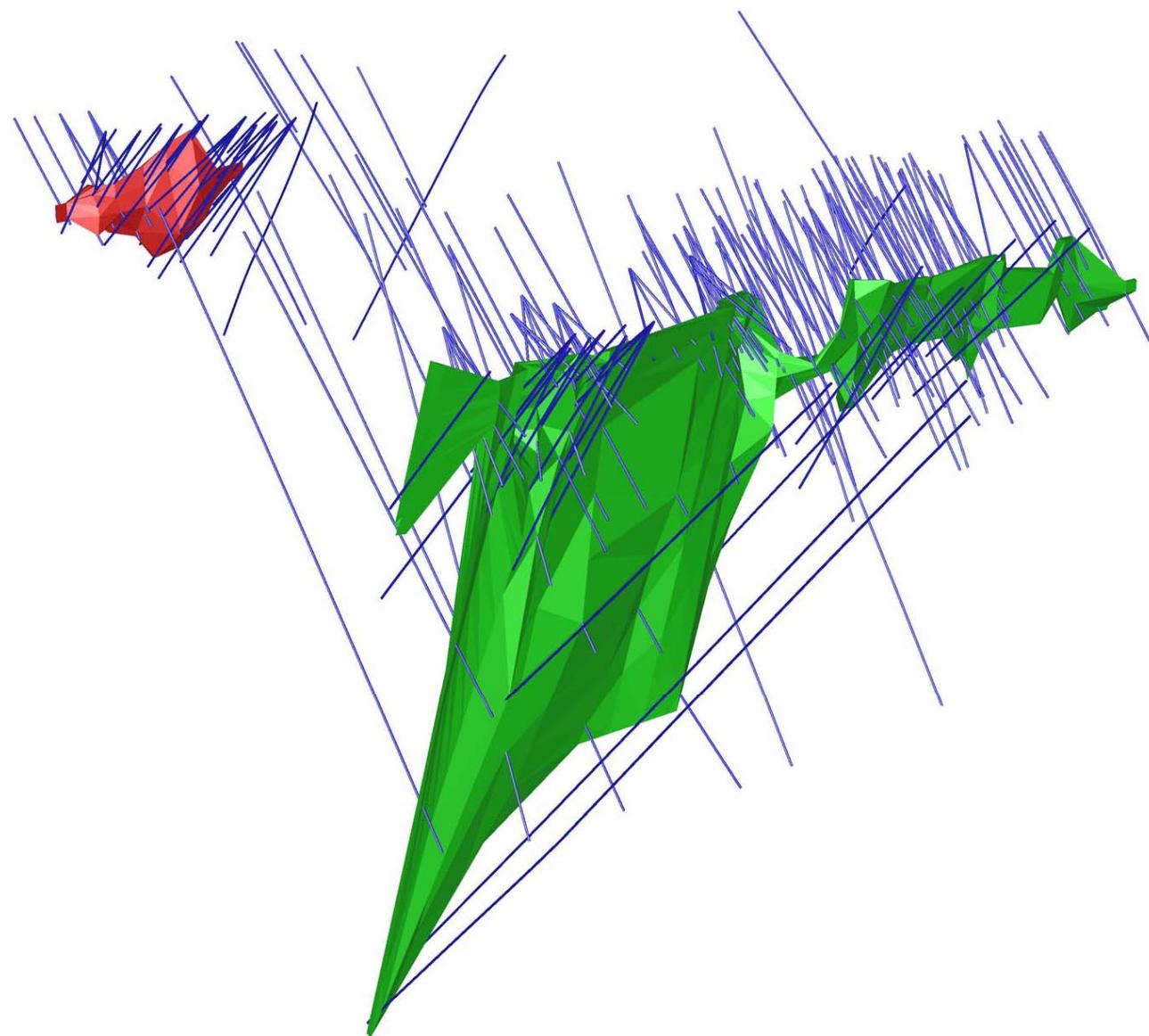
David Burga, P. Geo.

**APPENDIX I:**  
**DRILL HOLE PLAN**



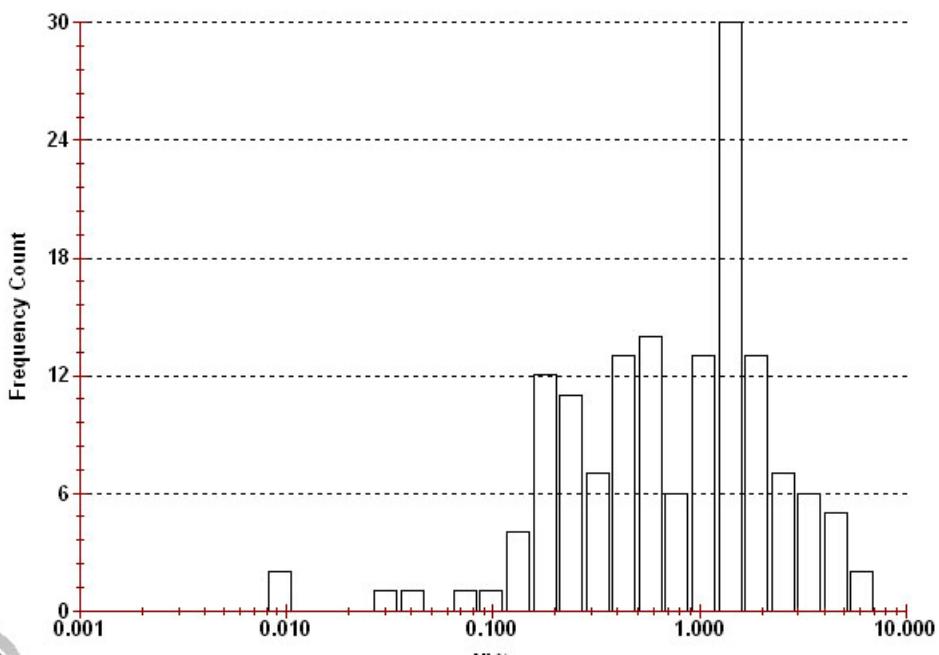
**APPENDIX II:**  
**3D DOMAINS**

# ALEXO-KELEX DEPOSIT - 3D DOMAINS



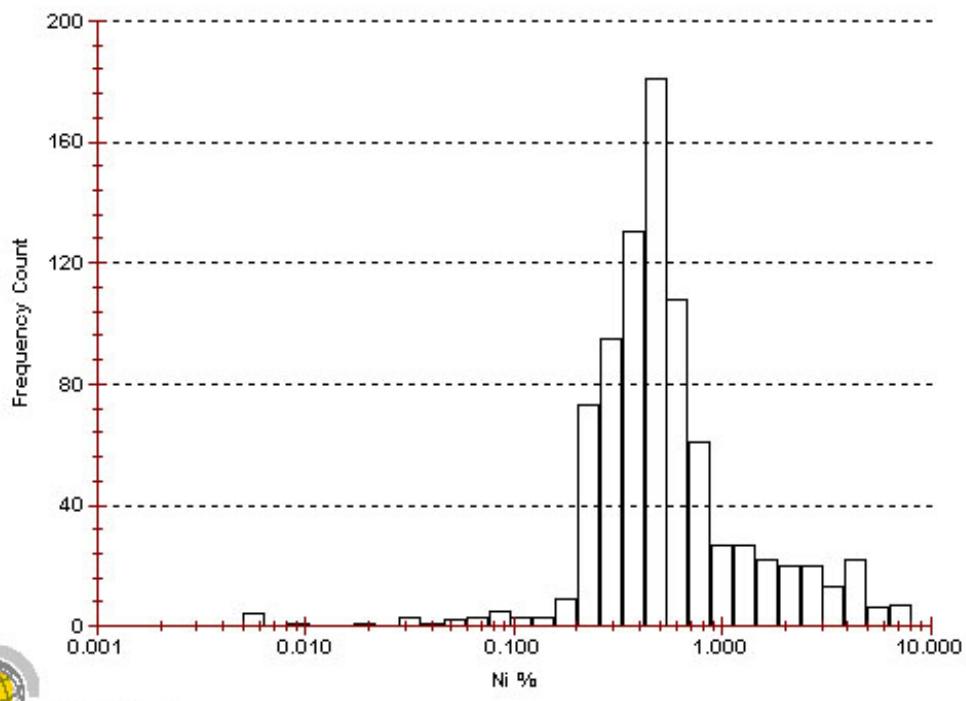
**APPENDIX III:**  
**LOG NORMAL HISTOGRAMS**

### ALEXO Ni LOG NORMAL HISTOGRAM



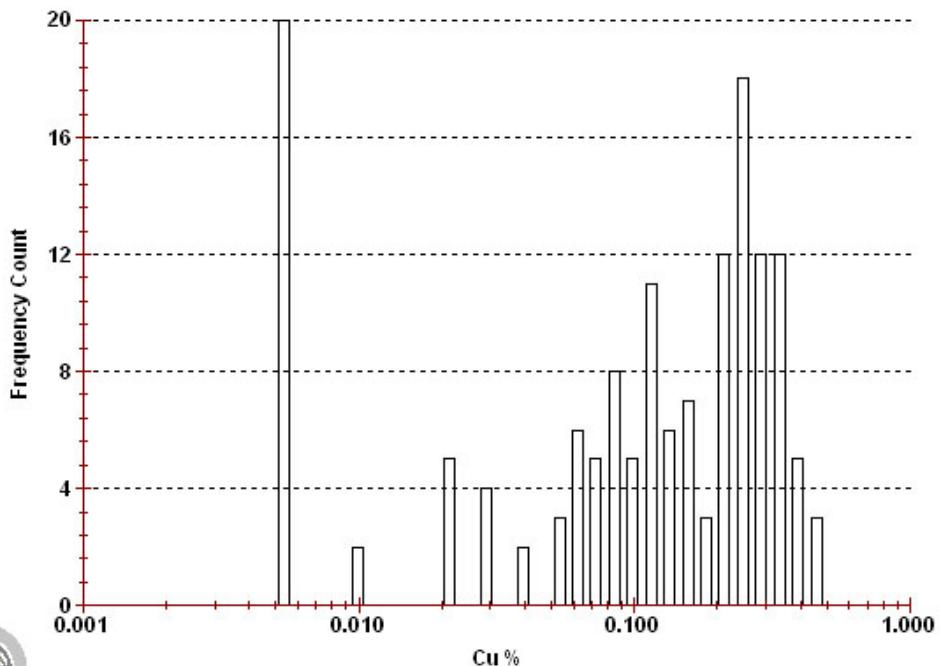
Software By Gemcom

### KELEX Ni LOG NORMAL HISTOGRAM



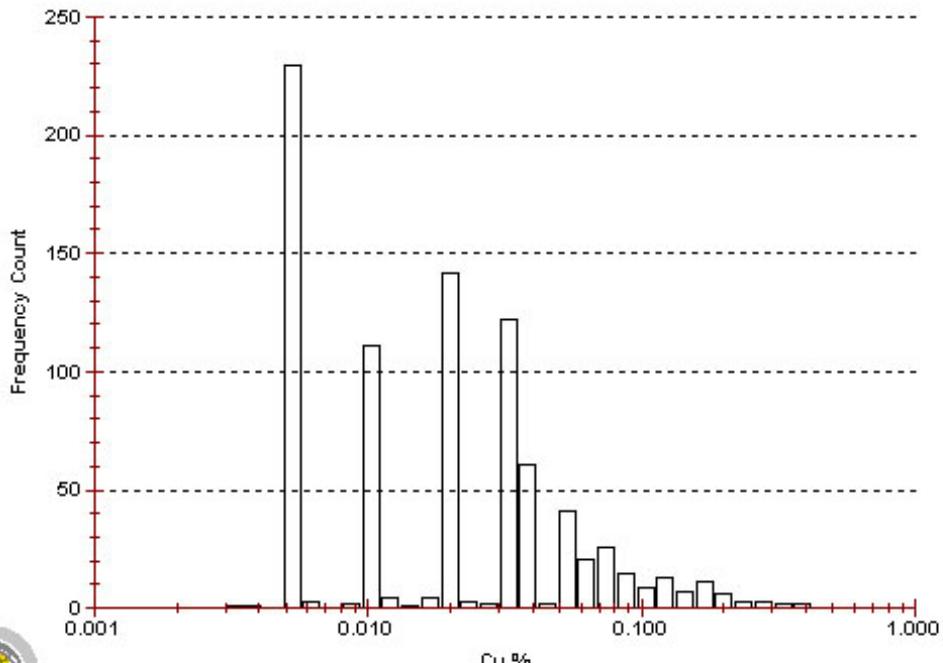
Software By Gemcom

### ALEXO Cu LOG NORMAL HISTOGRAM



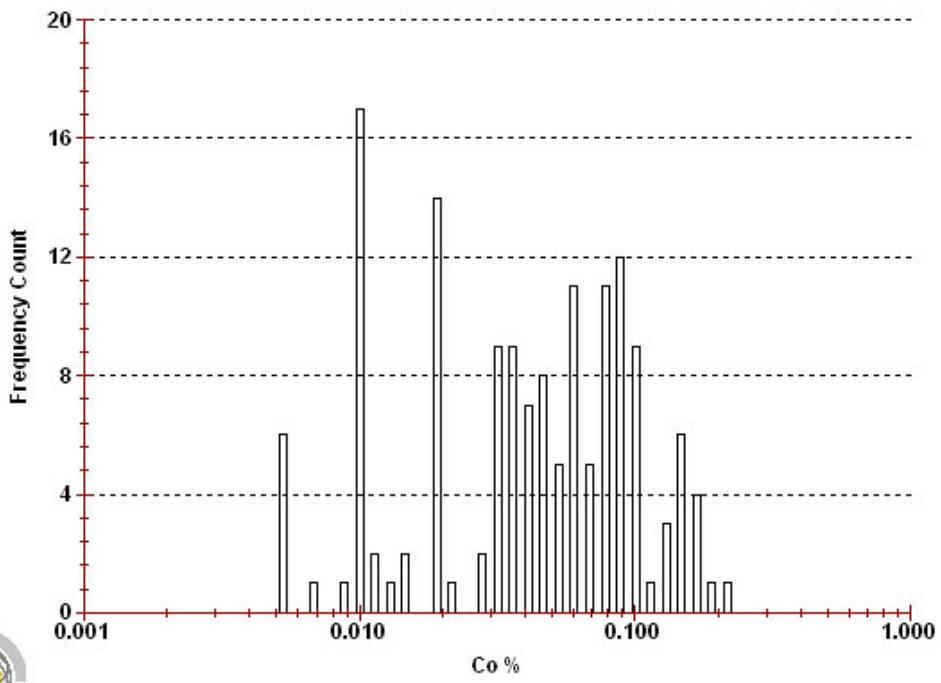
Software By Gemcom

### KELEX Cu LOG NORMAL HISTOGRAM

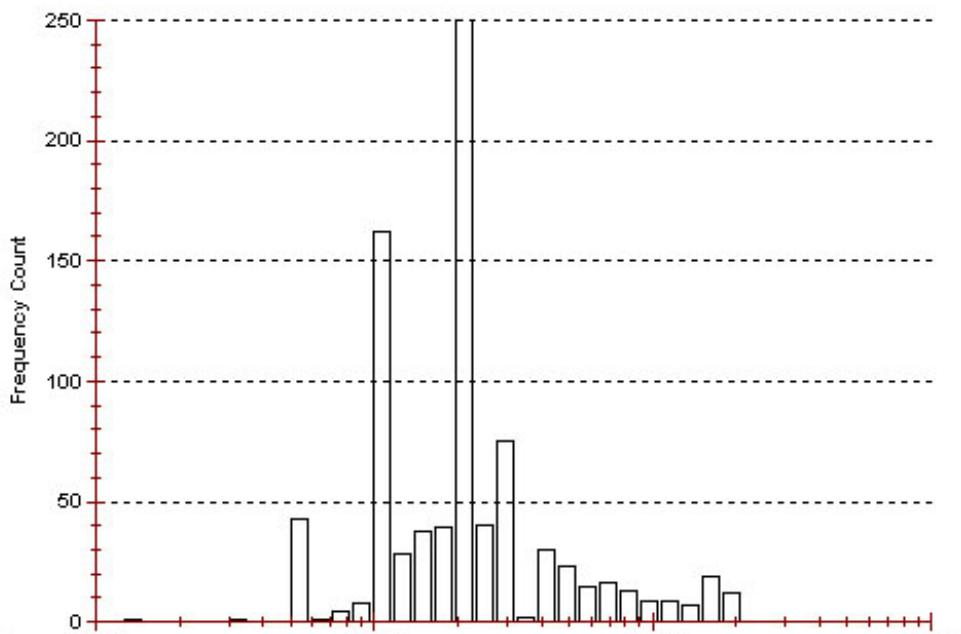


Software By Gemcom

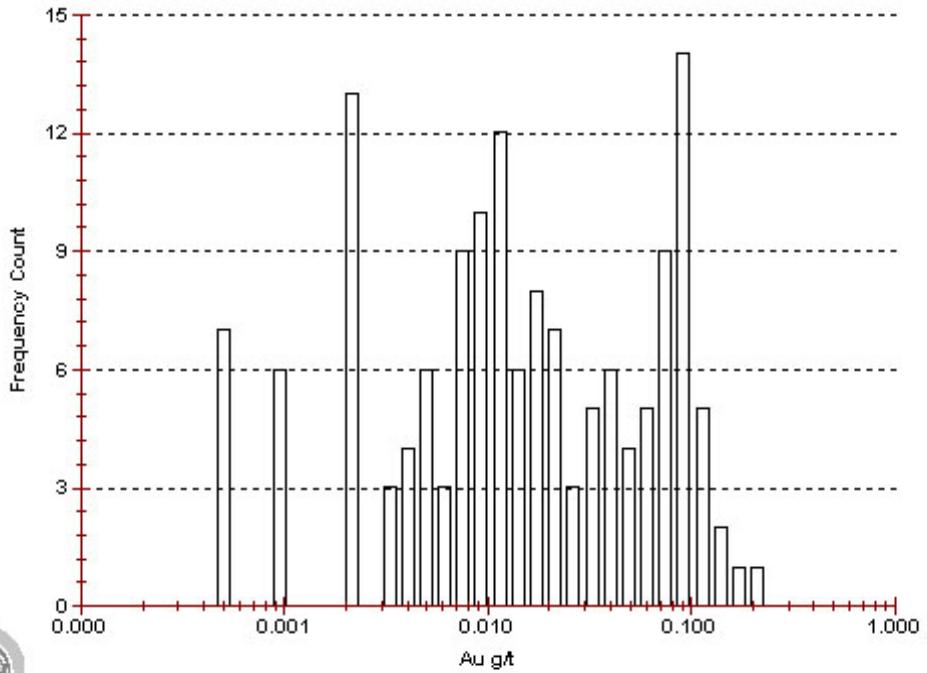
### ALEXO Co LOG NORMAL HISTOGRAM



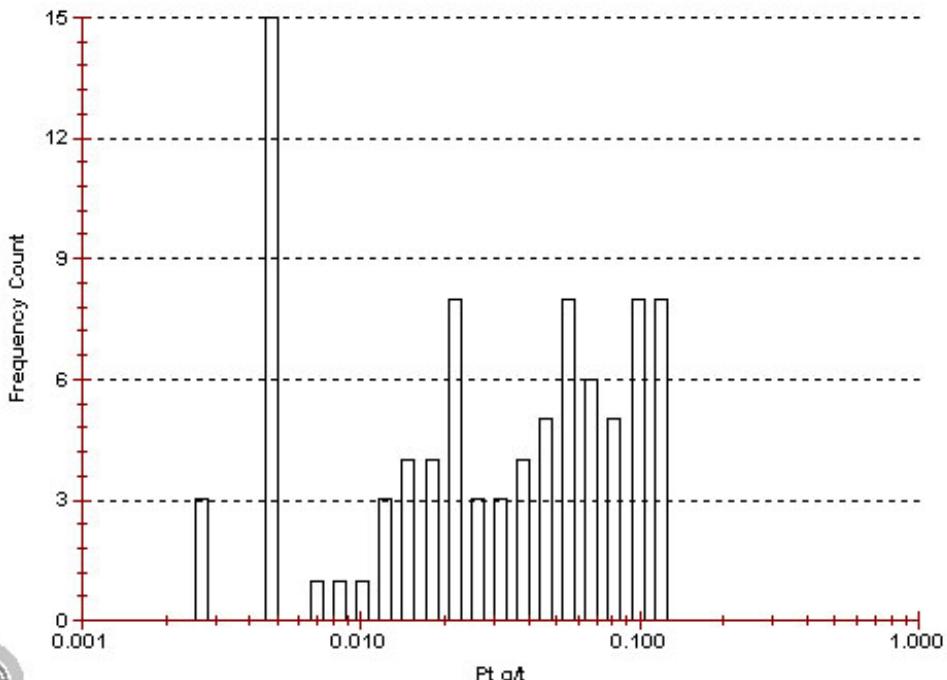
### KELEX Co LOG NORMAL HISTOGRAM



### ALEXO Au LOG NORMAL HISTOGRAM

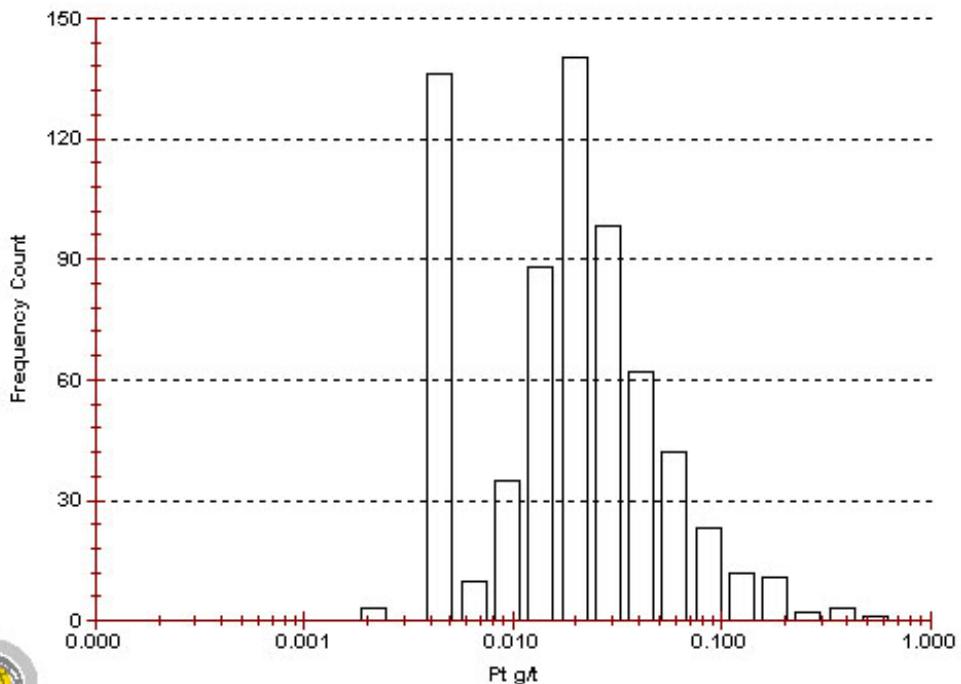


### ALEXO Pt LOG NORMAL HISTOGRAM

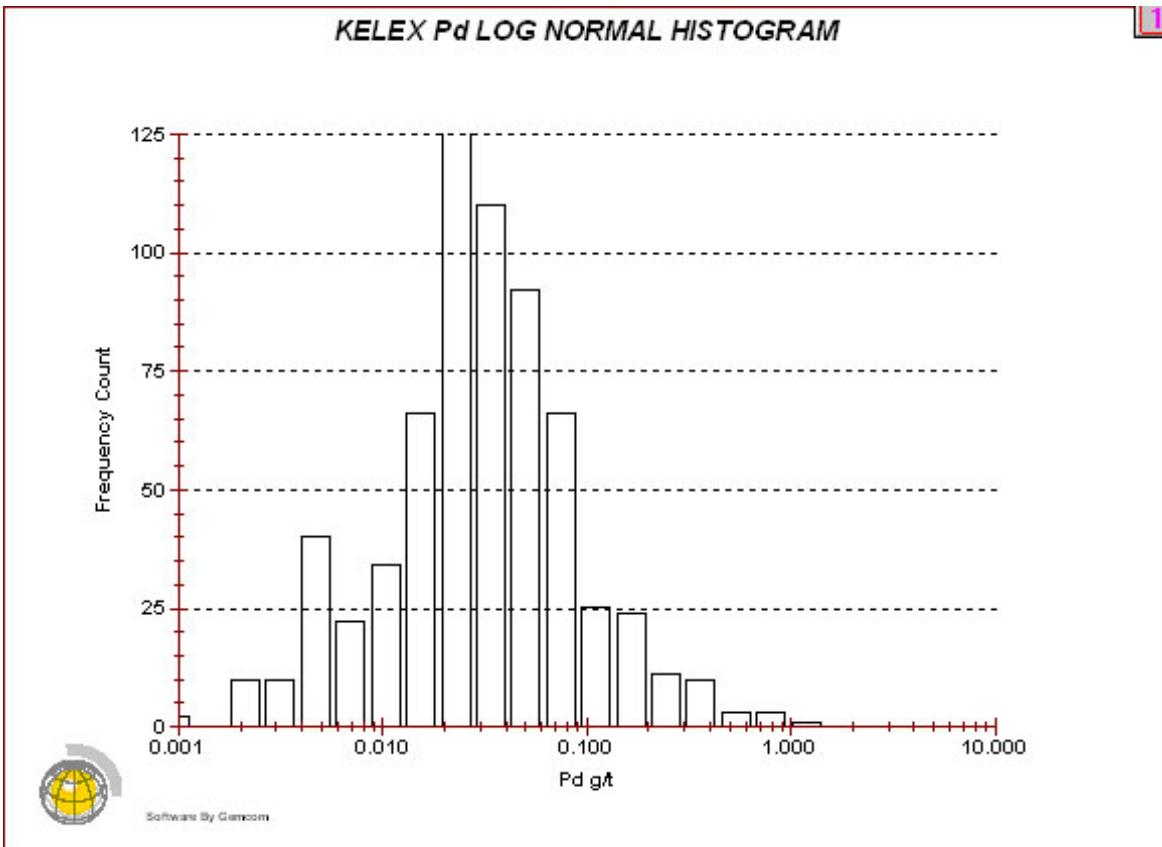
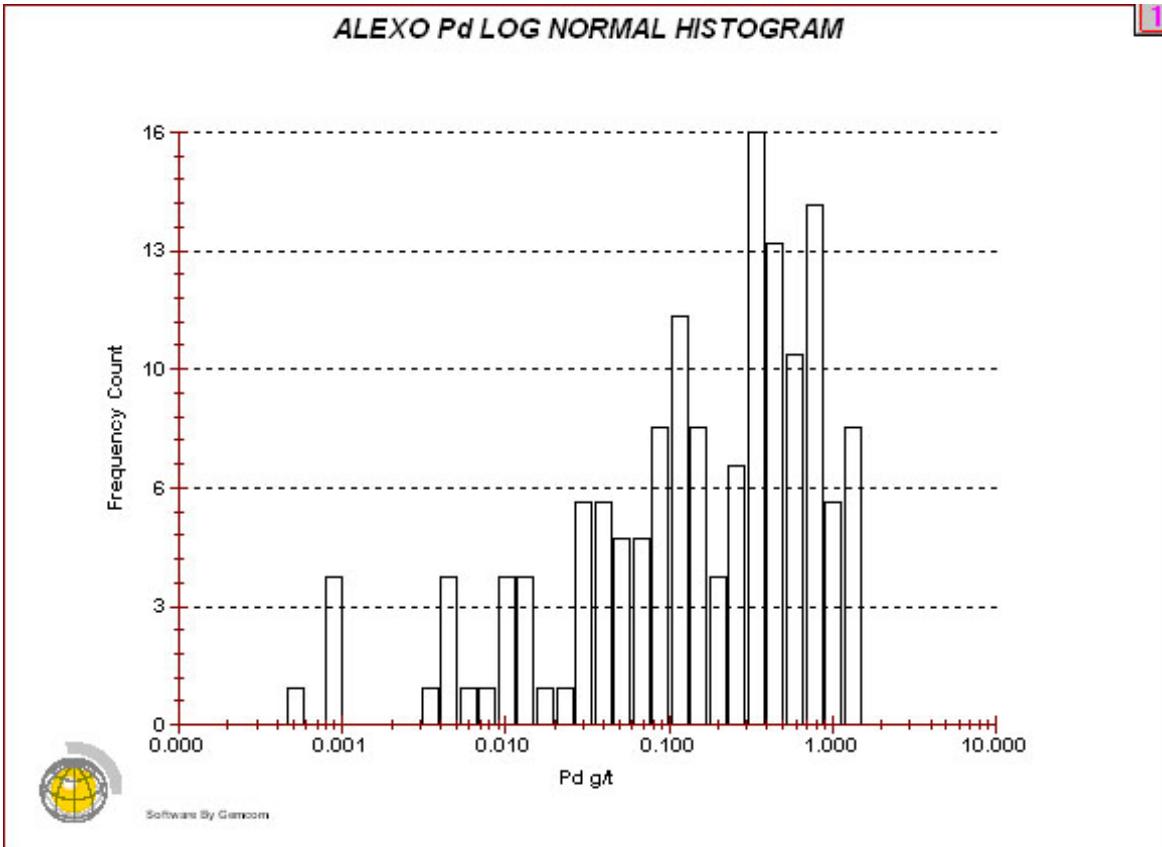


Software By Gemcom

### KELEX Pt LOG NORMAL HISTOGRAM

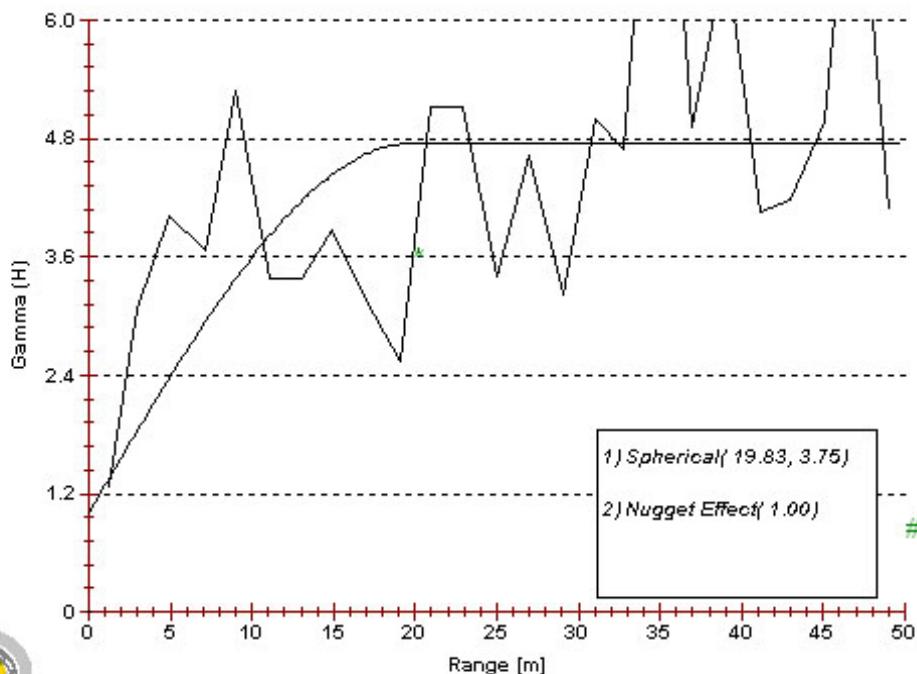


Software By Gemcom



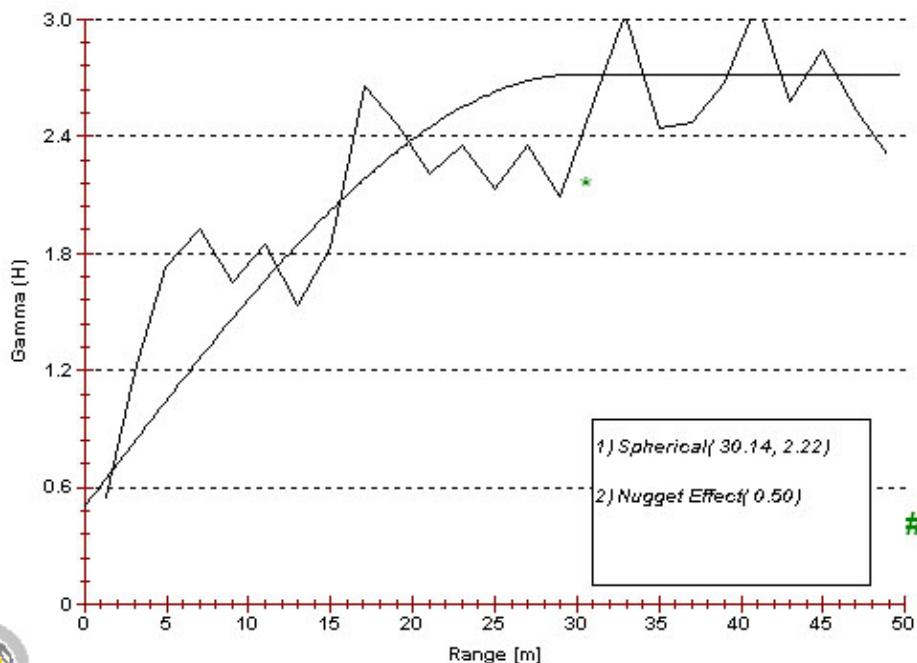
**APPENDIX IV:**  
**VARIOGRAMS**

### ALEXO Ni OMNIVARIOGRAM



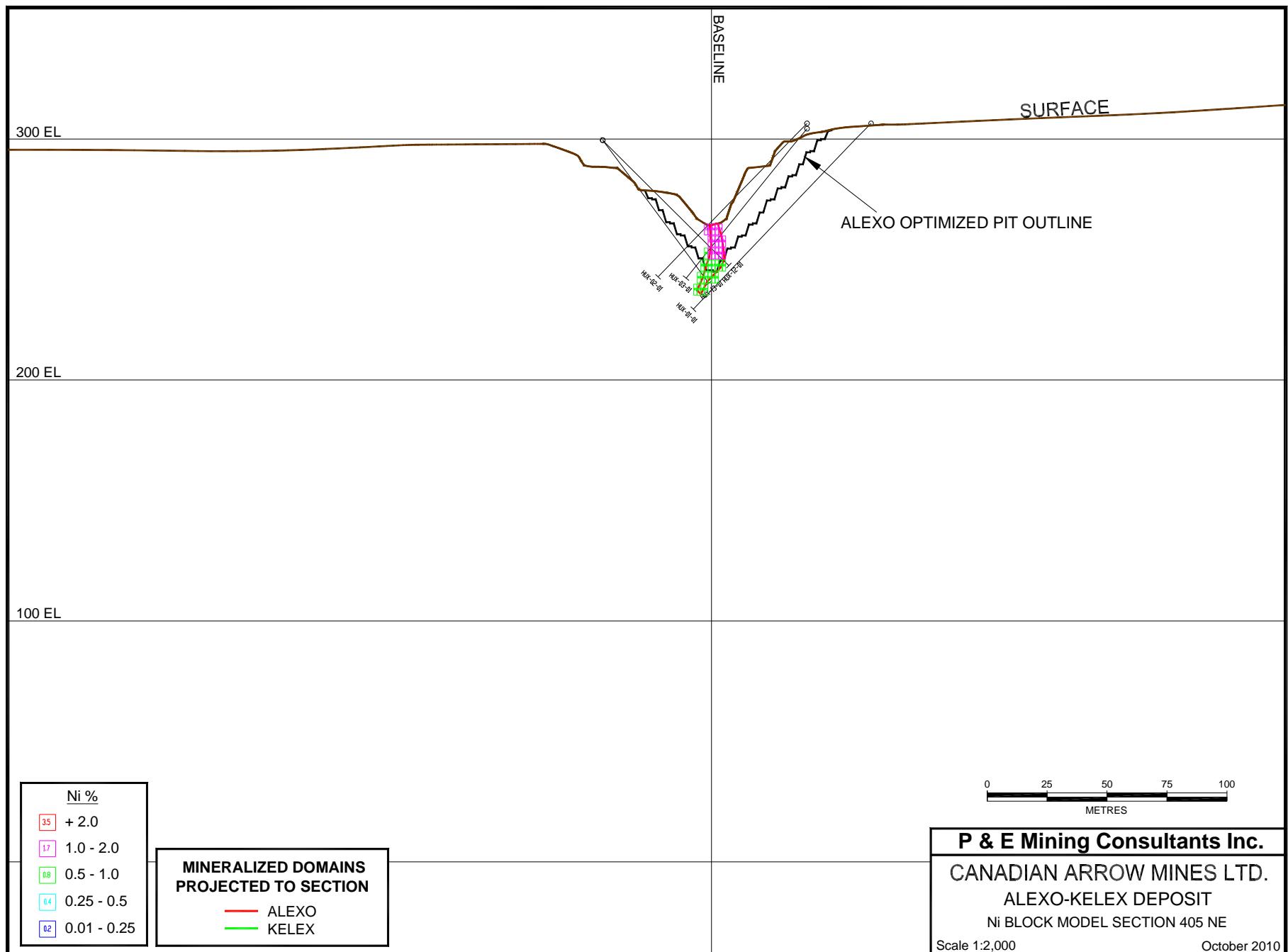
Software By Gemicom

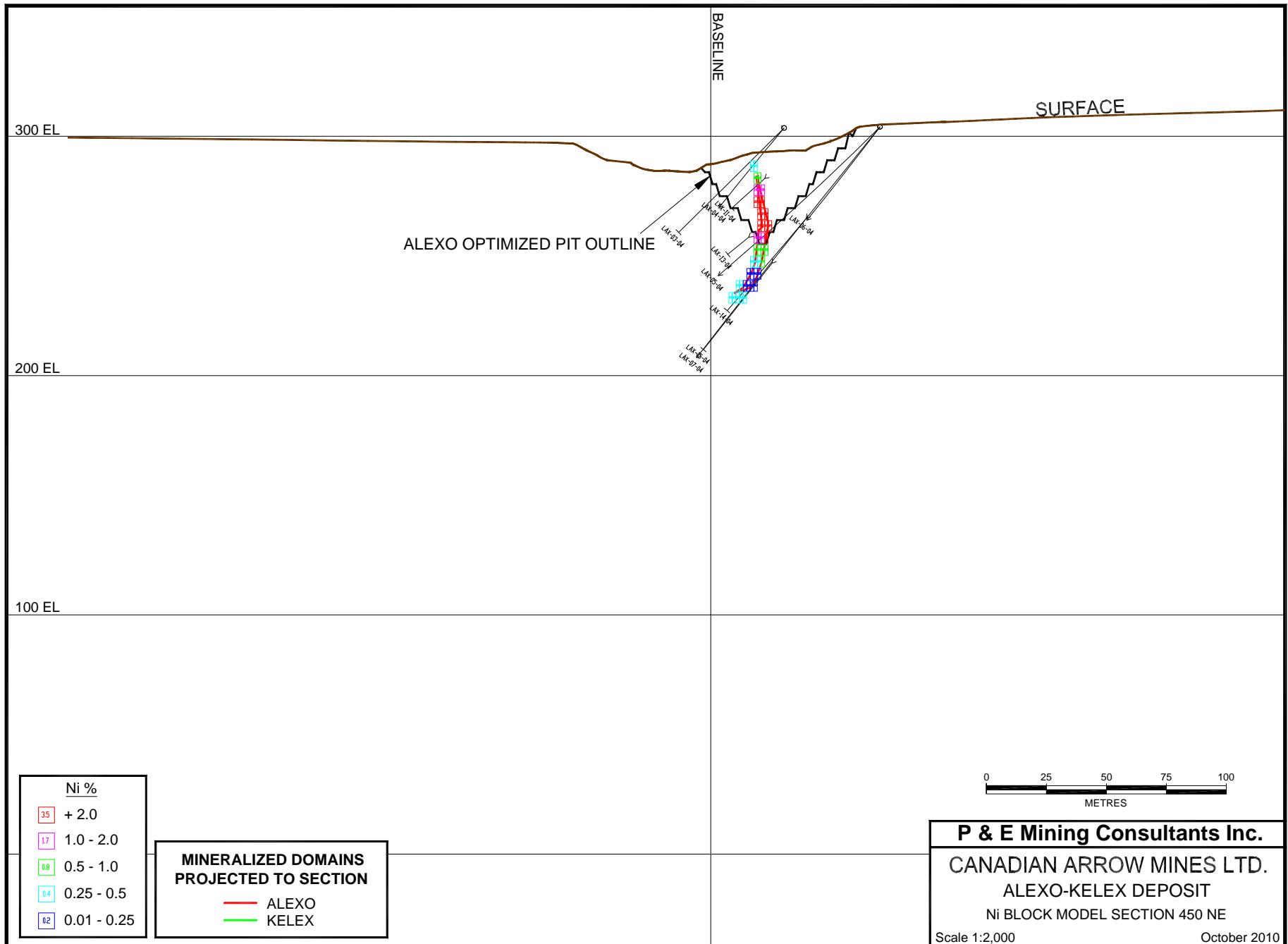
### KELEX Ni OMNIVARIOGRAM

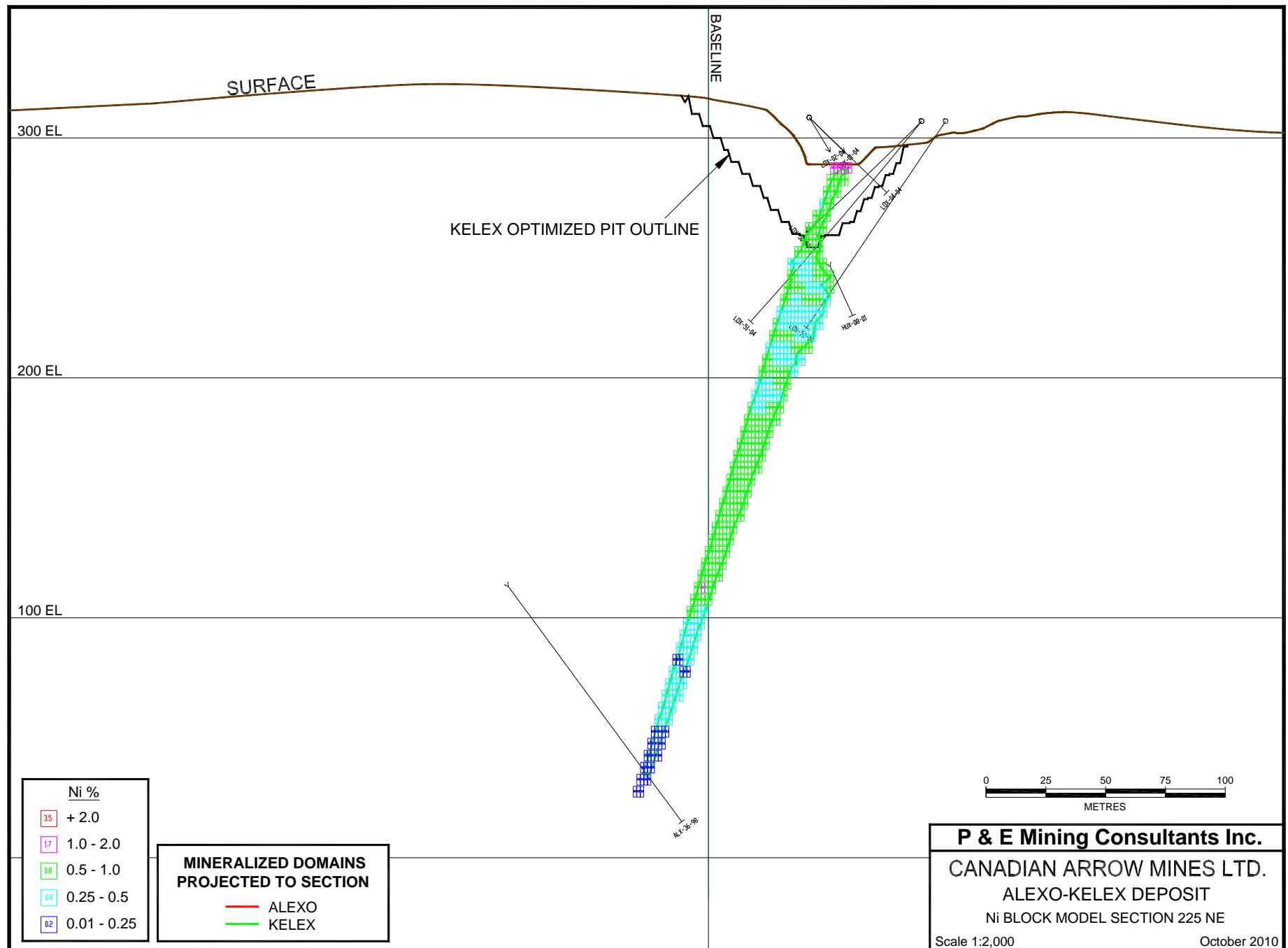


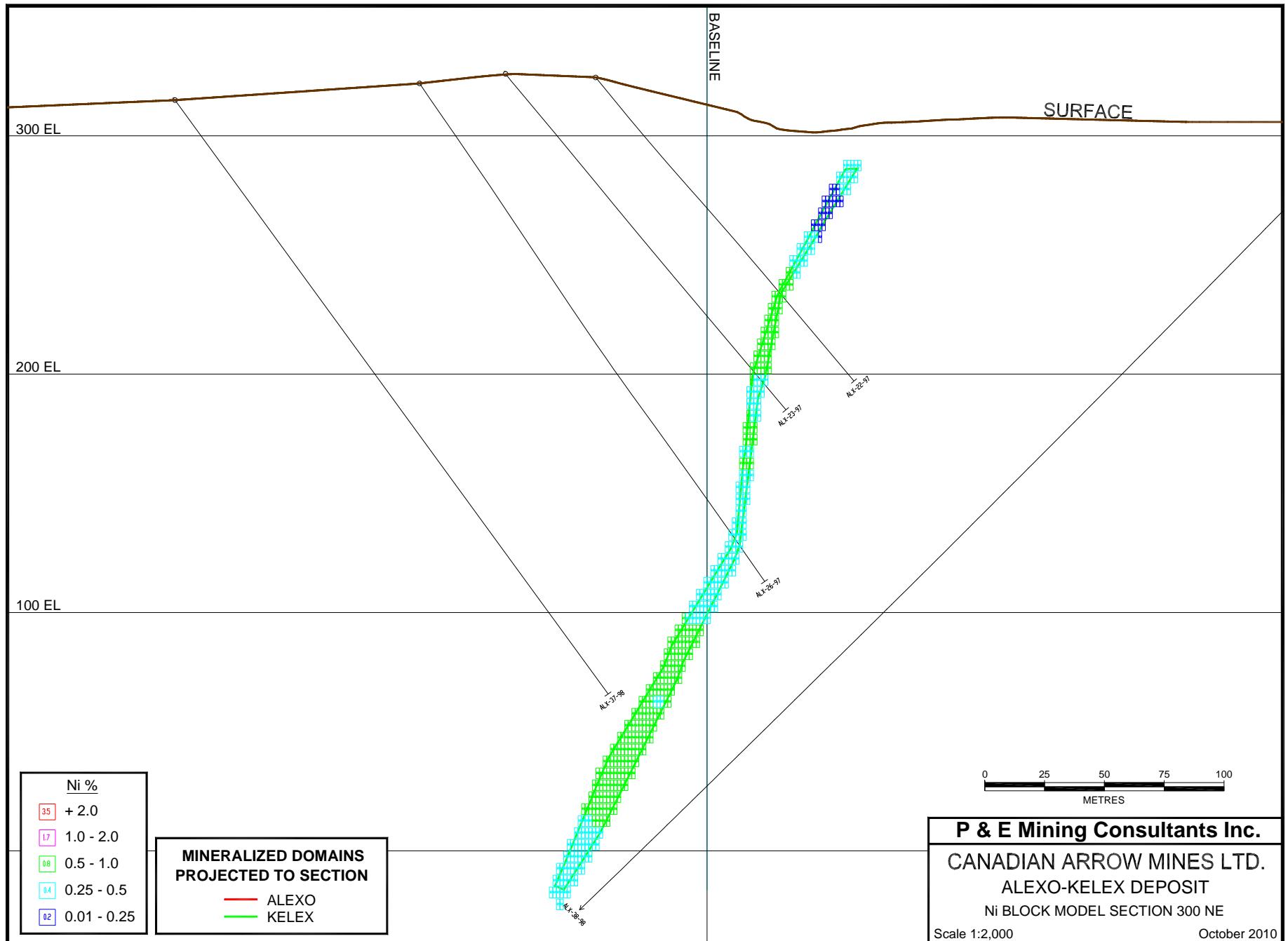
Software By Gemicom

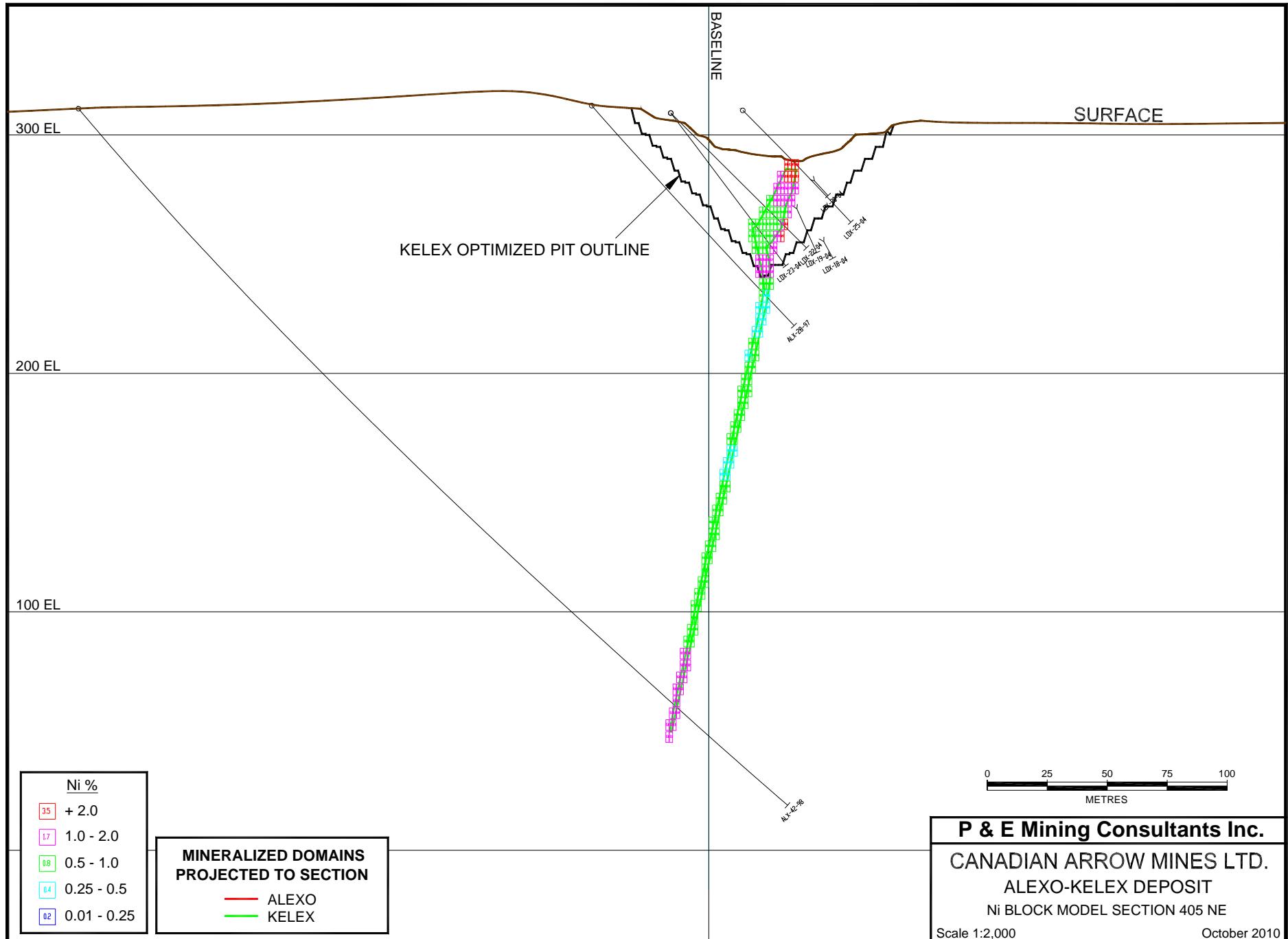
**APPENDIX V:**  
**NI BLOCK MODEL CROSS SECTIONS AND PLANS**

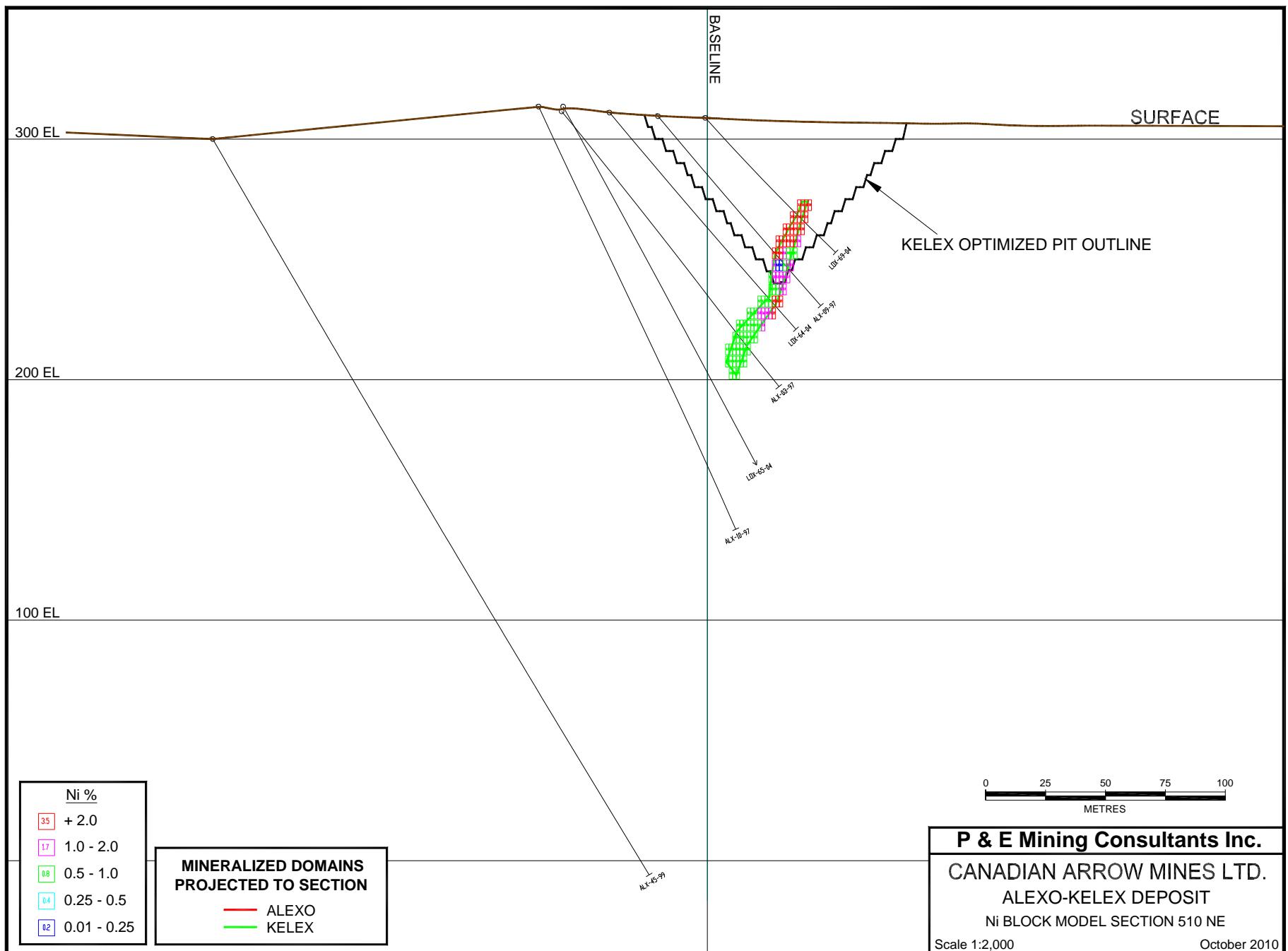


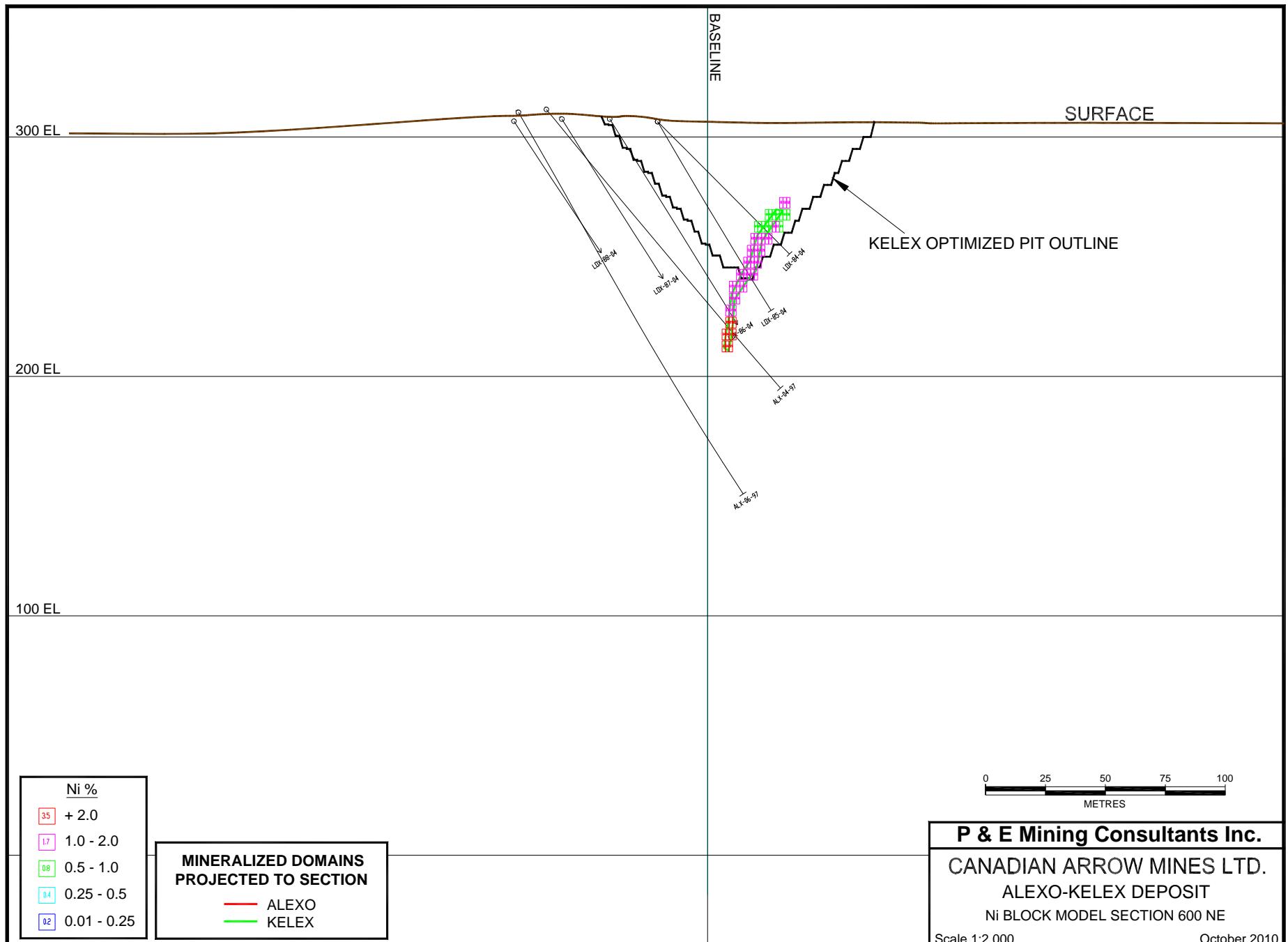


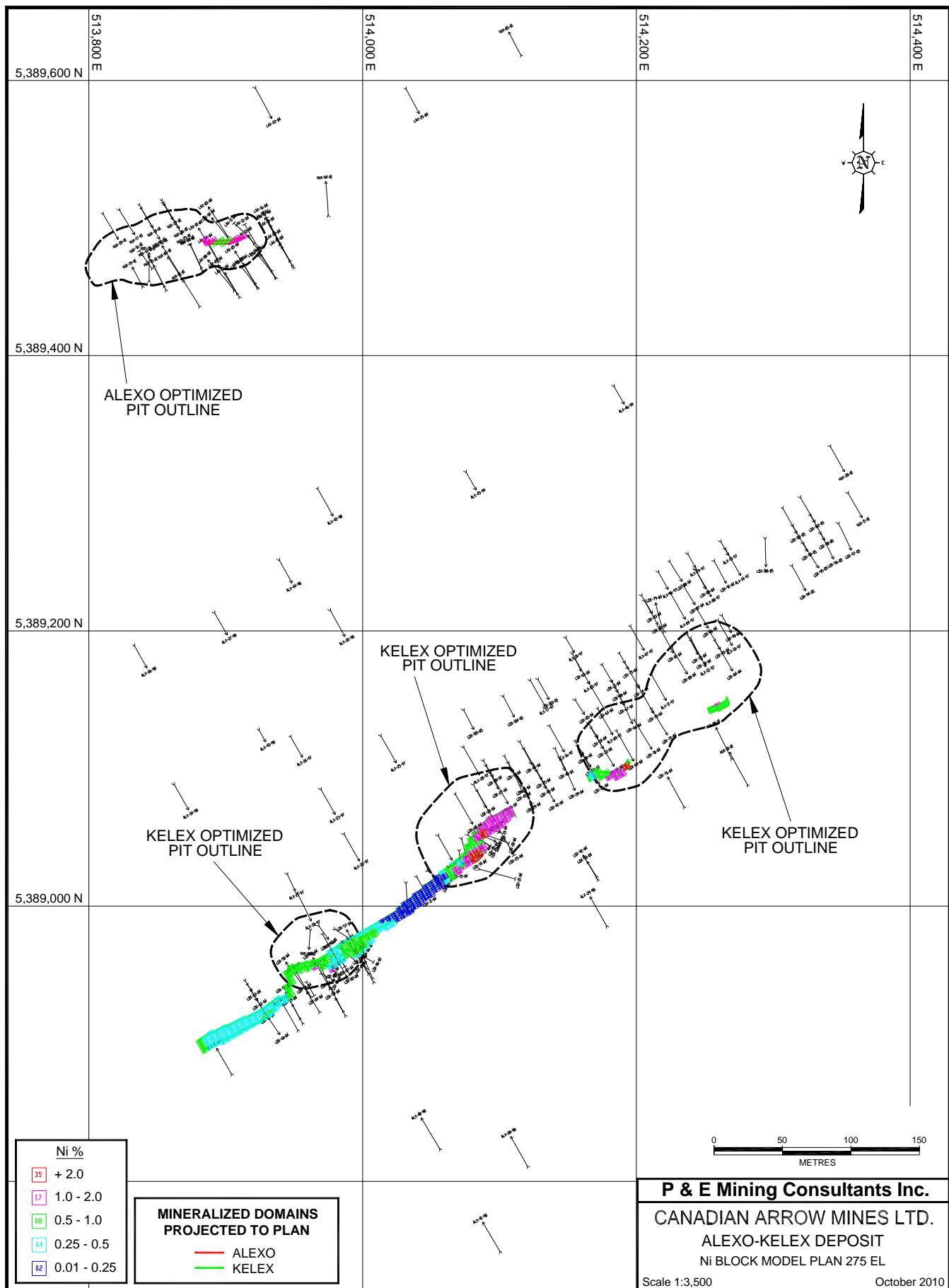


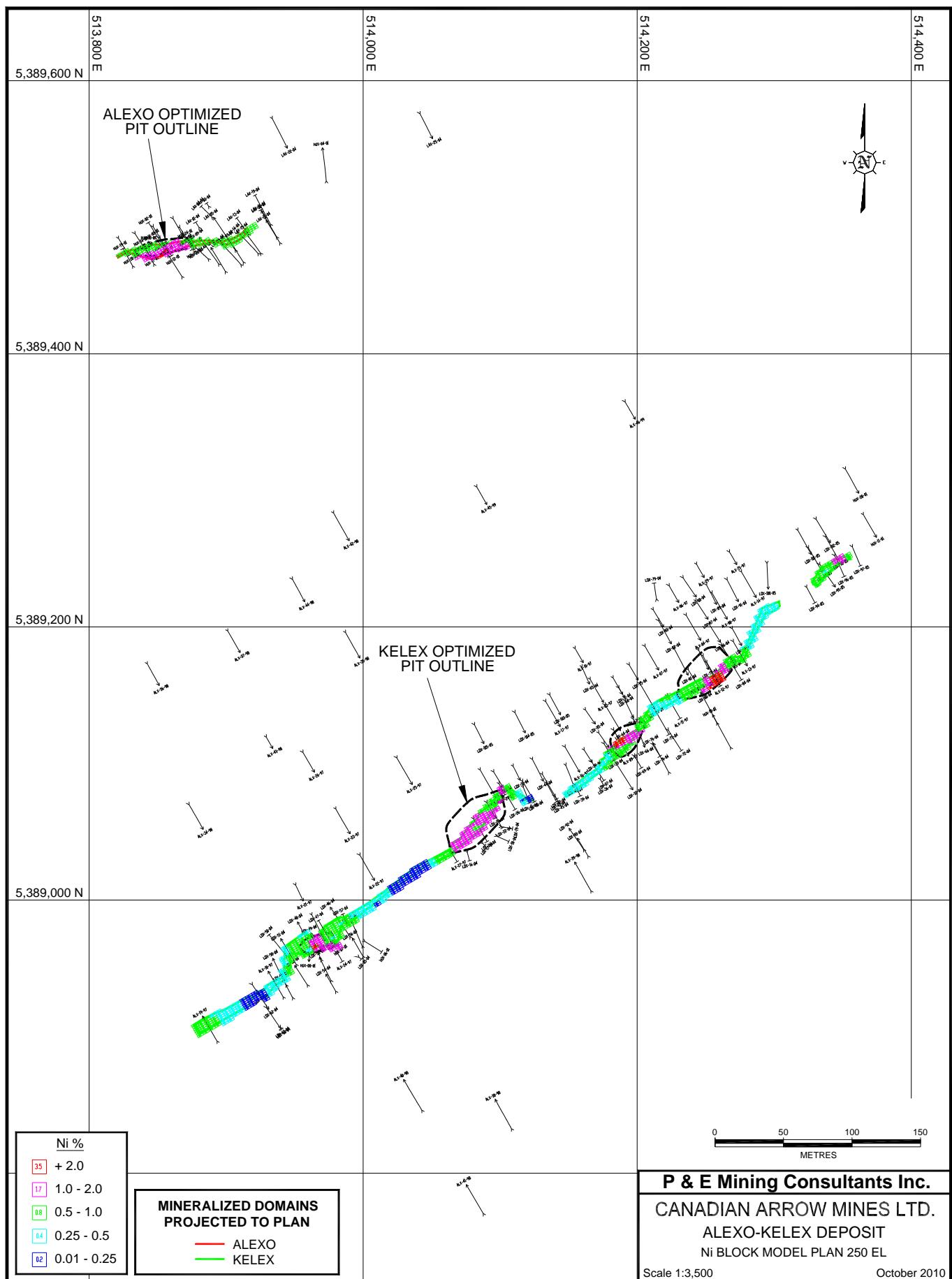


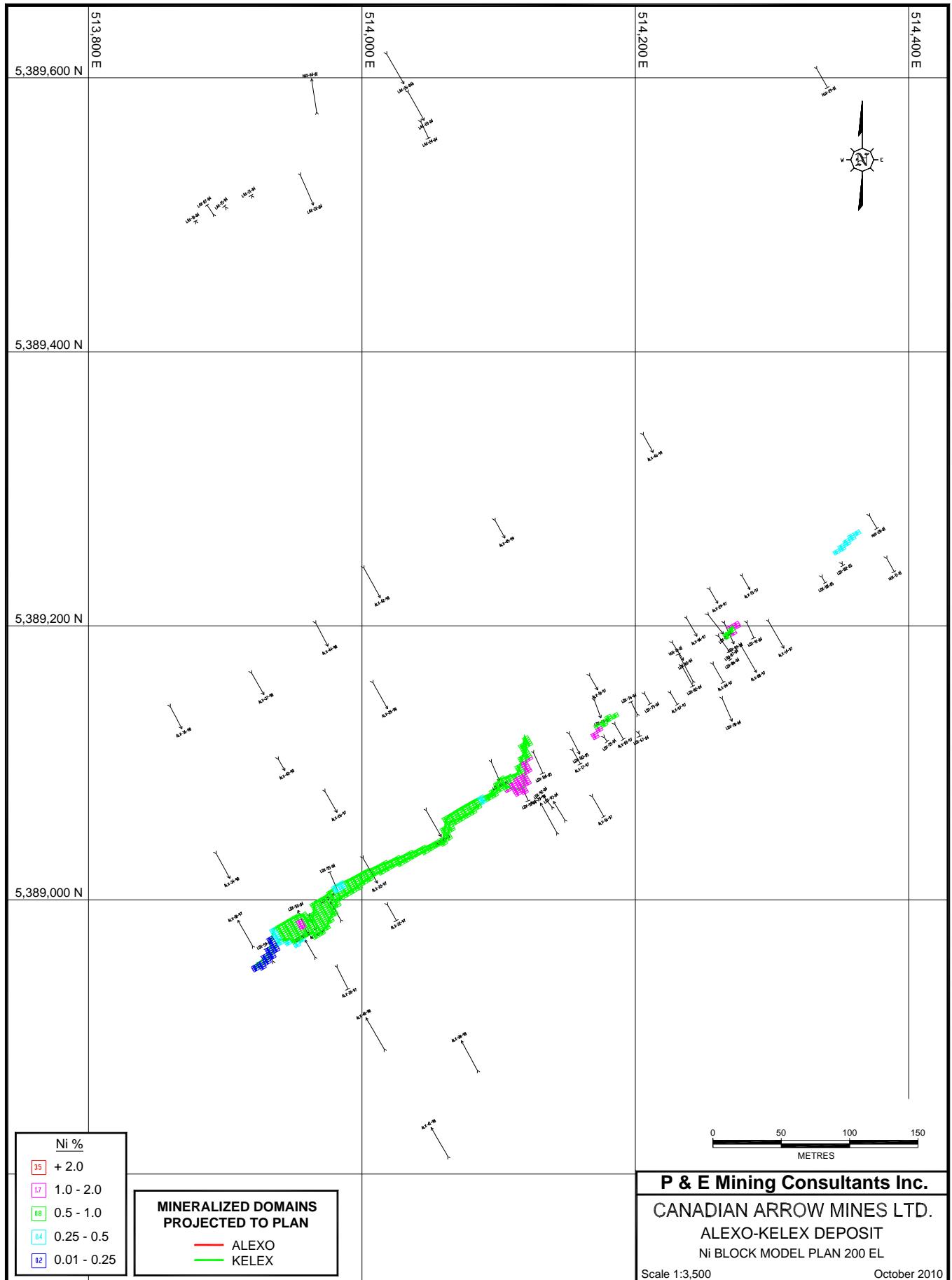


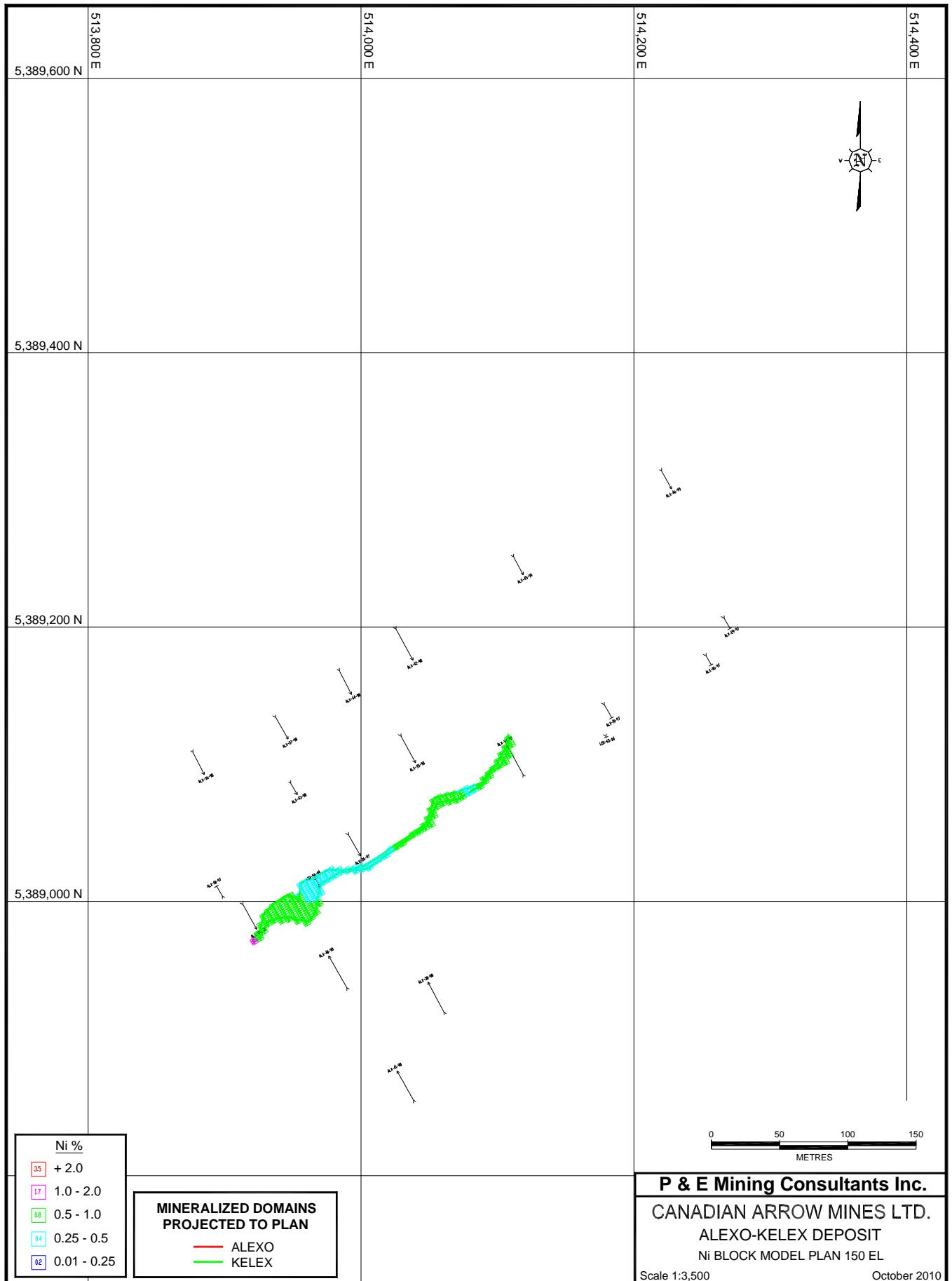




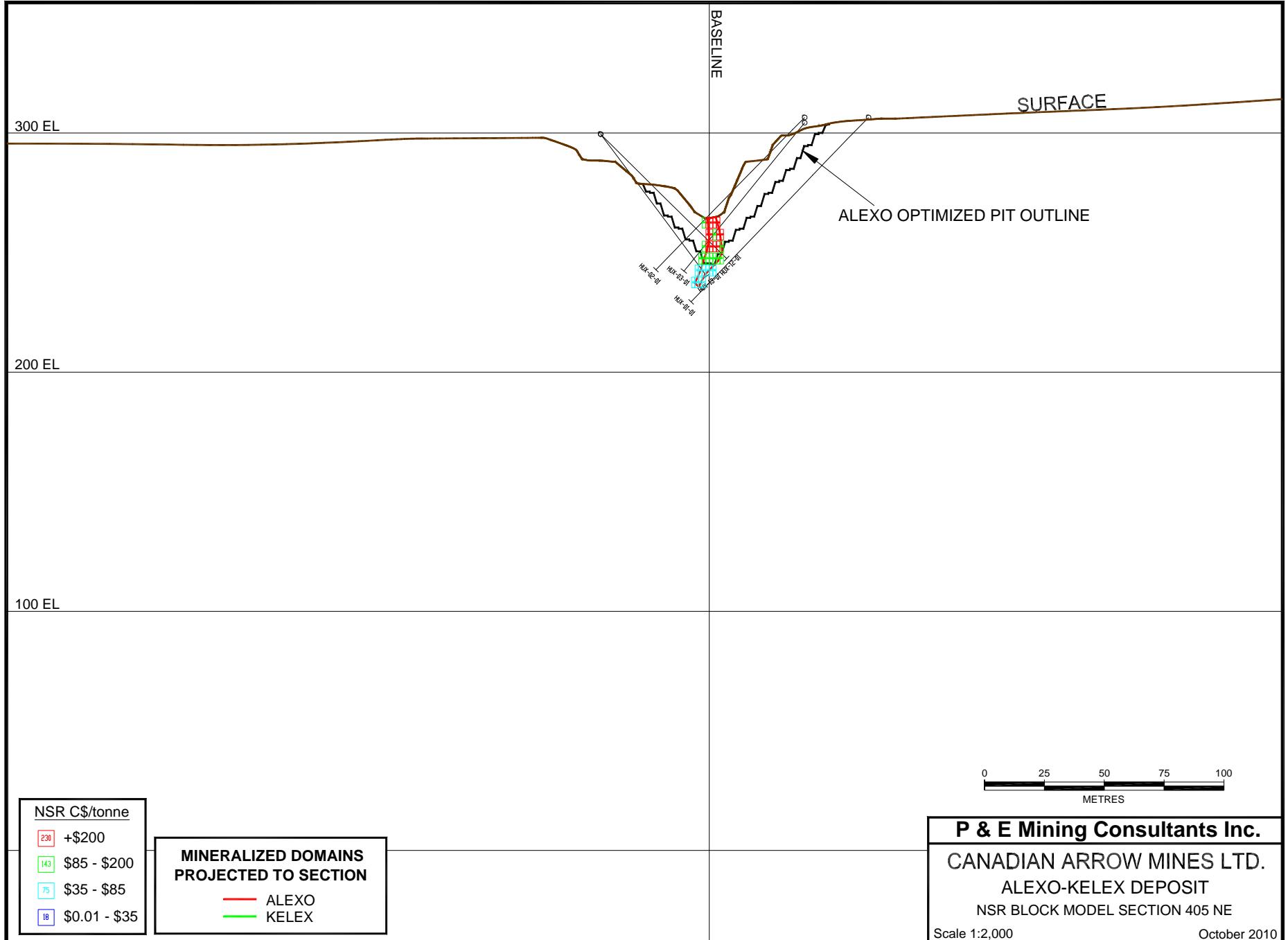


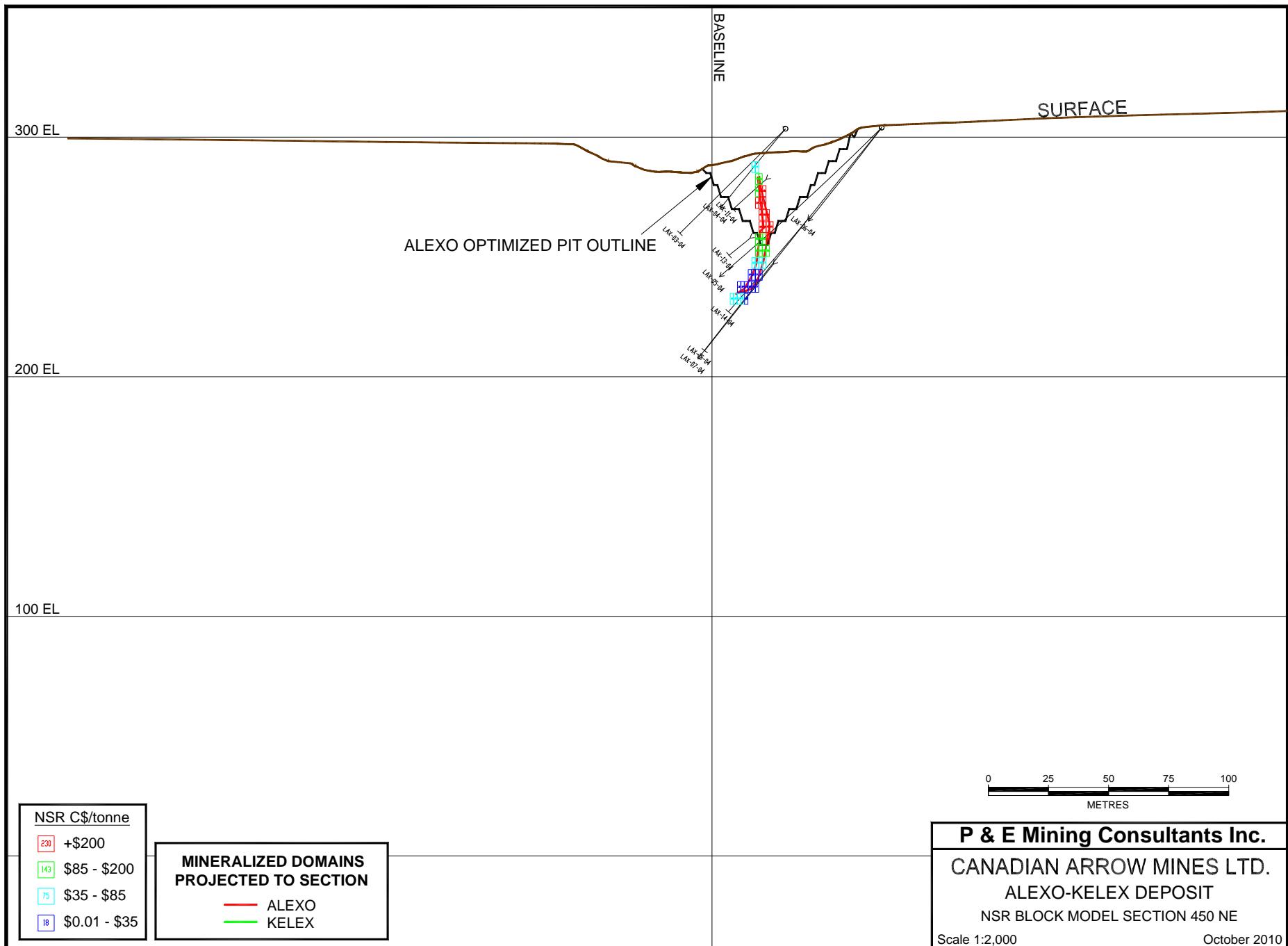


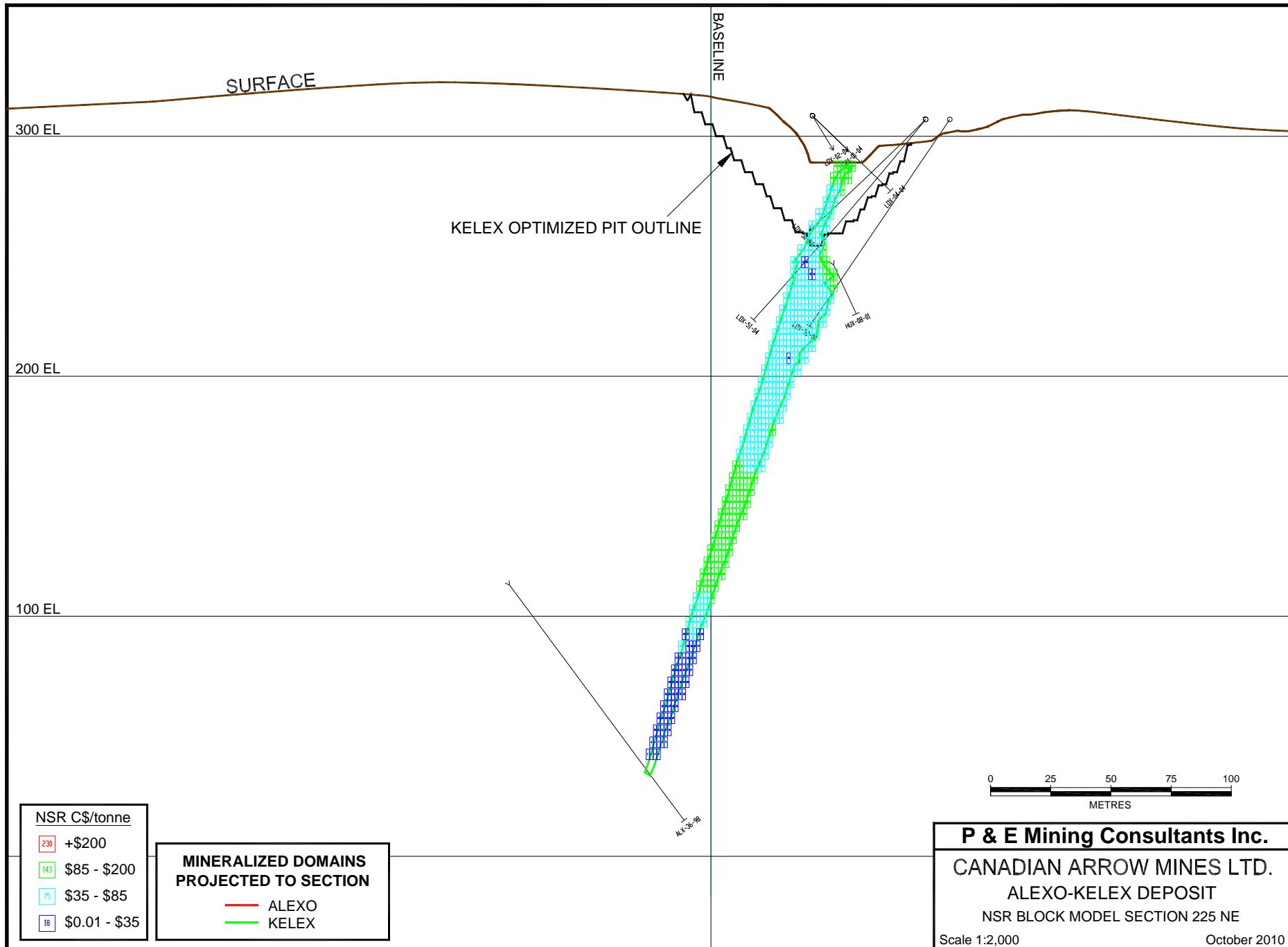


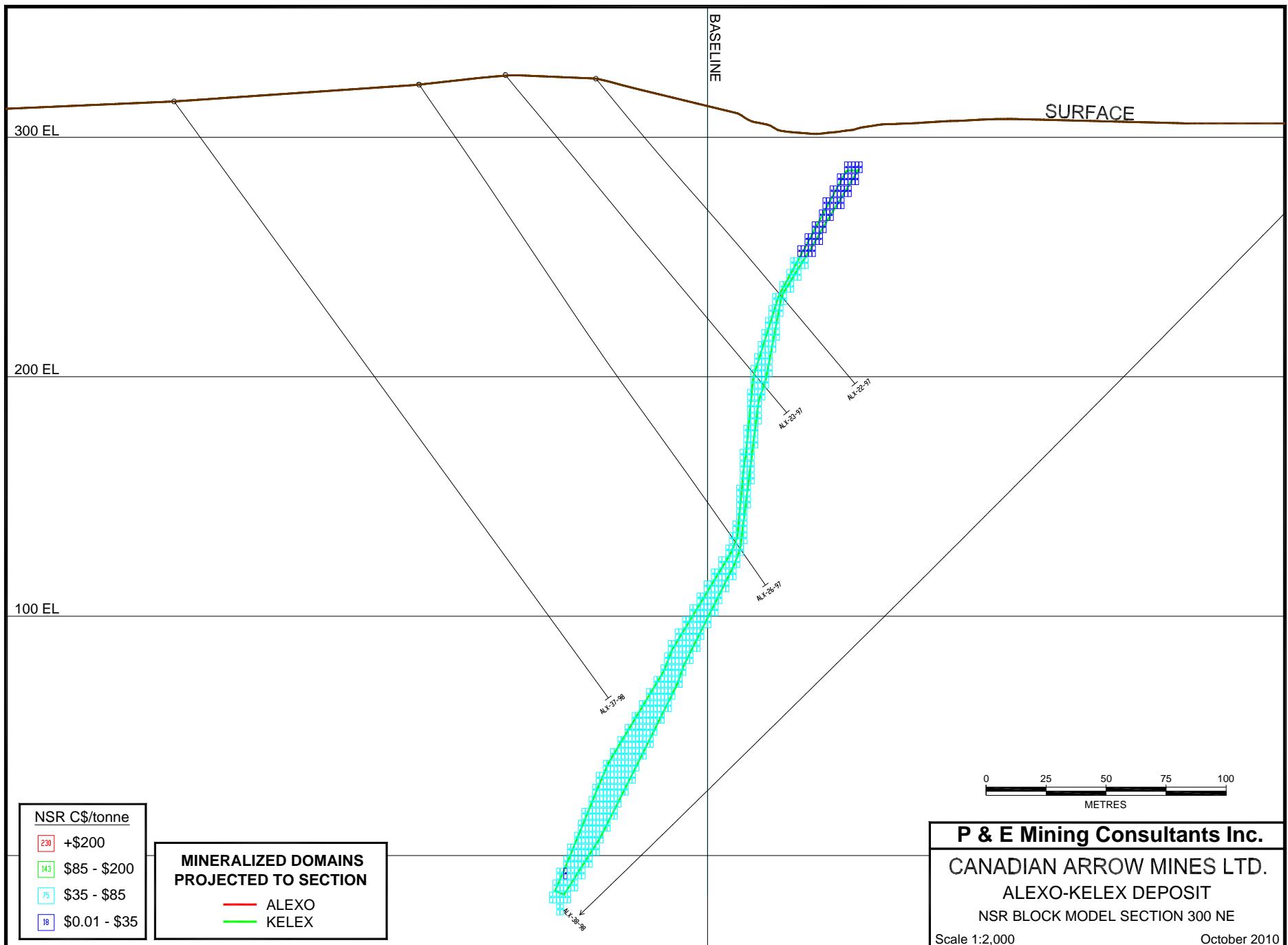


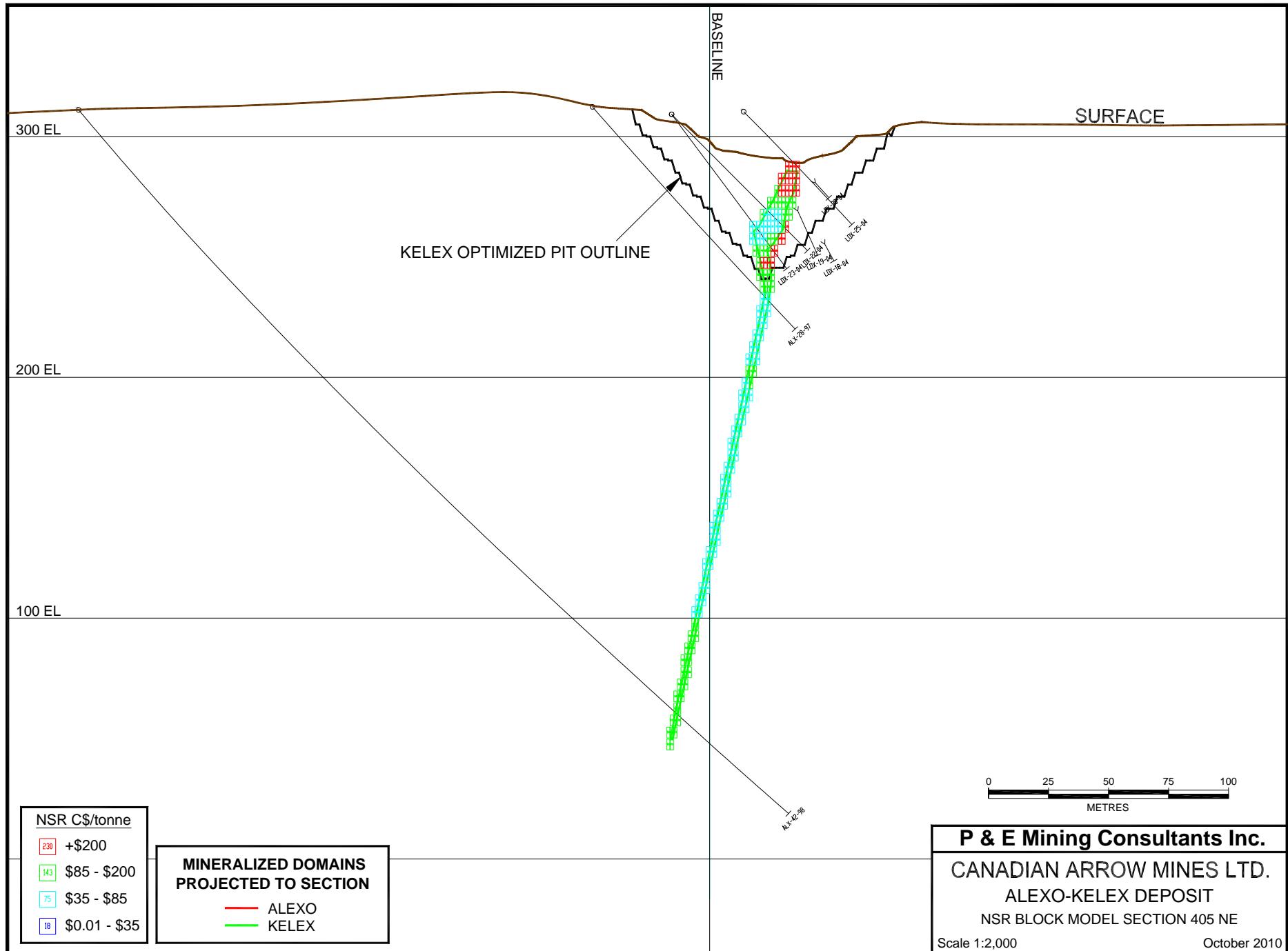
**APPENDIX VI:**  
**NSR BLOCK MODEL CROSS SECTIONS AND PLANS**

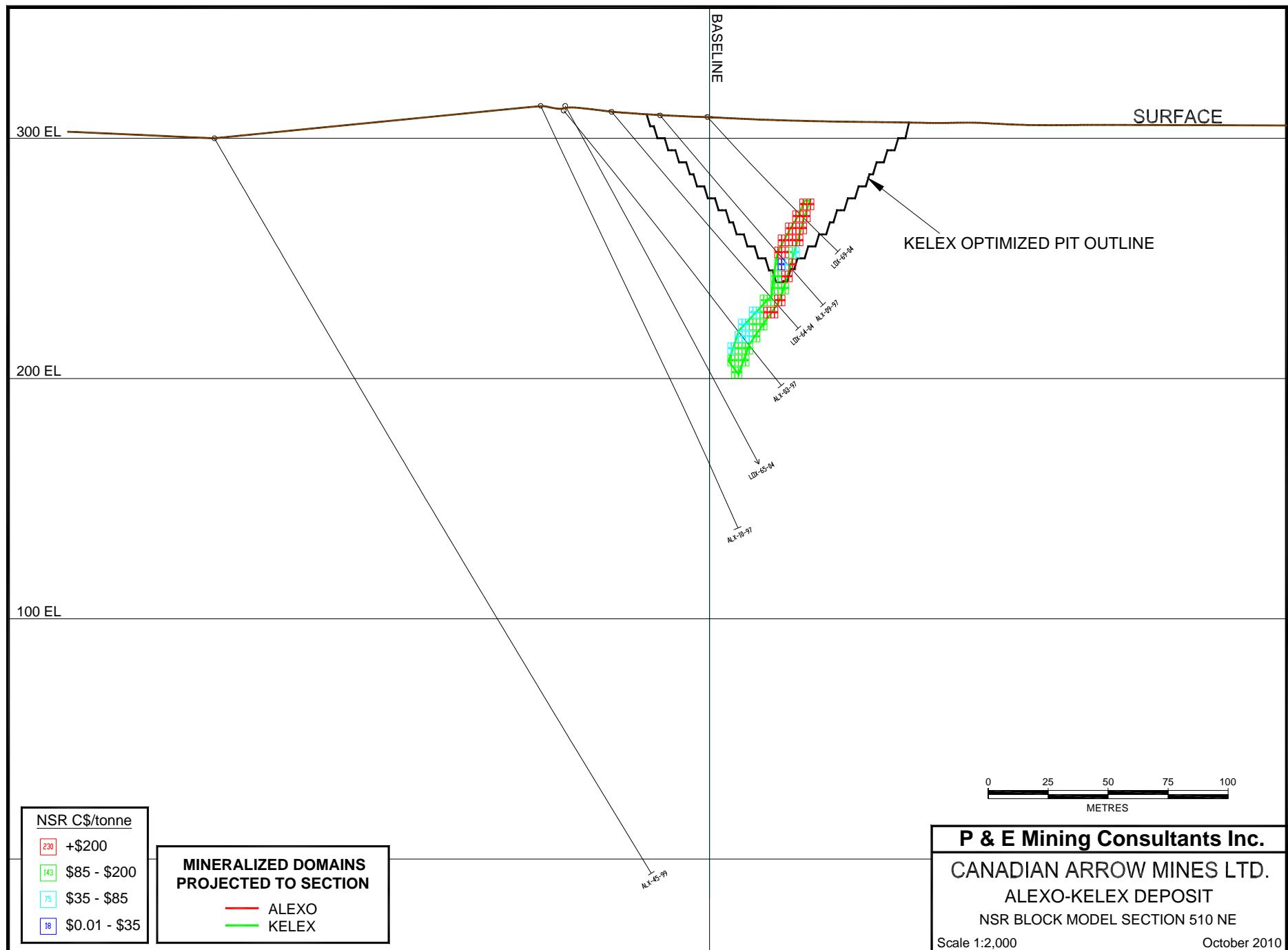


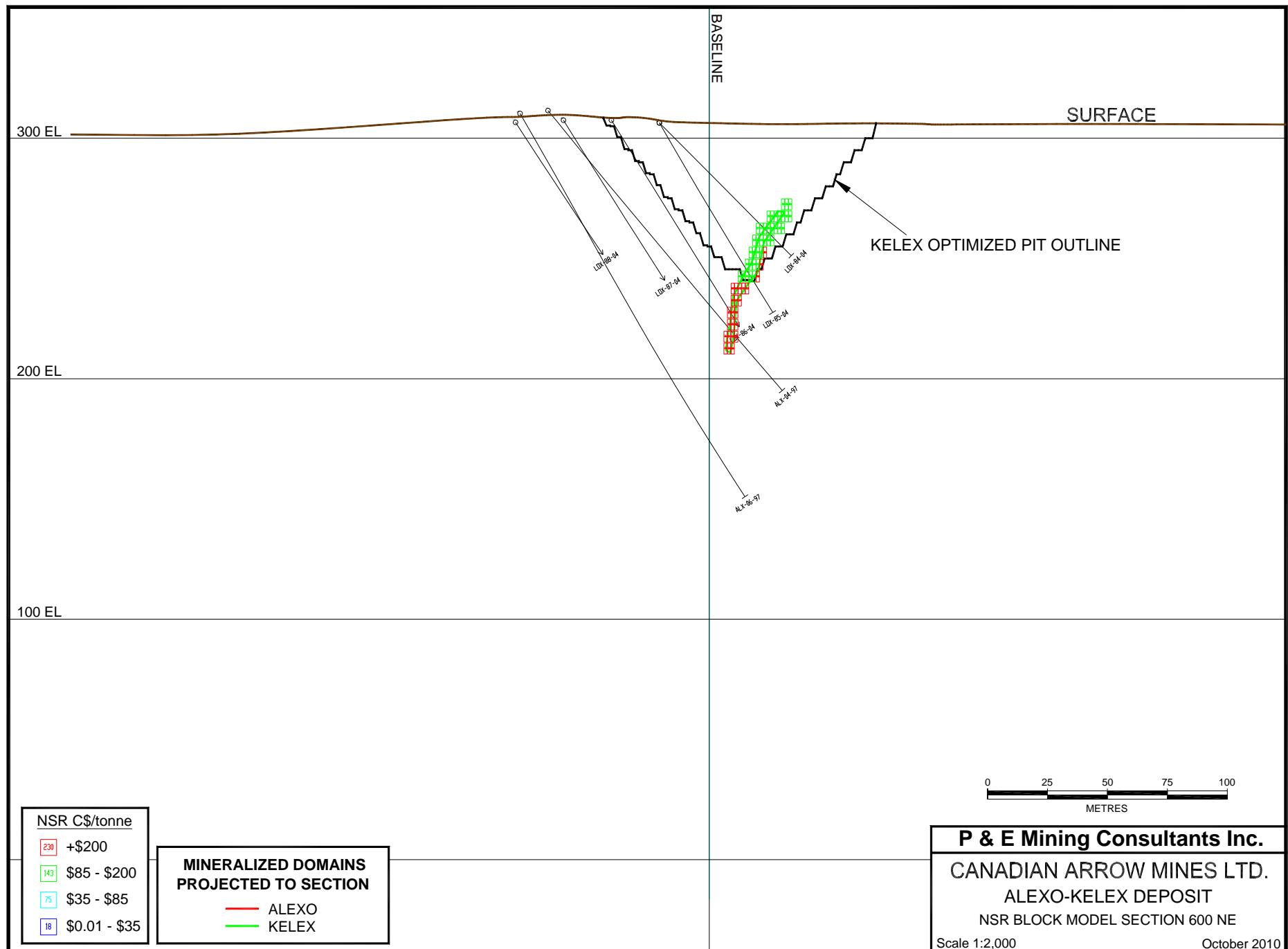


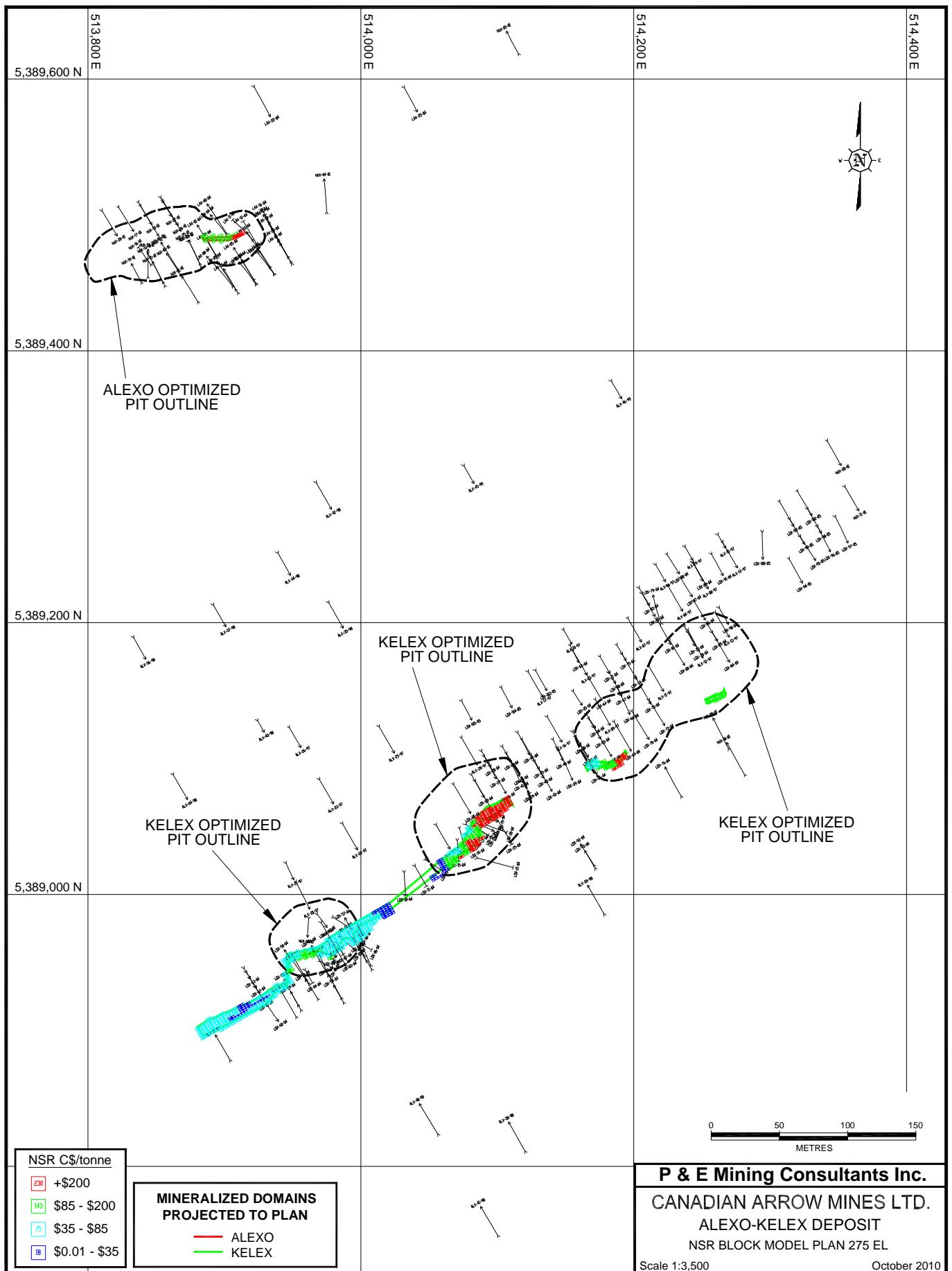


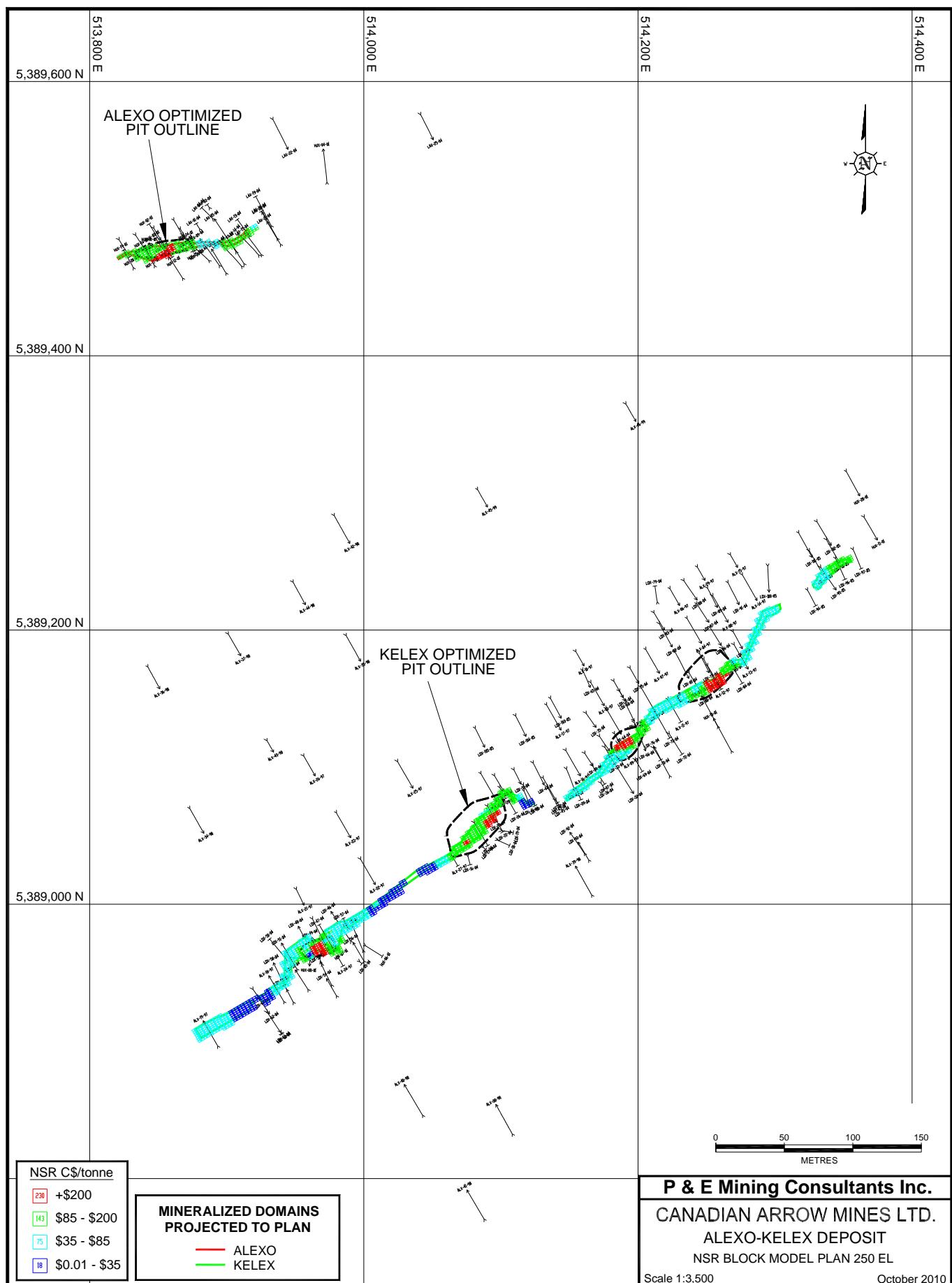


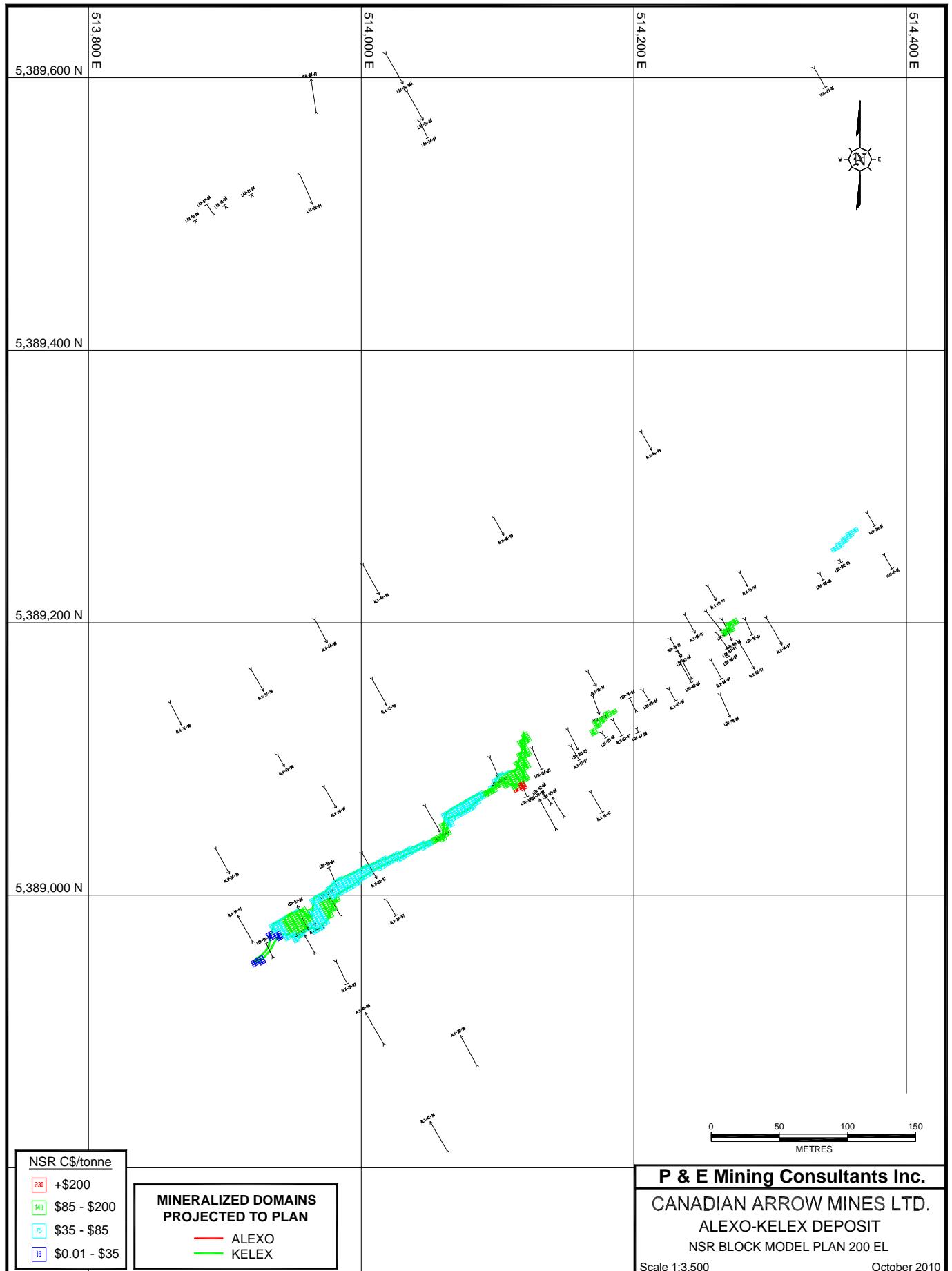


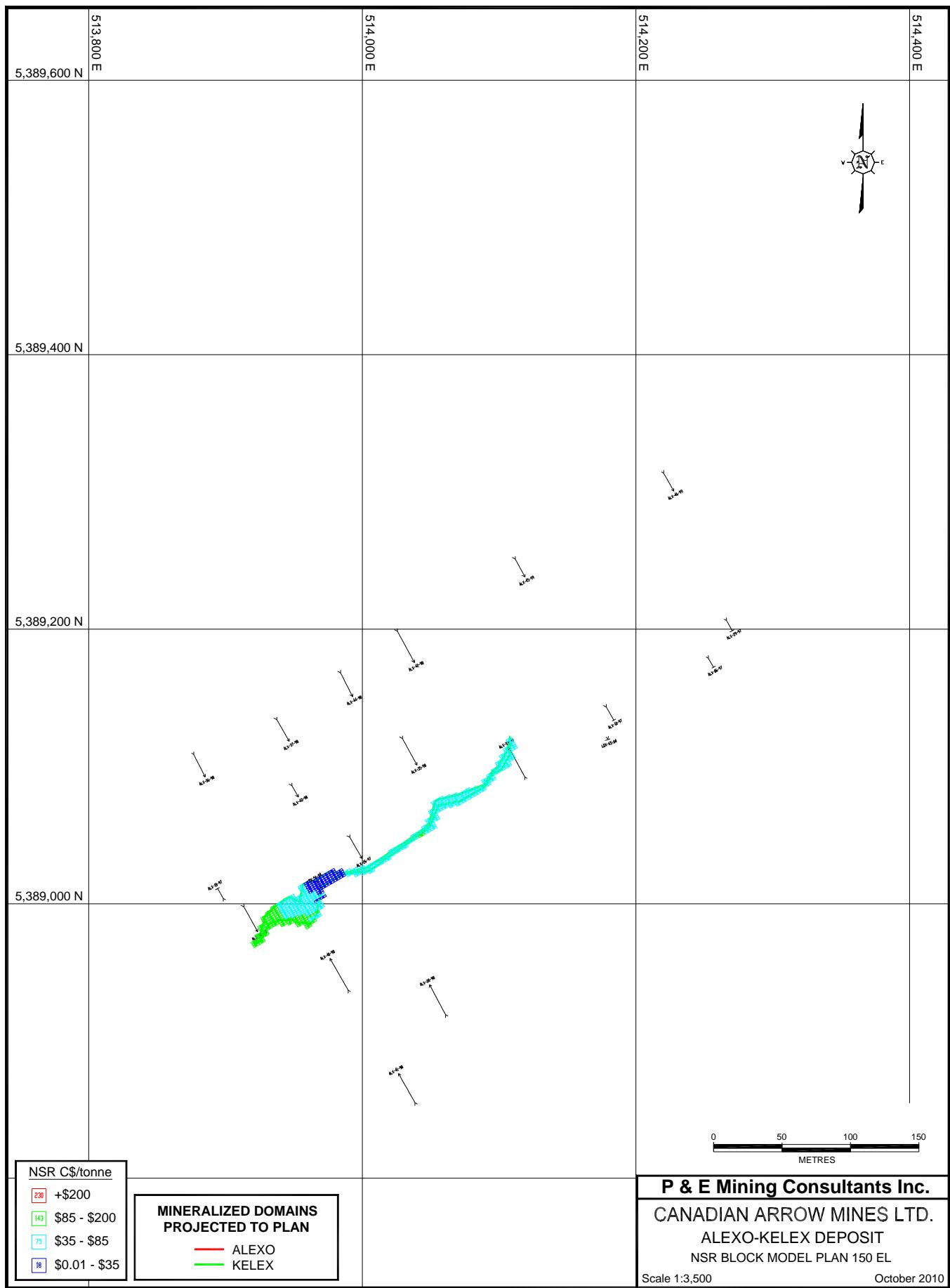




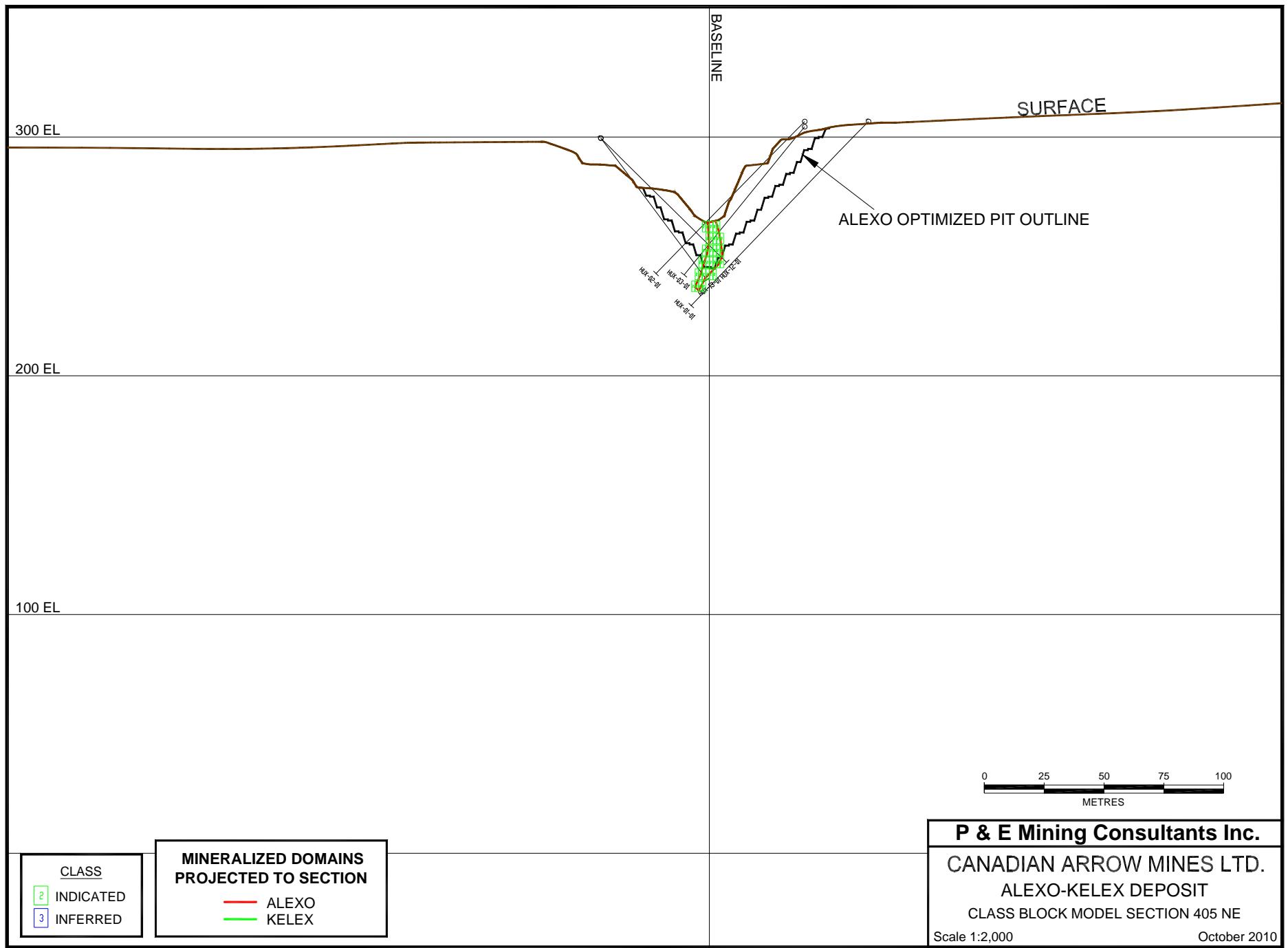


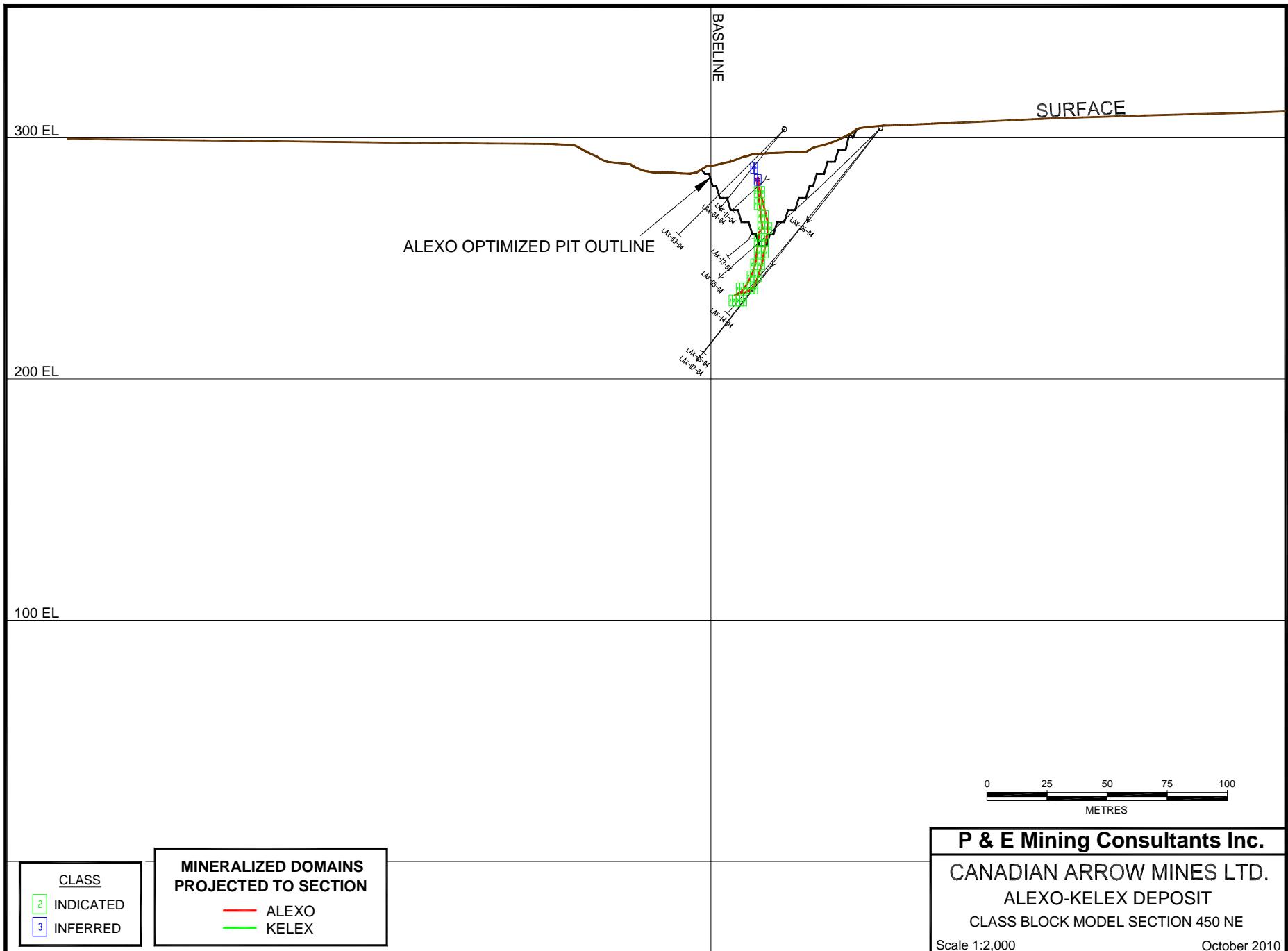


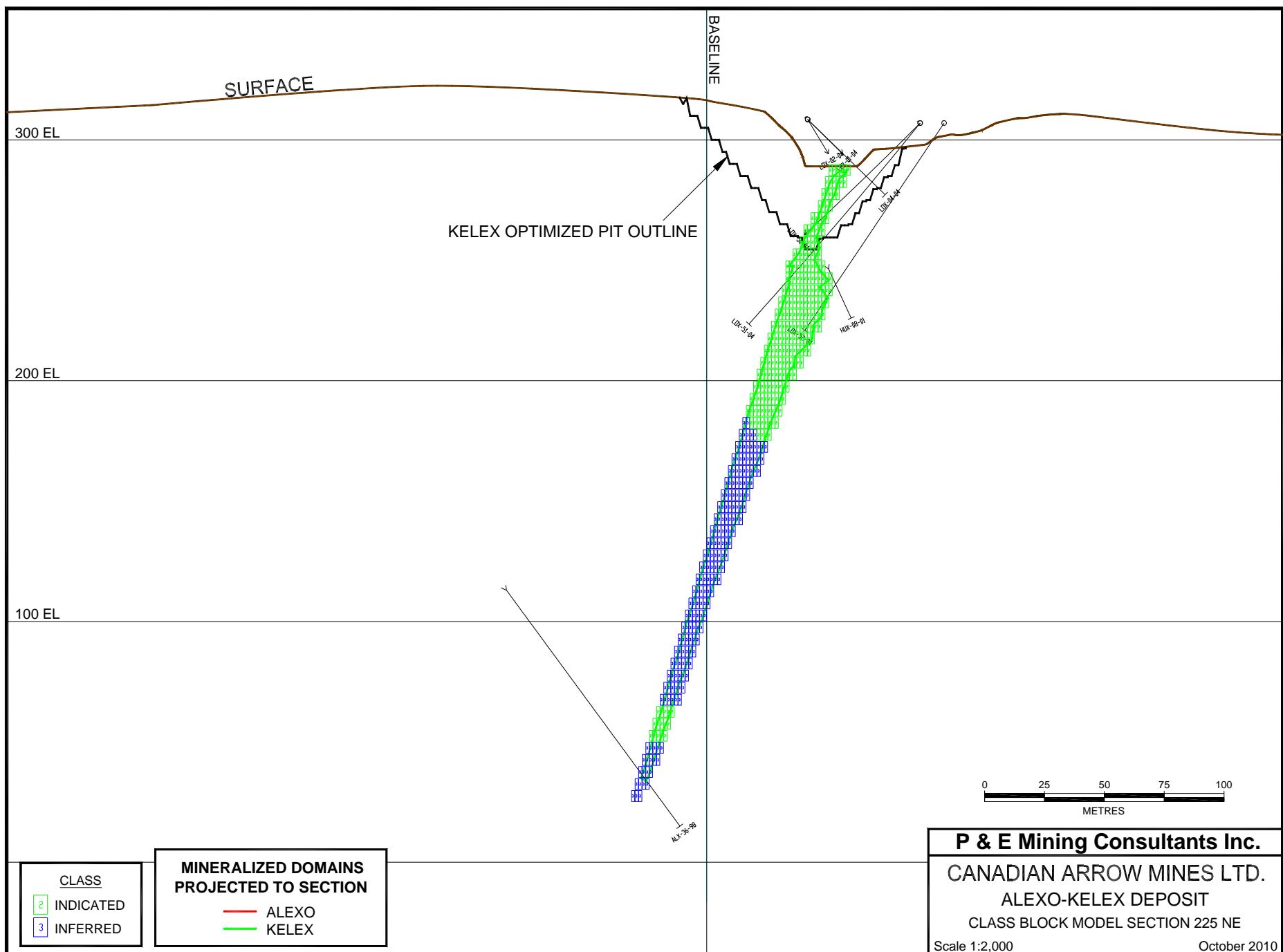


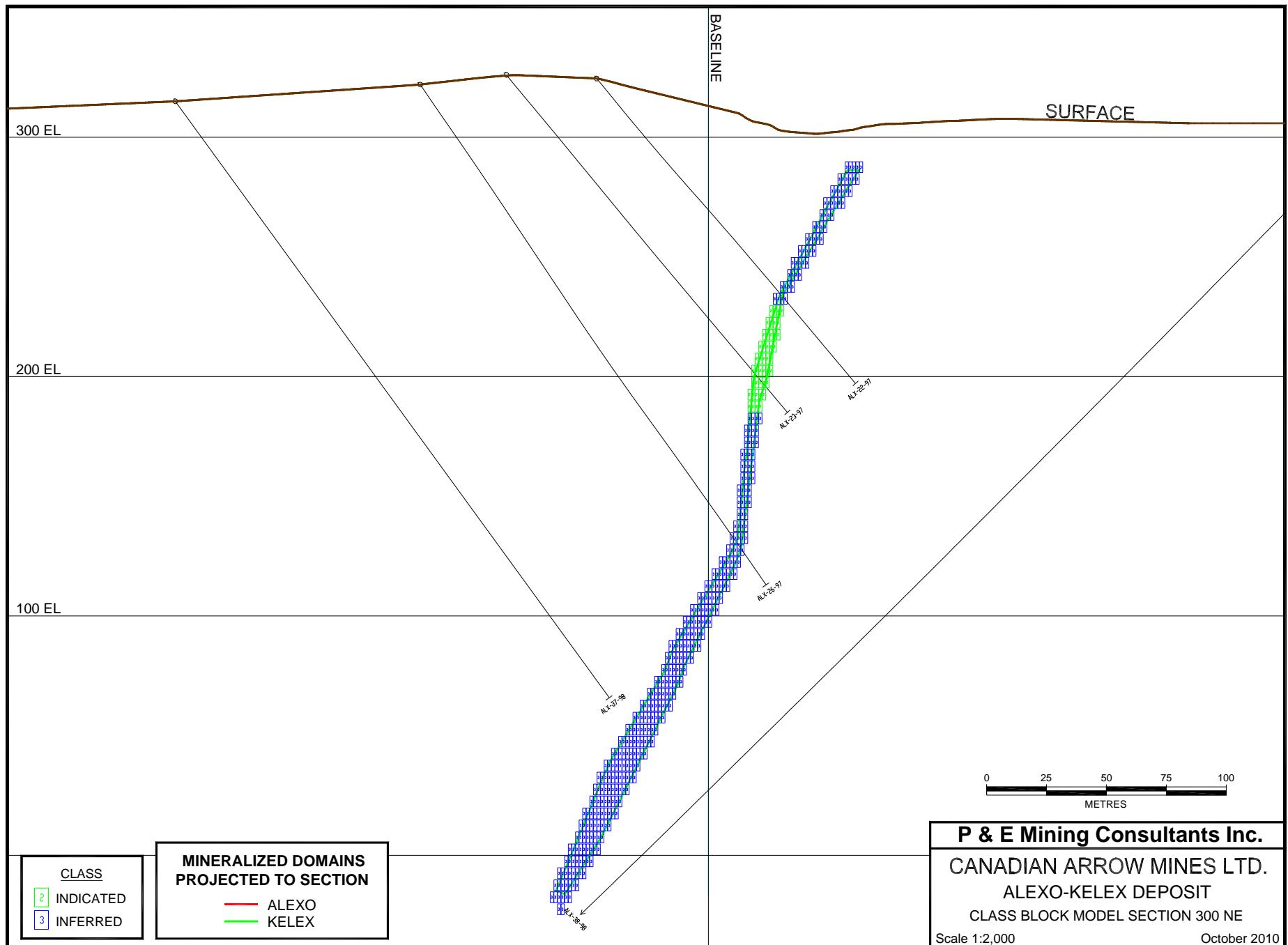


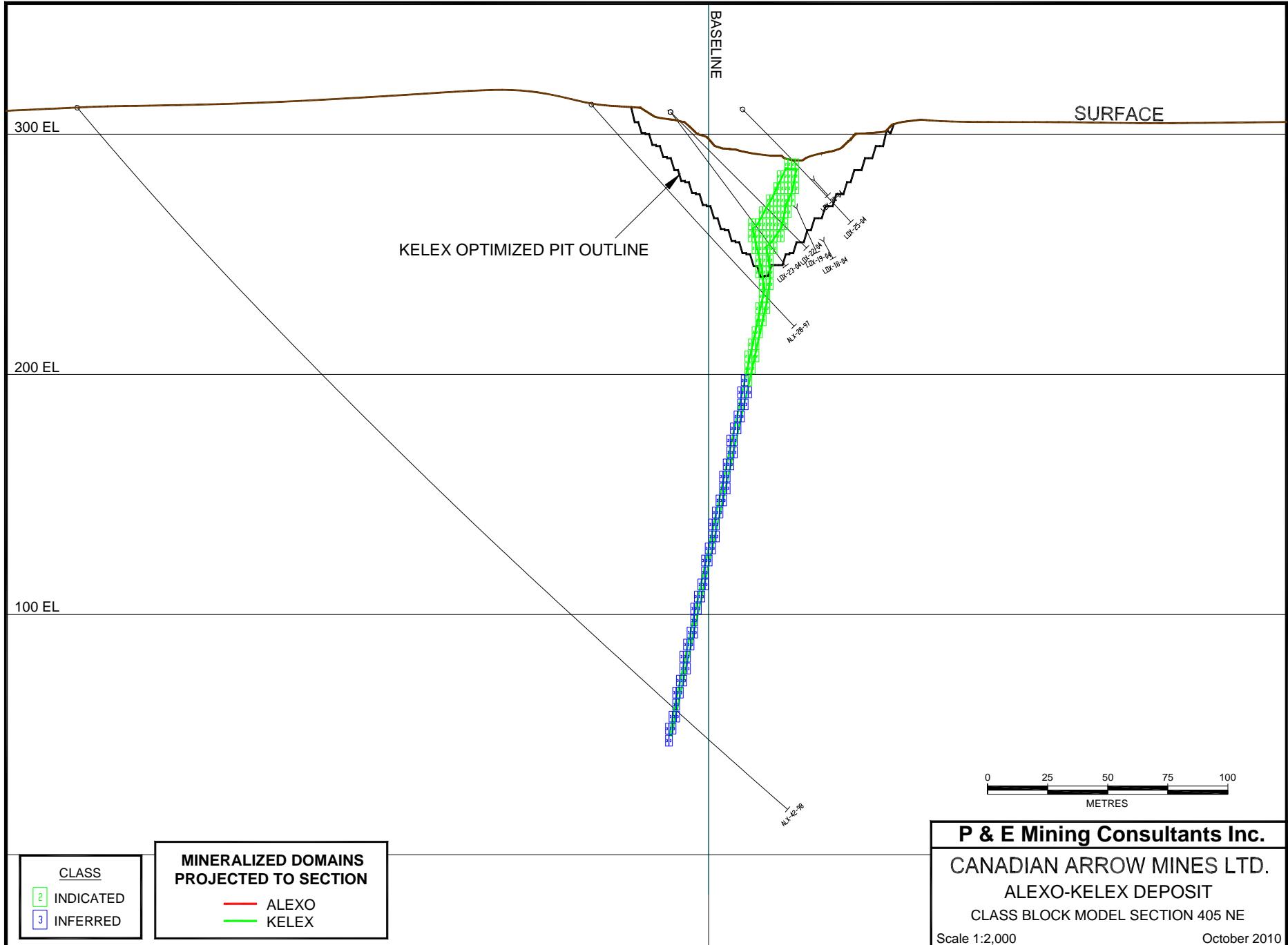
**APPENDIX VII:**  
**CLASSIFICATION BLOCK MODEL CROSS SECTIONS AND PLANS**

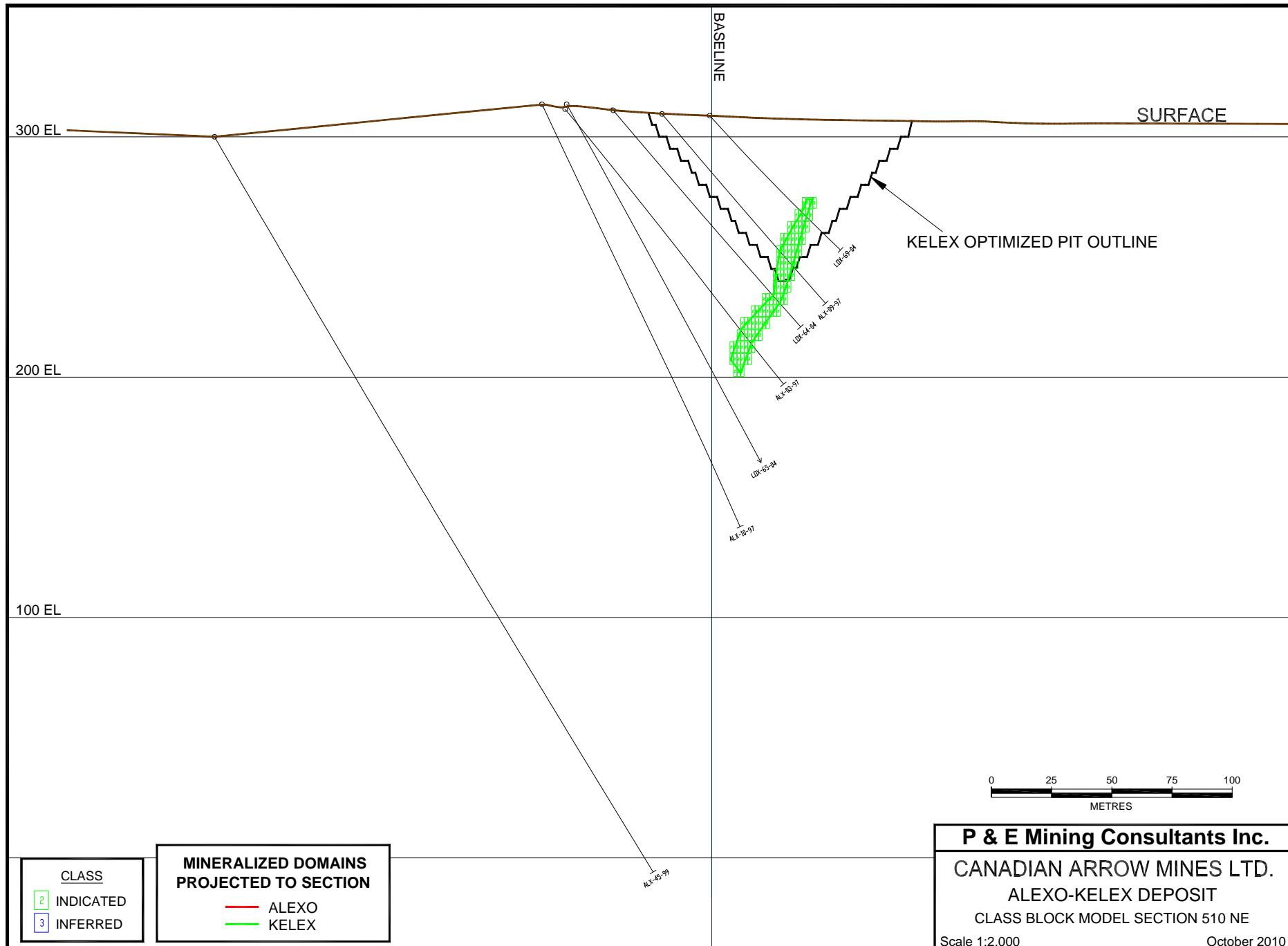


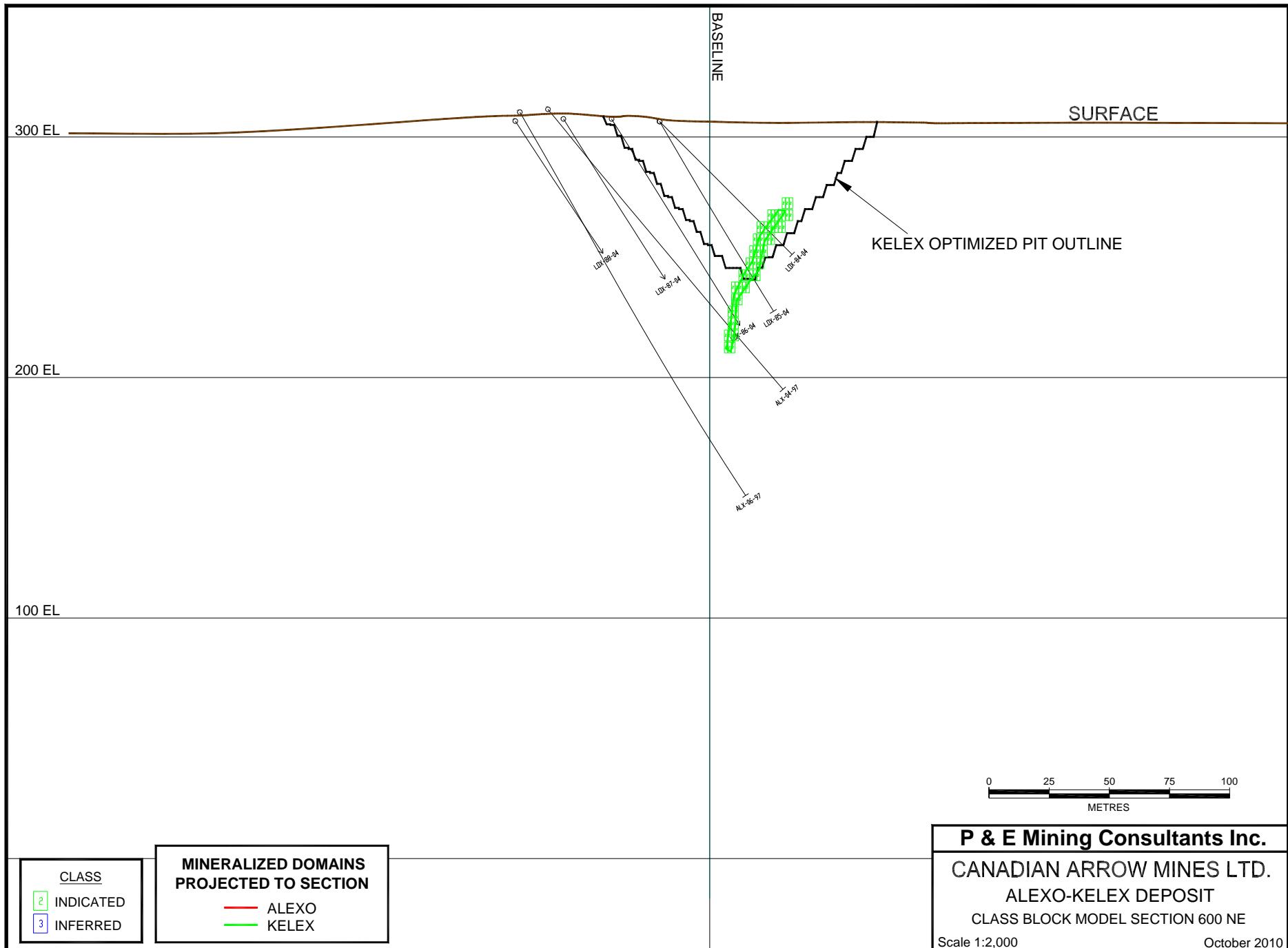


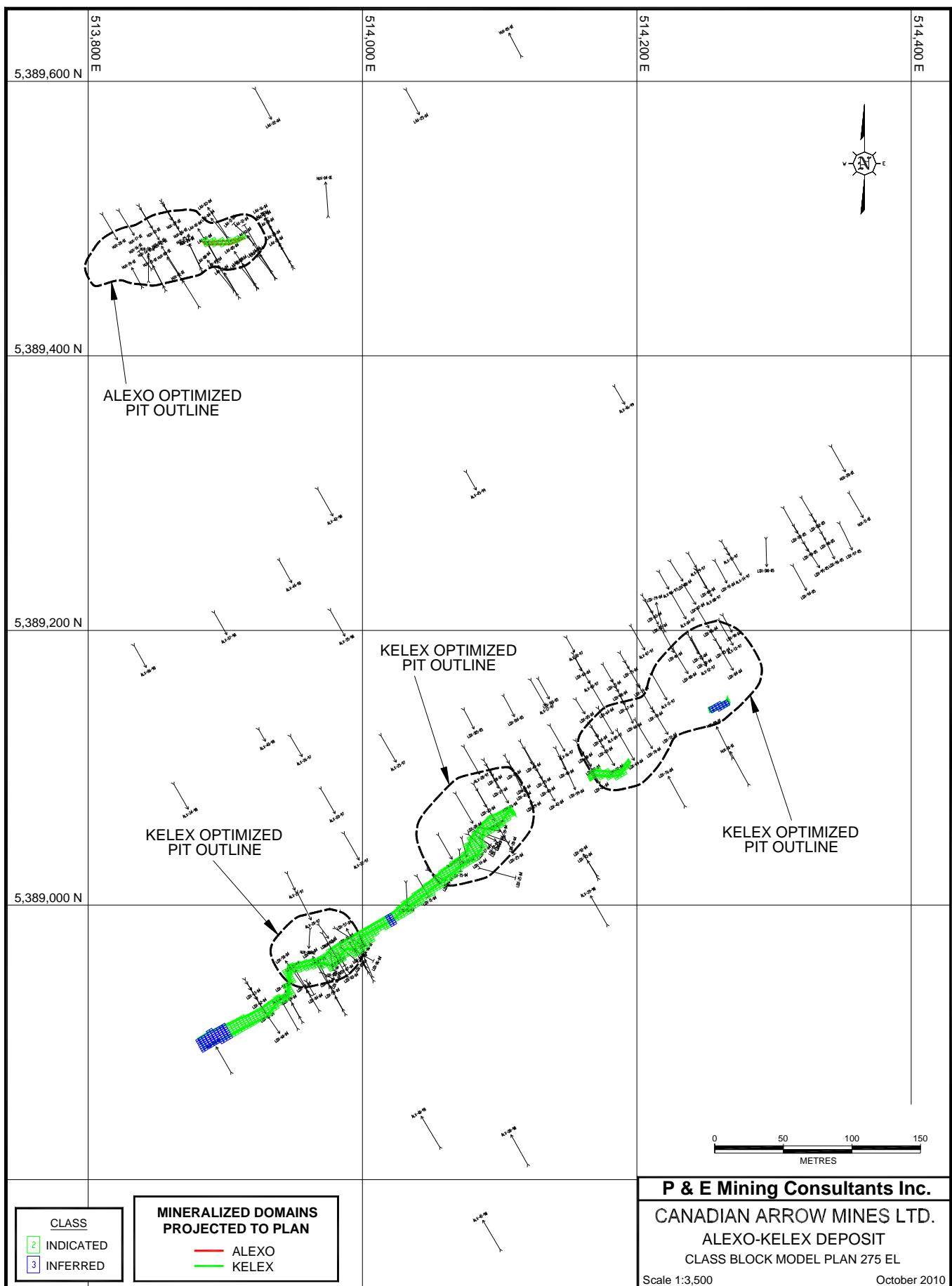


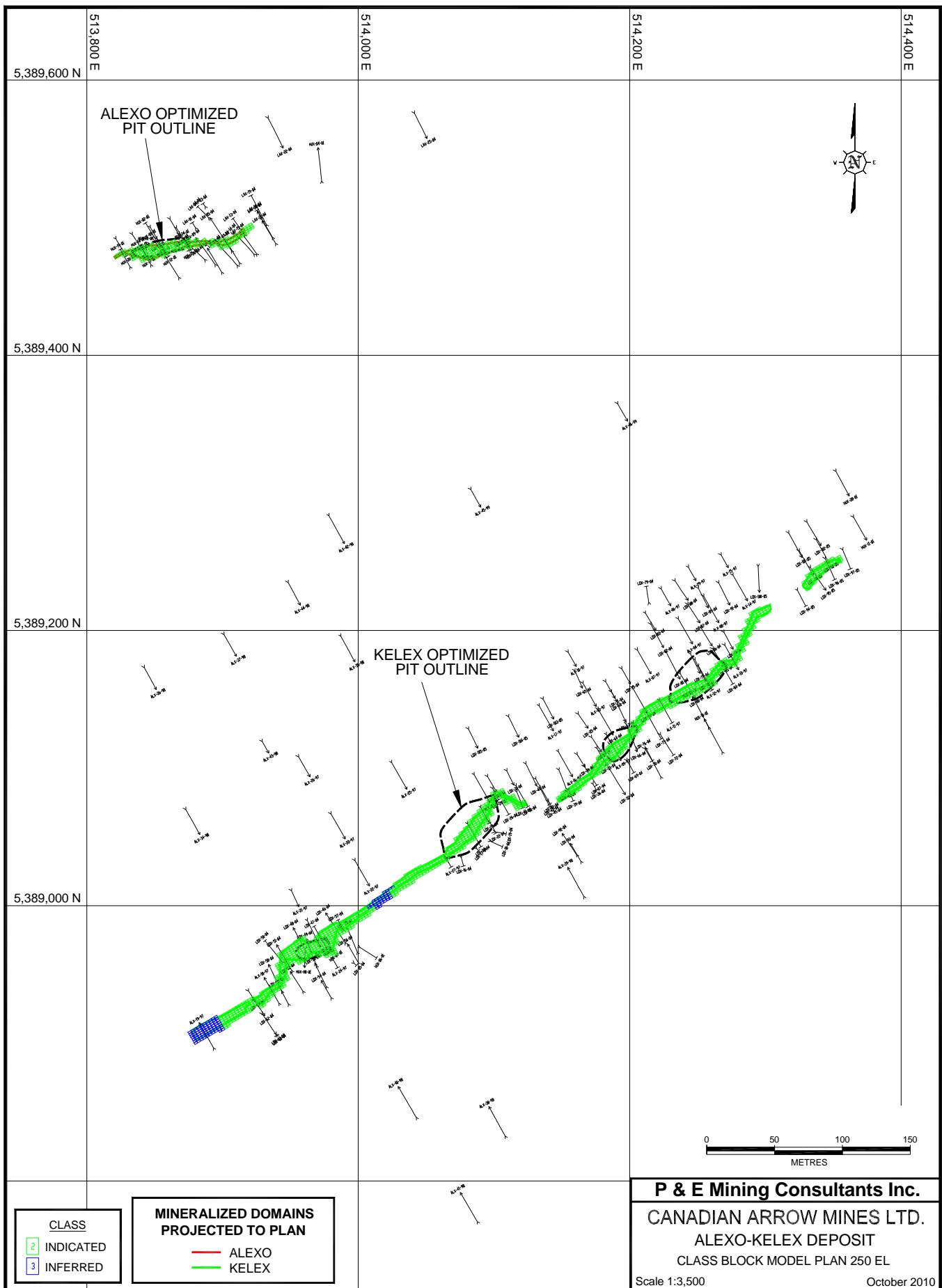


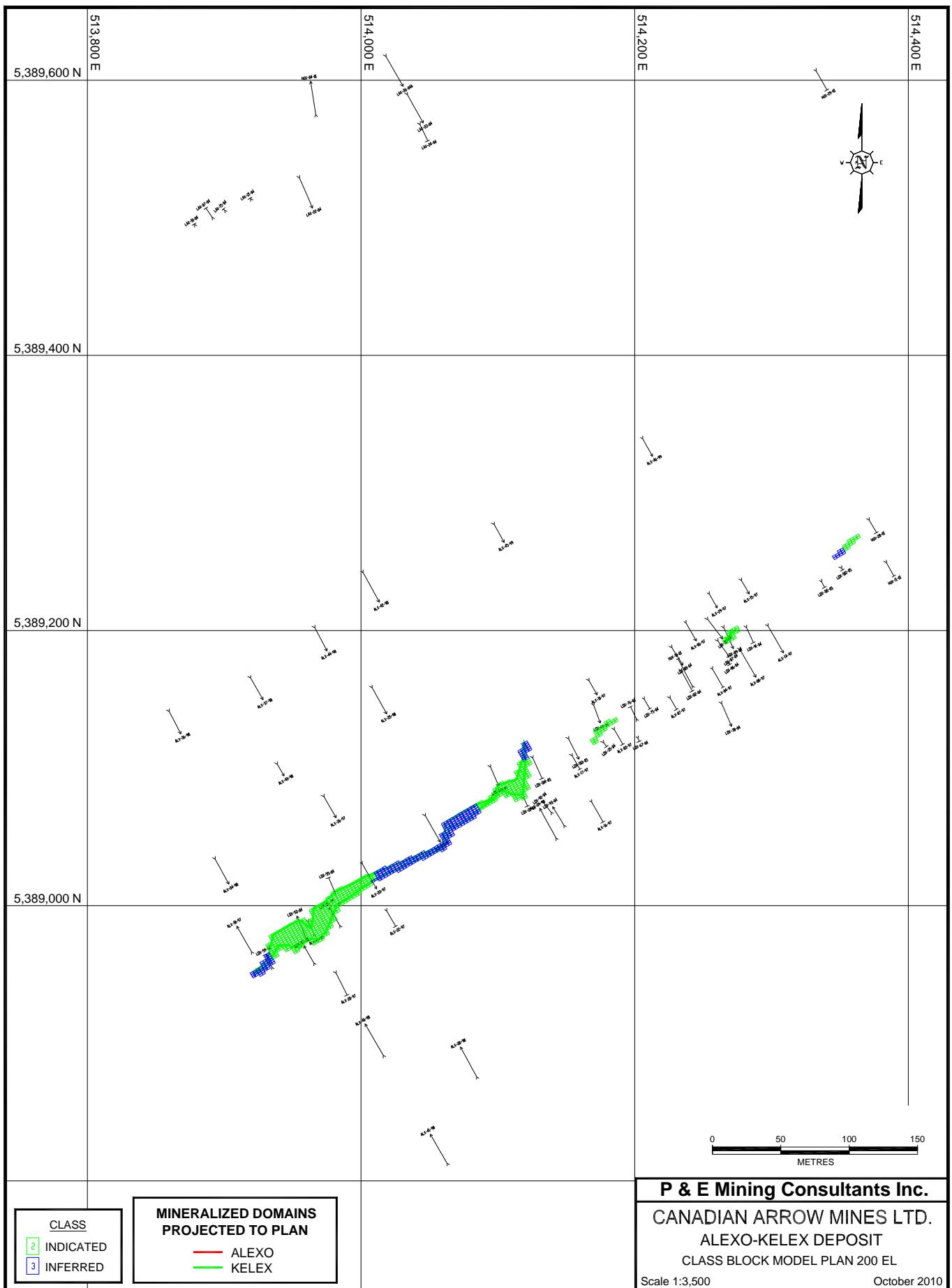


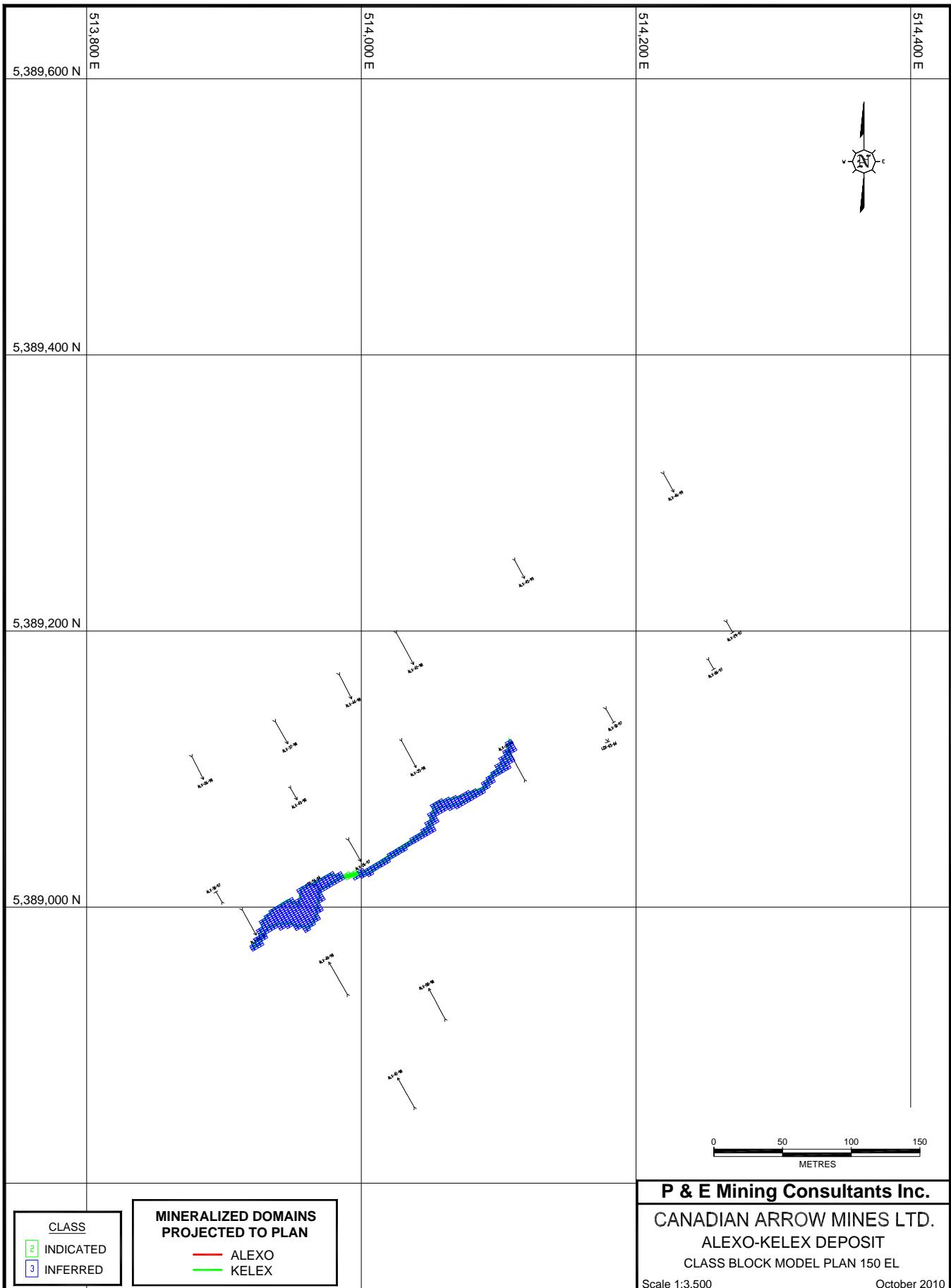












**APPENDIX VIII:**  
**OPTIMIZED PIT SHELL**

# ALEXO-KELEX DEPOSIT - OPTIMIZED PIT

