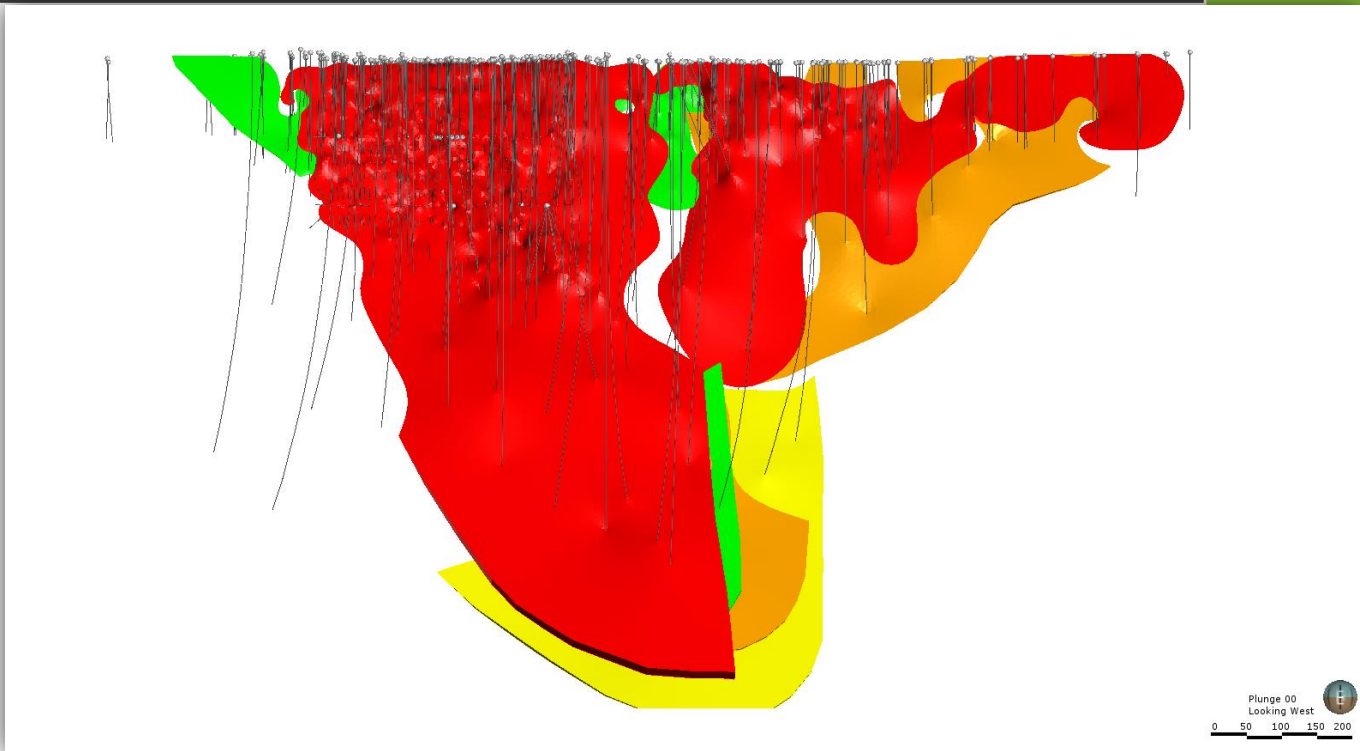




**First Mining Finance Corp.**  
**Technical Report on the Cameron Gold Deposit, Ontario, Canada**



Effective Date: January 17, 2017

**Perth Office**

Level 1, 16 Ord Street  
West Perth WA 6005

PO Box 1646  
West Perth WA 6872  
Australia

Tel: +61 8 9215 0000  
Fax: +61 8 9215 0011

Optiro Pty Limited  
ABN: 63 131 922 739  
[www.optiro.com](http://www.optiro.com)

Doc Ref:  
Cameron Technical Report - March 17, 2017 (FINAL -  
conformed)(1).docx

Number of copies: 2

Optiro: 1

First Mining Finance Corp.: 1

Principal author:	Mark Drabble <i>B.App.Sci (Geology), MAIG, MAusIMM</i>	Signature:	<i>"Original signed by Mark Drabble, B.App.Sci (Geology), MAIG, MAusIMM"</i>
		Date:	17 January 2017
Contributing authors:	Kahan Cervo <i>B.App.Sci (Geology), MAIG, MAusIMM</i>		
<p><b>Important Information:</b> This Report is provided in accordance with the proposal by Optiro Pty Ltd ("Optiro") to First Mining Finance Corp. and the terms of Optiro's Consulting Services Agreement (the "Agreement"). Optiro has consented to the use and publication of this Report by First Mining Finance Corp. for the purposes set out in Optiro's proposal and in accordance with the Agreement.</p>			

**Technical Report on the Cameron Gold Deposit,  
Ontario, Canada  
January 2017 Mineral Resource Estimate.**

The following technical report has been re-addressed to First Mining Finance Corp. (“First Mining”) from a report originally prepared for Chalice Gold Mines Limited documenting the Cameron December 2015 Mineral Resource estimate. This report is based on exploration drilling results received to the end of October 2015 and has been prepared to allow filing of a Form 43-101 F1 technical report in accordance with National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (“NI 43-101”). In addition the Mineral Resource has been restated for 2017 using an appropriate cut-off grade and constraining pit shell to represent the zone amenable to open pit mining. Below this a cut-off grade has been applied consistent with exploitation by underground mining methods.

Prepared for

First Mining Finance Corp.

Authors		
Mark Drabble	Principal Consultant, Optiro Pty Ltd	<i>B.App.Sci (Geology), MAIG, MAusIMM</i>
Kahan Cervoj	Principal Consultant, Optiro Pty Ltd	<i>B.App.Sci, MAIG, MAusIMM</i>

**Date of report: 17 January 2017**

## TABLE OF CONTENTS

<b>1.</b>	<b>SUMMARY</b>	<b>13</b>
1.1.	PROJECT DESCRIPTION	13
1.2.	GEOLOGY AND MINERALISATION	14
1.3.	MINERAL RESERVES	17
1.4.	METALLURGY	17
1.5.	SOCIAL AND ENVIRONMENTAL	18
1.6.	CONCLUSIONS AND RECOMMENDATIONS	18
<b>2.</b>	<b>INTRODUCTION</b>	<b>20</b>
2.1.	SCOPE OF THE REPORT	20
2.2.	AUTHORS	20
2.3.	PRINCIPAL SOURCES OF INFORMATION	21
2.4.	SITE VISIT	22
2.5.	INDEPENDENCE	22
<b>3.</b>	<b>RELIANCE ON OTHER EXPERTS</b>	<b>23</b>
<b>4.</b>	<b>PROPERTY DESCRIPTION AND LOCATION</b>	<b>24</b>
4.1.	PROJECT OWNERSHIP	24
4.2.	PROJECT LOCATION	24
4.3.	EXISTING PROJECT INFRASTRUCTURE	24
4.4.	THE PROJECT TENEMENT AREA	25
4.5.	LEGISLATION AND PERMITTING	29
4.6.	PROPERTY OWNERSHIP AND AGREEMENTS	30
4.7.	COMMUNITY ENGAGEMENT	31
4.8.	ROYALTIES AND TAXATION	31
<b>5.</b>	<b>ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY</b>	<b>37</b>
5.1.	ACCESSIBILITY	37
5.2.	CLIMATE, PHYSIOGRAPHY AND VEGETATION	38
5.3.	LOCAL RESOURCES AND INFRASTRUCTURE	39
<b>6.</b>	<b>HISTORY</b>	<b>41</b>
6.1.	WEST CEDARTREE PROJECT	42
6.1.1.	DUBENSKI DEPOSIT	43
6.1.2.	DOGPAW DEPOSIT	43
6.1.3.	HISTORICAL MINERAL RESOURCES	44
6.1.4.	HISTORICAL PRODUCTION	45
<b>7.</b>	<b>GEOLOGICAL SETTING AND MINERALISATION</b>	<b>46</b>

<b>7.1.</b>	<b>REGIONAL GEOLOGICAL SETTING</b>	<b>46</b>
<b>7.2.</b>	<b>LOCAL GEOLOGICAL SETTING</b>	<b>50</b>
7.2.1.	REGOLITH AND GLACIAL GEOMORPHOLOGY	50
7.2.2.	LITHOLOGY	51
7.2.3.	STRUCTURAL GEOLOGY	55
7.2.4.	ALTERATION	59
7.2.5.	MINERALISATION	61
<b>7.3.</b>	<b>GEOLOGICAL MODELLING</b>	<b>65</b>
<b>7.4.</b>	<b>MINERALISATION MODELLING</b>	<b>67</b>
<b>8.</b>	<b>DEPOSIT TYPES</b>	<b>73</b>
<b>9.</b>	<b>EXPLORATION</b>	<b>77</b>
9.1.	HISTORICAL REGIONAL SURVEYS	77
<b>10.</b>	<b>DRILLING</b>	<b>78</b>
10.1.	DIAMOND DRILLING	78
10.2.	HISTORICAL DRILLING	80
10.2.1.	NORANDA EXPLORATION COMPANY LIMITED (1960 TO 1971)	80
10.2.2.	ZAHAVY MINES LIMITED AND NORANDA EXPLORATION COMPANY LIMITED (1972 TO 1974)	81
10.2.3.	NUINSCO RESOURCES LIMITED (1979 TO 1983)	82
10.2.4.	NUINSCO RESOURCES LIMITED AND LOCKWOOD PETROLEUM INC (1983 TO 1985)	82
10.2.5.	NUINSCO RESOURCES LIMITED AND ECHO BAY MINES LIMITED (1985 TO 1988)	83
10.2.6.	NUINSCO RESOURCES LIMITED AND DEAK INTERNATIONAL RESOURCES HOLDINGS LIMITED (1988 TO 1990)	84
10.2.7.	CAMBIOR INC (1995 TO 1996)	84
10.2.8.	NUINSCO RESOURCES LIMITED (1997 TO 2009)	85
10.2.9.	COVENTRY RESOURCES INC (2010 TO 2012)	85
10.3.	COLLAR SURVEYING	86
10.3.1.	PRE-2010 DRILL PROGRAMMES	86
10.3.2.	2010 TO 2012 DRILL PROGRAMMES	86
10.4.	DOWNHOLE SURVEYING	86
10.4.1.	PRE-2010 DRILL PROGRAMMES	86
10.4.2.	2010 TO 2012 DRILL PROGRAMMES	87
<b>11.</b>	<b>SAMPLE PREPARATION, ANALYSIS AND SECURITY</b>	<b>88</b>
11.1.	PRE-2010 DRILL PROGRAMMES	88
11.2.	2010 TO 2012 DRILL PROGRAMMES	89
11.2.1.	SAMPLE PREPARATION	89
11.2.2.	ASSAYING	89
11.2.3.	SAMPLE SECURITY – CHAIN OF CUSTODY	89
11.3.	2015 RESAMPLING PROGRAMS	90
11.3.1.	LOGGING	90
11.3.2.	SAMPLING	90

11.3.3.	STORAGE	91
11.3.4.	SAMPLE SECURITY – CHAIN OF CUSTODY	91
11.3.5.	QUALITY ASSURANCE – QUALITY CONTROL	91
11.3.6.	PRE-2010 DRILLING	92
11.3.7.	RESAMPLING PROGRAMME - COVENTRY	92
11.3.8.	2010 TO 2012 DRILL PROGRAMME (COVENTRY RESOURCES)	96
11.3.9.	2014 RESAMPLE PROGRAMME (CHALICE RESOURCES)	98
11.3.10.	2015 RESAMPLE PROGRAMME (CHALICE RESOURCES)	100
<b>11.4.</b>	<b>UMPIRE DUPLICATES</b>	<b>103</b>
<b>12.</b>	<b>DATA VERIFICATION</b>	<b>104</b>
<b>12.1.</b>	<b>DATA</b>	<b>104</b>
<b>12.2.</b>	<b>DATABASE AUDIT</b>	<b>104</b>
12.2.1.	LOGGING AND SAMPLING CHECKS	106
12.2.2.	DOWNHOLE SURVEY CHECKS	106
12.2.3.	ASSAY CERTIFICATE CHECK	107
12.2.4.	COLLAR CO-ORDINATE CHECK	108
<b>12.3.</b>	<b>LABORATORY REPEATS</b>	<b>108</b>
<b>12.4.</b>	<b>TWINNED HOLES</b>	<b>108</b>
<b>12.5.</b>	<b>INDEPENDENT SAMPLING</b>	<b>108</b>
<b>13.</b>	<b>MINERAL PROCESSING AND METALLURGICAL TESTING</b>	<b>112</b>
<b>13.1.</b>	<b>METALLURGICAL TESTWORK</b>	<b>112</b>
<b>14.</b>	<b>MINERAL RESOURCE ESTIMATES</b>	<b>114</b>
<b>14.1.</b>	<b>INTRODUCTION</b>	<b>114</b>
<b>14.2.</b>	<b>DATA FOR MINERAL RESOURCE MODELLING</b>	<b>114</b>
<b>14.3.</b>	<b>MINERALISATION</b>	<b>114</b>
14.3.1.	DATA COMPOSITING	119
<b>14.4.</b>	<b>STATISTICAL ANALYSIS</b>	<b>121</b>
14.4.1.	BOUNDARY ANALYSIS	126
<b>14.5.</b>	<b>VARIOGRAM ANALYSIS</b>	<b>127</b>
<b>14.6.</b>	<b>KRIGING NEIGHBOURHOOD ANALYSIS</b>	<b>130</b>
14.6.1.	BLOCK SIZE SELECTION	130
14.6.2.	OPTIMISATION OF SEARCH AND SAMPLE NUMBERS	131
<b>14.7.</b>	<b>BLOCK MODEL</b>	<b>135</b>
<b>14.8.</b>	<b>GRADE ESTIMATION</b>	<b>136</b>
14.8.1.	ORDINARY KRIGING INTERPOLATION	136
<b>14.9.</b>	<b>MODEL FIELDS</b>	<b>140</b>
<b>14.10.</b>	<b>BULK DENSITY</b>	<b>141</b>
14.10.1.	LITHOLOGY	142
14.10.2.	MINERALISATION	143
14.10.3.	DENSITY ASSIGNMENT	146
<b>14.11.</b>	<b>MODEL VALIDATION</b>	<b>146</b>
<b>14.12.</b>	<b>MINERAL RESOURCE CLASSIFICATION AND REPORTING</b>	<b>151</b>
<b>14.13.</b>	<b>MINERAL RESOURCE ESTIMATE COMPARISONS</b>	<b>152</b>
<b>14.14.</b>	<b>DEPLETION FOR MINING</b>	<b>153</b>

14.15.	CUT-OFF GRADE ASSUMPTIONS	154
14.16.	MINERAL RESOURCE TABULATION	158
14.17.	MINERAL RESOURCE ESTIMATE MATERIAL IMPACT	160
15.	MINERAL RESERVE ESTIMATES	161
16.	MINING METHODS	162
17.	RECOVERY METHODS	163
18.	PROJECT INFRASTRUCTURE	164
19.	MARKET STUDIES AND CONTRACTS	165
20.	ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT	166
21.	CAPITAL AND OPERATING COSTS	167
22.	ECONOMIC ANALYSIS	168
23.	ADJACENT PROPERTIES	169
23.1.	EAST CEDARTREE	169
24.	OTHER RELEVANT DATA AND INFORMATION	170
25.	INTERPRETATION AND CONCLUSIONS	171
26.	RECOMMENDATIONS	174
27.	REFERENCES	175
28.	CERTIFICATES OF QUALIFIED PERSONS	176

## TABLES

Table 1.1	Cameron Measured & Indicated Mineral Resource statement as at January 17, 2017	16
Table 1.2	Cameron Inferred Mineral Resource statement as at January 17, 2017	16
Table 2.1	Cameron Technical report – authors and contribution	20
Table 2.2	NI 43-101 accepted foreign associations	21

Table 4.1	Cameron Gold Project summary of tenements	27
Table 4.2	Cameron Gold Project royalties table	33
Table 4.3	West Cedartree Project royalties table	36
Table 6.6.1	West Cedartree historical mineral resource estimate	44
Table 7.1	Description of the lithological units of the Cameron Gold project (Source: Ball, 2014)	52
Table 10.1	Historical drilling completed at the Cameron Gold Project (Chalice, 2014 and Coventry, 2013)	78
Table 10.2	Distribution of down-hole survey types in pre-2010 drilling	87
Table 11.1	Summary of standards, blanks and duplicates submitted	92
Table 11.2	Cameron re-sample programme statistics (Source: Chalice, 2014)	93
Table 11.3	Internal certified standards submitted by Coventry Resources as part of the resample program	95
Table 11.4	Internal certified standards submitted by Coventry Resources	97
Table 11.5	Pulp duplicates results	99
Table 11.6	Coarse rejects results	100
Table 11.7	Internal certified standards submitted by Chalice Resources	101
Table 12.1	Summary of drillholes recorded in the Cameron Lake Deposit Database	104
Table 12.2	Database tables within the master database	105
Table 12.3	Sampling sheet error summary	106
Table 12.4	Survey type summary	107
Table 12.5	Assay certificate validation summary	108
Table 12.6	Results of the collar audit	108
Table 12.7	Independent sample assay comparison to original results	109
Table 14.1	Summary of sample types	114
Table 14.2	Leapfrog parameters – low grade interpolants	116
Table 14.3	Cameron January 2017 zone identifiers	119
Table 14.4	Average lode width and composite creation parameters	120
Table 14.5	Pre and post composite sample statistics	121
Table 14.6	Naïve and declustered uncapped sample mean	122
Table 14.7	Pre and post capped naïve statistics	123
Table 14.8	Summary declustered capped statistics for the 2015 Cameron composite samples	125
Table 14.9	Modelled variograms (back transformed sills) for southern zones	128
Table 14.10	Modelled variograms (back transformed sills) for northern and the non-mineralised zone	129
Table 14.11	Block model dimensions	136
Table 14.12	Cameron January 2017 wireframe/block model fill comparison	137
Table 14.13	Cameron January 2017 Mineral Resource estimate search parameters	137
Table 14.14	Block model attributes 'cameron_151105_depleted.mdl'	140
Table 14.15	Summary bulk density statistics, by rock type	142
Table 14.16	Summary statistics, by mineralisation zone	143
Table 14.17	Number of samples and mean values by mineralised domain and rock type	145
Table 14.18	Density assignments based on mineralisation and lithology	146
Table 14.19	Global capped and model estimate comparison	147
Table 14.20	Pass 1 estimate and adjacent capped samples and model estimate comparison	148
Table 14.21	January 2017 and December 2015 Mineral Resource comparison	153
Table 14.22	January 2017 depleted cells by material type (all development)	154



Table 14.23	Optimisation Input Parameters	155
Table 14.24	Cameron Measured & Indicated Mineral Resource statement as at January 2017	158
Table 14.25	Cameron Inferred Mineral Resource statement as at January 2017	158
Table 14.26	Cameron January 2017 grade-tonnage data	159
Table 23.1	Main Zone Gold Deposit March 2012 Mineral Resource estimate reported above a 0.3 g/t gold cut-off grade.	169
Table 26.1	Recommended work for Cameron	174

## FIGURES

Figure 1.1	Cameron Gold Project location map (source: Chalice, 2015)	13
Figure 1.2	January 2017 Cameron Mineral Resource classification (long-section looking west)	17
Figure 4.1	Cameron Gold Project location map (Source: Chalice, 2015)	24
Figure 4.2	Property location map – Cameron Gold Project tenements (Source: First Mining, 2017)	26
Figure 4.3	Cameron Gold Deposit Tenement plan (First Mining, 2017)	28
Figure 4.4	Land Tenure map of the Cameron Gold Project (Source: First Mining, 2017)	35
Figure 5.1	Cameron Gold Project location map (source: Chalice, 2015)	37
Figure 5.2	Kenora climate normals - monthly temperature and precipitation chart (source: www.climate.weather.gc.ca)	38
Figure 5.3	Cameron Lake location map, local population centres and inset showing the deposit site (source: Google Earth, 2015)	39
Figure 6.1	Location of the East Cedartree Project (Source - Ball, 2014).	42
Figure 7.1	Regional geology of the Superior Province showing the sub-provinces of this Archean Shield (Source: Ball, 2014)	46
Figure 7.2	Schematic regional geology Savant Lake - Crow Lake Greenstone Terrane (Source: Ball, 2014)	47
Figure 7.3	Major camp-scale geological and structural features in the area surrounding the Cameron Gold Deposit on an image of the first vertical derivative (1VD) of total magnetic intensity (TMI) data. (Source: Ball, 2014)	48
Figure 7.4	Idealised stratigraphic sequence for the Cameron Gold Project across the recognisable large-scale structures in the area (Source: Ball, 2014)	49
Figure 7.5	Simplified geological map of the Cameron Gold Project area (Source: Chalice, 2015)	50
Figure 7.6	Quarry located at the north-western extension of the Cameron Gold Deposit showing till thickness in excess of 20 m. Note shovel for scale. (Source: Ball, 2014).	51
Figure 7.7	Geological map showing the major structures and shear zones (Source: Chalice, 2015)	56
Figure 7.8	Strongly foliated basalt exhibiting typical sericite-iron carbonate-quartz alteration with fine-grained disseminated pyrite from the CLSZ (Ball, 2014)	57
Figure 7.9	Basalt wall rock transition into intensely foliated and ankerite altered mineralised zone with quartz veining in drillhole CCD-10-13. (Source: Optiro, 2015)	57
Figure 7.10	Intensely foliated mafic unit with folded quartz veins – plan view (Optiro, 2015)	58

Figure 7.11	Progressive shortening shown by folded quartz veins in outcrop (LH view) and drill core. (Optiro, 2015)	58
Figure 7.12	Hangingwall mineralised intersection CCD-10-13 (Source: Optiro, 2015)	60
Figure 7.13	Main Zone mineralised intersection CCD-10-13 (Source: Optiro, 2015)	60
Figure 7.14	Early deformed quartz-carbonate vein (Source: Ball, 2014)	61
Figure 7.15	Intensely foliated and disseminated pyrite mineralisation cutting undeformed quartz breccia vein material from the Cameron Gold Deposit stockpile (Source: Ball, 2014)	62
Figure 7.16	Quartz-sulphide stockwork mineralisation from the Cameron Gold Deposit stockpile exhibiting multiple overprinting relationships (Source: Ball, 2014)	63
Figure 7.17	Quartz breccia veins with angular altered clasts with disseminated pyrite in a matrix of quartz-pyrite from the Cameron Gold Deposit stockpile. (Source: Ball, 2014)	63
Figure 7.18	Abundant visible gold within a quartz-carbonate-chlorite vein from CCD-11-099, downhole depth 6.0 m. (Source: Ball, 2014)	64
Figure 7.19	Cameron Deposit 3D geological model – plan view	65
Figure 7.20	Cameron geology model 3D oblique view (looking northwest)	66
Figure 7.21	Cameron cross-section view (50045 mN) looking north showing geological model	67
Figure 7.22	Cameron mineralisation lode interpretations comparison long section (view looking west)	68
Figure 7.23	Sectional comparisons of mineralisation interpretations	69
Figure 7.24	Long section view of Cameron mineralised domains	70
Figure 7.25	Cameron mineralisation domains with geology at 790 mRL (north to the right page)	70
Figure 7.26	Cameron 3D geological model and mineralised domains cross-section view looking east (50,400 mN)	71
Figure 7.27	Cameron mineralisation domains with geology and underground development at 790 mRL (north to the right page)	71
Figure 7.28	Thickness contours of the Main Zone mineralisation model (long section view looking west)	72
Figure 8.1	Schematic cross-section of the key geological elements of the main gold systems and their crustal emplacement depth (note logarithmic depth scale), from Robert, F. et al 2007. (Source Ball 2014).	73
Figure 8.2	Geologic model for the disseminated stockwork and crustiform vein deposits in greenstone belts showing the spatial association with high level porphyry intrusions and conformities at the base of conglomeratic sequences. (Source: Ball 2014).	75
Figure 10.1	Plan of drilling undertaken at the Cameron Gold Project (Chalice, 2014)	79
Figure 10.2	Representative cross-section looking north of Cameron drilling and mineralisation models	80
Figure 11.1	Core laid out for logging, core storage racks	90
Figure 11.2	Core cutting station and cut core marked up with sampling tickets stapled into the boxes	91
Figure 11.3	Core storage racks	91
Figure 11.4	Coventry resample program results (source: Chalice 2014)	93
Figure 11.5	Coventry Resources 2010 to 2011 blank results submitted as part of the resample program	94
Figure 11.6	Coventry Resources resample programme CRM results	95

Figure 11.7	Coventry Resources 2010 to 2012 blank results	96
Figure 11.8	Coventry Resources 2010 to 2012 CRM results	97
Figure 11.9	Pulp duplicates results	99
Figure 11.10	Coarse rejects results	100
Figure 11.11	Chalice Resources resample programme blank results	101
Figure 11.12	Chalice Resources 2015 resample programme CRM results	102
Figure 11.13	Chalice resample programme duplicate scatter plot	103
Figure 12.1	Rock chip sample (left) and quarter core interval with sample tags	110
Figure 12.2	GPS and compass checks of Cameron drill collar locations and dip, CCD-11-100 drillhole cap with hole number at deposit outcrop	110
Figure 14.1	Length-weighted gold grade distribution (samples)	115
Figure 14.2	View looking west showing MAIN lode and low grade interpolants	115
Figure 14.3	Plan view (875 mRL) showing mineralised zone outlines and interpolant low grade (blue)	117
Figure 14.4	View looking west showing FW1 and FW Nth mineralised zones (purple) and low grade (blue)	117
Figure 14.5	View looking west showing the Mid mineralised zones (olive green) and low grade (blue)	118
Figure 14.6	View looking west showing Main and Main north mineralised zones (red) and low grade (blue)	118
Figure 14.7	View looking west showing HW and HW north mineralised zones (brown) and low grade (blue)	119
Figure 14.8	Histogram of sample lengths	120
Figure 14.9	Deccluster optimisation of Main Lode (Zone 40)	121
Figure 14.10	Decclustered histogram and probability plot Main/Zone 40	122
Figure 14.11	Decclustered histogram and probability plot Main low-grade/Zone 1040	123
Figure 14.12	Cameron boundary analysis FW1/Zone 10 (left) and FW2/Zone 20 (right)	126
Figure 14.13	Cameron boundary analysis MID/Zone 30 (left) and Main/Zone 40 (right)	126
Figure 14.14	Cameron boundary analysis HW/Zone 50 (left) and Nth FW/Zone 110 (right)	126
Figure 14.15	Cameron boundary analysis Nth Main/Zone 140 (left) and Nth HW/Zone 150 (right)	127
Figure 14.16	Cameron boundary analysis Main mineralisation/low grade (Zone 40 / 1040)	127
Figure 14.17	Modelled back-transformed normal-score variograms mineralised Main/40 (left) and Main low-grade/1040 (right)	129
Figure 14.18	Kriging neighbourhood analysis – block size optimisation and Main lode areas	130
Figure 14.19	Kriging neighbourhood analysis to optimise block size	131
Figure 14.20	KNA search and number of samples for FW1/Zone 10 (upper - kriging efficiency, lower – slope of regression)	132
Figure 14.21	KNA search and number of samples for MID/Zone 30 (upper - kriging efficiency, lower – slope of regression)	133
Figure 14.22	KNA search and number of samples for Main/Zone 40 (upper - kriging efficiency, lower – slope of regression)	134
Figure 14.23	KNA search and number of samples for HW/Zone 50 (upper - kriging efficiency, lower – slope of regression)	135
Figure 14.24	FW1 and North FW (zones 10 and 110) search ellipses, samples and model coloured by estimation pass	138

Figure 14.25	FW2 (zones 20) search ellipse, samples and model coloured by estimation pass	138
Figure 14.26	Mid (zones 30) search ellipses, samples and model coloured by estimation pass	139
Figure 14.27	Main and North Main (zones 40 and 140) search ellipses, samples and model coloured by estimation pass	139
Figure 14.28	HW and North HW (zones 50 and 150) search ellipses, samples and model coloured by estimation pass	140
Figure 14.29	Plan view of available density samples at the Cameron Project (north to right)	141
Figure 14.30	Bulk density box plot by lithology (all samples)	142
Figure 14.31	Histograms by lithology (all samples)	143
Figure 14.32	Box plot of density data, grouped by mineralisation domain (Zone)	144
Figure 14.33	Histograms of the density data, by mineralised domain	144
Figure 14.34	Box plot of density data grouped by lithology for mineralised samples only (Zone $\neq$ 1000)	145
Figure 14.35	Histograms of density data grouped by lithology for mineralised samples only (ZONE $\neq$ 1000)	146
Figure 14.36	Visual validation of OK block grades	147
Figure 14.37	Validation swath plot Zone 10 by northing (left) and elevation (right)	148
Figure 14.38	Validation swath plot Zone 20 by northing (left) and elevation (right)	149
Figure 14.39	Validation swath plot Zone 30 by northing (left) and elevation (right)	149
Figure 14.40	Validation swath plot Zone 40 by northing (left) and elevation (right)	149
Figure 14.41	Validation swath plot Zone 50 by northing (left) and elevation (right)	150
Figure 14.42	Validation swath plot Zone 110 by northing (left) and elevation (right)	150
Figure 14.43	Validation swath plot Zone 140 by northing (left) and elevation (right)	150
Figure 14.44	Validation swath plot Zone 150 by northing (left) and elevation (right)	151
Figure 14.45	Cameron Mineral Resource classification domains – long-section view looking west	152
Figure 14.46	Mineral Resources with schematic US\$1,350 shell outline - long section view looking west	159
Figure 14.47	Cameron grade-tonnage curves for Measured and Indicated material only	160

## APPENDICES

Appendix A	Drillhole Collar Listing	179
Appendix B	Tenement Disposition List	201

## 1. SUMMARY

### 1.1. PROJECT DESCRIPTION

On 9 June 2016 First Mining Finance Corp (First Mining) announced the successful completion of the acquisition of Cameron Gold Operations Ltd., a wholly owned subsidiary of Chalice Gold Mines Limited (Chalice), the principal asset of which is the 100% owned Cameron Gold Project. On 9 December, 2016 First Mining requested that Optiro Pty Ltd re-issue the February Technical Report for the Cameron Gold Project originally prepared for Chalice Gold Mines Limited with First Mining as the addressee. The effective date of this report is 17 January, 2017.

The updated reporting of the Mineral Resource in January 2017 relates to an open pit shell constraint and cut-off grades provided by First Mining that have been applied to the December 2015 model.

In 2015, Chalice commissioned Optiro Pty Ltd (Optiro) to prepare a Mineral Resource estimate for the Cameron gold deposit located in Ontario, Canada (Figure 1.1). The Cameron Gold Project (CGP) is located approximately 80 km southeast of Kenora in the southern part of western Ontario. The site visit and oversight of the Mineral Resource estimate was carried out by Mr Mark Drabble. Mr Drabble is a qualified geologist and is a member of the Australian Institute of Geoscientists (AIG), with sufficient experience in the style of mineralisation to meet the requirements of an independent Qualified Person set out in Section 1.5 of National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (“NI 43-101”).

**Figure 1.1 Cameron Gold Project location map (source: Chalice, 2015)**



On 7 January 2013, the Australian Securities Exchange (ASX) listed Coventry Resources Limited (Coventry Australia) merged with the TSX Venture Exchange (TSX-V) listed Crescent Resources Corp. (Crescent). The result of the merger was that Coventry Australia became a wholly owned subsidiary

of Crescent and Coventry Australia shareholders received approximately 87.26% of the outstanding shares in Crescent. Crescent then changed its name to Coventry Resources Inc.

On 5 February 2014, Chalice and Coventry Resources Inc. (Coventry) completed a Plan of Arrangement whereby Chalice acquired a 100% interest in the Project and Coventry shareholders received consideration of 46 million Chalice shares. Cameron Gold Operations Limited (CGO), a wholly owned subsidiary of Chalice, is the 100% owner of the Cameron Gold Project.

On 9 June 2016 First Mining completed acquisition of CGO from Chalice for consideration of 32,260,836 common shares of First Mining and assignment of a 1% NSR on 133 unpatented claims within the Cameron Gold Project which were not encumbered by pre-existing royalty agreements.

The Cameron Gold Project comprises 226 unpatented claims, 24 patented claims (mineral rights only), seven mining licences of occupation (MLO) and four mining leases. All of the claims are located within unsurveyed crown lands, mainly within the Rowan Lake area, though some claims are situated in the Tadpole Lake, Brooks Lake and Lawrence Lake areas.

The total area of the project is approximately 448.53 km<sup>2</sup> (44,853.2 ha) (First Mining, 2017).

The Cameron Gold Project currently consists of two project areas; namely Cameron (which includes the Cameron Deposit) and West Cedartree which includes the Dubenski and Dogpaw deposits. This Technical Report covers only the Cameron Deposit and Mineral Resource Estimate within the broader Cameron Project. The Cameron property comprises 128 unpatented claims, four patented claims, six mining licences of occupation and two mining leases. The West Cedartree property comprises nine unpatented claims, 20 patented claims, one mining licence of occupation and two mining leases.

Underlying royalties which affect the Cameron deposit are a \$0.30 per short ton of ore mined on Mining Lease CLM 305 and a 1% net smelter royalty. Other royalties apply to the Cameron Project but do not extend over the mineral resource at the Cameron Deposit.

This report contains information relating to the December 2015 Mineral Resource at Cameron which is being re-stated and updated effective January 17, 2017. As stated by Ball (2014) Coventry was responsible for the bulk of the drilling data collection, compilation and quality assurance. Chalice has carried out programmes of re-logging and sampling during 2015 in order to validate previous work and to sample intervals of drillholes within the mineralised corridor that were previously unsampled. This information has been used to update the Mineral Resource interpretations and estimate. Technical information relating to geology and general information is summarised from previous technical reports.

Optiro understands that the January 2017 Mineral Resource estimate may form the basis of a future Preliminary Economic Assessment (PEA).

## **1.2. GEOLOGY AND MINERALISATION**

The mineralisation at the Cameron Gold Deposit is mainly hosted in mafic volcanic rocks within a northwest trending shear zone (Cameron Lake Shear Zone or CLSZ) which dips steeply to the northeast. In the south-eastern part of the deposit where the greatest amount of gold has been

delineated, the shear zone forms the contact between the mafic volcanic rocks and diabase/dolerite rocks of the footwall.

Gold mineralisation occurs within quartz breccia veins, associated with intense silica-sericite-carbonate-pyrite alteration in a series of zones that dip moderately to steeply to the northeast within and adjacent to the shear zone. Gold is associated with disseminated pyrite with high sulphide concentration generally corresponding with higher gold grade. Visible gold is rare. The mineralisation is open at depth and along strike to the northwest with potential to expand the Mineral Resource in these directions.

The Cameron Gold Deposit is a greenstone-hosted gold deposit. Whilst the deposit can generally be considered to be part of the orogenic family of gold deposits, it bears many characteristics atypical of the largest gold deposits of this style. These features include:

- mineralisation dominated by disseminated sulphide replacement and quartz-sulphide stockwork and quartz breccia veins;
- spatial and temporal association of mineralisation with porphyry intrusive bodies that have similar alteration assemblages (taking into account primary lithological variations);
- relatively minor amounts of auriferous quartz-carbonate vein material comprising the mineralisation, which is likely temporally-late compared to the disseminated sulphide replacement and quartz breccia veins;
- high-grade mineralisation is largely deformed and the disseminated sulphide replacement zones that constitute the bulk of the mineralisation are commonly foliated; and
- the alteration assemblage of the mineralisation (sericite-albite-carbonate-pyrite) is atypical (Ball 2014).

This estimate for Cameron was completed in December 2016 by Mark Drabble and Kahan Cervo (Principal Consultants) of Optiro Pty Ltd. Optiro is a specialist Mineral Resources and Mining consultancy which provides technical services to clients around the world. All named consultants are members of the Australian Institute of Geoscientists, a recognised overseas professional organisation (“ROPO”) as stated by the NI 43-101 “Appendix A – Accepted Foreign Associations and Membership designations”.

The Mineral Resource estimates have been generated from drillhole sample assay results. The interpretations are based on an integrated 3D geological model that defines the relationships of the geological elements at Cameron. The interpreted mineralisation wireframes (using a nominal 0.4 g/t Au and 0.25 g/t Au cut-off grade for low grade domains) have been used to constrain gold grade estimates. There are eight mineralisation domains that are split into two global areas – ‘northern’ and ‘southern’, with the separation defined by a set of northwest (grid) striking quartz feldspar porphyry (QFP) dykes. The southern domain is the most strongly mineralised. The stronger mineralisation is attributed to being dominantly mafic hosted with an inflection point in the Cameron Lake Shear Zone (CLSZ) and resultant dilation zone defined by north-south striking hangingwall (HW) and footwall (FW) QFP dykes.

Block grade estimation parameters have been defined on the basis of geology, drillhole spacing and through geostatistical analysis of the data. Block grade estimation is by ordinary kriging (OK) into a

panel size of 5 mE by 10 mN and 5 mRL, which is considered appropriate for the distribution of sample data and the deposit type. Sub-celling of the parent cells to 0.625 mE by 2.5 mN and 1.25 mRL was enabled to ensure good volumetric correlation with the mineralisation wireframes.

The Mineral Resource estimates have been classified by the geological understanding, data spacing, block proximity to sample locations, underground development and confidence in the block model grade estimate. The Mineral Resource estimate has been reported in accordance with the Standards on Mineral Resources and Reserves of the Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) 2014 Definition Standards.

The Mineral Resources have been reported using updated constraints and cut-off grades. The January 17, 2017 Mineral Resource is tabulated in Table 1.1 for Measured and Indicated Mineral Resources and in Table 1.2 for Inferred Mineral Resources.

**Table 1.1 Cameron Measured & Indicated Mineral Resource statement as at January 17, 2017**

Mineral Resource Classification	Open-Pit Constraint	Gold cut-off (Au g/t)	Tonnes	Gold g/t	Gold (Ounces)
Measured Mineral Resource	Within US\$1,350 open-pit shell	0.55	2,670,000	2.66	228,000
Indicated Mineral Resource	Within US\$1,350 open-pit shell	0.55	820,000	1.74	46,000
<b>Measured + Indicated</b>			<b>3,490,000</b>	<b>2.45</b>	<b>274,000</b>
Mineral Resource Classification	Underground Constraint	Gold cut-off (Au g/t)	Tonnes	Gold g/t	Gold (Ounces)
Measured Mineral Resource	Below US\$1,350 open-pit shell	2.00	690,000	3.09	69,000
Indicated Mineral Resource	Below US\$1,350 open-pit shell	2.00	1,350,000	2.80	121,000
<b>Measured + Indicated</b>			<b>2,040,000</b>	<b>2.90</b>	<b>190,000</b>
<b>Total Measured + Indicated</b>			<b>5,530,000</b>	<b>2.61</b>	<b>464,000</b>

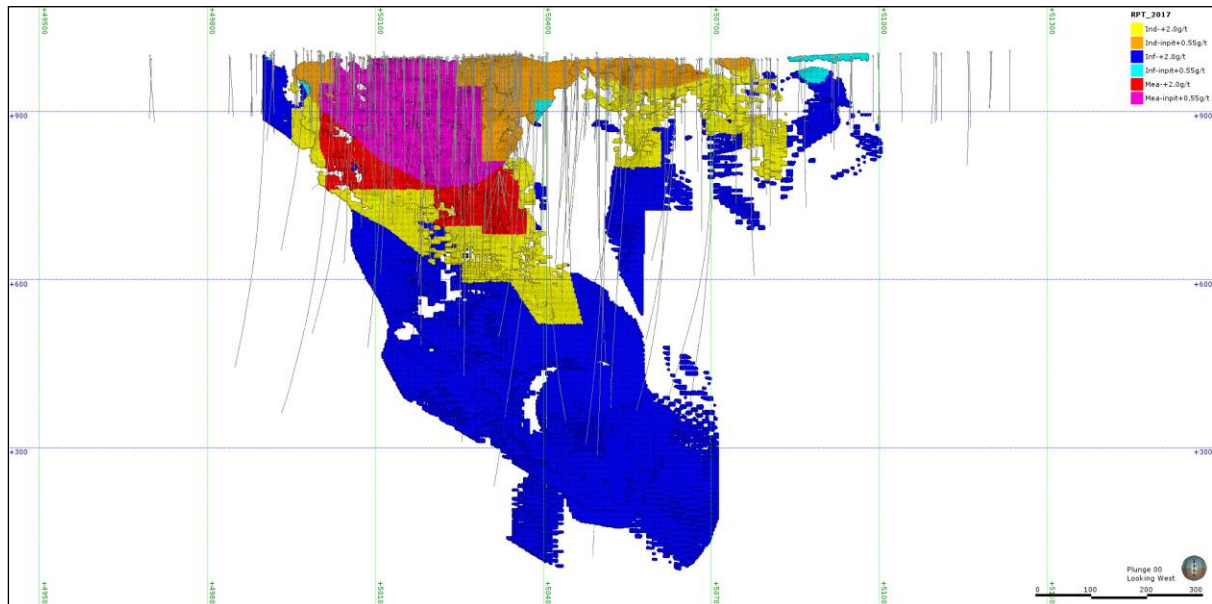
**Table 1.2 Cameron Inferred Mineral Resource statement as at January 17, 2017**

Mineral Resource Classification	Open-Pit Constraint	Gold cut-off (Au g/t)	Tonnes	Gold g/t	Gold (Ounces)
Inferred Mineral Resource	Within US\$1,350 open-pit shell	0.55	35,000	2.45	3,000
Mineral Resource Classification	Underground Constraint	Gold cut-off (Au g/t)	Tonnes	Gold g/t	Gold (Ounces)
Inferred Mineral Resource	Below US\$1,350 open-pit shell	2.00	6,500,000	2.54	530,000
<b>Total Inferred</b>			<b>6,535,000</b>	<b>2.54</b>	<b>533,000</b>



A long section projection looking grid west is presented in Figure 1.2 showing the Mineral Resource classification domains with drilling overlaid for reference. The Measured and Indicated Mineral Resources are defined in the areas of the deposit that have the highest drilling density along with underground development that has exposed and sampled the deposit on three levels of drift development.

**Figure 1.2 January 2017 Cameron Mineral Resource classification (long-section looking west)**



### 1.3. MINERAL RESERVES

No Mineral Reserves have been defined at Cameron.

### 1.4. METALLURGY

A number of preliminary metallurgical studies have been carried out on samples from Cameron from 1985 to the present. Multi-element geochemical assays of the samples from the Coventry drillholes have indicated that concentrations of deleterious elements (such as sulphur) are not significant.

Metallurgical testwork carried out on samples representative of the style of mineralization at the Cameron Gold deposit showed that recoveries of 92% to 93% were returned from direct cyanidation of samples ground to 75  $\mu\text{m}$ . The results also showed that the recoveries were grind sensitive with maximum recoveries at a  $P_{80}$  grind size in the range 53 to 75  $\mu\text{m}$ . An alternative processing regime of sulphide flotation (mainly pyrite), regrind of flotation concentrate followed by intensive cyanidation of flotation concentrate and flotation tailings provided gold recoveries marginally higher than direct cyanidation. At a grind size of 75  $\mu\text{m}$  the optimum leach time was approximately 24 hours.

Testwork completed by SGS Vancouver in 2013 used a composite sample taken from 17 drillhole intersections from 14 separate drillholes at Cameron. Comminution tests indicated that:

- rod and ball mill bond work indices are low
- moderate abrasion index within typical ranges for dolerite-basalt material

- JK breakage parameters indicating the material is highly competent.

Gravity recoverable gold is typically around 25% with no improvement in overall recovery after gravity recovery with cyanidation of the gravity tails. Test work carried out in 2014 showed that cyanide in leach processing at a  $P_{80}$  of 75  $\mu\text{m}$  would recover 92.5% of gold with a cyanide usage of 0.2 kg/t and lime usage of 1.2 kg/t. This result was an improvement on direct cyanidation in terms of reagent usage with a lower recovery (92.5% vs. <95% cyanidation). No processing issues or deleterious element have been identified that could have a significant effect on potential mineral extraction in metallurgical test work completed to date (Ball, 2014) and (Lycopodium, 2013).

## 1.5. SOCIAL AND ENVIRONMENTAL

First Mining has continued with the Community Engagement policies initiated by Coventry Resources in 2010 and continued by Chalice, including engagement of Chalice's First Nations consultant, regular update meetings, traditional feasts, local hiring initiatives, and recently has started the negotiation process to establish Memorandum of Understanding agreements with Treaty 3 signatory communities.

First Mining has continued with the Environmental Studies initiated by Coventry Resources in 2010 and continued by Chalice, including surface water quality sampling and weather data collection via an automated weather station on site, and engagement of the environmental consulting firm Environmental Applications to initiate baseline studies of the project.

## 1.6. CONCLUSIONS AND RECOMMENDATIONS

The Cameron Gold Deposit Mineral resource estimate has been updated using an additional 30,000 samples which combined with the re-logging of approximately 771 diamond holes (103,000 m) has increased the confidence of the geological and mineralisation interpretations. The definition of grade domains and continuity is considered to be robust and with greater confidence at a more local scale than previous estimates due to the much greater number of samples.

The key constraints of geological controls and mineralisation continuity are well understood and the confidence in the input data and estimation process reported in this document are considered to be of a standard suitable to support the definition of a Mineral Resource under the CIM 2014 Definition Standards.

The author considers that the data provided by First Mining and Chalice to be reliable and representative of the mineralisation at the Cameron Gold Deposit and that it is of sufficient quality and confidence to justify the definition and classification of a Mineral Resource as defined by the CIM 2014 Definition Standards.

The interpretation of the deposit scale geological model was done in a collaborative manner, with the Chalice site geological team (who were responsible for the re-logging of the drilling) involved in the interpretation of sectional and wireframe interpretations of the geology and mineralisation. These interpretations were used by Optiro as a guide to compile the 3D geological model using Leapfrog Geo 3D software. The geological modelling process was iterative with discussions and amendments made in order to validate the definition of the lithological and structural elements into

an integrated model. The risk of the geological interpretation is considered to be low given the very close spaced drilling, surface and underground mapping information, high level of geological understanding and the consistent relationship of the logged lithological units.

The risk of the mineralisation interpretations is also considered to be low, as the underground drilling spacing is down to 4 m in area and averages 15 m in the southern part of the deposit. The issue of grade variability within the shear hosted domain has been addressed in part by the ability to subdomain out low grade areas of mineralisation and this has improved the quality of the local grade estimate by reducing the amount of smoothing in the estimate. The grade risk has been reduced by detailed analyses of various grade continuity models to assess the impact of alternative interpretations. The re-logging and sampling of previously unsampled intervals has improved the sample population within the mineralised domains and the definition of short scale grade continuity parameters/trends. Separation of low grade sub-domains has reduced the amount of smoothing in the model and increased the confidence of the grade estimate accordingly.

The Mineral Resource has been reported using two Au cut-off grades. The parts of the deposit considered amenable to open pit mining methods have been reported using a 0.55 g/t Au cut-off grade applied within a constraining open pit shell down to a depth of 235 m below natural surface. Below this the deposit has been reported at a 2 g/t Au cut-off grade, which is considered to be appropriate for underground mining using the longhole open stoping method. A gold price of US\$1,350 has been used in both cases, with a 91.5% metallurgical recovery. The parameters for the optimisation process and assumptions for the underground mining are included in Section 16 – Mining Methods.

The key constraints of geological controls and mineralisation continuity are well understood and the confidence in the input data and estimation process reported in this document are considered to be of a standard suitable to support the definition of a Mineral Resource under the CIM 2014 Definition Standards.

Optiro recommends a single phase program of drilling to advance Inferred Mineral Resources to higher categories and extend the current resource down plunge of identified mineralized trends. In addition Optiro recommends that First Mining commence Environmental Baseline studies and continue development of relations with First Nations stakeholders.

## 2. INTRODUCTION

### 2.1. SCOPE OF THE REPORT

This report was commissioned by First Mining Finance Corp. to Optiro Pty Ltd (Optiro) to prepare a Mineral Resource estimate for the Cameron gold deposit in Ontario, Canada. The Cameron Gold Project is located approximately 80 km southeast of Kenora in the southern part of western Ontario. The January 2017 Cameron Mineral Resource estimate was completed by Mark Drabble (MAIG) and Kahan Cervoj (MAIG).

This technical report covers the Cameron Gold project and has been written to comply with the reporting requirements of National Instrument 43-101 *Standards of Disclosure for Mineral Projects* ("NI 43-101").

### 2.2. AUTHORS

The principal author of this technical report is Mark Drabble (MAIG) and the Mineral Resource estimate was prepared under his direction. Kahan Cervoj (MAIG) is a contributing author to this report. Both Mr. Drabble and Mr. Cervoj meet the requirements of an independent Qualified Person (QP) under NI 43-101 as set out in Table 2.1 and the attached Certificates of Qualified Person.

**Table 2.1 Cameron Technical report – authors and contribution**

Name	Position	Qualifications and memberships	NI 43-101 Contribution
Mark Drabble	Principal Consultant, Optiro Pty Ltd	<i>B.App.Sci (Geology), MAIG, MAusIMM</i>	Site visit, geological modelling, report compilation, QP sign-off
Kahan Cervoj	Principal Consultant, Optiro Pty Ltd	<i>B.App.Sci, (Geology), MAIG, MAusIMM</i>	Block model estimation, variography analysis, validation and reporting

The effective date for the Mineral Resource estimates is January 17, 2017. The effective date of this report is 17 January, 2017.

**Table 2.2 NI 43-101 accepted foreign associations**
**Rules and Policies**

**Appendix A  
Accepted Foreign Associations and Membership Designations**

Foreign Association	Membership Designation
American Institute of Professional Geologists (AIPG)	Certified Professional Geologist (CPG)
The Society for Mining, Metallurgy and Exploration, Inc. (SME)	Registered Member
Mining and Metallurgical Society of America (MMSA)	Qualified Professional (QP)
Any state in the United States of America	Licensed or certified as a professional engineer
European Federation of Geologists (EFG)	European Geologist (EurGeol)
Institute of Geologists of Ireland (IGI)	Professional Member (PGeo)
Institute of Materials, Minerals and Mining (IMMM)	Professional Member (MIMMM), Fellow (FIMMM), Chartered Scientist (CSI MIMMM), or Chartered Engineer (CEng MIMMM)
Geological Society of London (GSL)	Chartered Geologist (CGeol)
Australasian Institute of Mining and Metallurgy (AusIMM)	Fellow (FAusIMM) or Chartered Professional Member or Fellow [MAusIMM (CP), FAusIMM (CP)]
Australian Institute of Geoscientists (AIG)	Member (MAIG), Fellow (FAIG) or Registered Professional Geoscientist Member or Fellow (MAIG RPGeo, FAIG RPGeo)
Southern African Institute of Mining and Metallurgy (SAIMM)	Fellow (FSAIMM)
South African Council for Natural Scientific Professions (SACNASP)	Professional Natural Scientist (Pr.Sci.Nat.)
Engineering Council of South Africa (ECSA)	Professional Engineer (Pr.Eng.) or Professional Certificated Engineer (Pr.Cert.Eng.)
Comisión Calificadora de Competencias en Recursos y Reservas Mineras (Chilean Mining Commission)	Registered Member

### 2.3. PRINCIPAL SOURCES OF INFORMATION

Information used in compiling this report was derived from previous technical reports on the property and from the reports and documents listed in the References section. A site visit and review of all geological technical aspects, including the database and sample QAQC audits, have been undertaken by Optiro. Consequently, other than for Section 14 – Mineral Resource estimates this report includes extracts and information from the following sources:

- **Ball, P., 2014.** Technical Report Cameron Gold Camp Project Mineral Resource Summary Western Ontario, Canada. NI 43-101 Technical Report for Chalice Gold Mines Ltd. 25 July 2014.
- **Ball, P., 2012** Technical Report Cameron Gold Project Western Ontario, Canada. NI 43-101 Technical Report for Coventry Resources Limited and Crescent Resources Group. 5 July, 2012.
- **Coventry, 2013** Revised Technical Report on the Cameron Gold Camp Project Western Ontario, Canada. NI 43-101 Technical Report for Coventry Resources Inc. by Lycopodium, DATAGEO Geological Consultants and AMC Consultants. 5 July, 2012.

- Chalice Gold Mines Limited – ASX and TSX releases

Optiro has made all reasonable enquiries to establish the completeness and authenticity of the information provided. In addition, a final draft of this report was provided to Chalice along with a written request to identify any material errors or omissions prior to lodgement.

## **2.4. SITE VISIT**

Mr Mark Drabble visited the project on 4 to 5 July 2015. Mr Drabble inspected outcrop exposures of the deposit, the exploration office, core processing facility, core storage facilities and pulp storage.

Mr Drabble viewed core samples of representative intervals of diamond drillholes. A list of holes was selected by Mr Drabble to cover the strike and depth extents of the deposit and these were laid out for viewing and sampling.

Independent sampling of surface outcrop exposures and diamond drill core was carried out by Mr Drabble and the results were sent only to Mr Drabble. Independent checks of a representative number of drillhole collar co-ordinates using a GPS unit were carried out with photographic records of the collar caps.

Photographs of the deposit and infrastructure were taken and are used in this report.

## **2.5. INDEPENDENCE**

Optiro is an independent consulting and advisory organisation which provides a range of services related to the minerals industry including, in this case, independent geological services, but also resource evaluation, corporate advisory, mining engineering, mine design, scheduling, audit, due diligence and risk assessment assistance. The principal office of Optiro is at 16 Ord Street, West Perth, Western Australia, and Optiro's staff work on a variety of projects in a range of commodities worldwide.

The author does not hold any interest in First Mining Finance Corp, its associated parties, or in any of the mineral properties which are the subject of this report. Fees for the preparation of this report are charged at Optiro's standard rates, whilst expenses are reimbursed at cost. Payment of fees and expenses is in no way contingent upon the conclusions drawn in this report.

### 3. RELIANCE ON OTHER EXPERTS

Information concerning claim status, ownership and exploration expenditures which are presented has been sourced from First Mining.

The author has sighted the property titles and ownership status relating to tenements under the Cameron Gold Project from information provided by First Mining. The claims are registered under Cameron Gold Operations Ltd. Standing and expiry dates have been provided by FF and are presented as an appendix to this report.

This reliance applies to disclosure in Sections 4.3 and 4.4 of the report.

## 4. PROPERTY DESCRIPTION AND LOCATION

### 4.1. PROJECT OWNERSHIP

The Cameron Gold Project is 100% owned by First Mining, a Vancouver, CA based resource holding company that is listed on the TSX Venture Exchange (TSX-V: FF). First Mining acquired the Cameron Gold Project in June 2016.

### 4.2. PROJECT LOCATION

The Cameron Gold Project is located approximately 80 km southeast of Kenora in the southern part of western Ontario (Table 4.1). Kenora is 207 km by road east of Winnipeg along the Trans-Canada Highway (Manitoba Hwy1/Ontario Hwy 17).

Figure 4.1 Cameron Gold Project location map (Source: Chalice, 2015)



### 4.3. EXISTING PROJECT INFRASTRUCTURE

The current infrastructure at the Cameron Gold Project consists of:

- The Cameron Lake gravel road, which is well maintained and provides year round access to the project site. The access road intersects Highway 71 and is approximately 22 km long.
- First Mining exploration camp at the project with a capacity of 31 persons and is accessible all year.
- Power generation by diesel generators.



The Trans-Canada Highway (Hwy 71) which runs through Sioux Narrows and Nestor Falls has an adjacent 115 kV power line that is within 30 km of the project. Major hydroelectricity projects are located north of Kenora, along with a coal fired power station east of Fort Frances.

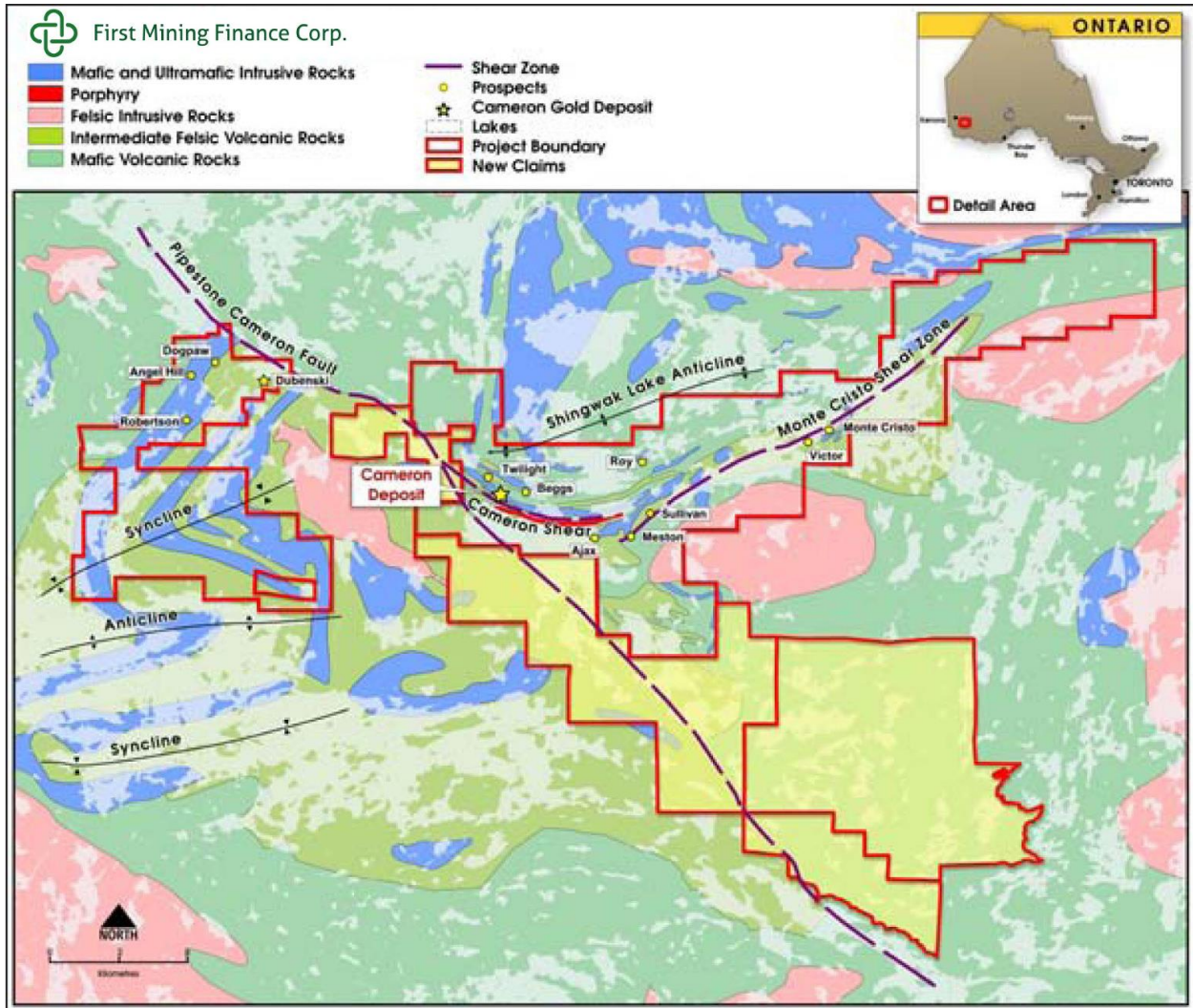
The project area is deemed of sufficient size to contain any infrastructure related to potential mining operations including mining areas, processing plant site, administration offices and tailings storage facilities. When required, First Mining anticipates sourcing mining personnel from Kenora and Fort Frances with specialist services and personnel from Winnipeg and Red Lake.

#### **4.4. THE PROJECT TENEMENT AREA**

The Cameron Gold Project comprises a total of 226 unpatented claims, 24 patented claims (mineral rights only), seven mining licences of occupation (MLO) and four mining leases. All of the claims are located within unsurveyed crown lands, mainly in the Rowan Lake area, though some claims are situated in the Tadpole Lake, Brooks Lake and Lawrence Lake areas. The type of mineral tenure and the identifying name or number of each can be found in Appendix B – “Tenement Disposition List”.

The total area of the project is approximately 448.532 km<sup>2</sup>, (44,853.2 ha) as shown in Figure 4.2.

Figure 4.2 Property location map – Cameron Gold Project tenements (Source: First Mining, 2017)

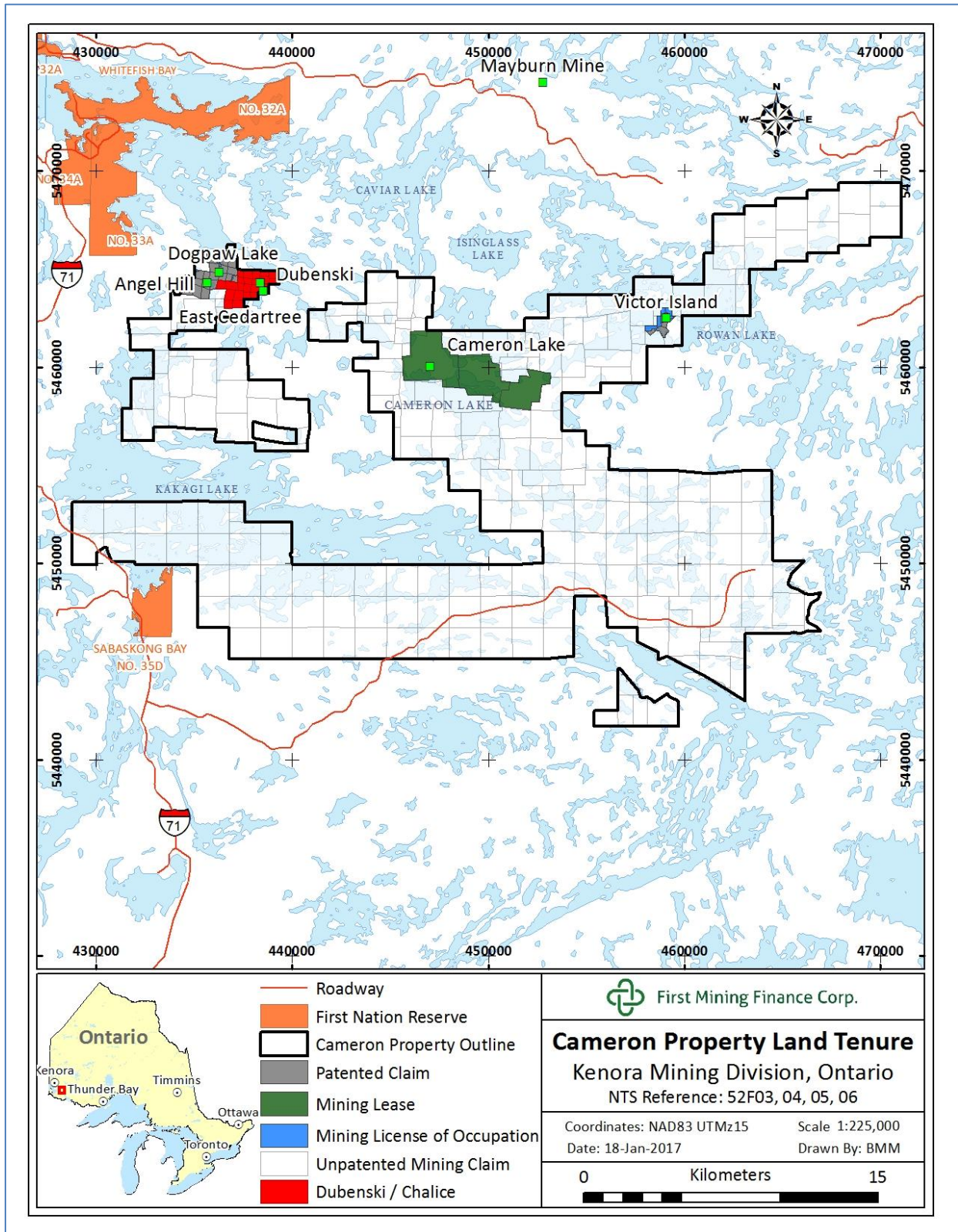


A summary of the tenements at the Cameron Gold Project is presented in Table 4.1.

**Table 4.1 Cameron Gold Project summary of tenements**

Project Area	Tenement Status
Cameron (Contains the Cameron Deposit): <i>100% owned by Cameron Gold Operations Ltd:</i>	152 unpatented claims
	4 patented claims
	6 mining licences of occupation
	3 mining leases
<i>Under option agreement:</i>	65 unpatented claims
<b>Totals:</b>	217 unpatented claims
	4 patented claims
	6 mining licences of occupation
	2 mining leases
West Cedartree: (Contains Dogpaw & Dubenski Deposits): <i>100% owned by Cameron Gold Operations Ltd:</i>	9 unpatented claims
	20 patented claims
	1 mining licences of occupation
	2 mining leases
Project totals: <i>100% owned by Cameron Gold Operations Ltd:</i>	161 unpatented claims
	24 patented claims
	7 mining licences of occupation
	4 mining leases
<i>Under option agreement:</i>	65 unpatented claims
<b>Grand Totals:</b>	<b>226 unpatented claims</b>
	<b>24 patented claims</b>
	<b>7 mining licences of occupation</b>
	<b>4 mining leases</b>

Figure 4.3 Cameron Gold Deposit Tenement plan (First Mining, 2017)



#### 4.5. LEGISLATION AND PERMITTING

Chalice provided the following summary of the Ontario *Mining Act* (2013) with respect to mineral exploration at the Cameron Gold Project:

“According to the *Mining Act* (Ontario), except where otherwise provided, the holder of a prospector’s licence may prospect for minerals and stake a mining claim on any Crown land (surveyed or unsurveyed). Unpatented lands are where the surface and mining rights have been reserved by the Crown. Individual unpatented mining claims are comprised of a multiple of 16 Ha (40 Acre) blocks. In order to maintain the title to an unpatented mining claim indefinitely, the recorded holder of the claim is required to undertake approved work expenditure in excess of \$400 per claim within two years of the granting of the claim. Work programmes and expenditure commitments can be grouped across a contiguous series of unpatented mining claims. To maintain the unpatented claims comprising the Cameron Project in good standing, First Mining is required to incur an aggregate expenditure of \$750,800 per year and to file annual assessment reports of the work that has been undertaken. A total of \$522,213 is available for distribution across the Cameron Gold Project (Note: Unless otherwise specified all currency is in Canadian dollars).

The recorded holder of an unpatented mining claim does not own the land and has no title permitting mineral extraction unless it converts the mining claim to a mining lease under Section 81 of the *Mining Act*. Prior to the grant of a mining lease, certain conditions must be fulfilled including a survey of boundaries of the claims. Once granted the duration of a mining lease is 21 years. This can be renewed on application. The mining leases within the Cameron Project were initially granted in 1988 and were subsequently renewed for a further 21 years in July 2009, except CLM 289 which was renewed in May 2006.

Patented lands are private property in which the surface and mining rights are not held by the Crown. No assessment work is required on these claims, although land taxes are levied against the claim holder if the patented claim includes the surface rights associated with the claim. As the surface rights for all patented claims within the Cameron Project are held by other parties, First Mining is not required to pay any such fees.

Mining Licences of Occupation (MLOs) are a type of claim that was once commonly issued to permit the mining of minerals under bodies of water. On rare occasions the licence may include portions of dry land. Issued in perpetuity, there is no requirement to renew an MLO. All MLOs are subject to an annual flat rental fee of \$5.00 per hectare. The holder of a patented mining claim covering predominately dry land may also hold an MLO within the patented claim, for the water portion of the same mining claim.

All patented and unpatented mining claims, licences of occupation and mining leases are held in the name of CGO, except those claims and leases currently under option.”

As of the effective date of this Technical Report, all claims are in good standing. The author is not aware of any outstanding aboriginal land rights or land claims over the project area. First Mining enjoys full and unfettered legal access to all claims comprising the Cameron Project.

#### 4.6. PROPERTY OWNERSHIP AND AGREEMENTS

The Cameron Gold Project is 100% owned by Cameron Gold Operations Limited, a wholly owned subsidiary of First Mining. Ownership is pursuant to either a 100% direct interest in the underlying licences or option agreements whereby First Mining may acquire a 100% interest upon making certain payments to the vendor.

On 9 June 2016 First Mining acquired Cameron Gold Operations Limited from Chalice in consideration of 32,260,836 common shares of First Mining. In connection with the Transaction, First Mining granted to Chalice a net smelter returns (“NSR”) royalty of 1% on 129 unpatented mining claims (4 currently being registered) within the Cameron Gold project which are not encumbered by pre-existing royalties. A list of these is included in Appendix B – “Tenement Disposition List”. First Mining has retained the right to repurchase 0.5% of the NSR royalty for CDN\$1,000,000.

On January 7 2013, the ASX listed Coventry Resources Limited (Coventry Australia) merged with TSX Venture Exchange (“TSX-V”) listed Crescent Resources Corp. (“Crescent”) upon which Coventry Australia became a wholly owned subsidiary of Crescent. Coventry Australia shareholders received approximately 87.26% of the outstanding shares of Crescent. Crescent subsequently changed its name to Coventry Resources Inc.

On 5 February 2014, Chalice and Coventry Resources Inc. (Coventry) successfully completed a Plan of Arrangement under which Chalice acquired a 100% interest in the Cameron Gold Project, which includes the Cameron, Dubenski and Dogpaw Gold Deposits. Under this arrangement Coventry shareholders received 46 million Chalice shares.

In July 2014, Chalice acquired 100% of the Dubenski Gold Deposit for C\$700,000, which was previously under an option agreement. In addition, there is an additional payment on all gold production mined in excess of 70,000 ounces (being US\$13 per ounce where the gold price is less than or equal to US\$1,500 per ounce, and US\$16 per ounce where the gold price is greater than US\$1,500 per ounce).

Prior to Chalice’s involvement, on 20 April 2010, Coventry completed the acquisition of a 100% interest in the mineral rights covering 3,205 hectares over the Cameron Gold Deposit and surrounding areas. These rights were secured by purchasing 100% of the shares of Cameron Lake JEX Corporation from Nuinsco Resources Limited (Nuinsco). Cameron Lake JEX Corporation was subsequently renamed to Cameron Gold Operations Limited (CGO). As part of the transaction Nuinsco was granted a 3% net smelter return (NSR).

During the summer of 2010, Coventry expanded the project area to approximately 116.2 km<sup>2</sup> (11,620 ha) by staking additional unpatented mining claims. The new areas staked covered the known and interpreted strike extents of geological structures associated with gold mineralisation, primarily to the east and south of the original project area.

On 13 September 2010, Coventry, through CGO, executed an option agreement with King’s Bay Gold Corporation (King’s Bay) and Lasir Gold Inc. (Lasir) providing Coventry the right to acquire an 80% interest in the Nucanolan property and King’s Bay the right to acquire a 20% interest in the

Nucanolan property. The Nucanolan property comprised 20 unpatented mining claims encompassed by granted Mining Lease CLM 289. The property covered 324 hectares within the central portion of the Cameron Project area. Under the terms of the option agreement Coventry and King's Bay were obliged to expend a total of \$1 million on exploration on the property before 16 February 2014 and to make staged payments of cash and shares to the vendors during this period. Chalice completed its obligations and on 10 April 2014 purchased King's Bay's 20% interest in the property for CDN\$100,000. Lasir retains a 3% NSR which may be reduced to 1.5% upon payment of CDN\$1.5 million.

On 4 October 2010, Coventry, through CGO, executed an option agreement with prospectors Sherridon Johnson and Edward Barkauskas (Johnson and Barkauskas) which provides Coventry the right to acquire 100% of the Roy Property by making staged payments of cash and shares over a four year period ending 4 October 2014. On the 10 December 2013, the conditions of the agreement were fulfilled and the then holders of the option agreement (Bergen Cindra Lee [60%] and Edward Antony Barkauskas [40%]) transferred their interest to CGO making CGO a 100% owner of the Roy Property. A 2% NSR in respect of production from the property applies. The Roy property comprises a single unpatented mining claim covering approximately 143 hectares in the northern part of the project area.

#### **4.7. COMMUNITY ENGAGEMENT**

First Mining is currently undertaking community engagement with neighbouring First Nation and Metis communities and other groups potentially affected by exploration activities at the Cameron Gold Project. A draft Memorandum of Understanding (MOU) is currently being negotiated with Treaty 3 partners.

Good working relationships were established with the communities by Chalice and this engagement has been continued by First Mining. In 2016 First Mining engaged the services of Chalice's First Nations consultant to provide this continuity. During 2015, Chalice undertook spring information meetings in Kenora, Dryden and at individual communities, traditional ceremonies on site, significant employment of aboriginal members in the 2015 summer exploration programme and the initiation of fall information meetings at the communities.

#### **4.8. ROYALTIES AND TAXATION**

First Mining has provided the following information regarding the royalties at Cameron:

##### **CAMERON DEPOSIT:**

The estates of the two prospectors, W. Moorhouse and D. Petrunka who staked the original 15 claims in 1979 that were optioned by Nuinsco in 1981 and which were subsequently acquired by Coventry retain a royalty over the resources defined within these claims. This royalty amounts to \$0.30 per short ton of ore mined. These claims are now held under Mining Lease CLM 305. The particular claims are identified in Table 4.2.

Under Coventry and Nuinsco's purchase and sale agreement for the Cameron Gold Project, Nuinsco retained a 3% NSR royalty on the proceeds of the sale of minerals from the lands subject to the

purchase and sale agreement (minus allowable deductions). In March 2015, Chalice acquired 2% of the NSR for CDN\$2 million, thereby reducing this NSR royalty to 1%. This does not apply to subsequently acquired or staked lands.

Three other NSR royalties apply to the Cameron Project, but do not extend over the mineral resource at the Cameron Deposit.

On 19 February 2015, Chalice via CGO has entered into an option agreement with Rubicon Minerals Corp. for 47 unpatented claims. There is also a 1.5% NSR, with the option to buy back 0.75% for CDN\$750,000.

On 9 June 2016 First Mining granted to Chalice a 1% NSR on 133 unpatented claims (details of claims presented in Appendix B – “Tenement Disposition List”) within the Cameron Gold project which are not encumbered by pre-existing royalties. First Mining has retained the right to repurchase 0.5% of this NSR royalty for CDN\$1,000,000.

The project is not subject to any other royalties, back-in rights, payments or other agreements or encumbrances. A summary of all royalties pertaining to the project are listed on a per claim basis within Table 4.2.



**Table 4.2 Cameron Gold Project royalties table**

Cameron Project claims	Parties	Date	Comments
47 unpatented claims under an option agreement <b>(Block 1 &amp; Blocks 2)</b>	Option agreement between Cameron Gold Operations and Rubicon Minerals Corp.	Agreement dated 19 February 2015	1.5% NSR, with the option to buy back 0.75% for CDN\$750,000
20 unpatented claims <b>(1105444,1105445, 1161574,1161575, 1210120,1210121, 1210122,1210123, 1210124,1210125, 1210126,1210128, 1210129,1210130, 1210131,1210132, 1210133,1210134, 1210135,1210136)</b> 4 patented claims <b>(K2766,2767,2768,4712)</b> 6 mining leases of occupation <b>(K4709,4710,4711,4712, 2767,2768)</b> 2 mining leases <b>(CLM305/CLM306)</b>	Royalty agreement between Cameron Gold Operations and 8248567 Canada Limited (Orion Resource Partners)	Royalty was transferred on 27 September 2012 (original signed 20 April 2010)	1.0% NSR  <b><i>Covers the Cameron deposit.</i></b>
1 unpatented claim <b>(4248906)</b>	Royalty agreement between Cameron Gold Operations and Barkauskas and Johnson	Agreement dated 4 October 2010	2% NSR, with right to buy back 1% for CDN\$500,000
1 mining lease <b>(CLM305)</b>	Royalty agreement between Cameron and Morehouse & Petrunka	Agreement dated 31 December 1979	\$0.30 per ton on all ore mined and milled from the mining property <b><i>Covers the Cameron deposit.</i></b>
1 mining lease <b>(CLM289)</b>	Royalty agreement with Lasir Gold	Agreement dated 13 September 2010 and letter to King's Bay Gold 31 March 2014	3% NSR, with the right to buy back 1.5% for CDN\$1,500,000

Cameron Project claims	Parties	Date	Comments
133 unpatented claims	Royalty agreement between First Mining Finance and Chalice Gold	9 <sup>th</sup> June 2016	1% NSR on all unpatented claims not previously encumbered by an existing royalty

#### WEST CEDARTREE:

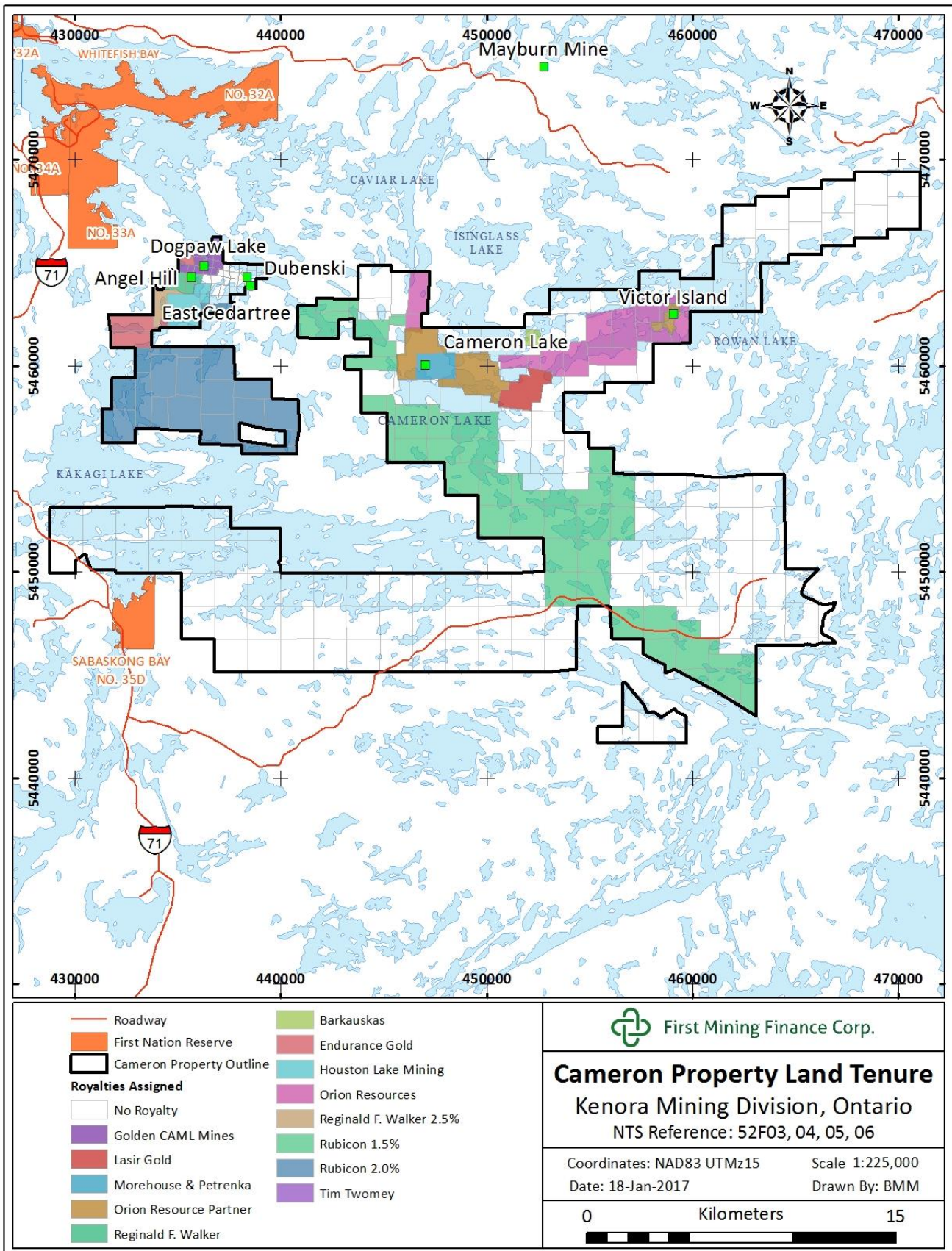
Royalties are applicable to all of the eight separate option and/or purchase agreements that comprise the individual properties of the West Cedartree Project.

The Dubenski Gold Deposit is wholly contained within lands comprising a purchase agreement with Ms Nykola Dubenski. The property has an attached royalty amount of between US\$13 per gold ounce and US\$16 per gold ounce for any ounces produced over 59,000 gold ounces. The appropriate royalty paid is based on average daily gold price for the quarter within which production occurred; the lower royalty is paid if the average gold price is less than or equal to US\$1,500/ounce and the higher if the average gold price is greater than US\$1,500/ounce.

For the Dogpaw Gold Deposit, in the event of commercial production, a 2.5% NSR Royalty is payable to Golden CAML Mines Limited. Chalice has an option to purchase up to 1.5% of the NSR Royalty for \$500,000 per 0.5%.

A summary of all royalties pertaining to the West Cedartree Project is listed on a per claim basis within Table 4.3.

Figure 4.4 Land Tenure map of the Cameron Gold Project (Source: First Mining, 2017)



**Table 4.3 West Cedartree Project royalties table**

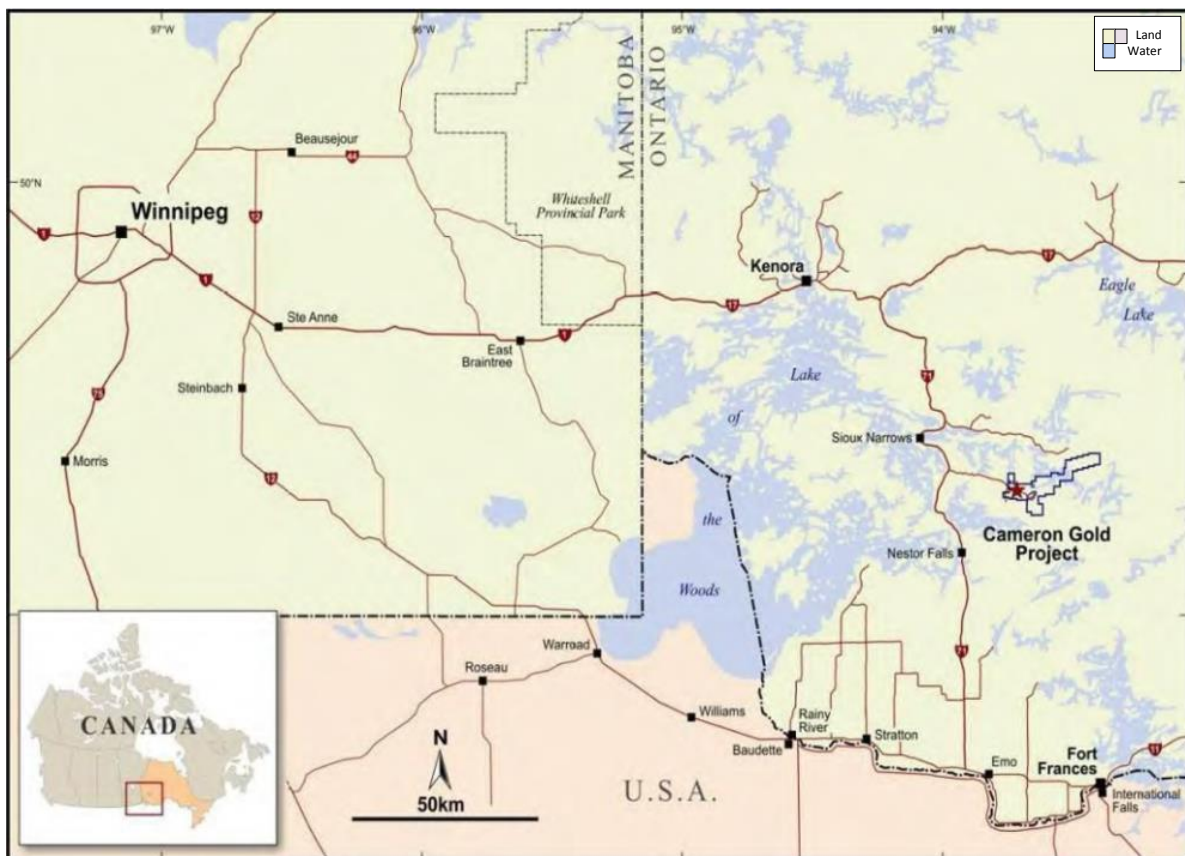
West Cedartree claims	Parties	Date	Comments
4 unpatented claims <b>(3012199,3001240, 3001298,3010497)</b>	Royalty agreement between Cameron Gold Operations Houston Lake and Endurance Gold Corporation	Agreement dated 22 January 2007	2.5% NSR, with option to purchase back 1.5% for CDN\$500,000 per 0.5%.
1 unpatented claim <b>(1196649)</b>	Royalty agreement with Tim Twomey dated 6 February 1997	Agreement dated 6 February 1997	2% NSR with the option to acquire at a cap of CDN\$1 million
1 unpatented claim <b>(1149862)</b>	Royalty agreement with Reginald F Walker	Agreement dated 5 May 2002	2.5% NSR
3 unpatented claims <b>(3000802,3000803, 3000804)</b>	Asset purchase agreement with Houston Lake Mining Inc.	Agreement dated 7 January 2013	2.5% NSR
13 patented claims <b>(K10058,K9999,K10000, K10010,K10011,K9990, K9992,K9996,K9991, K9993,K9994,K9995, K9997)</b>	Royalty agreement with Golden CAML Mines Limited	Agreement dated 19 April 2006	2.5% NSR, option to acquire 1.5% at CDN\$1.5 million at any time. Any part of 1.5% can be bought for CDN\$500,000 per 0.5%. <b><i>Covers the Dogpaw deposit</i></b>
7 patented claims <b>(K10025,10026,10024,100 27,10028,10029,10030)</b>	Agreement with Reginald F Walker and Agreement with Marbank Minerals Inc.	Agreements dated 5 May 2002 and 5 February 1997.	1.5% NSR – Reginald Walker 0.75% NSR – Marbank Minerals Inc.
2 mining leases <b>(107495,107494)</b>	Agreement with 525400 Ontario Inc. and Cameron Gold	Agreement dated 10 July 2014	Royalty payable on or after the Sale of 70,000 ounces of gold. Amount is US\$13.00 per ounce of Gold sold where the spot price is less than or equal to US\$1,500 per ounce, and US\$16 per ounce of Gold sold where the spot price is greater than US\$1,500 per ounce. <b><i>Covers the Dubenski deposit</i></b>

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

### 5.1. ACCESSIBILITY

The Cameron Gold Project is located in the southern part of western Ontario, Canada approximately 80 km southeast of Kenora and 80 km northwest of Fort Frances (Figure 5.1). The nearest towns are Sioux Narrows and Nestor Falls, 30 km and 25 km away respectively. The project is on unsurveyed crown lands accessed by sealed and all weather gravel roads. From Kenora via Highway 17, Hwy 71 and the Cameron Lake road the distance is around 123 kilometres. From Fort Frances via Hwy 11, Hwy 71 and the Cameron Lake road the distance is 168 kilometres.

Figure 5.1 Cameron Gold Project location map (source: Chalice, 2015)



The Cameron Lake access road is an all-weather gravel road and access is restricted to holders of permits issued by the Ministry of Natural Resources (MNR) in Kenora. Regulations state that the road cannot be used to gain access for the purposes of hunting or fishing, nor may any fishing equipment be transported along the road. The primary purpose of the road is for logging activities and it is Chalice policy is to manage travel safety using two-way radios with call-up stations every kilometre along the road.

The project is accessible by float plane, with a dock situated in Cameron Lake (Nuinsco Bay), immediately south of the Cameron Deposit. Commercial flights are available from Kenora, Winnipeg

and Fort Frances. Chalice generally uses Winnipeg and Kenora airports. The Canadian National Railway has lines that pass through both Kenora and Fort Frances.

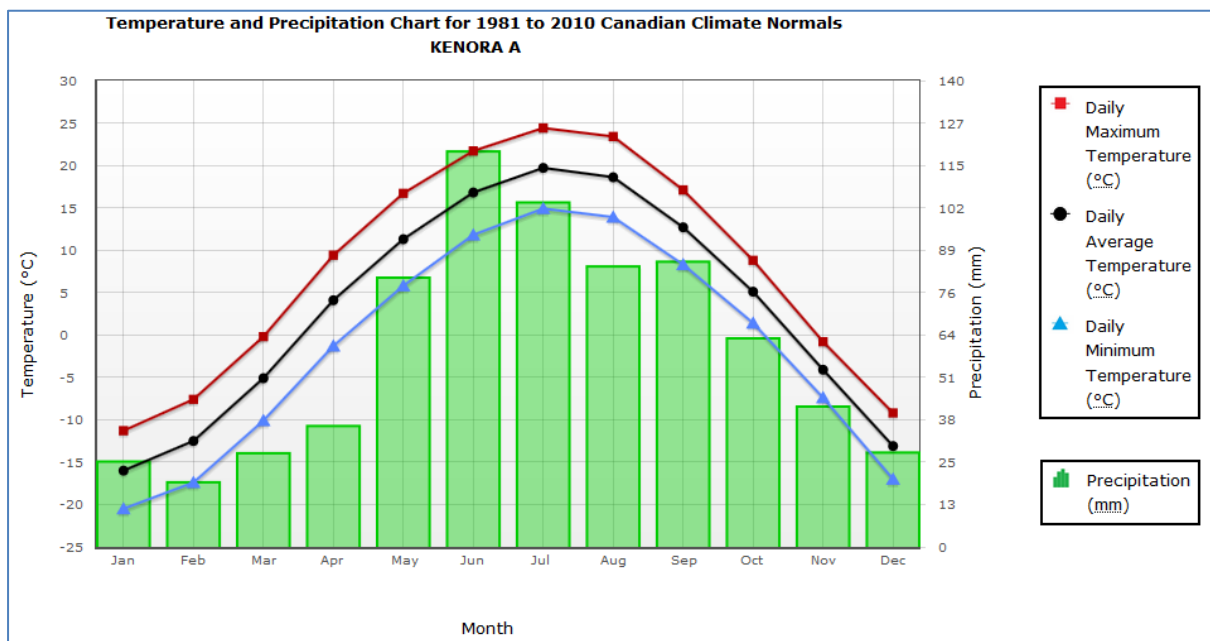
## 5.2. CLIMATE, PHYSIOGRAPHY AND VEGETATION

The physiography of the Cameron Gold Project is typical of the Canadian Precambrian Shield uplands of Ontario. The topography is characterised by glacial features such as moraines and eskers with subordinate outcrop as topographic highs. Relief is low (less than 35 m) and steep drop offs on outcrops often indicate fault structures.

The density of outcrop exposures is variable and ranges from none (completely covered) to 30% exposure in some areas. The highest density of outcrop is seen on the shorelines of the numerous lakes and islands in the area. The amount of outcrop can often be correlated to lithological units, with dolerites commonly found in extensive linear ridges that have been more resistant to the effects of glaciation. The rocks are generally fresh from the surface with minimal weathering apart from shallow oxidation noted in areas of strong alteration (such as carbonate) or sulphide minerals.

The climate of the Kenora region is characterised as continental. Temperatures in January range from -11.3°C (max) to -20.5°C (min) and in July the maximum temperature is 24.4°C with a low of 14.9°C, as shown in Figure 5.2 (Canadian Climate normals 1981-2010). Precipitation is moderate, with an average of 56 cm of rainfall and 164 cm of snow per annum. Frost penetration can be as deep as two metres. The driest period is February through to April.

**Figure 5.2 Kenora climate normals - monthly temperature and precipitation chart (source: [www.climate.weather.gc.ca](http://www.climate.weather.gc.ca))**



Vegetation comprises mixed arboreal forest with low lying areas of cedar swamp and bog. Minor plantation timber stands are present, as logging has been extensively carried out and much of the forest is regrowth. Lakes account for a significant proportion of the project area (40%). The average

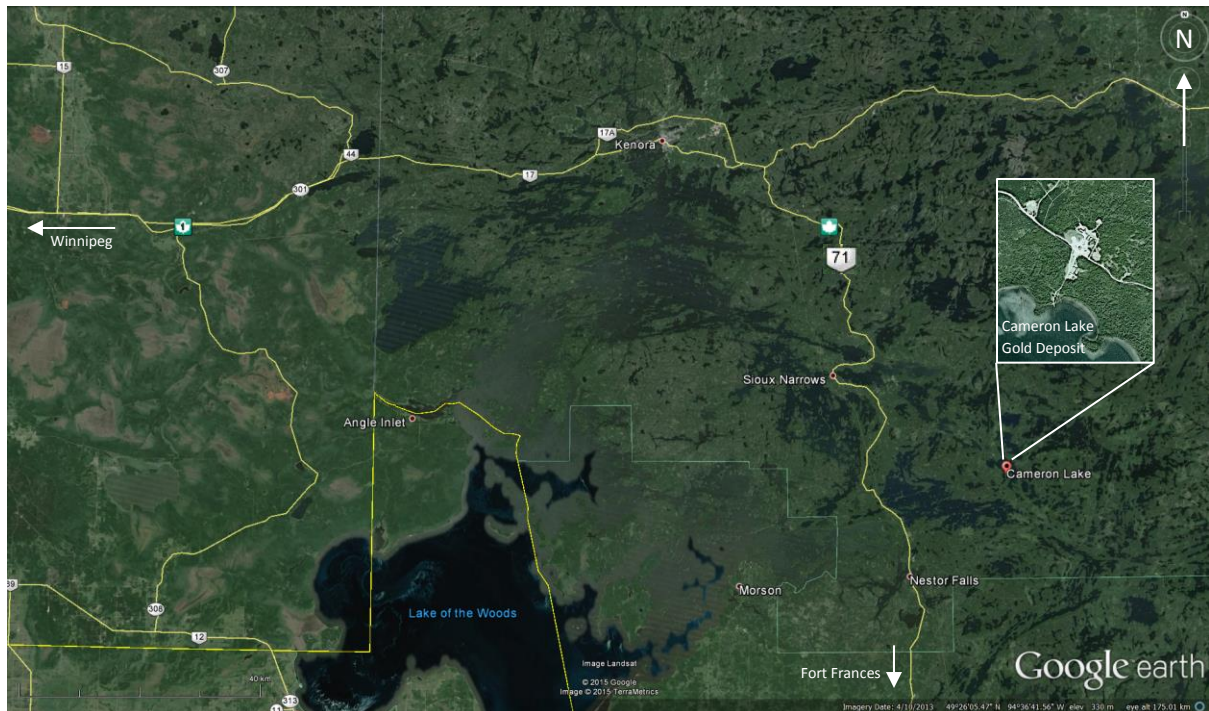
depth is from 10 m to 30 m, with thick layers of organic mud overlaying glacial till sediments of up to 20 m in thickness.

### 5.3. LOCAL RESOURCES AND INFRASTRUCTURE

The Cameron Gold Project has two local population centres; Sioux Narrows (population: 300) which is 33 km or a 30 minute drive and Nestor Falls (population: 300), 53 km or 45 minutes. The regional centre of Kenora (population: 15,500) is 123 km or a 90 minute drive from Cameron and Fort Francis (population: 9,000) is 168 km or 2 hours drive to the south.

Figure 5.3 shows the major highways, population centres and the Cameron Lake project area along with the physiography of the region and the numerous lakes. Drainage flow is in an anticlockwise direction, initially to the east, then northwards, before heading west to drain into the Lake of the Woods.

**Figure 5.3 Cameron Lake location map, local population centres and inset showing the deposit site (source: Google Earth, 2015)**



Sioux Narrows and Nestor Falls are small resort communities that once supported mining and logging in the area but now primarily cater to the outdoor tourism industry with boating, fishing and hunting activities popular in the area. Kenora (originally named Rat Portage) and Fort Francis have been significant centres supporting the forestry industry in the past but downturns have reduced employment opportunities. The nearest city is Winnipeg, Manitoba (population: 635,000), about 4.5 hours drive to the west.

Chalice has an exploration camp at the project that has a capacity of 31 persons and is accessible all year. Power generation is by diesel generators. The Trans-Canada Highway (Hwy 71) which runs through Sioux Narrows and Nestor Falls has an adjacent 115 kV power line that is within 30 km of

the project. Major hydroelectricity projects are located north of Kenora, along with a coal fired power station east of Fort Frances.

The project area is deemed of sufficient size to contain any infrastructure related to potential mining operations including mining areas, processing plant site, administration offices and tailings storage facilities (Ball, 2014). When required Chalice anticipates sourcing mining personnel from Kenora and Fort Frances with specialist services and personnel from Winnipeg and Red Lake.



## 6. HISTORY

Exploration in the area commenced in the 1940s and numerous companies have carried out prospecting, line cutting, geological mapping, trenching, soil and outcrop sampling and ground magnetic and electromagnetic (EM) geophysical surveys.

On the Cameron Project there have been numerous exploration and drilling programmes. On the Cameron Gold Deposit itself the first drilling was undertaken in July 1960. Prior to Coventry purchasing the project in 2010, there were 836 holes comprising in excess of 90 km of diamond drill core drilled by six companies.

In 1987 at the Cameron Gold Deposit, underground development for an extensive sampling programme was undertaken. Some 65,000 m<sup>3</sup> of material was excavated with some bulk sampling, diamond drilling and rock chip sampling completed. Between 2010 and 2012, Coventry drilled 242 surface diamond holes totalling 36,000 m, the majority on the Cameron Gold Deposit.

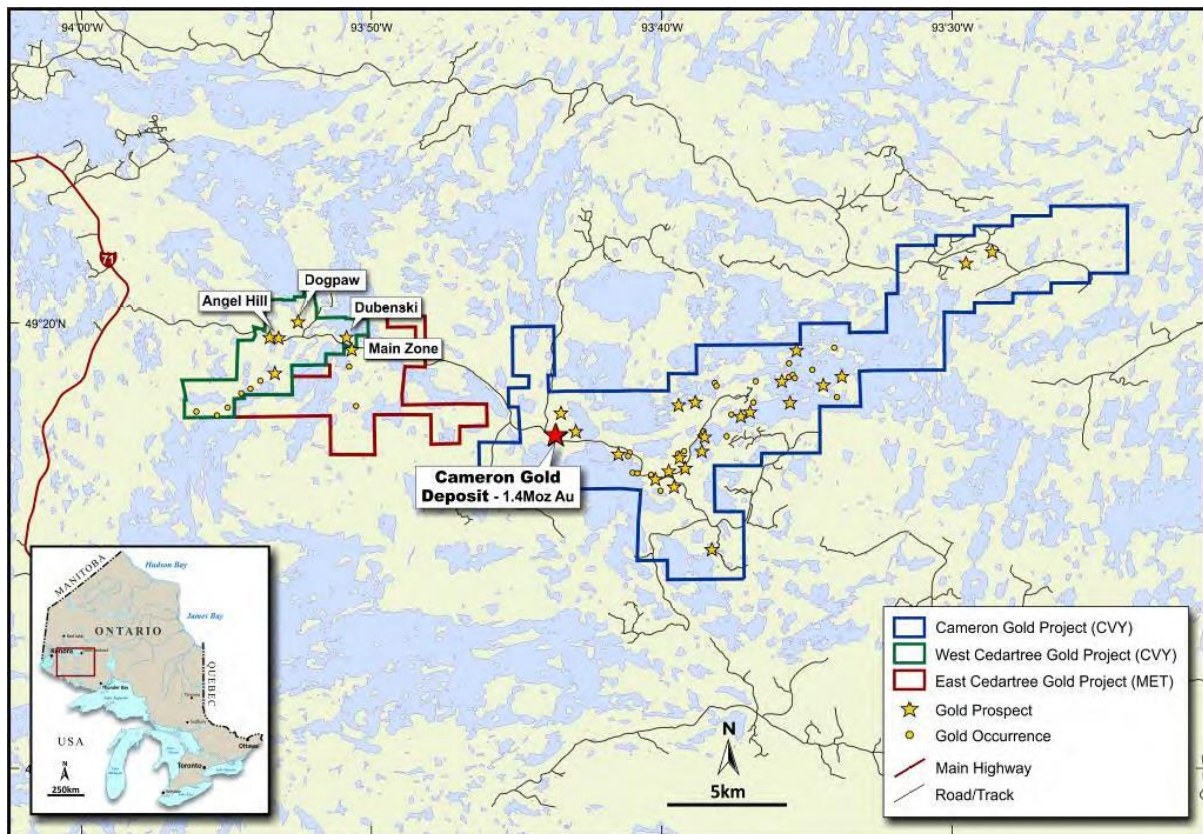
On the West Cedartree Project, numerous underground workings (mainly shafts) have been excavated. Drilling commenced in 1936 for the Dubenski Gold Deposit and in 1944 for the Dogpaw Gold Deposit. The total drilled for Dubenski is 268 holes (29,270 m) and 235 holes (19,597 m) for Dogpaw. Three other prospects have been drilled; namely McLennans, Angel Hill and Robertson. A historical non-compliant mineral estimate has been quoted for the Angel Hill prospect.

In 1995, an open pit excavation was undertaken at the Dogpaw Gold Deposit to generate a bulk sample. Since 2010, Coventry carried out exploration work throughout the Cameron Gold Project consisting of:

- Airborne magnetic gradiometers survey of the project area in 2010.
- 250 km of line cutting over the property
- 142 line km of Pole-Dipole Induced Polarisation surveys (July 2010 to February 2011)
- Orientation geochemical sampling programme of surface pits around the Cameron deposit in late 2011. A total of 19 samples of around 12kg were collected from the base of till over an area of about 900 m x 600 m.
- Excavation of 94 pits in 2013 on gold-in-till anomalies.
- Outcrop mapping and prospecting
- Heli-borne magnetics and Versatile Time-domain Electromagnetic (VTEM) over the western portion of the project in 2014. A total of 1457 line km of VTEM was flown at 200 m spacings.

Chalice carried out diamond drilling at several prospects that are proximal to the Cameron Deposit in May 2014, with 15 holes for 2,599.5 m drilled at the Jupiter, Ajax, Juno and Hermione prospects (Ball, 2014).

The Cameron Gold Project comprises the Cameron and West Cedartree Projects.

**Figure 6.1 Location of the East Cedartree Project (Source - Ball, 2014).**


## 6.1. WEST CEDARTREE PROJECT

The West Cedartree Gold Project (WCGP) is located approximately 10 km to the west of the Cameron Gold Project along the Cameron Lake access road.

A binding letter of intent that was entered into on 14 June 2012 by Coventry to purchase a 100% interest in the mineral and surface rights of the West Cedartree Project from Houston Lake Mining Inc. (HLM). A sale and purchase agreement between HLM and Cameron Gold Operations Limited was executed on 7 January 2013 and the acquisition was completed on 11 January 2013. The consideration for the purchase was \$600,000 cash and 1,935,010 fully-paid ordinary shares of Coventry Resources Inc. and 2.5% NSR royalty covering three unpatented mineral claims (K3000802-K3000804). The total area of the property is approximately 16.5 km<sup>2</sup>.

In total the Project has:

- two Mining Leases containing 22 leased mining claims which make up the Dubenski Agreement area
- 12 freehold patented claims which include an MLO
- One MLO consisting of eight patented claims.

Additional property agreements that comprise the West Cedartree Project include the Jesse North option (one unpatented mining claim), North Block option (one unpatented mining claim), West

Cedartree option (three unpatented mining claims), Dogpaw West option (one unpatented mining claim), Gold Sun option (three unpatented mining claims), Dogpaw Lake option (13 patented mining claims and one MLO) and the McLennan option (seven patented mining claims) (Ball, 2014).

#### **6.1.1. DUBENSKI DEPOSIT**

Gold mineralisation within the Dubenski Gold Deposit is hosted within the Kakagi Lake Volcanics consisting of dominantly felsic volcanoclastic rocks and fine-grained sedimentary rocks within strongly-foliated and sheared rocks. The shear is sub-vertical over a strike of 400 m that is up to 20 m wide and has been delineated to a vertical depth of more than 150 m. The mineralisation consists of fine-grained pyrite and free gold associated with carbonate, sericite, silica and locally, fuchsite alteration within strongly-deformed mafic volcanic rocks. The mineralisation is open in all directions.

A combined total of 272 diamond drillholes (30,674.3 m) have been completed at the Dubenski Gold Deposit in nine drilling campaigns by previous explorers between 1936 and 2010. The great majority of this drilling has been completed from surface. The drilling density varies between 10 m to 15 m spaced west-east sections in the central western area to 20 m to 25 m at the eastern end of the mineralisation. The true thickness of the mineralisation ranges between five and more than 20 m. The standard length for samples collected varies between 0.3m to 2.45 m with the majority at 1 m (Ball, 2014).

#### **6.1.2. DOGPAW DEPOSIT**

Intermediate to mafic volcanic and pyroclastic rocks dominates the supracrustal rocks at the Dogpaw Lake Property. This sequence has been have been intruded by several irregular bodies of basic rocks that vary in composition from dioritic to gabbroic and by later, irregular masses of granite and granodiorite with numerous associated dykes and small bodies of feldspar and quartz porphyry.

The Dogpaw Gold Deposit comprises ten identified vein sets that extend over a strike of 350 m and to a vertical depth of 210 m. Gold mineralisation occurs mainly in gabbro at the contact with mafic volcanic rocks where porphyry intrusions are apparently localized by a series of northwest-trending faults.

The mineralisation occurring at the Dogpaw Gold Deposit comprises pyrite-silica, largely as replacements and breccia within both gabbro and mafic volcanic host rocks. The mineralisation varies in thickness considerably, particularly over narrow intervals, ranging from 30 cm to more than 5 m, with an average width of 2 to 3 m. Significant pyrite is especially associated with high grade gold zones, with ounce plus results commonly associated with pyrite in the range of 10%. Minor chalcopyrite is also recorded as associated with pyrite and visible gold is common, especially in high grade mineralised material. The alteration associated with mineralisation dominantly comprises carbonate, albite and silica in the immediate selvages bounding sulphidic zones extending over several centimetres to a few metres wide, with strong chlorite alteration and minor pyrite and pyrrhotite in a more distal position.

A combined total of 235 holes totalling 19,597 m have been drilled on the Dogpaw Deposit and immediate surrounds in six programmes. The drilling density varies along strike between 20 m to 30

m with occasional drilling more closely spaced for the first 100 m from surface. Below this depth drilling is not consistently spaced with depth with holes being up to 60 m apart. On section (down dip) spacing varies from 5 m to 40 m with the drilling density decreasing with depth. The central part of the deposit is drilled to the greatest depth.

The true thickness of the individual mineralised zones at the Dogpaw Gold Deposit ranges between 2 to 10m within a shear zone up to 30 m wide. The length for samples collected from the mineralisation varies between 0.1 m to 2.17 m with the majority at 1 m. There are some un-sampled intervals within the mineralisation interpretation (Ball, 2014).

### 6.1.3. HISTORICAL MINERAL RESOURCES

Several historical mineral resource estimates have been done for the Cameron Deposit.

A Mineral Resource statement for the Dubenski and Dogpaw Gold Deposits was reported by Chalice in a TSX announcement on 16 December 2015 as part of the December 2015 Cameron Gold Deposit Mineral Resource update. It is important to note the Mineral Resource figures for the satellite Dubenski and Dogpaw deposits remain unchanged from those previously announced in 2014 but have not been verified by the authors. The historical mineral resources are summarised below in Table 6.6.1:

**Table 6.6.1 West Cedartree historical mineral resource estimate**

Deposit and Mineral Resource Date	Cut-off (g/t Au)	Class	Tonnes	Gold (g/t Au)	Gold Ounces
Dubenski deposit (July 2014)	1.0g/t	Measured	-	-	-
		Indicated	806,000	2.28	59,000
		<b>M+I</b>	<b>806,000</b>	<b>2.28</b>	<b>59,000</b>
		<b>Inferred</b>	<b>392,000</b>	<b>1.44</b>	<b>18,000</b>
Dogpaw deposit (July 2014)	0.5g/t	Measured	-	-	-
		Indicated	247,000	3.02	24,000
		<b>M+I</b>	<b>247,000</b>	<b>3.02</b>	<b>24,000</b>
		<b>Inferred</b>	<b>64,000</b>	<b>2.27</b>	<b>5,000</b>
Totals		Measured			
		<b>Indicated</b>	<b>1,053,000</b>	<b>2.45</b>	<b>83,000</b>
		<b>M+I</b>	<b>1,053,000</b>	<b>2.45</b>	<b>83,000</b>
		<b>Inferred</b>	<b>456,000</b>	<b>1.57</b>	<b>23,000</b>

The Mineral Resource estimates were prepared using the following methodology: At Dubenski 112 diamond holes for 15,421 m and 93 drillholes at Dogpaw for 10,745 m were used for the Mineral Resource estimates. The NQ size core was logged and cut in half using masonry saws. The intervals for sampling were marked up to reflect geological or mineralisation contacts. The samples were transported to TSL Laboratories ("TSL") in Saskatoon, Saskatchewan or Chemex Labs Ltd of Thunder Bay Ontario. The samples were assayed using the fire assay technique with a gravimetric finish.

The mineralised zones were interpreted on 10 m to 25 m spaced cross-sections using a 0.5 g/t Au cut-off grade. These sectional outlines were wireframed into 3D solid models. The samples within the zones were composited to 1m intervals and analysed for grade continuity. Capping values of

7g/t Au or 30g/t Au were applied at Dubenski, and 30g/t Au at Dogpaw. The block models were estimated by either ordinary kriging, inverse distance to the power of 3, or average grade assignment for zones with a small number of composites. The Mineral Resource classification assigned confidence according to geological influences, data quality, grade continuity and the estimation process. Density values were calculated from specific gravity measurements taken from drillcore (Dubenski: n=2305, Dogpaw n=353). A minor amount of material attributed to historic open pit mining was depleted at Dogpaw.

The locations of the project areas are shown in Figure 6.1.

While First Mining Finance believes that the historical mineral resources are relevant in that they provide an indication of the amount and grade of mineralization that may be present at Dubenski and Dogpaw, First Mining Finance has not done the work necessary to upgrade the historical mineral resources to current mineral resources and as such is treating the estimates for the West Cedartree deposits as historical in nature. The mineral resources will have to be reviewed by a qualified person and possibly re-estimated in order to be upgraded to current mineral resources and as such should not be relied upon.

#### **6.1.4. HISTORICAL PRODUCTION**

There has been no commercial production from the Cameron Property. In 1987, underground development was undertaken to carry out an extensive sampling programme. Some 65,000 m<sup>3</sup> of material was excavated with some bulk sampling, diamond drilling and rock chip sampling was completed (Ball, 2014).

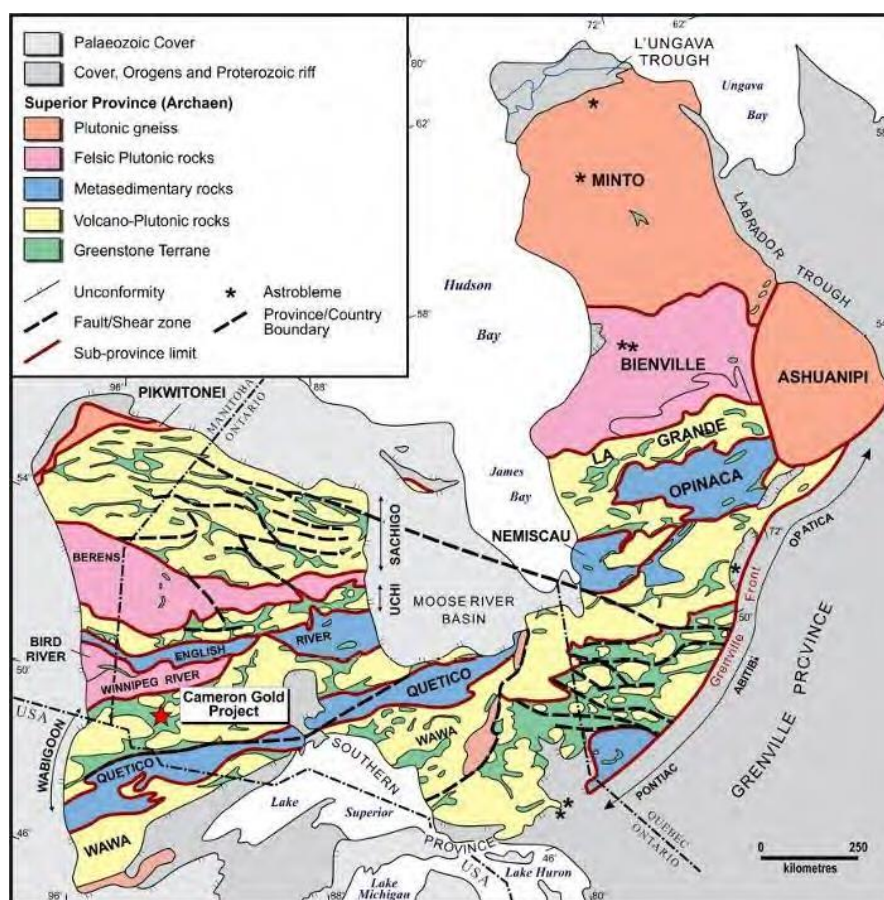
The excavated material was placed on surface at site in three separate stockpiles: one for unmineralised access development material, one for “low-grade” mineralized material; and one for “mineralized” material. The unmineralised stockpile has been used from time to time for access road maintenance. The mineralized material stockpiles have been surveyed and sampled for the purpose of reconciliation against depletion calculations but no estimate has been prepared that would permit inclusion of the material in a disclosure of resources.

## 7. GEOLOGICAL SETTING AND MINERALISATION

### 7.1. REGIONAL GEOLOGICAL SETTING

The Cameron Gold Project is located at the western end of the Late Archaean Savant Lake-Crow Lake Belt in the Western Wabigoon Subprovince of the Superior Province in north western Ontario (Figure 7.1). The Wabigoon Subprovince is a 900 km long, east-west trending, composite volcanic and plutonic terrane comprising distinct eastern and western domains separated by rocks of Mesoarchean age. Rocks of the Western Wabigoon Subprovince separate gneissic terranes of the Quetico Subprovince to the south and greenstones of the English River Subprovince to the north.

**Figure 7.1 Regional geology of the Superior Province showing the sub-provinces of this Archean Shield (Source: Ball, 2014)**

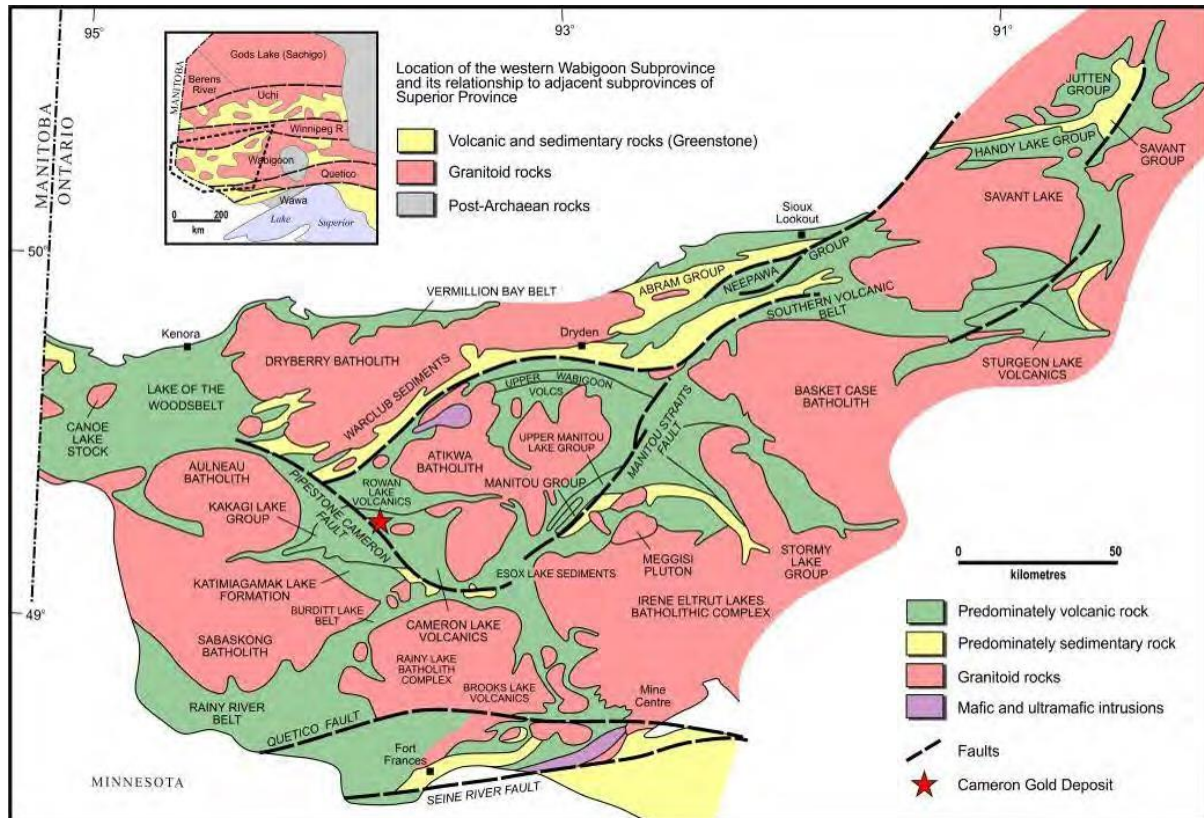


The Western Wabigoon Subprovince is dominated by mafic volcanic rocks that mostly range in composition from tholeiitic to calc-alkaline, with large tonalitic plutonic intrusions. The volcanic rocks were largely deposited between about 2.74 and 2.72 Ga and are interpreted to represent oceanic crust (tholeiites) and volcanic arcs (calc-alkaline rocks) and are overlain by volcano-sedimentary sequences deposited at about 2.71 to 2.70 Ga. These rocks are locally overlain unconformably by coarse clastic sedimentary rocks but these do not have a widespread distribution, most likely due to erosion.

Supracrustal lithologies have been intruded by a wide range of plutonic rocks including synvolcanic batholiths (tonalite-diorite-gabbro) at about 2.735 to 2.72 Ga, younger granodiorite batholiths and plutons at about 2.710 Ga, sanukitoid monzodiorite at about 2.698 to 2.690 Ga, and plutons and batholiths of monzogranite (2.690-2.660 Ga) as documented by a number of researchers.

The Savant Lake-Crow Lake Belt comprises a number of individual greenstone belts that are most commonly separated by large-scale faults and shear zones, including the Kakagi Lake and Rowan Lake Greenstone Belts (Figure 7.2).

**Figure 7.2 Schematic regional geology Savant Lake - Crow Lake Greenstone Terrane (Source: Ball, 2014)**



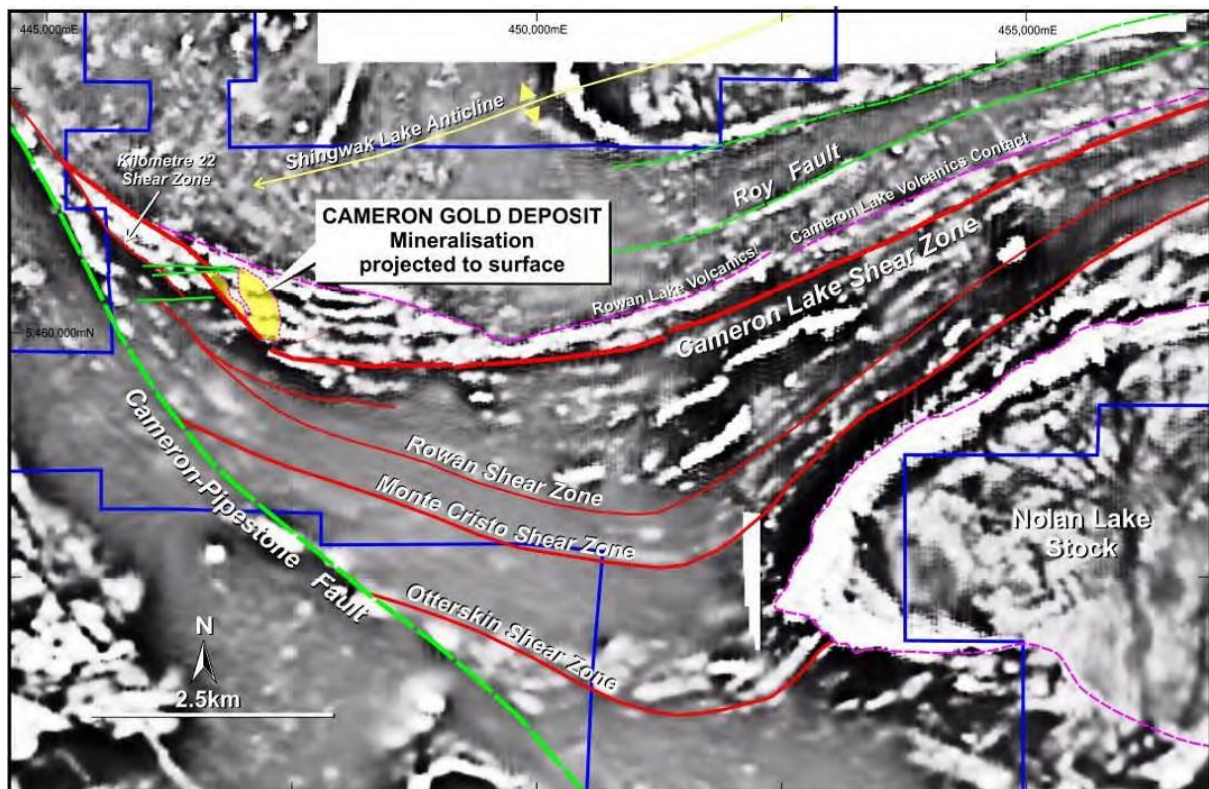
The Cameron Gold Project region is dominated by the crustal-scale, southeast-striking and northwest dipping Cameron-Pipestone Fault which extends over a strike length of greater than 100 km. The Kakagi Lake Greenstone Belt (GSB) comprises a topographically-high, north to east facing supracrustal sequence that is situated to the southwest of the Cameron-Pipestone Fault, whilst the south facing Rowan Lake GSB, which hosts the Cameron Deposit, is located immediately northeast of this structure.

The geology of the Rowan Lake GSB is dominated by the Shingwak Lake Anticline located to the north of the project area. The axis of this asymmetric fold structure strikes to the east-northeast and plunges steeply to the southwest, whilst verging to the east-northeast. Two geological sequences are exposed within the Shingwak Lake Anticline, the Rowan Lake Volcanics and the Cameron Lake Volcanics.

The Rowan Lake Volcanics comprises a thick, subaqueous mafic flow succession with lesser volcanoclastic sedimentary rocks. The mafic flows are predominantly pillowed and outcrop in the core of the Shingwak Lake Anticline. This unit is overlain with apparent conformity by the Cameron Lake Volcanics which comprises a mixed succession of south-facing pillowed and massive basaltic rocks and intermediate to felsic volcanoclastic rocks. The transition between the two volcanic cycles is marked by the first appearance of intermediate to felsic pyroclastic rocks which are characteristic of the Cameron Lake Volcanics as well as a change from dominantly pillowed basalt to a succession consisting of pillowed and massive mafic volcanic rocks.

The transition between the Rowan Lake Volcanics and Cameron Lake Volcanics is interpreted from detailed high-resolution airborne magnetic data collected by Coventry in 2010 (Figure 7.3) which shows that the interpreted stratigraphic top of Rowan Lake Volcanics corresponds with a distinctive break in the airborne magnetic data. The Rowan Lake Volcanics are characterised by magnetic units of relatively low response, which are overlain by distinct package of magnetic units with relatively high magnetic responses.

**Figure 7.3** Major camp-scale geological and structural features in the area surrounding the Cameron Gold Deposit on an image of the first vertical derivative (1VD) of total magnetic intensity (TMI) data. (Source: Ball, 2014)



These units of high magnetic susceptibility represent a series of strongly-magnetic mafic volcanic and intrusive rocks that are interbedded and likely genetically-related. This magnetic complex is relatively restricted in the main, though the basal unit does extend along strike to the east. The morphology and extent of this feature gives rise to the interpretation that the magnetic complex itself is representative of an individual volcanic/intrusive sequence that occurs as a sub-unit within

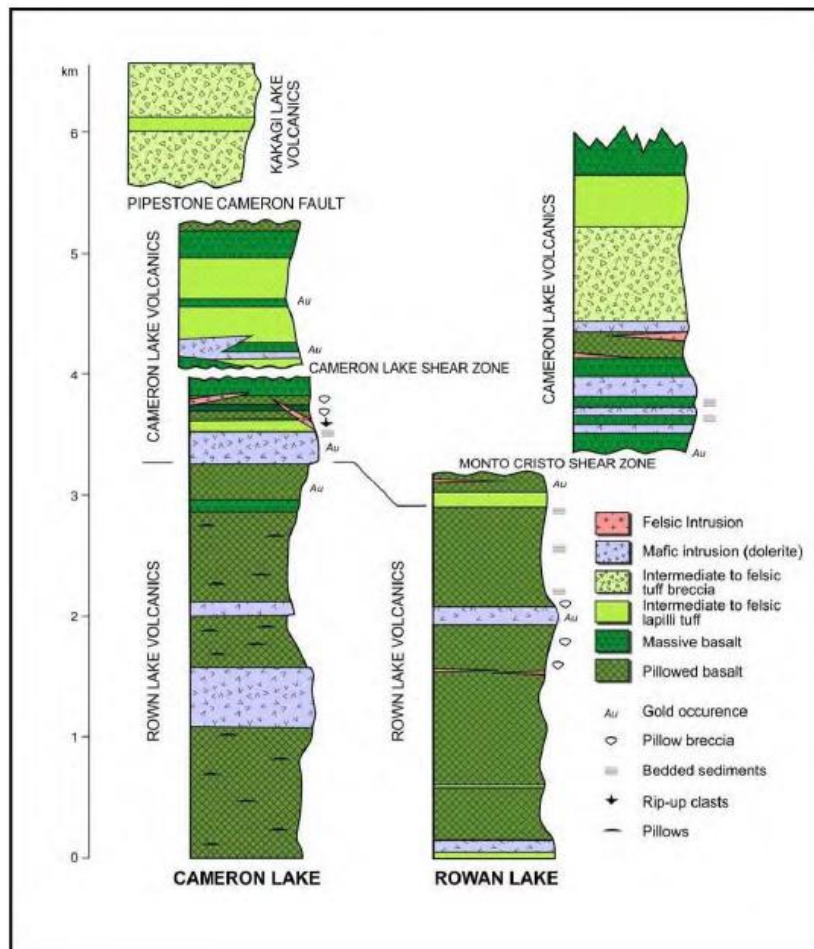


the Cameron Lake Volcanics. The morphology and extent of this feature preserves the primary volcanic and intrusive architecture in which the rocks were developed.

The mostly concordant, subvolcanic mafic intrusive rocks were emplaced at all levels of the supracrustal sequence prior to regional deformation. Previously these lithologies have been locally referred to as gabbro; however the medium-grain size of the rocks deems them more akin to dolerite or diabase. Numerous, mostly thin, felsic porphyry sills and dykes also intrude the sequence. These range from dacitic quartz-feldspar porphyry to hornblende porphyry. Significant lamprophyre has been mapped at the Roy prospect and at several other locations within the project area.

Geochemistry work recorded that most of the rocks from the Rowan Lake Volcanics are tholeiitic with the majority being high-iron tholeiites, with lesser amounts of rocks of andesitic and calc-alkaline composition. The Cameron Lake Volcanics comprise a mixed succession of rocks of tholeiitic and calc-alkaline composition that range from high-magnesium mafic intrusive and extrusive rocks to rhyolitic felsic pyroclastic rocks. An idealised stratigraphic sequence for the area is presented in Figure 7.4 (Ball, 2014).

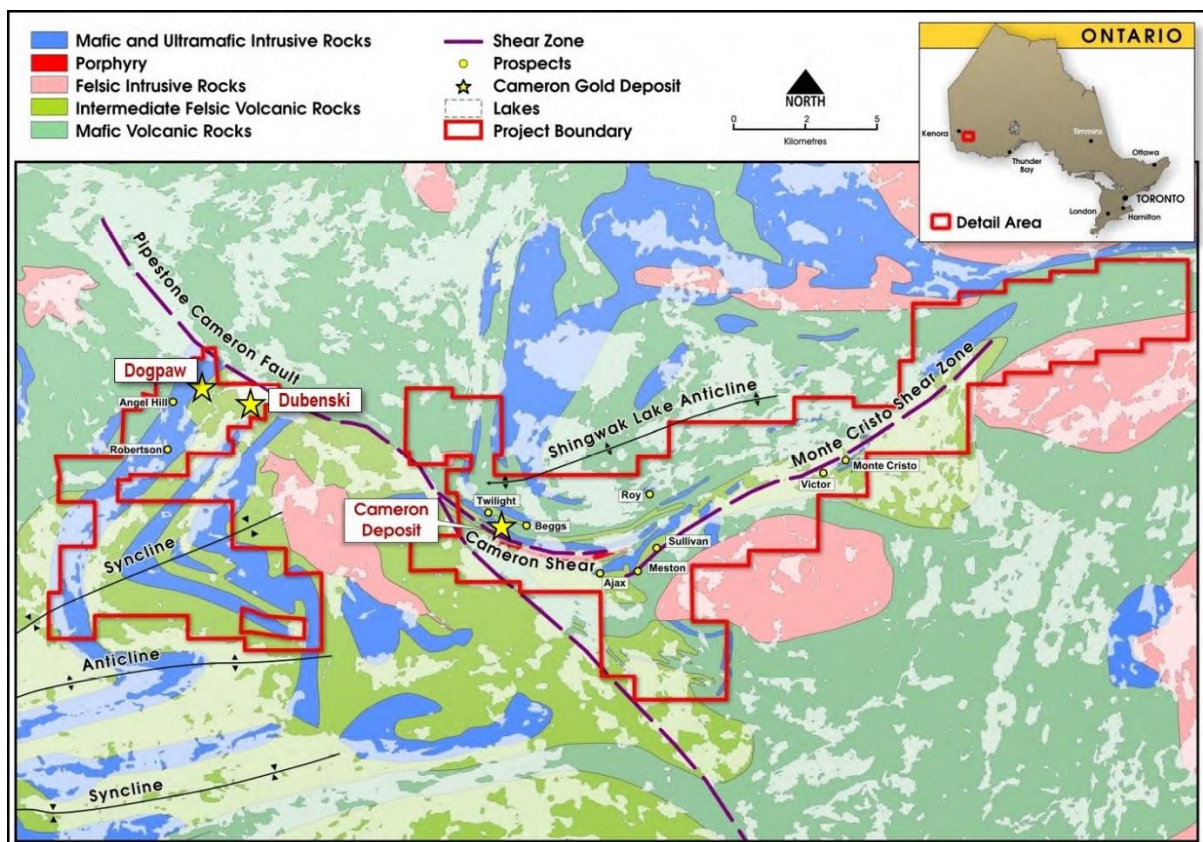
**Figure 7.4** Idealised stratigraphic sequence for the Cameron Gold Project across the recognisable large-scale structures in the area (Source: Ball, 2014)



## 7.2. LOCAL GEOLOGICAL SETTING

The Cameron Gold Project is located on the southern limb of the Shingwak Lake anticline near the western nose of the Nolan Lake Stock. The stock is an ovoid-shaped composite felsic intrusive body comprised of a largely granodiorite core and monzonite rim that is evident within regional airborne magnetic data. A series of large-scale shear zones and faults splay from the Cameron-Pipestone Fault, trending southeast from this regional crustal-scale structure, before striking east-northeast along the northern margin of the intrusive body. There are two main splays, the Cameron Lake and Monte Cristo Shear Zones. Third-order faults and shear zones are associated with gold mineralisation within the project area. A simplified map of the area is shown in Figure 7.5 (Ball, 2014).

Figure 7.5 Simplified geological map of the Cameron Gold Project area (Source: Chalice, 2015)



### 7.2.1. REGOLITH AND GLACIAL GEOMORPHOLOGY

The Cameron Gold Project is covered by unconsolidated glacial overburden. Glacial cover at the project was deposited during the Late Wisconsin glaciation by the Labradorean sector of the Laurentide Ice Sheet. Glacial sediments are dominated by supraglacial till comprising unsorted and poorly-stratified sandy conglomerate with clasts dominated by granitoid and gneiss that range from cobble to boulder in size. These sediments overlie more restricted basal till (subglacial till) which contains angular cobble sized clasts of mostly supracrustal lithologies in a clay-loam matrix. Glacier transport as indicated by striae is towards  $190^{\circ}$  ( $\pm 10^{\circ}$ ).

The thickness of glacial overburden across the project is variable and shows the greatest variation over the Cameron Gold Deposit itself. The discovery outcrops have only thin glacial cover of 1 to 3 m but till thickness rapidly increases to the northwest and to the south of the deposit. In the north-western area of the deposit the till thickness ranges up to 20 m (Figure 7.6).

Glaciation has resulted in the gouging of fault structures and shear zones, whereby their traces are commonly marked by escarpments, especially where facing to the north.

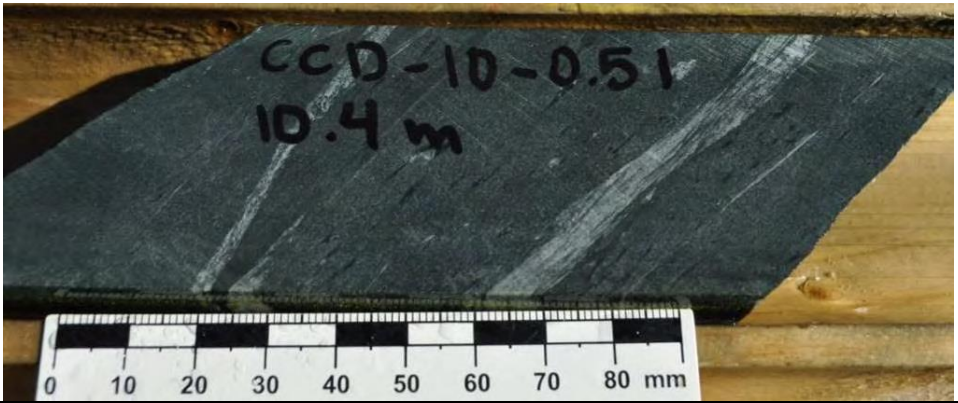

**Figure 7.6** Quarry located at the north-western extension of the Cameron Gold Deposit showing till thickness in excess of 20 m. Note shovel for scale. (Source: Ball, 2014).






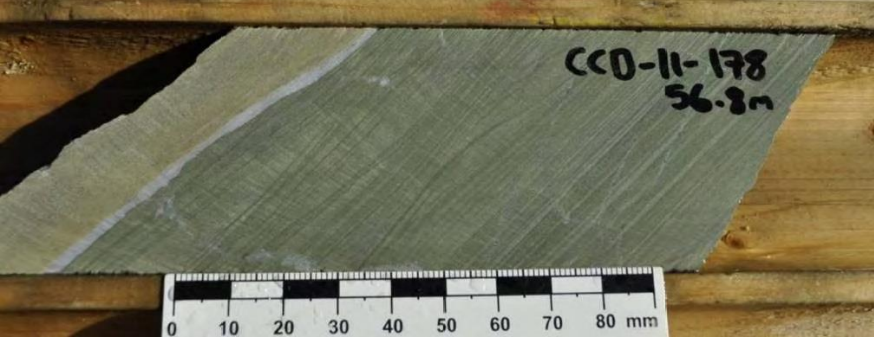
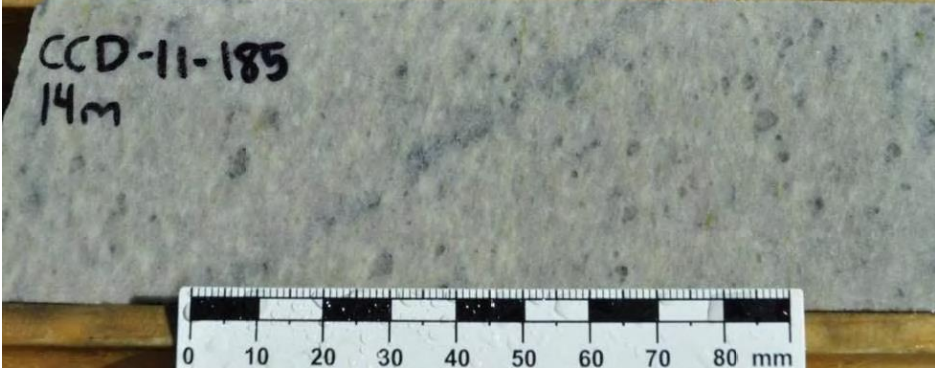

### 7.2.2. LITHOLOGY


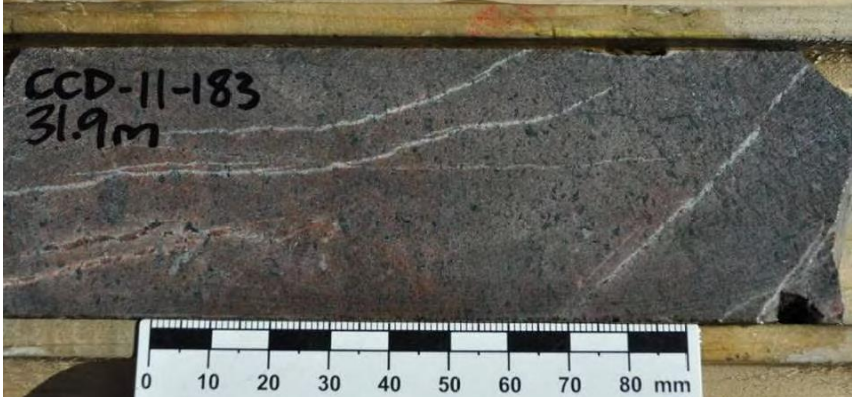
The deposit lithological units are described in Table 7.1 which provides a brief description of each rock type and alteration characteristics with reference samples shown (Ball, 2014). Geological logging codes are provided in brackets.

**Table 7.1 Description of the lithological units of the Cameron Gold project (Source: Ball, 2014)**

Lithology	Description
<p><b>Basalt</b></p> <p><b>Logging code:</b></p> <p><b>(MB)</b></p>	<p>Basalt is the most common lithological unit in the area and hosts most of the gold mineralisation at the Cameron Gold Deposit. Most often it is massive to pillowed, but is occasionally amygdaloidal and auto brecciated, aphanitic to fine-grained and dark green in colour. It is generally moderate to pervasively chlorite-calcite altered and is often cut by dolerite dykes.</p> <p>Thin calcite-quartz veins are common throughout the unit. In some areas of the deposit it is intercalated by intermediate volcanoclastic horizons. The basalt in the hanging wall and footwall can be described as massive to weakly/moderately foliated depending on proximity to the Cameron Lake Shear Zone.</p>
<p>Basalt with chlorite – carbonate (calcite) alteration (Ball, 2014)</p>	
<p>Pillow basalt exposure in Cameron deposit trench exposure (Optiro)</p>	

Lithology	Description
<p><b>Dolerite / Gabbro</b> <b>(MG)</b></p>	<p>Dolerite (re-logged as gabbro) occurs as dykes that cross-cut the basalt throughout the hangingwall and footwall of the Cameron Gold Deposit with some dolerite/gabbro probably making up the middle of thicker basalt flows. The unit can be described as massive, dark green, equigranular, often containing disseminated skeletal leucoxene throughout and tends to be fine-grained at its margins. It is affected by weak to moderately pervasive chlorite-carbonate alteration and weak epidote alteration occurring in disseminated form or associated with veins that cross-cut the unit. Pyrite is often medium-grained disseminated blebby and cubic.</p>
<p>Dolerite with chlorite-calcite-epidote alteration. (Ball, 2014)</p>	
<p><b>Sedimentary volcanoclastic/ intermediate volcanic rocks</b> <b>(ITL)</b></p>	<p>Towards the northwestern part of the Cameron Gold Deposit the thickness of sedimentary volcanoclastic rock horizons increases significantly and replaces basalt in the hangingwall. The volcanoclastic succession consists of a number of units of variable thickness comprised of intercalated intermediate lithic tuff, lithic-crystal tuff, lithic-ash tuff often with carbonaceous sedimentary and quartz-rich sedimentary volcanoclastic rock. Diagenetic pyrite lenses, coarse-grained blebs and semi-massive pyrite are characteristic of these units, but tend not to be associated with gold mineralisation. Volcanoclastic rocks are commonly affected by weak to moderate sericite-chlorite-calcite to moderate to strong sericite-iron carbonate/calcite alteration.</p>
<p>Quartz-rich sedimentary volcanoclastic rock (upper hangingwall) (Ball, 2014)</p>	

Lithology	Description
<p>Carbonaceous sedimentary volcanoclastic rock with thin diagenetic pyrite lenses. Found in the upper hangingwall.</p> <p>(Ball, 2014)</p>	
<p>Laminated intermediate volcanic ash.</p> <p>(Ball, 2014)</p>	
<p><b>Quartz feldspar porphyry dyke (PQF)</b></p>	<p>The dacite feldspar-quartz porphyry intrudes the Cameron Lake Shear Zone and surrounding country rock at medium to high angles. It consists of medium to coarse grained plagioclase phenocrysts, lesser quartz phenocrysts and occasional minor chlorite replaced amphiboles within a fine-grained to aphanitic groundmass made of quartz and feldspar. Dacitic porphyry dykes display moderate to strong sericite-quartz iron-carbonate-pyrite alteration with trace to 2% disseminated pyrite where they occur within the Cameron Lake Shear Zone or gold lodes.</p>
<p>Dacitic feldspar-quartz porphyry displaying moderate sericite-quartz-iron carbonate-pyrite alteration.</p> <p>(Ball, 2014)</p>	
<p>Feldspar porphyry in CCD -10-64</p> <p>(Optiro)</p>	

Lithology	Description
<p><b>Hornblende Porphyry (MG)</b></p>	<p>Hornblende porphyry dykes occur occasionally throughout the deposit but are more common to the northwest where they cross-cut the hangingwall volcanoclastic rocks. Hornblende porphyry dykes consist of hornblende phenocrysts with lesser biotite phenocrysts within aphanitic to fine-grained groundmass and have undergone moderately pervasive hematite alteration and sericite-hematite-quartz alteration close to vein contacts. The re-logging project in 2015 grouped these as gabbroic units (MG).</p>
<p>Hornblende porphyry dyke with sericite-hematite-quartz altered contacts.</p> <p>(Ball, 2014)</p>	
<p>Hornblende porphyry dyke with moderately-pervasive hematite alteration.</p> <p>(Ball, 2014)</p>	

### 7.2.3. STRUCTURAL GEOLOGY

There are at least two regional deformation events that are recognised within the Cameron Gold Project area:

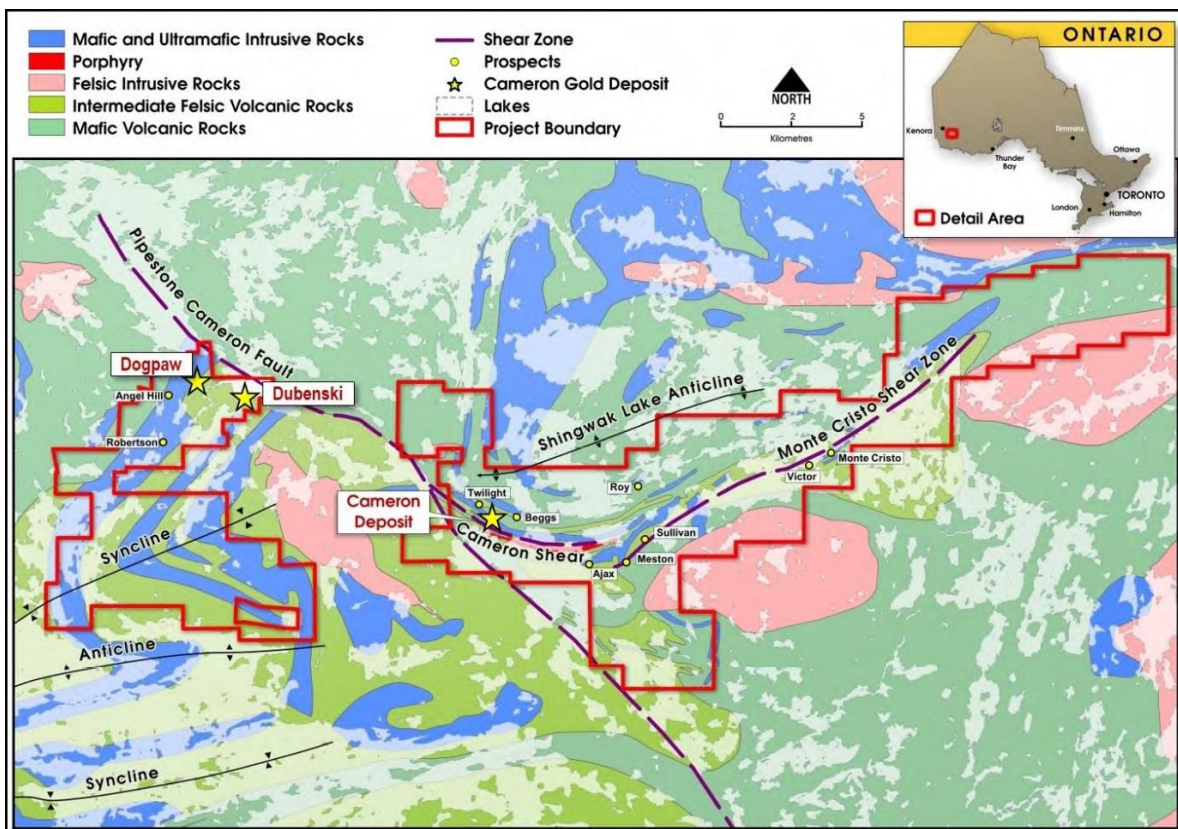
- D1: manifested as bedding parallel fabrics (S1) and rare tight to isoclinal folds (F1) that have been subsequently refolded. These are seen in sporadic outcrops where sedimentary lithologies are exposed.
- D2: north-northwest-south-southeast shortening resulting in the formation of large scale open to tight folds (F2) with mostly upright fold axes that commonly plunge towards the WSW.

The Shingwak Lake Anticline and Kakagi Lake Syncline which respectively occur to the east and west of the Cameron-Pipestone Fault (CPF) are prominent examples of D2 structures. The Cameron-Pipestone Fault cuts these two fold structures and is interpreted as possibly being a D3 event, or reactivated by D3. The CPF is manifested as a northwest-southeast trending steeply dipping zone of

highly sheared and foliated lithologies. The fault zone extends over a width of 3 km and strike length of 100 km. The CPF has been interpreted to occur in the south-western parts of the Cameron Project but there are no exposures due to swamp and till cover. Exposures of the CPF in outcrop have shown that in mafic rocks the fault presents as a chlorite schist and sericite-quartz schist in felsic lithologies with compositional layering developed parallel to foliation.

The Cameron Lake Shear Zone (CLSZ) is one of a number of arcuate splays from the CPF, including the Monte Cristo Shear Zone (MCSZ) that are associated with a number of gold occurrences, such as the Cameron Project, Victor and Monte Cristo prospects. These shear zones form a corridor of interconnected and anastomosing structures as shown in Figure 7.7

**Figure 7.7 Geological map showing the major structures and shear zones (Source: Chalice, 2015)**



At the Cameron Gold Deposit, the CLSZ is a brittle-ductile structure that cross-cuts the local stratigraphy trending northwest-southeast and dips to the northeast at an average angle of 65 to 70°. Smaller splays off the CLSZ are common across the mineralised zone. As the CLSZ is oriented northwest-southeast and cuts obliquely across stratigraphy striking about east-west, the structure cuts through a number of lithologies, from basalt and dolerite in the southeast, through intermediate volcanic rocks, and then volcanoclastic rocks along the strike of the structure to the northwest.

The mafic stratigraphy is the preferential host to mineralisation in the south-eastern end of the deposit and the transition to volcanoclastics and sediment dominant lithologies at the north-western end produces a demonstrable reduction in the widths and magnitude of mineralisation. The primary protolith that comprises the CLSZ in the main part of the deposit is basalt which has undergone

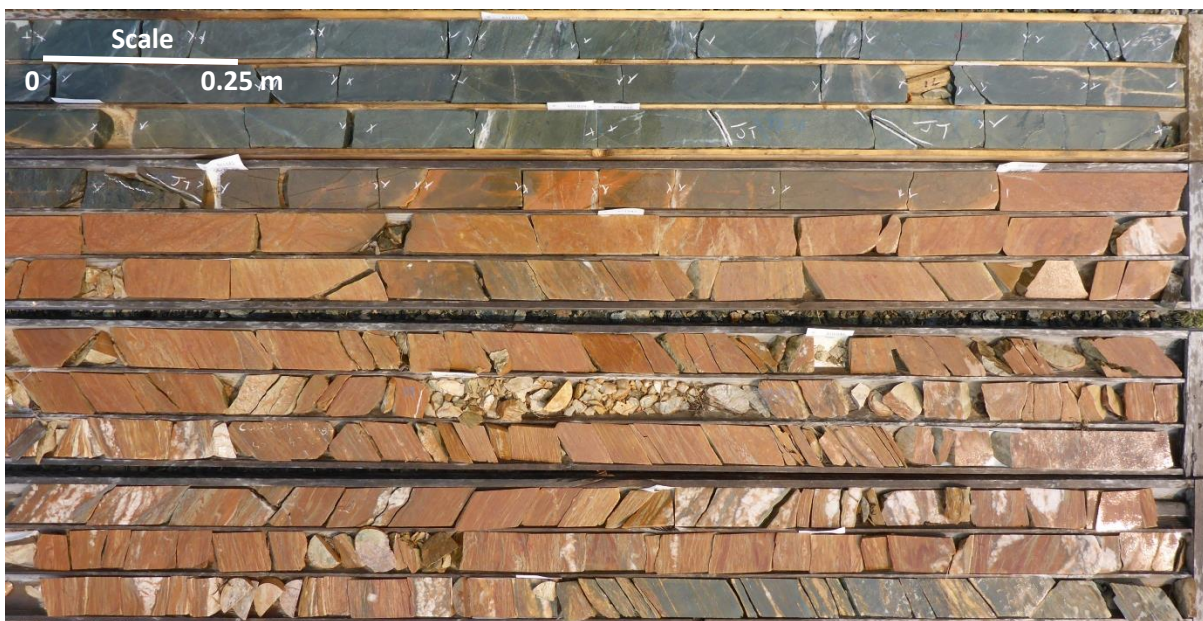


intense shearing and alteration, the most dominant and consistent being strong pervasive sericite-(iron)-carbonate+/-quartz-pyrite alteration as seen in Figure 7.8.

**Figure 7.8** Strongly foliated basalt exhibiting typical sericite-iron carbonate-quartz alteration with fine-grained disseminated pyrite from the CLSZ (Ball, 2014)



**Figure 7.9** Basalt wall rock transition into intensely foliated and ankerite altered mineralised zone with quartz veining in drillhole CCD-10-13. (Source: Optiro, 2015)

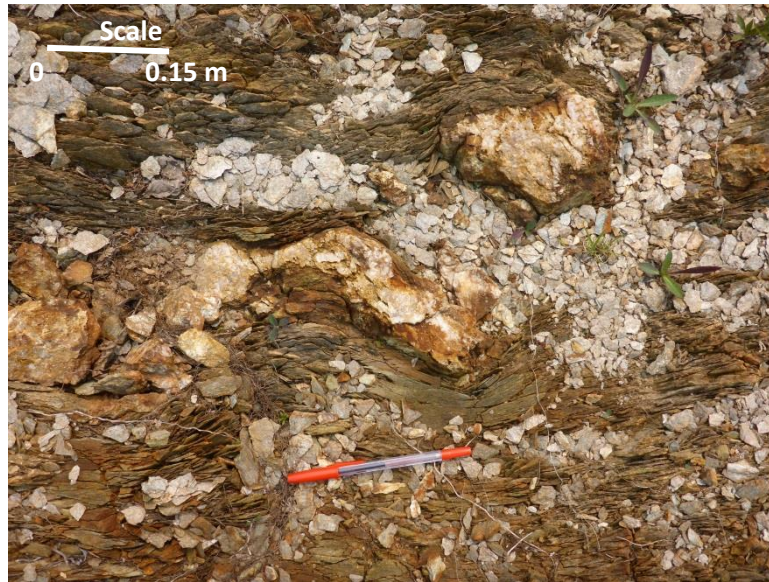


The degree of strain within the CLSZ varies along strike but it is observed that the angle of shearing steepens across the Cameron deposit (Ball, 2014). In the main part of the deposit, the CLSZ appears to be made up of two zones of intense shearing (an upper and lower shear zone) that range in thickness from 10 to 20 m with the shear zones separated usually by 10 to 15 m of basalt. Surface trench exposures of the Cameron Deposit display strain partitioning and mylonitic foliation development around lesser deformed masses of mafic host rock (Figure 7.10) in an anastomosing array of structures. Progressive deformation expresses as bulk shortening is seen in quartz veins in outcrop and in drill core as stylolitic type folding (Figure 7.11).

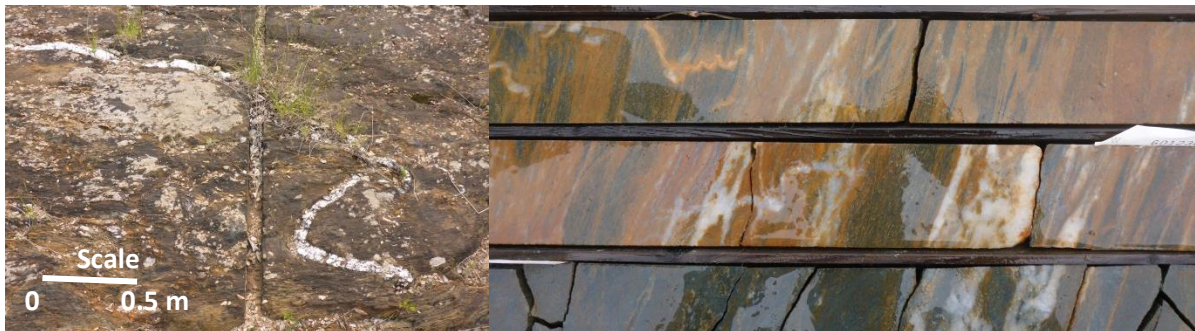
Within the exposed outcrops of the discovery area, two foliation directions attributable to the CLSZ are recognised, namely a northwest-oriented trend that dips steeply to the northeast (about 75° towards 030°) and a fabric which is bedding parallel that dips steeply to the north-northeast (about

70° towards 015°). It is possible that this bedding-parallel orientation is originally an S1 surface that has subsequently been reactivated and overprinted by S2 associated with the CLSZ. The intersection of these two surfaces produces a lineation that plunges moderately to steeply towards the northwest (about 60° towards 320°). The plunges of early quartz veins that are upright and openly-folded, as exposed in the discovery area are similar to this lineation. The mineralisation within the Cameron Gold Deposit has the same plunge and plunge direction (Ball, 2014).

**Figure 7.10 Intensely foliated mafic unit with folded quartz veins – plan view (Optiro, 2015)**



**Figure 7.11 Progressive shortening shown by folded quartz veins in outcrop (LH view) and drill core. (Optiro, 2015)**



#### 7.2.4. ALTERATION

The alteration associated with mineralisation at the Cameron Gold Deposit was initially defined as three broad alteration assemblages that are associated with the main mineralised zone in addition to the background lower greenschist facies metamorphic mineralogy. Work by Coventry then expanded the three assemblages to four. In order of increasing proximity to mineralisation these are:

1. disseminated carbonate-chlorite
2. pervasive to semi-pervasive carbonate  $\pm$  sericite
3. pervasive carbonate-sericite-pyrite
4. pervasive carbonate-sericite-silica-albite-pyrite

**Disseminated carbonate-chlorite alteration** in mafic lithologies represents the most distal alteration facies associated with the mineralisation at the Cameron Gold Deposit. Carbonate alteration is characterised by disseminated rhombs up to 2 mm in size, which in outcrop weathers to a distinctive rusty spotting of carbonate euhedra. The abundance of carbonate rhombs increases with proximity to high-strain zones and forms envelopes at the scale of several metres to tens of metres in the lithologies adjacent to wide, foliated zones of mineralisation. Although chlorite is likely to be associated with the overall lower greenschist facies metamorphic alteration within mafic rocks in the project area, it has been noted that chloritisation of mafic lithologies may also be a product of the overall distal alteration assemblage.

**Pervasive to semi-pervasive carbonate $\pm$ sericite alteration** is largely associated with foliated mafic lithologies that occur within an array of small-scale shear zones which are likely related to the CLSZ. The abundance of sericite is a function of the intensity of the shear fabric and the size of the shear zone. In outcrop, these rocks tend to be rusty and fissile due to the intense foliation developed, especially where the rocks are carbonate dominated. In fresh exposures and in drill core, they are light tan to buff-coloured and fissile. In areas where only small shears have been developed over centimetre scales, relict chlorite is often still preserved, giving the rocks a patchy or semi-pervasive appearance. These rocks can be associated with weak to low-grade gold mineralisation by virtue of the presence of pyrite.

**Pervasive carbonate-sericite-pyrite alteration** is largely transitional from carbonate $\pm$ sericite alteration and is often spatially associated with quartz breccia veins although this alteration style can occur without any associated veining. Pyrite content within this alteration type varies from less than 0.5% to locally up to 15%, with more pyrite commonly found in intensely altered lithologies adjacent to quartz breccia veins. It is ubiquitously deformed and commonly intensely foliated in sulphide-rich rocks. Depending on the sulphide content and morphology these rocks are generally associated with gold mineralisation, with higher pyrite contents usually correlating with higher gold grades.

**Pervasive carbonate-sericite-silica-albite-pyrite alteration** is similar to the pervasive carbonate-sericite-pyrite alteration described above except fine-grained silica-albite flooding has intensified the hardness of the altered rock. Silica-albite flooding may also be associated with very fine-grained, dark grey-coloured pyrite in addition to the more common fine-grained, bronze-coloured pyrite that

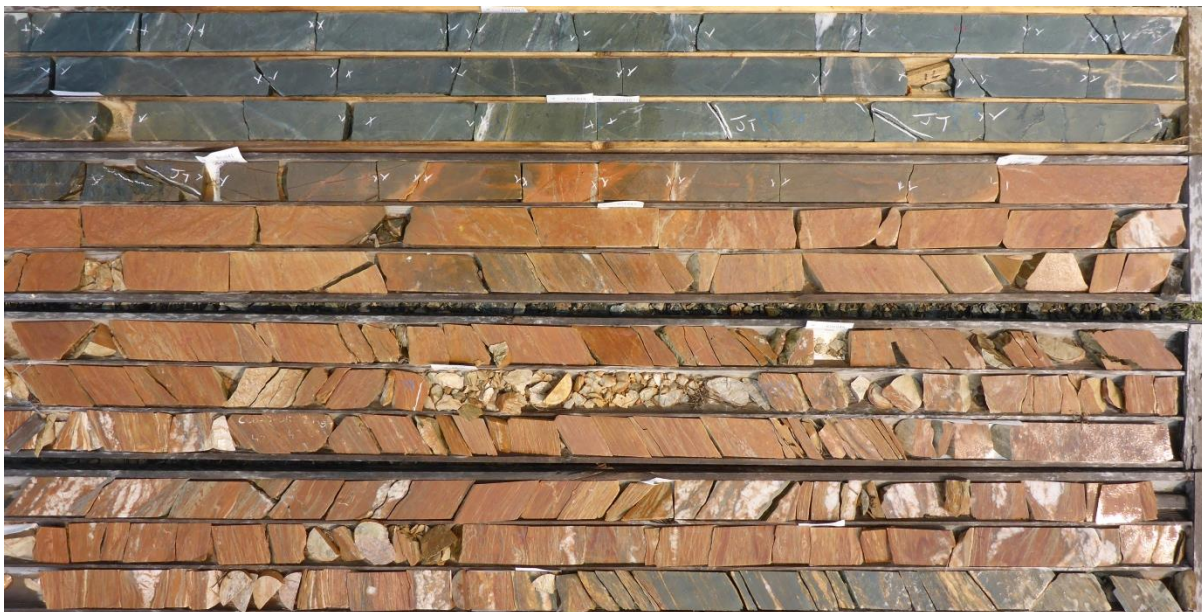
largely characterises the deposit. Zones exhibiting this style of alteration are usually associated with high-grade gold mineralisation (Ball, 2014).

A comparison of a hangingwall and Main Zone mineralised intersections is shown in Figure 7.12 and Figure 7.13 respectively. The hangingwall interval has a lower intensity of structure and alteration and typically presents grades of 1 to 3 g/t Au. The alteration style and intensity is markedly increased in the Main Zone, with carbonate (ankerite)-sericite-silica-albite-pyrite alteration. Most of the interval shows grades less than 1 g/t Au, but there is a zone of 3 m with grades of 2.4, 1.3 and 18.9 g/t Au corresponding to quartz+sericite+ankerite+albite veins and disseminated pyrite.

**Figure 7.12 Hangingwall mineralised intersection CCD-10-13 (Source: Optiro, 2015)**



**Figure 7.13 Main Zone mineralised intersection CCD-10-13 (Source: Optiro, 2015)**



### 7.2.5. MINERALISATION

Gold mineralisation within the Cameron Gold Deposit comprises two main styles, namely:

- I. disseminated sulphide replacements, quartz-sulphide stockwork and quartz breccia veins which comprise the vast bulk of the mineralisation, and;
- II. quartz-carbonate-chlorite veins.

Three main vein types are described within the Cameron Gold Deposit with an additional early set of centimetre scale quartz-carbonate veins present in the deposit. These veins have no alteration selvage and whilst unmineralised they are clearly related to the overall paragenesis of the deposit. The early veins are ubiquitously folded, mostly into upright, open to tight folds with fold axes that plunge moderate to steeply towards the northwest. This plunge and plunge azimuth is the same as the attitude of the main mineralised zones within the deposit. The foliation that is developed within lithologies that host these veins is axial planar to the folds (Figure 7.14).

**Figure 7.14** Early deformed quartz-carbonate vein (Source: Ball, 2014)

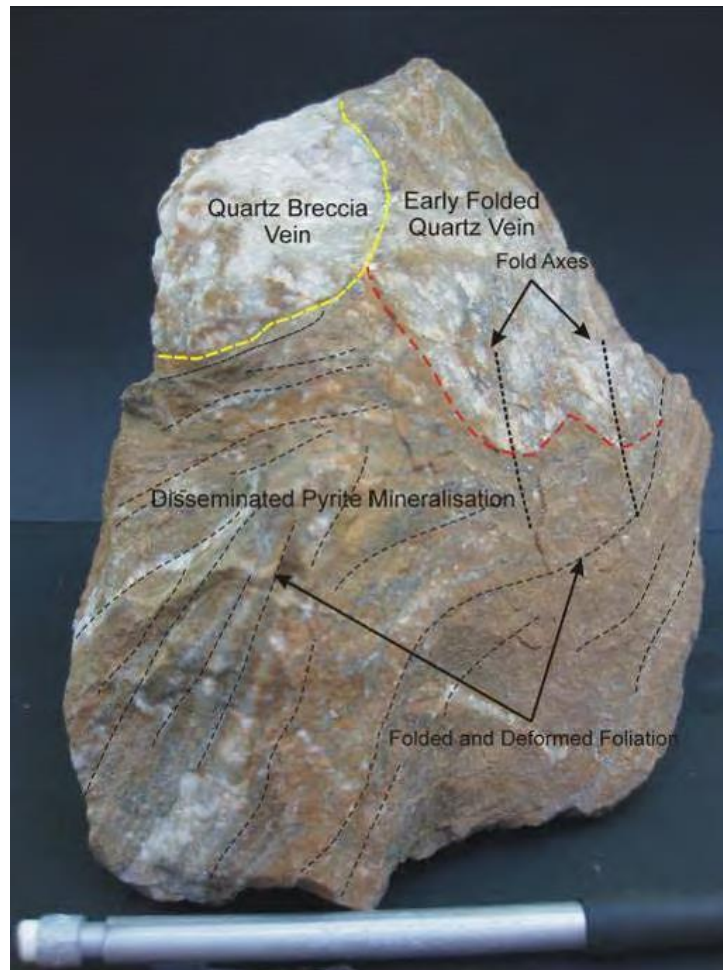


The bulk of the mineralisation that comprises the Cameron Gold Deposit consists of disseminated sulphide replacements, quartz-sulphide stockwork and quartz breccia veins. This variability is partly a function of the effects of deformation on only part of the mineralisation. This style comprises mostly fine-grained pyrite, ranging from trace amounts to greater than 10% in rare cases, in association with carbonate-sericite alteration (lower gold-grades) and also carbonate-sericite-silica albite alteration (high gold-grades). Generally pyrite comprises 0.5% to 2% by volume.

Gold grades tend to be a direct function of sulphide content where highly-sulphidic rocks record high grades especially in mafic lithologies. Pyrite is ubiquitous and the dominant sulphide present. Although chalcopyrite is noted frequently in historic drill logs, it is believed that this mineral has been misidentified as yellow pyrite due to the fact that little to no chalcopyrite has been observed in drilling completed by Coventry or re-logging by Chalice. It is noted however that trace fine-grained chalcopyrite and pyrrhotite have been observed in previous petrographic work. Disseminated pyrite associated with gold is present in the main part of the deposit in all lithologies, including porphyries, though these comprise a volumetrically-small component of the lithological sequence that is mineralised.

Within the disseminated sulphide replacement mineralisation pyrite is commonly deformed and foliated. Given this, the mineralisation is clearly overprinted by deformation. Such deformation zones can be relatively thin (2 to 3 cm thick) attesting to the partitioning of strain during deformation and can cut un-deformed breccia (Figure 7.15). At a hand lens or microscope scale, pyrite crystals within foliated rocks exhibit sericite pressure shadows and grain rotation demonstrating their emplacement prior to deformation of the rocks.

**Figure 7.15** Intensely foliated and disseminated pyrite mineralisation cutting un-deformed quartz breccia vein material from the Cameron Gold Deposit stockpile (Source: Ball, 2014)



Quartz-sulphide stockwork mineralisation comprises only a relatively small component of the total mineralisation at the Cameron Gold Deposit. This style comprises intensely silica-albite-sericite-carbonate-pyrite altered rocks that appear to be overprinted by an apparently random network of relatively thin (5 to 10 mm) quartz veinlets in an apparent stockwork array (Figure 7.16). Although not confirmed, some samples of quartz-sulphide stockwork material appear to retain quartz eye textures that are characteristically associated with porphyry intrusions.

**Figure 7.16** Quartz-sulphide stockwork mineralisation from the Cameron Gold Deposit stockpile exhibiting multiple overprinting relationships (Source: Ball, 2014)



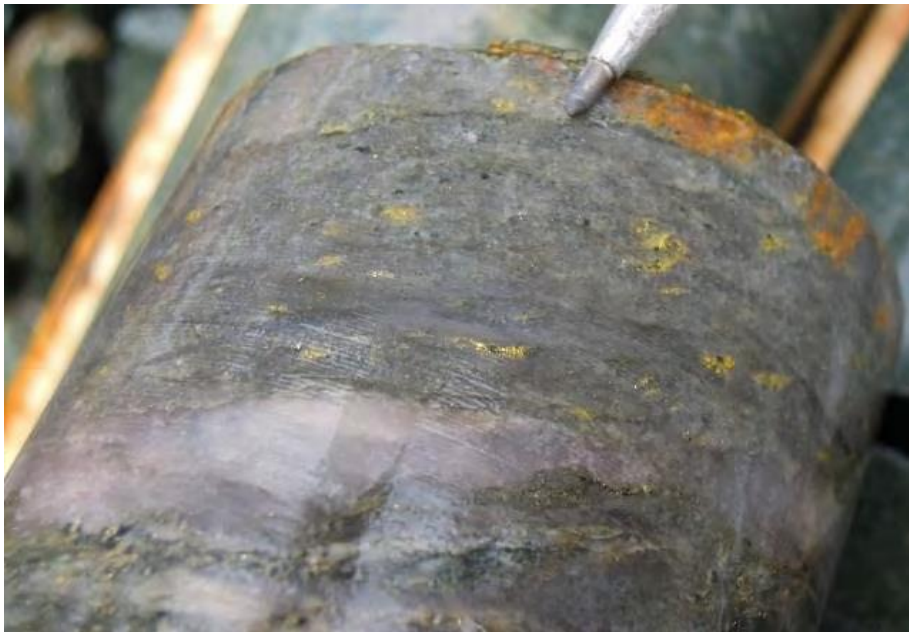
Quartz breccia veins constitute the other major mineralisation type in the deposit which generally exhibit high gold grades. This style comprises generally white to grey coloured quartz with variable amounts of disseminated pyrite forming the matrix to angular breccia fragments that range in size from a few millimetres to several centimetres (Figure 7.17). Breccia clasts are intensely altered like the surrounding wall rock and are mostly undeformed. The margins of the enclosing host rocks are commonly intensely foliated, with the fabric wrapping into the plane of the breccia. The preservation of this evidence of earlier deformation appears to be due to the anisotropy of the relatively-rigid quartz-dominated breccia bodies compared to the relatively-plastic, pyrite-sericite-carbonate disseminated mineralisation. Very fine grained dark pyrite commonly rims breccia clasts.

**Figure 7.17** Quartz breccia veins with angular altered clasts with disseminated pyrite in a matrix of quartz-pyrite from the Cameron Gold Deposit stockpile. (Source: Ball, 2014)



A newly recognised mineralisation style which may be under-represented by drilling within the deposit is a series of quartz-carbonate-chlorite veins that contain visible gold. Two holes drilled by Coventry (CCD-11-099 and CCD-11-144A) intersected these relatively thin veins (up to 10 cm) which contain abundant visible gold. These veins exhibit minor carbonate-chlorite alteration at their margins (Figure 7.18). Oriented drill core from these intersections suggests that these veins are near sub-vertical and strike towards the northeast and northwest. Given this orientation and that the standard drill azimuth used at the deposit (towards 225°), few intersections of the north-eastern trending vein set in drilling are likely. The apparently undeformed, to weakly deformed nature of these veins suggests they post-date the majority of the mineralisation at the Cameron Gold Deposit though are possibly synchronous with the later stages of the dominant regional deformation event.

**Figure 7.18** Abundant visible gold within a quartz-carbonate-chlorite vein from CCD-11-099, downhole depth 6.0 m. (Source: Ball, 2014)



The relative age of the quartz feldspar porphyry intrusives is important to the paragenesis given their spatial relationship to the mineralisation. Observations from drill core and outcrop suggest that feldspar-quartz porphyry dykes at the Cameron Gold Deposit are affected by the same alteration mineral assemblages and veining as the surrounding volcanics (taking primary lithological variations into account) and are similarly deformed. This suggests intrusion prior to alteration and deformation.

The mineralisation at the Cameron Gold Deposit comprises of a number of sub-parallel lodes (most commonly two). The lodes, while associated with the CLSZ at the deposit scale, commonly occur in the upper part of the CLSZ or in the structural hangingwall to the CLSZ. The lodes in the hangingwall of the CLSZ are generally associated with zones of high strain or shearing which are generally splay structures from the CLSZ. The most intense and gold-rich alteration generally does not occur within the highest strain zones but adjacent to them. Some lodes show little more than an increase in foliation and are not associated with any visually identifiable structures. A well-developed footwall lode also occurs in the main part of the deposit (Ball, 2014).

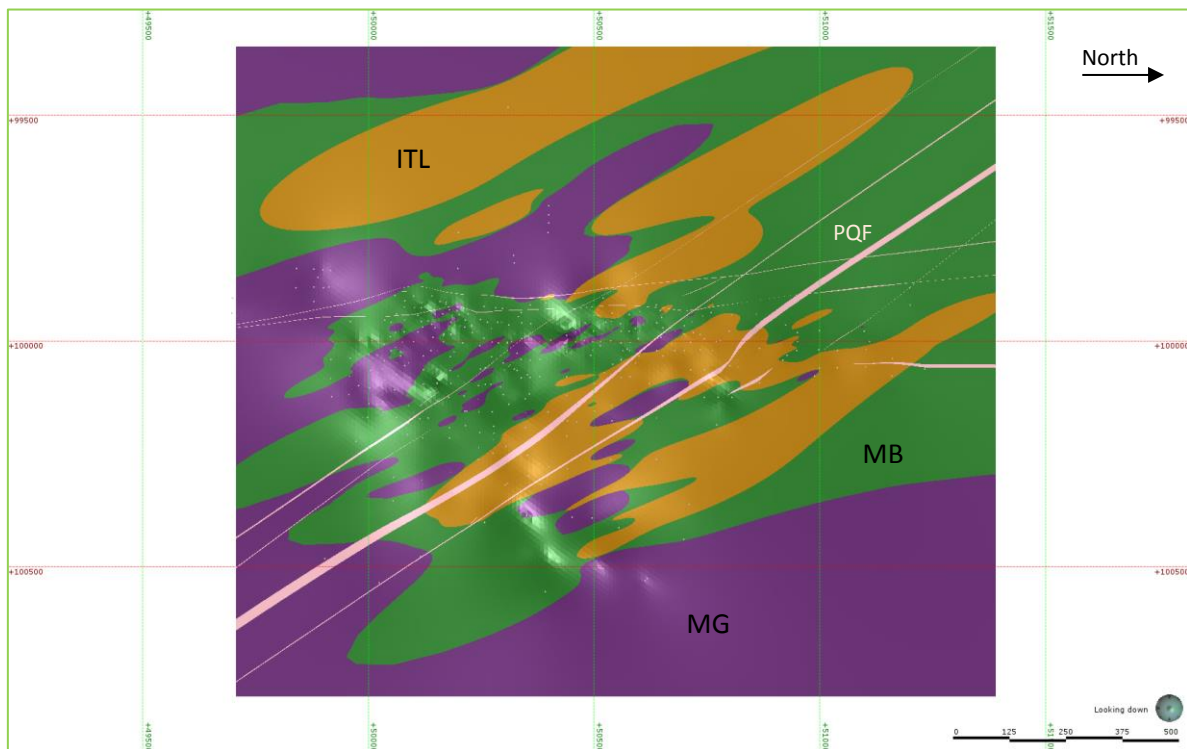


### 7.3. GEOLOGICAL MODELLING

Optiro interpreted and modelled the Cameron deposit lithological units into a 3D geological model as part of the January 2017 Mineral Resource Estimate, based on input from the Chalice geological team. The visualisation of lithology, structure, alteration and mineralisation relationships used Leapfrog Geo 3D modelling software (Version 2.2.1) developed by Aranz Geo Limited. The wireframes representing the Cameron lithological units have been modelled based on the interpreted 3D continuity of drillhole intersections. A plan view of the 3D model is shown in Figure 7.19 with annotations denoting the lithological units. Note that the view is rotated 90 degrees and that grid north is to the right.

The northwest-southeast trend of the major lithological units is clearly displayed, as is the two sets of quartz feldspar porphyry (PQF) dykes (north-south and northwest-southeast). The re-logging of the core has updated the dolerite code and corrected the previous use of fe-carbonate alteration (ZZV) as the lithology code to MG or MB and the models are constructed on this basis.

**Figure 7.19 Cameron Deposit 3D geological model – plan view**

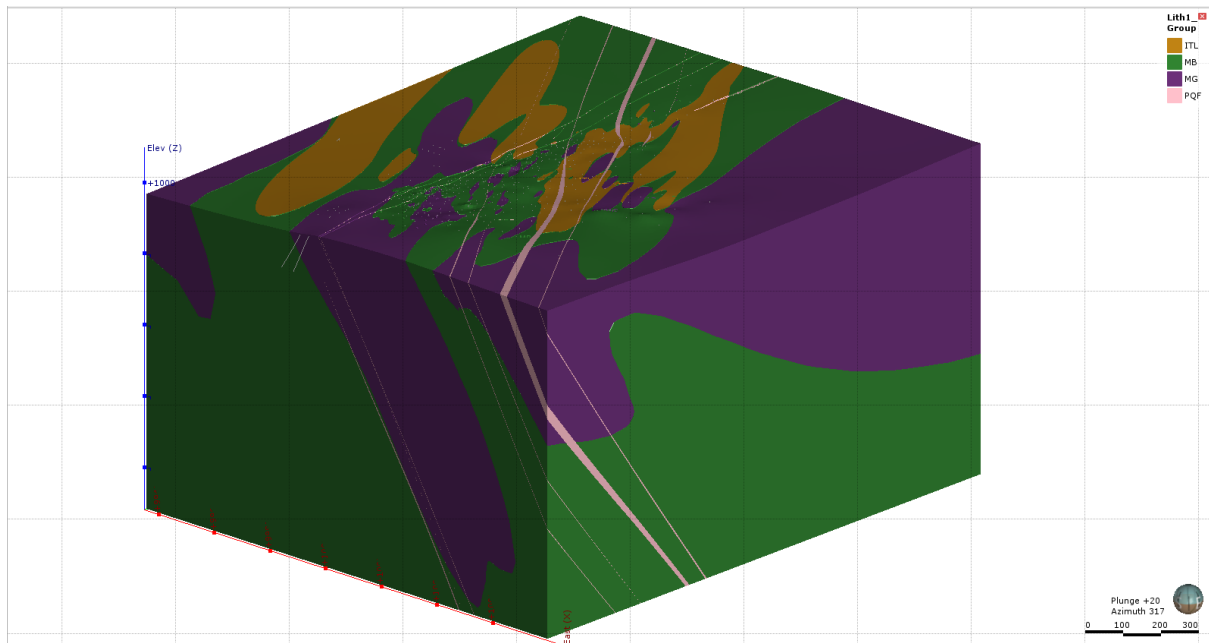


Leapfrog allows the setting of individual relationship criteria for elements such as chronology, termination of vein or fault sets, relative stratigraphic age and contact type. These can be adjusted iteratively and new wireframe meshes created very rapidly. Termed ‘implicit modelling’, the use of a radial basis function to generate meshes instead of hand digitised sectional outlines allows a number of scenarios to be run in real time without the traditional time cost of manually editing strings and points.

Chalice provided interpretations of the geology and mineralisation based on the updated re-logging information. These wireframes were viewed against the drilling information and validated both by

sectional review and against the 3D spatial representations of the lithological and mineralisation elements. In general, the lithology orientation and geometry correlated well when compared to the Optiro interpretations. There were some differences in the mineralisation models and these are discussed further in Section 7.4 below. The Chalice interpretations thus formed the basis for the geological modelling with refinements by Optiro using Leapfrog 3D modelling software and techniques to create a collaborative outcome. An oblique view of the model is shown in Figure 7.20.

**Figure 7.20 Cameron geology model 3D oblique view (looking northwest)**



One of the benefits of the Leapfrog software is the ability to manually code intervals as a means of modelling complex or large populations of input data. The geological model used vein modelling tools to construct the PQF dykes by manually coding 17 interpretable units and forming a vein system model that to set relationships between cross-cutting wireframes. The ITL and MG units used the intrusion modelling tools with MB and either ITL or MG as a constraining lithology to create a number of small zones oriented northwest-southeast as per the overall fabric orientation. The remaining volume of the model is set to MB as per the logged intervals in the drilling.

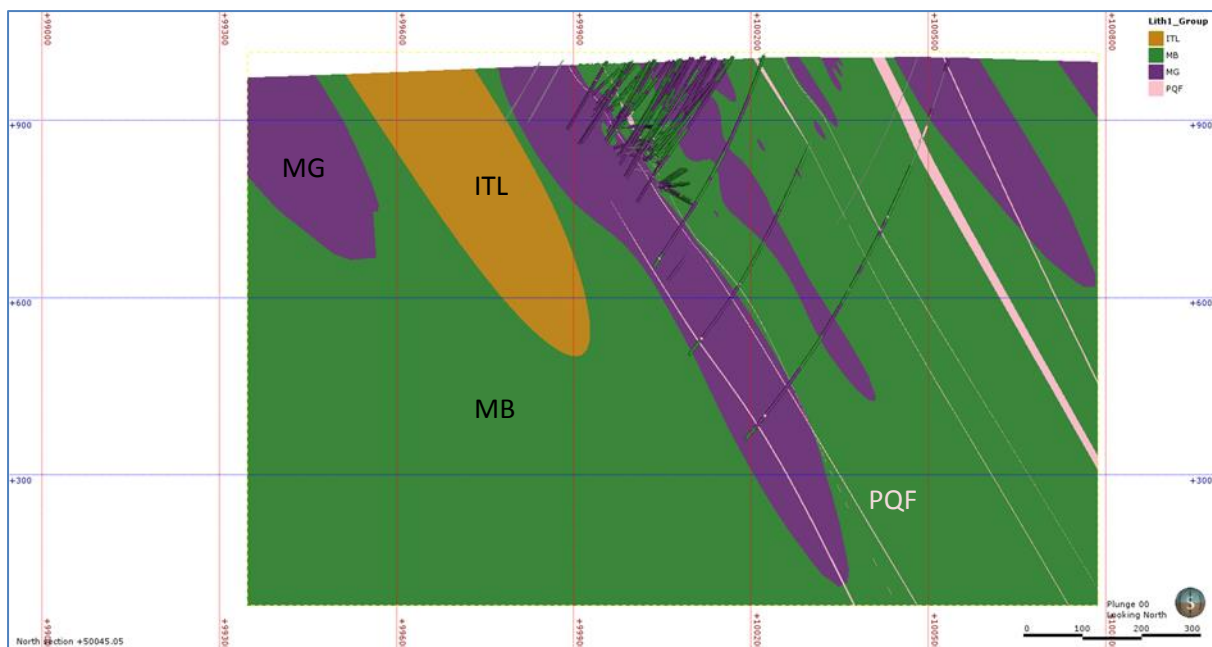
This integrated 3D model of the geology was used as the basis to assess potential associations/controls on mineralisation such as sulphide abundance, multi-element correlations, alteration and structural relationships. A section view of the model is shown in Figure 7.21.

Observations from the geological modelling of the Cameron deposit geology are listed below:

- **Quartz feldspar porphyry intrusions (PQF, PFBH, PQ, PF, PSC)** occur in two sets:
  - **North-south striking set** – a paired set of (grid) east dipping dykes ( $60^{\circ}/085$ .) These two PQF units occupy HW and FW positions within the shear corridor and delineate the flexure point and thickening of the Cameron shear zone that envelopes the Main mineralised zone. Generally narrow (1 to 15 m thick) this set is interpretable for the strike length of the deposit. There is evidence that these may coalesce at depth (~600 m BGL).

- **Northwest-southeast striking set** – dipping 65/058. These PQF units crosscut the CSZ and are more or less parallel to the regional foliation. Development of this northwest-southeast set of intrusives also corresponds with the change to more volcanoclastic dominant lithologies at the northern half of the deposit.
- **Gabbro units (MG/MD)** are oriented parallel to the regional northwest-southeast fabric and they cross-cut the CSZ. The relationship to the Main mineralised zone appears to be that they enclose or wrap around the southern end of the deposit. There is evidence that there is localised grade depletion where northwest trending gabbro dykes cut across the CSZ.
- **Volcanoclastic units (ITL, IT, ITA, ITY)** oriented northwest-southeast. The ITL units follow the regional fabric and are intercalated with the MB/MG units, and cross-cut by the PQF dykes. The northern half of the deposit is dominated by ITL and MB. Mineralisation still appears to be best developed in the mafic units, but the effect of the increase in ITL units in this half of the deposit is an observable reduction in width and intensity of the mineralisation.

**Figure 7.21 Cameron cross-section view (50045 mN) looking north showing geological model**



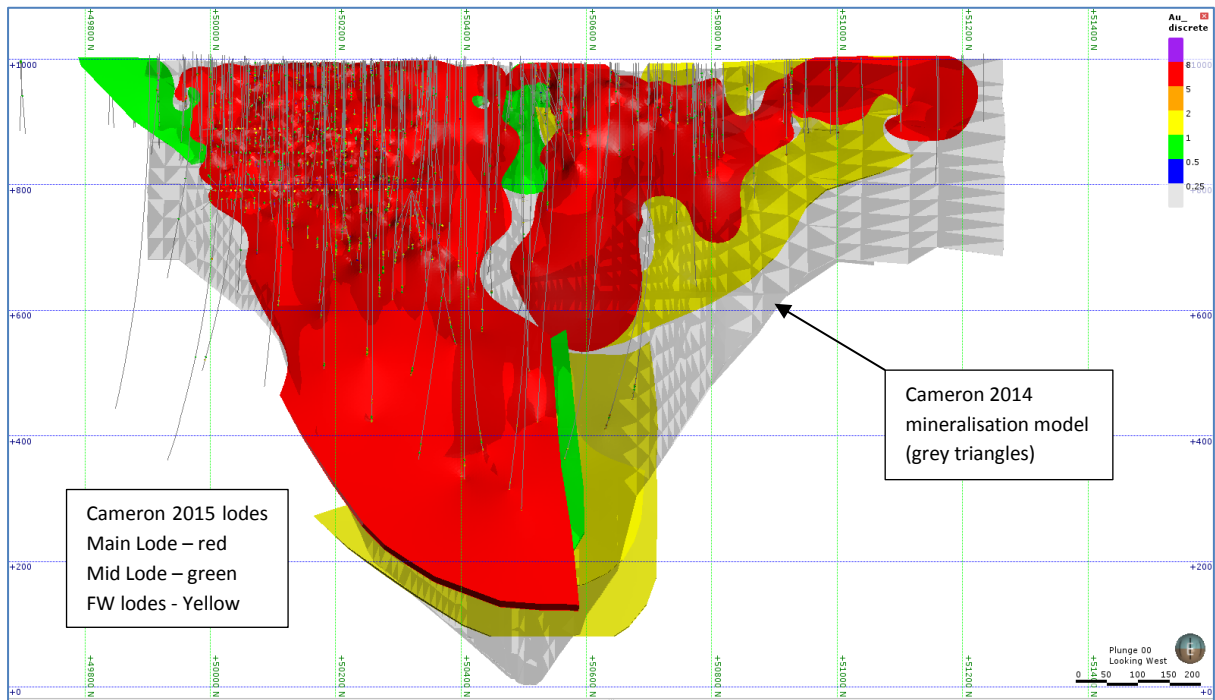
## 7.4. MINERALISATION MODELLING

Chalice provided interpretations of the mineralisation domains based on the updated assays from the resampling programme of 2015. A nominal 0.4 to 0.5 g/t gold cut-off grade was used to digitise 2D sectional outlines that were then wireframed into 3D solid objects.

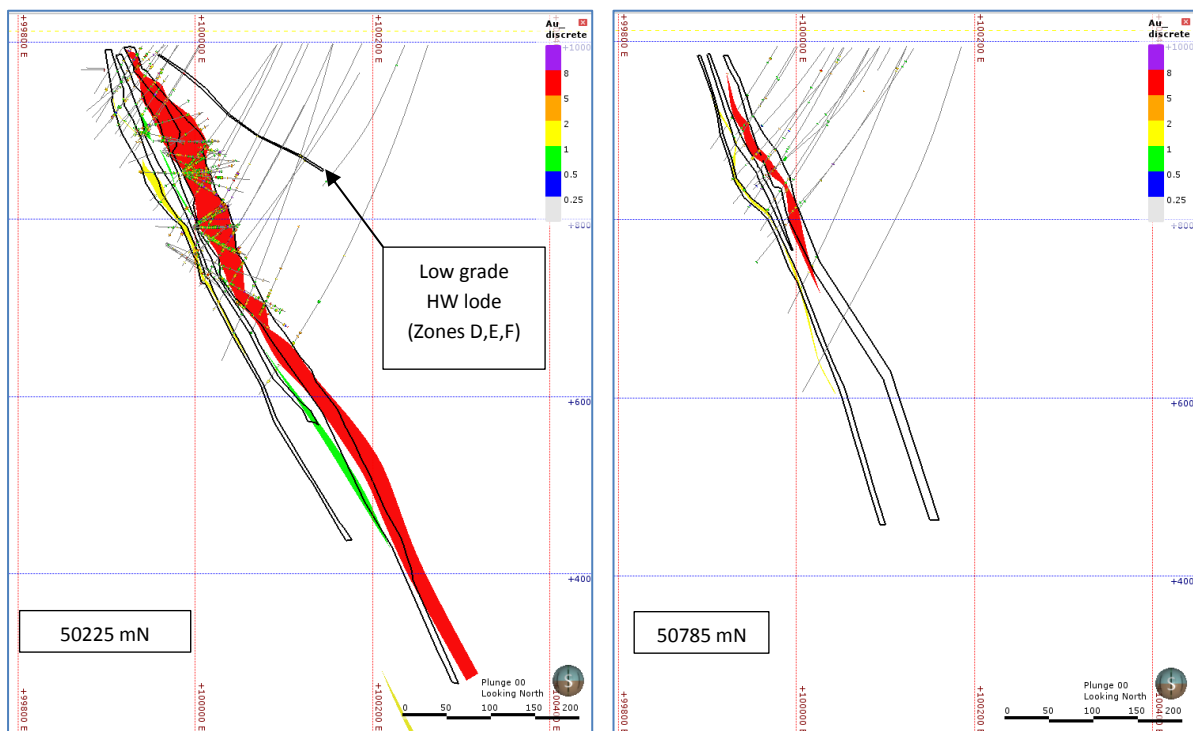
Optiro reviewed the interpretations against the geological models and information such as underground mapping and reports on mineralisation controls. The comparison showed that the global approach to the interpretations was valid and the main mineralisation domains are reasonably consistent in terms of interval selection, thickness and volume control and assignment of continuity. Differences were noted in the hangingwall domains, extents of projection and some areas were found to have had the mineralised domains projected through unmineralised drillhole

intersections. These were discussed and adjusted along with the extents of the models, as shown in Figure 7.22.

**Figure 7.22 Cameron mineralisation lode interpretations comparison long section (view looking west)**



The three images in Figure 7.23 show two northing cross-section views showing the comparison of the initial sectional interpretations (black outlines) and the coloured 3D domains. As discussed, the down-dip extents were modified but in general the main change was the decision not to include the flatter low grade hangingwall domains (zones D, E, and F). The geometry could be produced by narrow cross-cutting northwest-southeast structures that were more consistent with the overall steep dipping CSZ and were not considered to be volumetrically significant.

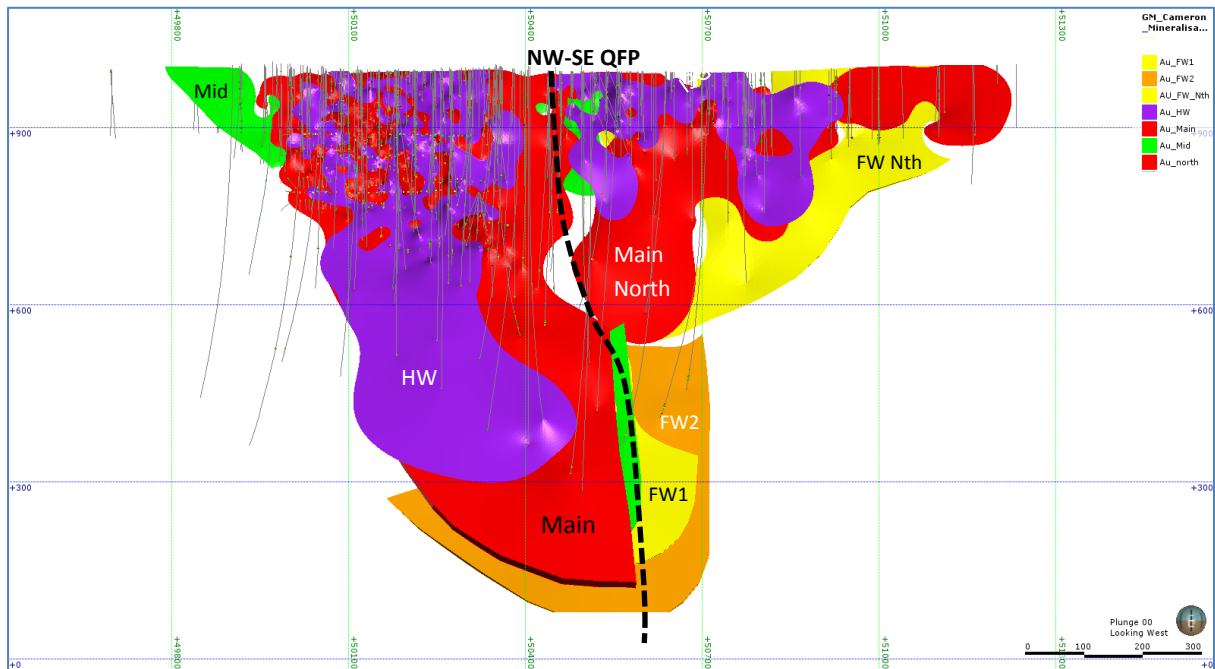
**Figure 7.23 Sectional comparisons of mineralisation interpretations**


The final mineralisation domains were interpreted by manually selecting spatially consistent 3D domains and using the codings to construct vein models in Leapfrog. These could be dynamically updated during the validation phase to include or exclude intersections based on their relationship to other domains, local geometry, support from adjacent intersections and continuity of structures. This process is time consuming but was considered necessary to constrain the samples within geologically consistent domains rather than running simplistic interpolant grade shells. The process defined the following domains which are also shown in Figure 7.24:

- **Main Zone (red):** the most consistent and thickest of the mineralised domains. The Main Zone is split by the PQF dykes as shown in Figure 7.24 into two estimation domains (south and north). The HW PQF dyke moves in and out of the Main Zone but in general is located on the eastern (HW) side.
- **Hangingwall (HW) Zone (purple):** A parallel zone to the main zone of narrow shear hosted mineralisation averaging ~1 to 3 m thick approximately 10 m above the Main Zone.
- **Mid Zone (green):** A distinct zone of lower grade mineralisation located between the Main and footwall (FW) zones, and only found in the southern half of the deposit. This zone is sub parallel to the Main and FW zones. The Mid Zone ranges from 1 to 20 m thick and averages 3 to 4 m.
- **Footwall (FW) Zone (yellow):** The FW Zone is also continuous for the length of the deposit, and like the Main Zone is split at around 50475 mN by the northwest-southeast trending PQF dykes.
- **Footwall 2 Zone (orange):** A second FW zone developed below the 525 mRL level in the southern end of the deposit. There are a number of thicker intersections in the deepest drillholes. To maintain consistency in thickness of the interpretations this mineralisation

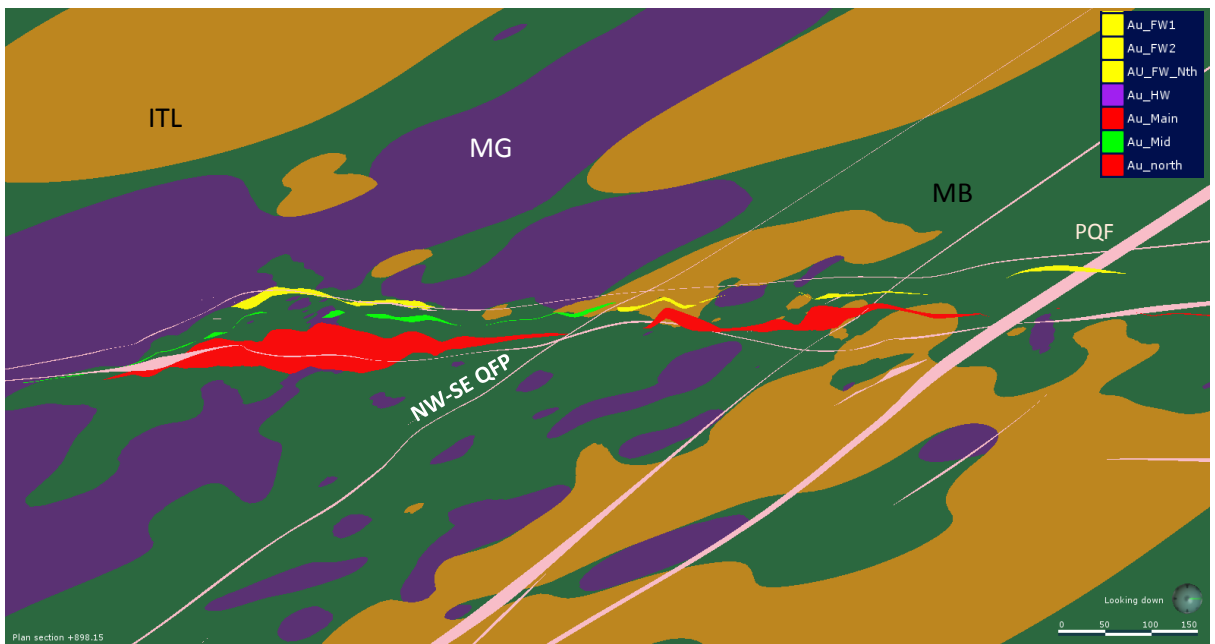
was interpreted as a separate zone. There is a clear separation between FW2 and the FW Zone.

**Figure 7.24 Long section view of Cameron mineralised domains**



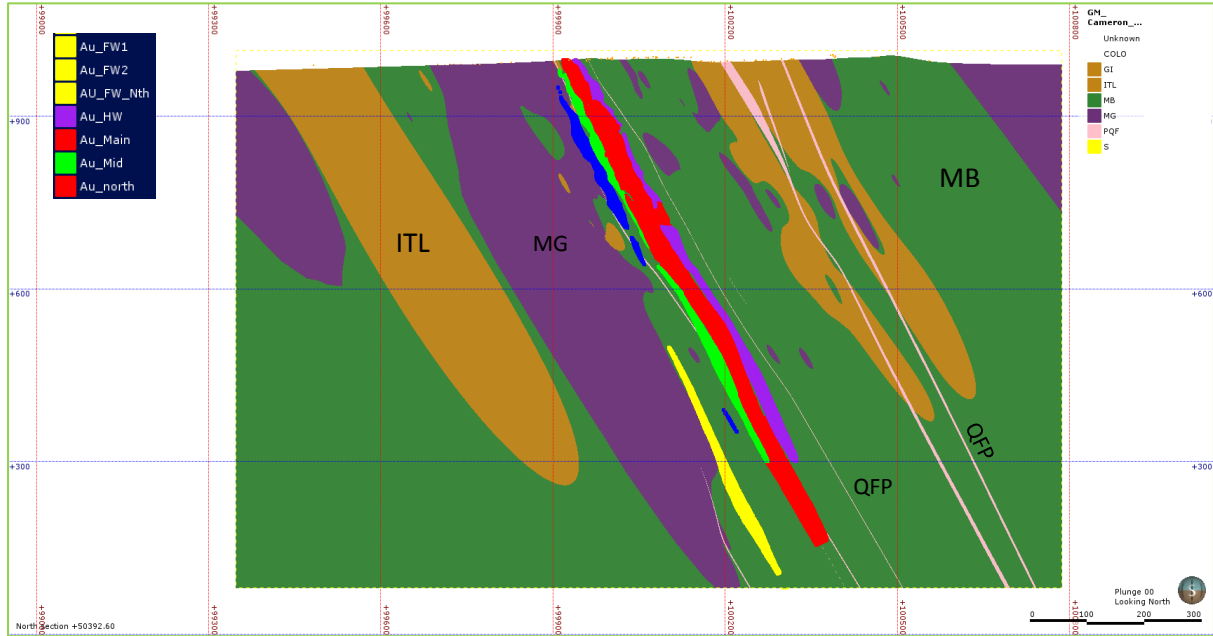
The mineralisation domains are shown overlaid against the geological model in Figure 7.25. Of note are the north-south PQF dykes running more or less parallel to the mineralisation domains within the CSZ and the northwest-southeast dykes that separate the system into southern and northern sections.

**Figure 7.25 Cameron mineralisation domains with geology at 790 mRL (north to the right page)**



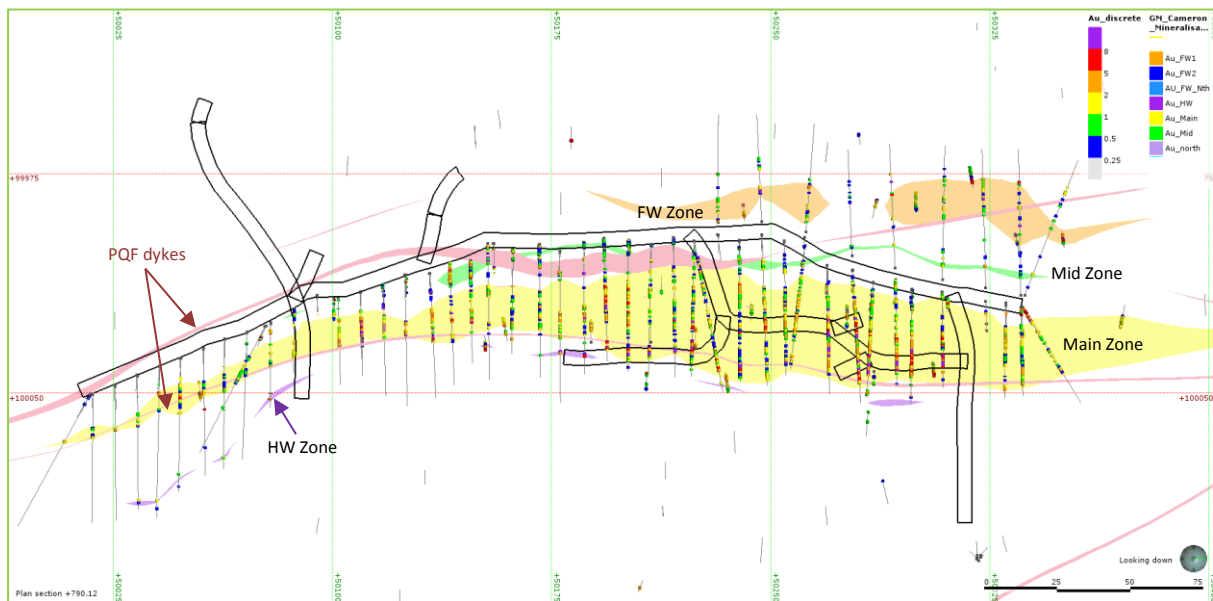
The deposit geology and mineralisation domains are shown in cross-section in Figure 7.26 showing the sub parallel nature of the domains that represents the CSZ control on the global geometry.

**Figure 7.26 Cameron 3D geological model and mineralised domains cross-section view looking east (50,400 mN)**



As a final comparison the mineralisation domains and PQQ dykes are shown with the underground level (drift) development as reference in Figure 7.27.

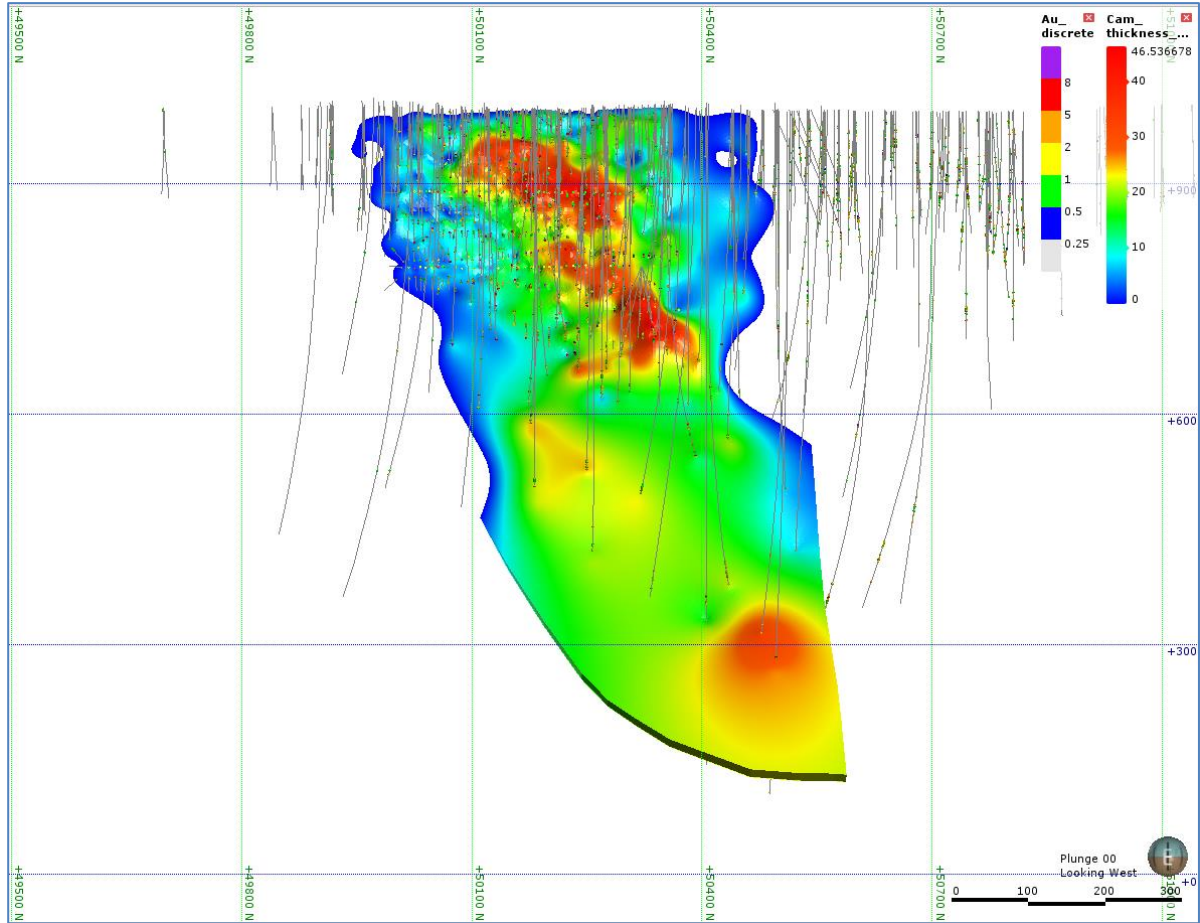
**Figure 7.27 Cameron mineralisation domains with geology and underground development at 790 mRL (north to the right page)**



Optiro considers that the moderate north plunging orientation (in the plane of the mineralisation/CSZ) plays a key role in the development of mineralisation at Cameron. Modelling of the thickness contours of the mineralised zones shows the repetition of thicker zones of

mineralisation (up to 46 m thick) within the Main zone (Figure 7.28). This orientation is considered to be supportive of variography results that indicate grade continuity of a similar orientation.

**Figure 7.28 Thickness contours of the Main Zone mineralisation model (long section view looking west)**

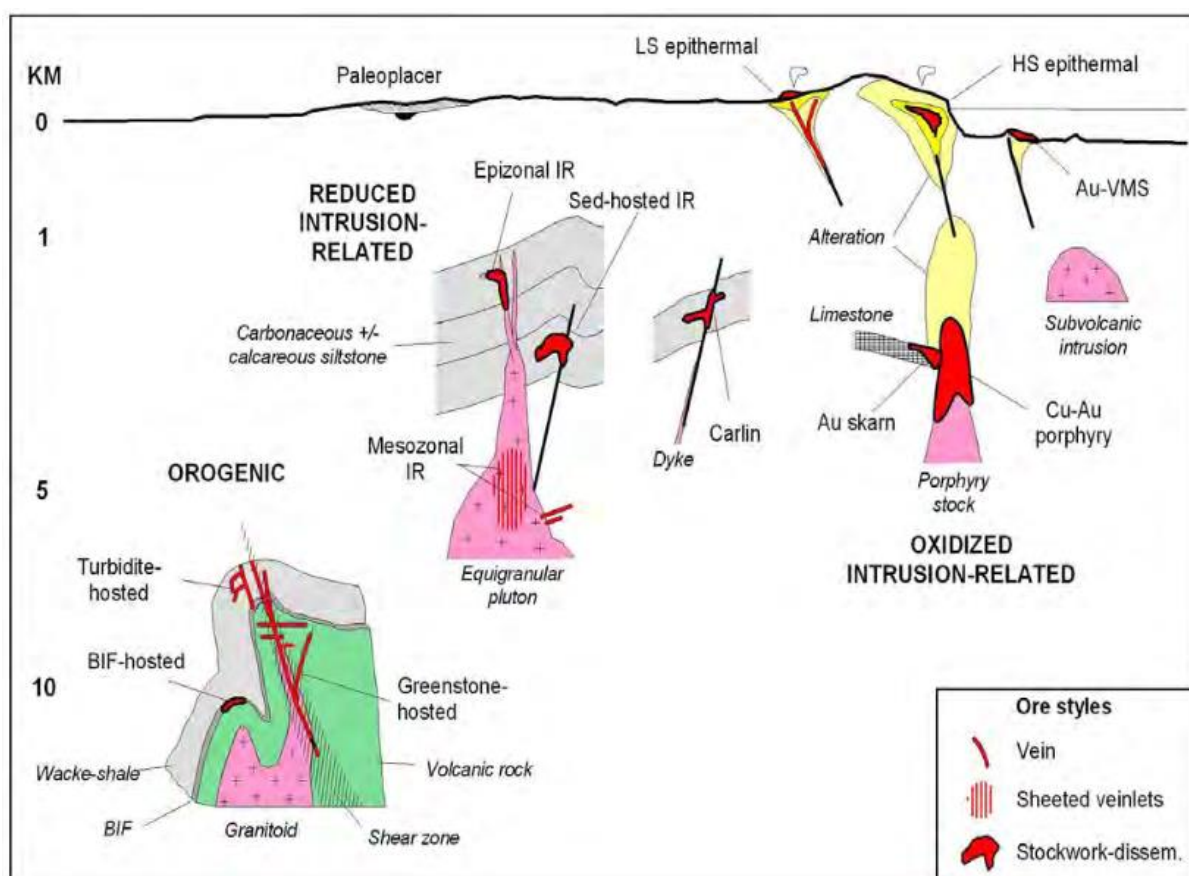




## 8. DEPOSIT TYPES

The Cameron deposit is part of a group of orogenic gold mineral systems that occur within Archaean greenstones. These have traditionally been classified as orogenic related hydrothermal processes (Robert et al. 2007). There are nineteen identified deposits greenstone-hosted gold deposits with more than 10 Moz of contained gold and approximately 400 Moz of total worldwide endowment. The key geological elements of orogenic gold systems are shown in Figure 8.1

**Figure 8.1** Schematic cross-section of the key geological elements of the main gold systems and their crustal emplacement depth (note logarithmic depth scale), from Robert, F. et al 2007. (Source Ball 2014).



Originally the orogenic model applied strictly to syn-tectonic vein-type deposits formed at mid-crustal levels in compressional or trans-tensional tectonic settings. Over time the term has been progressively broadened to include deposits that are post-orogenic relative to processes at their crustal depth of formation (Robert et al. 2007). Ambiguities in the classification of greenstone-hosted gold deposits has given rise to varying interpretations such that a number of different types and ages of deposits exist (Robert et al, 2005), or that all deposits are based on a single, all-encompassing orogenic model with a few atypical gold-base metal deposits (Groves et al, 2003).

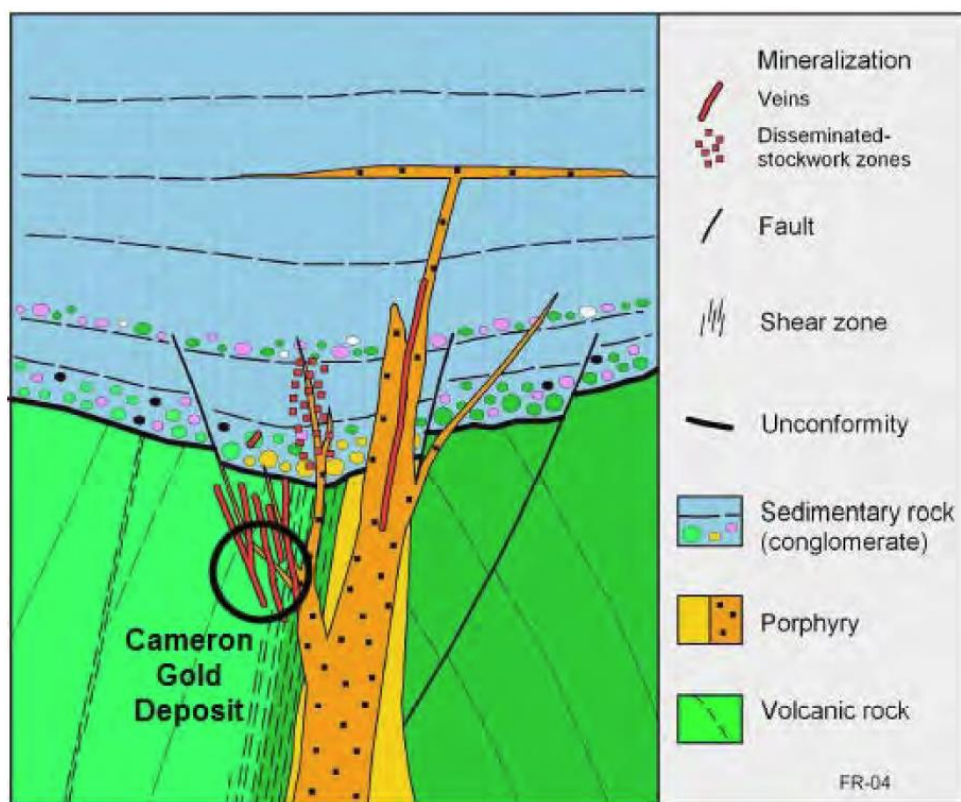
Orogenic greenstone mineralisation as described above typically comprises quartz-carbonate veins that are commonly laminated in reverse shear zones and as shallowly-dipping extensional veins. The veins are associated with sericite-carbonate-pyrite alteration and are primarily late, overprinting all lithologies. Quartz is the dominant gangue mineral followed by carbonate and generally less than

5% sulphide, commonly in the form of pyrite. Tourmaline, scheelite and tellurium are common minor minerals, whilst silver, arsenic and tungsten are commonly prevalent. Robert et al (2005, 2007) highlighted that prolific greenstone belts can contain gold-only and gold-base metal deposits that do not conform to the typical orogenic model. These include Red Lake, Hemlo, Malartic, Doyon, Fimiston, Wallaby, Kanowna Belle and Boddington and the Horne and La Ronde gold-rich VMS deposits (Dubé and Gosselin, 2006).

Although atypical deposits display similar regional-scale controls and commonly occur in the same camps as typical orogenic deposits they differ in styles of mineralisation, metal association, interpreted crustal levels of emplacement and relative age. Mineralisation from atypical greenstone deposits range from disseminated-stockwork zones at Wallaby and Kanowna Belle to crustiform-textured veins with associated sulphidic wall rock replacements and quartz breccia veins at Red Lake and Fimiston, to less common sulphide-rich veins (Robert et al, 2005, 2007). These atypical deposits also show a close spatial association with high-level porphyry stocks and dykes and often occur near or above the unconformity at the base of conglomeratic sequences as shown in Figure 8.2.

These atypical deposits comprise low quartz, but often high-silica systems, with pyrite being the dominant sulphide, often in conjunction with tellurides, molybdenite, magnetite, haematite and sulphates. Gold may often also be associated with silver, telluride, vanadium, barium, molybdenum, arsenic, antimony and mercury. Alteration comprises sericite-albite-carbonate-pyrite and potassium feldspar-carbonate-pyrite. Atypical greenstone deposits are also characterised as having been formed relatively early in the development of the greenstone belts, prior to the folding of their host units during the main part of shortening of their host belts, and are commonly overprinted by orogenic veins (Robert et al, 2005, 2007). These deposits share many of the characteristics and origins of the alkalic, porphyry-style deposits of the oxidised intrusion-related clan (Ball, 2014).

**Figure 8.2** Geologic model for the disseminated stockwork and crustiform vein deposits in greenstone belts showing the spatial association with high level porphyry intrusions and conformities at the base of conglomeratic sequences. (Source: Ball 2014).



From the above discussion, the bulk of the mineralisation comprising the Cameron Gold Deposit can be regarded as being part of the atypical greenstone family, with a lesser, but potentially-highly significant orogenic vein style that is newly-recognised and possibly overprinting. Characteristics associated with the mineralisation at the Cameron Gold Deposit confirming this assertion include:

- Mineralisation dominated by disseminated sulphide replacement and quartz-sulphide stockwork and quartz breccia veins.
- Spatial and temporal association of mineralisation with porphyry intrusive bodies that have similar alteration assemblages (taking into account primary lithological variations).
- Low amounts of auriferous quartz-carbonate vein material comprising the mineralisation, with this newly recognised style, being likely temporally-late compared to the disseminated sulphide replacement and quartz breccia veins.
- High-grade mineralisation is largely deformed and disseminated sulphide replacement zones which constitute the bulk of the mineralisation are commonly foliated.
- Alteration assemblage (sericite-albite-carbonate-pyrite) is of the atypical style.

Differences between the mineralisation at the Cameron Gold Deposit and atypical greenstone mineralisation described above comprise the following points:

- Largely a simple Au-Ag association with little/no enrichment in other elements (Mo, Hg, Sb, Te).

- Lack of high-level crustiform carbonate veins that are commonly temporally early in the mineralisation paragenesis (not always present in all atypical greenstone deposits), though the early set of unmineralised veins may correspond with these.

The Cameron Gold Deposit has many features in common with both orogenic and atypical greenstone deposits. These include an association of the intersection of a crustal-scale (first-order) structure (Cameron-Pipestone Fault) with a large-scale (second-order) structure (Cameron Lake Shear Zone) in the region of an anticline fold structure (Shingwak Lake Anticline). A stratigraphic position at a possible hiatus or change in volcanism (Rowan Lake Volcanics to Cameron Lake Volcanics) in an iron-rich part of the volcanic stratigraphy, which is also near a volcanic-sediment (volcaniclastic) transition.”

## 9. EXPLORATION

### 9.1. HISTORICAL REGIONAL SURVEYS

Exploration at the Cameron Project commenced in 1960 and has been conducted intermittently until the present day. Prior to 1960, the area had received little exploration though the high-grade Roy occurrence (claim 4248906 subject to earn in option agreement) has been known since the 1890s.

The Ontario Geological Survey (OGS) undertook geological mapping in the area in the early 1930s (Thompson, 1935). The area was mapped again by the OGS as part of a regional mapping programme in the 1970s (Kaye, 1973) with this work being recompiled by Johns (2007). The majority of the previous exploration work was completed by Nuinsco Resources Limited (Nuinsco) together with a number of partners between 1980 and 2005. The vast majority of this work was undertaken between 1983 and 1989 (Ball, 2014).

The majority of this historical review is based on assessment files on work submitted by previous explorers on the property that are archived in the Ministry of Northern Development and Mines (MNDM) office in Kenora. This data is available online through the Assessment File Reporting Imaging (AFRI) system (<http://www.geologyontario.mndm.gov.on.ca/>) and is also held in its original form by First Mining at its Vancouver office and partially on site at the Cameron Project.

## 10. DRILLING

### 10.1. DIAMOND DRILLING

A number of diamond drillhole programmes have been carried out across the Cameron Gold Project area by a number of explorers (Table 10.1 and Figure 10.1). In addition, during the mid-1980s, Nuinsco completed an RC drilling programme to sample the overlying glacial till and the bottom of hole in bedrock to test for geochemical anomalism associated with gold mineralisation.

**Table 10.1 Historical drilling completed at the Cameron Gold Project (Chalice, 2014 and Coventry, 2013)**

Year	Company	No. Holes	Metres	Type	Surface or UG	Hole Prefix
1960-1961 1972-1974	Noranda & Zahavy	29	2,083	Diamond	Surface	60, 61, PS-60, PS-61, ZD, ZO
1981	Nuinsco	19	1,734	Diamond	Surface	NC-81
1983	Nuinsco & Lockwood Petroleum	70	19,679	Diamond	Surface	NC-83, NCX-83
1984	Nuinsco & Lockwood Petroleum	20	4,671	Diamond	Surface	NC-84, NCX-84
1985	Nuinsco	43	275	RC	Surface	Unknown
1986	Nuinsco	40	587	RC	Surface	Unknown
1985-1986	Nuinsco & Echo Bay Mines Ltd	41	6,906	Diamond	Surface	NC-85, NCX-85, NC-86, NCX-86
1987-1989	Nuinsco & Echo Bay Mines Ltd	508	26,594	Diamond	UG	D, 365, 490, 555, 685
1989	Nuinsco & Deak International	24	12,221	Diamond	Surface	NC-89, NCX-89
1996	Cambior Inc.	13	8,012	Diamond	Surface	CL96
2003-2005	Nuinsco	15	2,909	Diamond	Surface	NC
2010	Coventry	88	13,160	Diamond	Surface	CCD-10
2011	Coventry	124	18,728	Diamond	Surface	CCD-11
2012	Coventry	30	4,116	Diamond	Surface	CCD-12

A representative cross section showing drillholes coloured by assay value and overlaid by mineralisation interpretations is shown in Figure 10.2. The section northing is 50,245mN (local grid) which corresponds to the main zone of mineralisation in the southern half of the deposit.

Figure 10.1 Plan of drilling undertaken at the Cameron Gold Project (Chalice, 2014)

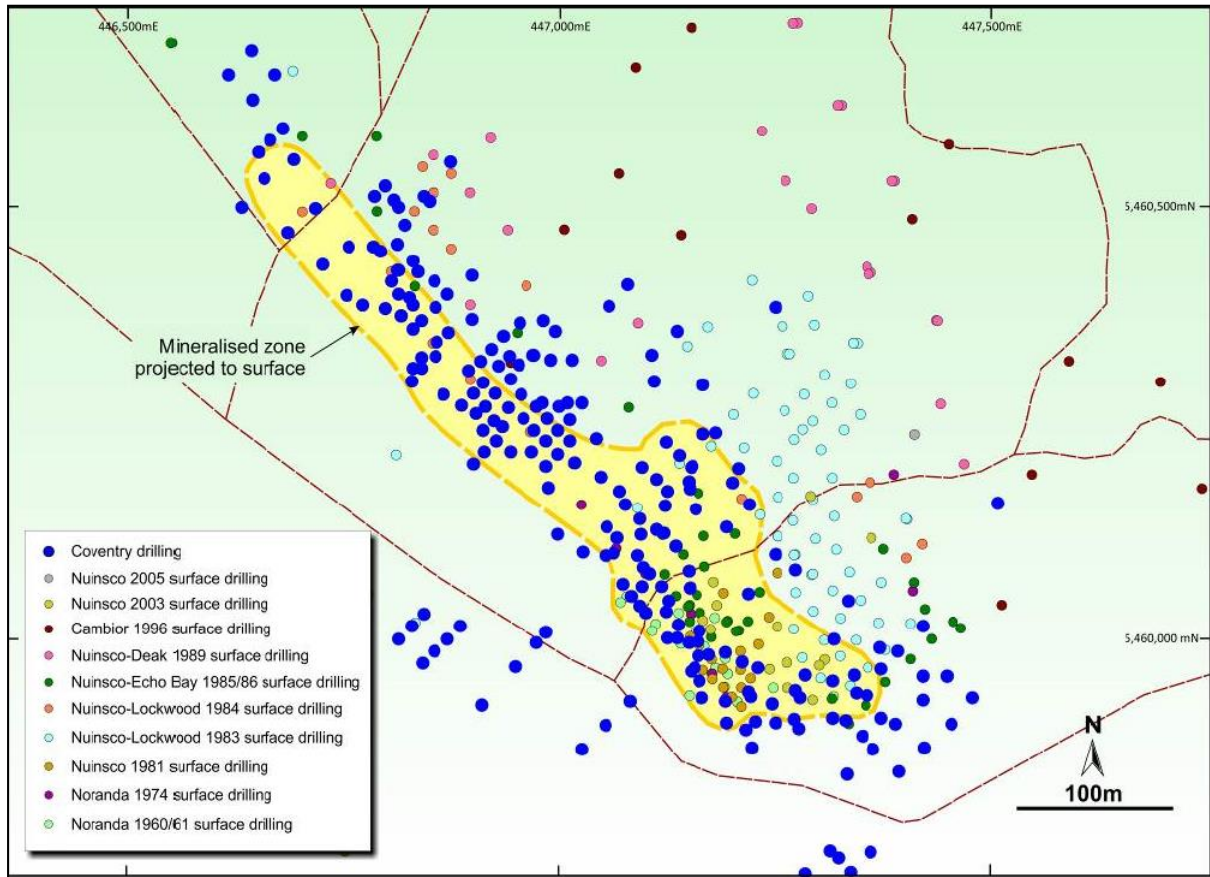
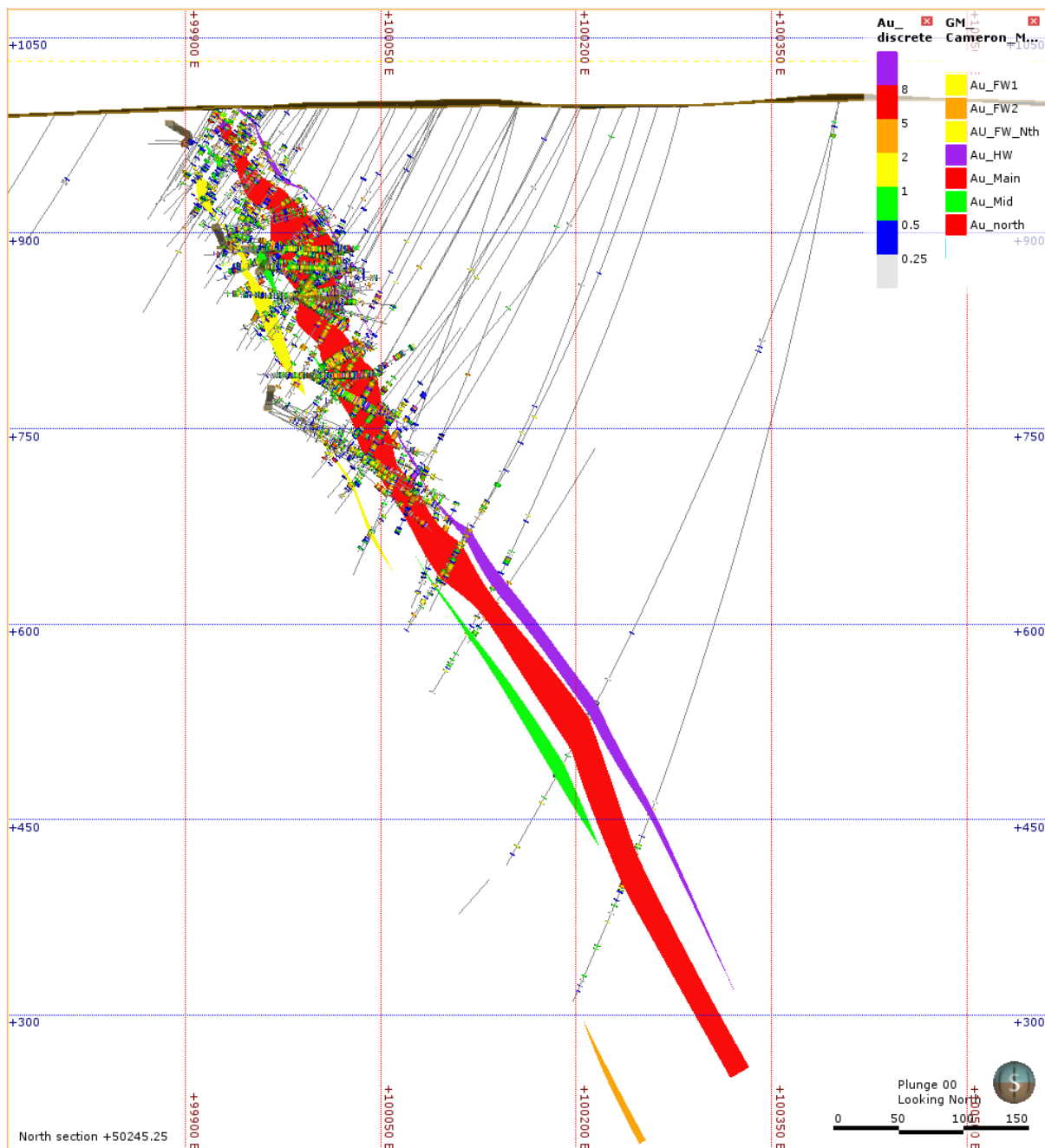


Figure 10.2 Representative cross-section looking north of Cameron drilling and mineralisation models



## 10.2. HISTORICAL DRILLING

### 10.2.1. NORANDA EXPLORATION COMPANY LIMITED (1960 TO 1971)

In May 1960, two prospectors employed by Noranda Exploration Company Limited (Noranda), Joe Burke and Alex Bouchie, discovered outcropping high-grade gold mineralisation in quartz veins hosted by diorite. This discovery was termed the Number One zone (now known as the Beggs Prospect). Subsequent prospecting by Burke and Bouchie led to the discovery of a further zone of mineralisation, termed the Number Two zone, about 700 m to the southwest of the Number One



zone. This mineralisation comprised an altered, sulphide-bearing shear zone in mafic rocks and was the surface expression of the Cameron Gold Deposit.

Noranda undertook line cutting, geological mapping, trenching and sampling and ground magnetic and electromagnetic (EM) geophysical surveys prior to completing a first stage drilling programme in July 1960. The drill programme comprised 29 AX diamond core drillholes for 1,441 m. The drilling comprised twenty-two drillholes (881 m) at the Number One zone; drillholes 60-1 to 60-22) and seven drillholes (563 m) at the Number Two zone (drillholes 60-23 to 60-30). An additional nine shallow AX Pack Sack drillholes (PS-60-1 to PS-60-9) were also completed at the Number One zone for at least 77 m though logs to two holes are missing and hence the total metres drilled is uncertain.

In January 1961, a further 16 AX diamond drillholes were completed for 808 m. Of these nine drillholes (628 m) were drilled at what would become the Cameron Gold Deposit (drillholes 61-35 to 61-43), whilst the remaining four drillholes (180 m) were completed at the eastern extent of the Beggs Prospect on the ice over Beggs Lake (drillholes 61-31 to 61-34).

In addition, a further four shallow AX Pack Sack drillholes (PS-61-10 – PS-61-13) were completed (55 m) after the main programme at the Number Two zone, apparently targeting additional mineralisation uncovered in trenching along strike to the northwest.

Due to the perceived limited size and grade of the mineralisation, Noranda allowed the claims to lapse in 1971 without completing any additional work. During this work programme Noranda utilised a camp on the western shore of Beggs Lake. The drill core was stored at this location but is now derelict and unsalvageable (Puritch & Jones, 2004).

### **10.2.2. ZAHAVY MINES LIMITED AND NORANDA EXPLORATION COMPANY LIMITED (1972 TO 1974)**

In 1972, Zahavy Mines Limited (Zahavy) restaked the former Noranda claims and completed seven AX diamond drillholes for a total of 788 m (ZD-1 to ZD-7) mostly in an area about 800 m west of the Beggs Prospect. This work was poorly documented though best intercepts of 0.5 m at 46.0 g/t gold from 117.7 m (ZD-1) and 3.0 m at 9.95 g/t gold from 53.3 m (ZD-7) were reported from the supposed extension of the Beggs Prospect (Number One zone).

These results attracted the attention of Noranda again and it executed an option to conduct further exploration. Noranda completed nine BQ diamond drillholes for a total of 638 m during 1974. Three drillholes (ZO-74-1 to ZO-74-3 totalling 223 m) tested the interpreted western extension of the Number One Zone (Beggs Prospect) where Zahavy had completed six shallow drillholes. The remaining six holes (ZO-74-4 to ZO-74-9 for 415 m) were drilled to follow up earlier 1960-61 Noranda drilling at the Cameron Gold Deposit itself.

Noranda was unable to repeat Zahavy's results at the extension of the Beggs Prospect with no significant intersections reported. At Cameron, the additional drilling was disappointing with the best recorded intercept being 6.6 m at 1.88 g/t gold from 49.4 m (ZO-74-5). Overall, Noranda regarded its programme as unsuccessful and in the case of Cameron that it had failed to extend the mineralisation materially or to increase its overall tonnage. On the basis of this work, Noranda withdrew from the option agreement with Zahavy.

Some uncertainty remains as to the accuracy and validity of the Zahavy work in 1972 due to the fact that no gold anomalous results were replicated by Noranda in 1974. None of the core drilled by Zahavy has ever been located and is presumed lost.

The remains of the core from the Noranda 1974 programme was stored at its camp on the western shore of Beggs Lake which is now derelict and unsalvageable (Puritch & Jones, 2004).

### **10.2.3. NUINSCO RESOURCES LIMITED (1979 TO 1983)**

Following the withdrawal of Noranda for a second time, Zahavy allowed the claims over the Cameron Gold Deposit to lapse. The project remained dormant until 1979 when W. Morehouse and D. Petrunka, two prospectors from Thunder Bay, Ontario, staked claims over the Number Two zone. In 1980 these claims were purchased by West Macanda Resources Limited which subsequently merged with Nuinsco. The estates of these two prospectors retain a royalty over these claims.

In 1981, Nuinsco commenced an initial exploration programme at what was then termed the Cameron Lake Gold Deposit. This comprised line cutting, geological mapping, ground magnetics and Induced Polarisation (IP) surveys. Nuinsco drilled 19 BQ diamond drillholes (NC-81-01 to NC-81-19) for a total of 1,432 m to follow up on the previous Noranda drilling. The results of this drilling were highly encouraging, prompting Nuinsco to conduct further work (Puritch & Jones, 2004).

### **10.2.4. NUINSCO RESOURCES LIMITED AND LOCKWOOD PETROLEUM INC (1983 TO 1985)**

As a result of plunging gold prices between 1979 and 1982, Nuinsco was unable to finance further exploration until 1983, when Lockwood Petroleum Inc. (Lockwood) agreed to joint venture (JV) into the project. Under the terms of the JV, Lockwood could earn a 50% equity interest in the project through expenditure of \$1.7 M. Nuinsco retained geological management and supervised work programmes.

In 1983, the Nuinsco-Lockwood JV completed 70 BQ diamond drillholes for a total of 19,679 m. Of this drilling, 60 drillholes totalling 17,313 m were completed at the Cameron Gold Deposit (drillholes NC-83-20 to NC-83-77) with the remaining ten drillholes totalling 2,366 m targeting IP anomalies and other surface prospects away from the main mineralised zone as was then defined (drillholes NCX-83-01 to NCX-83-10).

In addition to this drilling, the Nuinsco-Lockwood JV also completed outcrop stripping, trenching, mapping and sampling of the original Noranda surface trenches, geological mapping of the eastern part of the then project area, which complemented the work completed in 1981, and extensive ground magnetic and IP geophysical surveying.

The drilling completed as part of this extensive exploration programme continued to return positive results from the main mineralised zone. In 1984, the Nuinsco-Lockwood JV completed a further 19 BQ diamond drillholes for a total of 4,663 m. This work comprised five drillholes for 1,795 m at the main Cameron mineralised zone and an additional 17 holes (2,868 m) which were drilled to the northwest of the main deposit, targeting extensions to the mineralisation. Additional outcrop stripping, mapping and sampling was also conducted (Puritch & Jones, 2004).

### **10.2.5. NUINSCO RESOURCES LIMITED AND ECHO BAY MINES LIMITED (1985 TO 1988)**

Following the 1984 programme, Lockwood failed to provide pro-rata payments to maintain its equity interest in the project and dilution to its ownership commenced. This process was accelerated by the introduction of Echo Bay Mines Limited (Echo Bay) which provided funding to Nuinsco to explore the project in exchange for direct equity in Nuinsco. Pursuant to the arrangement with Echo Bay, all surface exploration was conducted and overseen by Nuinsco, whilst underground exploration and development was the responsibility of Echo Bay and its contractors.

During 1985 and early 1986, a further 41 BQ diamond drillholes were completed for a total of 6,906 m. This drilling comprised 33 drillholes (5,407 m) at the main part of the Cameron Gold Deposit with a further eight drillholes (1,499 m) completed over a strike length of more than 650 m along the northwest extension of the mineralisation. Results from drilling to evaluate the possible northwest extension of the deposit were disappointing; with the best intercept being 8.1 m at 1.59 g/t gold from 17.5 m (NCX-86-37).

During the mid-1980s, Nuinsco completed a limited programme of seven BQ diamond drillholes (848 m; NCX-BL-38 to NCX-BL-44) at the Beggs Prospect. During October 1985, a Reverse Circulation (RC) overburden drilling programme was undertaken with a total of 43 drillholes completed for 275 m. This programme successfully intersected gold grains transported down-ice from the Cameron Gold Deposit. As a result it was followed by a further 40 RC overburden drillholes (587 m) that were completed on the ice of Cameron Lake commencing in March 1986 and extending into June 1986 on land.

On the basis of the results from the diamond drilling completed underground exploration of the deposit commenced in October 1986. This was undertaken in two phases until July 1988. This work was completed to verify the surface drilling results and qualify the geological. Through the completion of the underground exploration programme, Echo Bay had earned a 51.1% equity interest in Nuinsco and expended about \$16.15 million (1988 dollars) on the project.

Phase one of the underground exploration programme comprised driving a decline to the 365 level (111 m below surface), drifting along mineralised material on the 365 level and diamond drilling from both the decline and the 365 level. Phase two comprised extending the decline to the 685 level (209 m below surface); driving footwall drifts on the 490 (149 m below surface) and 685 levels to provide drill platforms; diamond drilling from the decline, 490 and 685 levels; drifting and raising on mineralised material at the 490 and 685 levels; and deep diamond drilling to a depth of 366 m below surface.

Echo Bay, as operator of the underground component of the exploration at the Cameron Gold Deposit during this period, completed 1,391 m of decline development; 1,848 m of lateral development on the 365, 490 and 685 levels; and 348 m of raise development. Overall, 457 underground diamond drillholes were completed by Echo Bay for a total of more than 21,707 m. The records and drill logs of all but four holes (685-5, 685-14, 685-15, 685-16) have been preserved. Furthermore, during this period a bulk sample was treated in a sample tower to compare assays

from raise, back and muck sampling. Despite the mining of mineralised material for testing purposes, no production was ever undertaken (Puritch & Jones, 2004).

#### **10.2.6. NUINSCO RESOURCES LIMITED AND DEAK INTERNATIONAL RESOURCES HOLDINGS LIMITED (1988 TO 1990)**

In late 1988, following a negative feasibility assessment, Echo Bay divested its equity interest in Nuinsco to Deak International Resources Holdings Limited (Deak). Nuinsco remained the operator of the project.

During 1989 and 1990, the decline was extended to the 800 level (243 m) and an additional 55 BQ diamond drillholes were drilled from underground for a total of 4,887 m. Surface exploration during this period comprised 16 BQ and NQ diamond drillholes for 9,675 m, drilled to test for down plunge extensions of the main Cameron deposit (drillholes NC-89-116 to NC-89-126A). A further eight BQ and NQ diamond drillholes for a total of 2,546 m which targeted the northwest extension to the mineralised system (drillholes NCX-89-38 to NCX-89-45).

The vast majority of core (about 95%) drilled during this period has been preserved in excellent condition at the Cameron Gold Deposit.

In addition to the work completed at and around the Cameron Gold Deposit during the 1980s, Nuinsco also conducted regional exploration over a number of properties to the east covered by Rowan Lake from 1983 to 1990. Nuinsco undertook geological mapping and sampling, IP geophysical surveys, RC overburden drilling and drilled 100 diamond core holes for 17,946 m during this period. Most work was directed at the Victor (Island) and Monte Cristo prospects, which were known historic mineral occurrences and are associated with the large-scale Monte Cristo Shear Zone.

Following the withdrawal of Deak in 1990, the project remained dormant until late 1995 (Puritch & Jones, 2004).

#### **10.2.7. CAMBIOR INC (1995 TO 1996)**

In December 1995, Cambior Inc. (Cambior) and Nuinsco executed an agreement providing Cambior the right to earn a 51% equity interest in the project by incurring \$15.61 million of exploration and development expenditure over a four year period. This expenditure was considered sufficient to bring the deposit into production. Cambior was required to spend a minimum of \$1.5 million before withdrawing from the agreement.

Cambior interpreted the mineralisation to occur as three distinct en-echelon zones and set a target of increasing the resource by at least 50%. To achieve this, a first year programme comprising 13 NQ diamond drillholes for a total of 8,012 m (drillholes CL-96-1 to CL-96-13) was completed, targeting extensions to the mineralisation at depth. The results of this programme were disappointing, with the best intercept returned being 13.0 m at 4.23 g/t gold from 602.0 m (CL96-04).

All core drilled by Cambior has been preserved at the Cameron Gold Deposit (Puritch & Jones, 2004).

### **10.2.8. NUINSCO RESOURCES LIMITED (1997 TO 2009)**

Following Cambior's withdrawal from the project in October 1996, it lay dormant until 2003.

In November and December of 2003, Nuinsco completed 13 NQ diamond drillholes for a total of 1,845 m (NC127 to NC139). The objective of this work was to infill and update the existing drillhole inventory. The results of this drilling were largely disappointing, with better results returned including 4.65 m at 6.39 g/t gold from 109.55 m (NC129) and 6.1 m at 4.86 g/t gold from 262 m (NC128).

In late December 2004 and early January 2005, Nuinsco completed a further two NQ diamond drillholes for a total of 1,063 m, testing deeper interpreted extensions of the deposit.

During 2009, Nuinsco systematically resampled the stockpile of mineralised material at surface that had resulted from the underground exploration development work and bulk sampling during the late 1980s. This involved the collection of 281 samples with an excavator, by trenching across the stockpile in a cross pattern. The stockpile itself was surveyed and a volume estimated.

After the completion of the 2004-2005 drill programme, no further drilling was undertaken by Nuinsco. In December 2009, Nuinsco reached agreement to sell 100% of the project to Coventry. The sale and purchase was completed in April 2010. Coventry commenced drilling in July 2010.

All core drilled by Nuinsco during this period has been preserved at the Cameron Gold Deposit (Coventry, 2013).

### **10.2.9. COVENTRY RESOURCES INC (2010 TO 2012)**

During 2010, Coventry undertook an initial first-pass drill programme of 90 NQ diamond drillholes for 13,359 m (drillholes CCD-10-001 to CCD-10-089). Although this drilling recorded numerous intercepts of significant mineralisation, the plunge extensions of higher-grade shoots, within the overall mineralised envelope were not intersected, due to the wide-spaced nature of the drill pattern. In order to better define the plunging high-grade mineralised zones in the northwest extension of the deposit, the final 10 drillholes of the 2010 programme (CCD-10-081 to CCD-10-089) were drilled on tighter 10 to 20 m spacing, with holes separated on lines spaced 20 to 40 m apart.

In 2011, Coventry completed additional diamond drilling aimed at targeting the poorly-drilled footwall position of the main deposit and the interpreted extensions of the high-grade lodes in the northwest extension of the deposit. A total of 103 drillholes for 15,853 m (CCD-11-90 to CCD-11-188) were completed as a part of this programme (May to October 2011).

Drilling completed by Coventry after October 2011, includes 11 drillholes (CCD-11-181; CCD-11-189 – CCD-11-198), which were completed to target possible up or down plunge extensions of interpreted high-grade shoots. A further four drillholes (CCD-12-216 – CCD-12-219) were completed to test for the possible extensions of high-grade, quartz carbonate veins that were intersected in nearby holes and interpreted to trend oblique and at a low angle to the dominant drill direction (Coventry, 2013), (Ball, 2014).

## 10.3. COLLAR SURVEYING

### 10.3.1. PRE-2010 DRILL PROGRAMMES

Of the 710 pre-2010 drill holes, 565 were surveyed for Northing Easting and RL in the local Grid referred to as Cameron-225. Of the remaining 145 drill holes a total of 90 were documented as follows:

- A total of 25 were surveyed for Northing, Easting and RL in the field using a Trimble Differential GPS;
- A total of 48 were surveyed for Northing and Easting using a Trimble Differential GPS with RL converted from the local grid RL;
- A total of 13 were converted from the local grid Northing and Easting with RL estimated from the LIDAR topographic data;
- A total of 2 were converted from the local grid Northing and Easting with RL established by Differential GPS; and
- A total of 2 were surveyed for Northing and Easting using a Trimble Differential GPS with RL estimated from the LIDAR topographic data.

The remaining 55 drill holes have the collar Northing and Easting survey described as “estimated” with RL established from the LIDAR data. No further documentation detailing the method of “estimation” has been discovered to date. These drill holes total 5.8% of the total number of drill holes informing the estimate and 11.5% of the total meterage. The drill holes so designated occur in all pre-2010 drillhole campaigns from 1981 through 2004 and are scattered over the drilled area with no specific concentration either by drill campaign or location.

On the basis that visual inspection of the drill hole locations and mineralized intervals presented therein do not reveal any misalignment with the drill holes having documented descriptions of the collar survey, and given the broad geographic distribution, Optiro are of the opinion that there are no material discrepancies related to the collar coordinates for these drill holes that would preclude their inclusion in the database. Optiro do recommend that First Mining undertake to confirm the collar coordinates for these 55 drill holes by independent survey as part of the 2017 recommended work program.

### 10.3.2. 2010 TO 2012 DRILL PROGRAMMES

The collars of the drillholes completed by Coventry in 2010, 2011 and 2012 were surveyed using Trimble R3 GPS receiver and an onsite base station system. A final Trimble survey of the drill casing was performed upon completion of each drillhole and a labelled aluminium cap was used to cover each drillhole casing.

## 10.4. DOWNHOLE SURVEYING

### 10.4.1. PRE-2010 DRILL PROGRAMMES

Of the 710 pre-2010 drill holes, 175 were orientated either by the planned orientation at the collar or by a single down-the hole dip reading. The average total length of these holes was 34 m, and the

median was 31m. A total of 385 were surveyed for dip only with multiple down-the-hole measurements. These drill holes had a mean length of 80 m and a median of 57.

Of the remaining 150 pre-2010 holes, the down hole survey included multiple readings of both azimuth and dip by a variety of optical and mechanical methods as tabulated in Table 10.2. The mean length of the drill holes was 308m and the median 241m.

**Table 10.2 Distribution of down-hole survey types in pre-2010 drilling**

General Survey Categories	no. of drill holes	total metres	mean dh length	median dh length
single acid or collar (planned) reading only:	175	5,866	34	31
multiple acid readings of dip only <sup>(1)</sup> :	385	30,743	80	57
multiple readings of azimuth and dip <sup>(2)</sup> :	150	46,176	308	241
totals/averages:	710	82,785	117	90

Notes: <sup>(1)</sup> multiple acid readings of dip generally done on 3m (10 ft.) downhole spacing.

<sup>(2)</sup> multiple readings of azimuth and dip done on 15 m or 30 m downhole spacing and include Light Log, Reflex EZ, Sperry and Tropari.

From Table 10.2 above it can be seen that unsurveyed, or partially surveyed holes are on average significantly shorter than 100 metres, while the longer drill holes averaging 308 metres were surveyed for both azimuth and dip on regular intervals which varied by survey method.

#### **10.4.2. 2010 TO 2012 DRILL PROGRAMMES**

Downhole survey measurements of the drillholes completed by Coventry in 2010, 2011 and 2012 were taken every 30 m with a Reflex EZY-SHOT instrument to monitor the deviation of the azimuth and dip as each hole was drilled. A Reflex Ace tool was used in every drill run to record an orientation mark directly onto the drill core.

## 11. SAMPLE PREPARATION, ANALYSIS AND SECURITY

The following information has been sourced from reports by Puritch & Jones (2004), Coventry (2013), and Chalice (2014).

### 11.1. PRE-2010 DRILL PROGRAMMES

Documentation regarding historic field procedures applied by previous explorers at the Cameron Gold Deposit, including details regarding sample collection, preparation, transportation and security, and analytical techniques, is poor or non-existent.

Prior to 1988, core was manually split, with half-core sent for analysis. Post 1988, drill core was cut using a masonry saw. The inclusion of control samples is assumed and is sometimes referenced in documentation but details regarding this are not documented.

The only reports that document historic sample preparation, analysis and security are summarised below:

- Cambior (1996, CL series holes) as documented by Cavanaugh (Chalice, 2014):
  - Samples were sawn in half using a mechanical saw, except for the last hole in this programme from which samples were manually split.
  - Sample length varied between 0.4 m and 1.6 m.
  - Core was stored at the Cameron Gold Project.
  - Samples were transported to the Chemex laboratory in Thunder Bay by road transport.
  - Samples were prepared by drying, followed by two stage size reduction, with 200 gm (90% passing 150 mesh) retained for assay.
  - A thirty gram sub-sample was assayed by fire assay with AAS finish at 5 ppb detection limit.
  - Samples returning assays of less than 500 ppb were re-assayed using a lower detection limit of 0.03 g/t.
- Nuinsco (2003 holes NC127 to NC139) as documented by Wagg and Giroux (Chalice, 2014):
  - Selected core was halved using a mechanical saw.
  - Core was stored at the Cameron Gold Project.
  - Samples were fire assayed at ALS-Chemex in Vancouver.
- Nuinsco (2004-2005 holes NC140 and NC141) as documented by Wagg and Giroux (Chalice, 2014):
  - Selected core was halved using a mechanical saw.
  - Core was stored at the Cameron Gold Project.
  - Samples were sent to ALS-Chemex in Vancouver where they were jaw-crushed and then pulverised to 80% passing 180 mesh. The pulp was assayed by fire assay techniques.

In the authors opinion the information in these drilling programmes is of sufficient quality to be used for Mineral Resource estimation.



## 11.2. 2010 TO 2012 DRILL PROGRAMMES

### 11.2.1. SAMPLE PREPARATION

Drill core was cut on site with wet masonry core saws by geotechnical personnel who are supervised by Coventry site-based geologists. The selection of intervals for cutting and the length of these intervals was based on lithological, alteration or mineralisation boundaries as defined by the supervising geologist with 1 m intervals used in zones of similar lithology. Within mineralisation the sampling intervals vary from 0.06 m to 2 m.

Samples were received at the laboratory and checked against accompanying sample dispatch sheets to ensure all samples are delivered. Any discrepancies were noted and Coventry notified that resolution was required before the samples advanced through the preparation process.

Sample preparation comprised standard laboratory techniques of (i) drying for a minimum of 8 hours, (ii) mill crushing to greater than 70% passing 2 mm, (iii) riffle splitting (using a Jones Splitter) to approximately 250 gm and (iv) disk pulverising to 85% passing 75 microns. The sample was then split to 30 g for analysis with the remainder retained as a pulp residue. The coarse remainder was put aside as a bulk residue (reject).

Overweight samples (>2.5 kg) were crushed and split into two samples, treating each as above and recombining after pulverising.

### 11.2.2. ASSAYING

All samples were analysed for gold by accredited and independent Activation Laboratories Ltd. ("ActLabs") at their Thunder Bay facility using method '1A3-Tbay Au – Fire Assay Gravimetric'. The 30 g assay sample was combined with fire assay fluxes (borax, soda ash, silica and a lead oxide litharge) and silver added as a collector. The mixture was placed in a fire clay crucible, preheated at 850°C, intermediate at 950°C and finished at 1060°C over approximately 60 minutes. The crucibles were then removed from the assay furnace and the molten slag (lighter material) is carefully poured from the crucible into a mould, leaving a lead button at the base of the mould. The lead button is then placed in a preheated cupel which absorbs the lead when cupelled at 950°C to recover the silver and gold doré bead.

The gold was separated from the silver in the doré bead by parting with nitric acid. The resulting gold flake is annealed using a torch. The gold flake remaining is weighed gravimetrically on a microbalance. The detection limits are 0.03 ppm Au (lower) and 10,000 ppm Au (upper).

### 11.2.3. SAMPLE SECURITY – CHAIN OF CUSTODY

All drillcore from Coventry's 2010 and 2011 drilling programmes is stored in covered steel core racks at Coventry's Cameron Gold Project. Every core box is labelled with Dymo tags, recording hole ID, box number and 'from' and 'to' depths.

All samples were individually bagged and labelled with unique sample numbers. Corresponding laboratory specific assay tags were included in each sample bag, which were then sealed with plastic zip-ties and batched in woven nylon bags. Samples were transported via commercial road transport

on a weekly basis during drilling programmes. The samples were taken to Activation Laboratories Ltd (ActLabs) in Thunder Bay or (for the last 20 holes of the 2011 program) to the ActLabs sample preparation facility in Dryden before being transferred to Thunder Bay for analysis.

It is the authors' opinion that the sample preparation, security and assay protocols used in this programme follow accepted industry practice and are appropriate for this type of exploration work, and the resulting Mineral Resource estimate.

### 11.3. 2015 RESAMPLING PROGRAMS

#### 11.3.1. LOGGING

Drill core was logged in the Chalice exploration camp at Cameron Lake. For the major re-logging programme of 2015 the core was laid out on the ground as shown in Figure 11.1. The core was logged for geology, alteration, mineralisation, structure and other geological features such as veining. The core was photographed in wet and dry condition and stored in racks prior to sampling by core cutting.

Figure 11.1 Core laid out for logging, core storage racks



#### 11.3.2. SAMPLING

The drill core was marked up with the sample intervals and the core was cut using a diamond blade saw, as shown in Figure 11.2. Sample tickets were stapled into the wooden core trays and the other half put into the sample bag. The sample number was also written on the outside of the calico sample bag for identification and sorting purposes.

**Figure 11.2 Core cutting station and cut core marked up with sampling tickets stapled into the boxes**



### **11.3.3. STORAGE**

The core is stored in the exploration facility at Cameron (Figure 11.3). This has dedicated covered racks for storing drill core, wooden crates for sample residues, and sea containers for sample pulps.

**Figure 11.3 Core storage racks**



### **11.3.4. SAMPLE SECURITY – CHAIN OF CUSTODY**

All samples were individually bagged and labelled with unique sample numbers. Corresponding laboratory specific assay tags were included in each sample bag, which were then sealed with plastic zip-ties and batched in woven nylon bags. Samples were transported via Gardewine North commercial road transport of Kenora. The samples were taken to Activation Laboratories Ltd (ActLabs) in Thunder Bay. Confirmation was sent to Chalice that the Security tags were intact, and that the numbers match the sample despatch request.

The author considers that the protocols for sample preparation, labelling, tracking and security of transport of samples follow industry best practice and are sufficient to ensure correctly identified sample information for the purposes of Mineral Resource estimation.

### **11.3.5. QUALITY ASSURANCE – QUALITY CONTROL**

As part of its QAQC review, Optiro was provided a Microsoft access database (Cameron\_2015\_PEA\_6Oct2015.accdb) containing two QAQC tables. One table comprised standards and blanks (QAQC-Standards & Blanks) and one table comprised duplicates assay results (QAQC-Duplicates). Optiro exported these tables into CSV format and imported the QAQC results into data analysis spread sheets to review the Cameron QAQC results.

Based on Optiro's review (and interpretation) of the database, the standards, blanks and duplicates submitted are tabulated in Table 11.1.

**Table 11.1 Summary of standards, blanks and duplicates submitted**

	Pre 2010 drilling	Coventry drilling programme	Coventry resample programme	Chalice resample programme	Chalice resample programme	Total
<b>Year</b>	1960 to 2009	2010 to 2012	2010 to 2011	2014	2015	
<b>No. Standards</b>	Unknown	921	236	53	1644	2854
<b>No. Blanks</b>	Unknown	921	249	51	1608	2829
<b>No. Field Duplicates</b>	Unknown	901	101	33	1629	2664
<b>Field Duplicate Type</b>	Unknown	Quarter core	Quarter core	Unknown	Quarter core	-
<b>No. Coarse Reject Duplicates</b>	Unknown	0	0	325	0	325
<b>No. Pulp Duplicates</b>	Unknown	0	0	492	0	492

### 11.3.6. PRE-2010 DRILLING

No QAQC information is known to exist for drilling data collected prior to 2010.

### 11.3.7. RESAMPLING PROGRAMME - COVENTRY

The underground drilling data collected between 1987 and 1989 was considered critical to the quantity and quality of the 2014 Mineral Resource Estimate and as no QAQC information was available, Coventry undertook a re-sampling programme in order to establish confidence in the assay results.

The Coventry re-sampling programme targeted mineralisation in and around the underground development. Remaining core was quartered either using a core saw or manually (depending on core condition) over the same sample intervals as currently recorded in the database. The programme was extended to include earlier drillholes (some from surface) with the series involved being:

- 365 (1987/89)
- 490 (1987/89)
- 685 (1987/89)
- D (1987)
- NC-81 (1981)
- NC-83 (1983)
- NC-85 (1985)

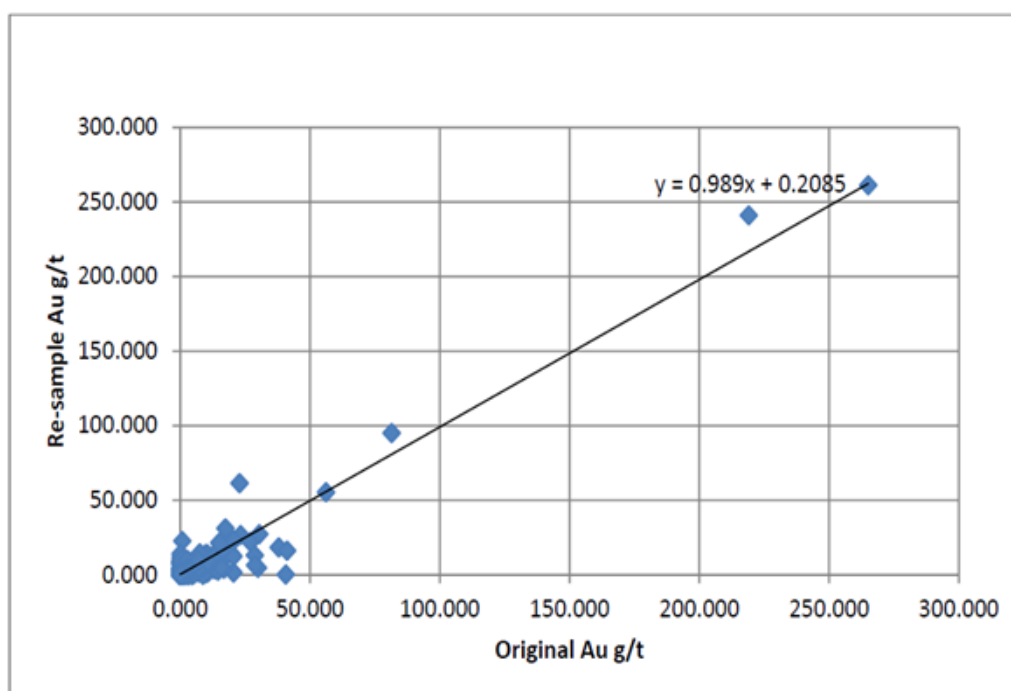
The re-samples were prepared and assayed in exactly the same manner that samples from Coventry's diamond drilling programme were processed with sample preparation and analysis

carried out at ActLabs in Thunder Bay. According to the Chalice 2014 Report, this re-sample programme provided 816 directly comparable assay results, from a total of 1,904.6 m of drill core (Table 11.2 and Figure 11.4). Optiro notes that the comparison is between half core (original sample) and quarter core (resample).

**Table 11.2 Cameron re-sample programme statistics (Source: Chalice, 2014)**

Item	Resample	Original
Average un-weighted g/t Au	3.07	3.25
Average length weighted g/t Au	2.92	3.11
Minimum value	0.02	0.00
Maximum value	265.00	261.46
Standard deviation	13.19	13.53
Coefficient Variation	4.29	4.17

**Figure 11.4 Coventry resample program results (source: Chalice 2014)**



Using lab job numbers and BHID prefixes, Optiro only managed to identify 101 samples recorded in the QAQC database to be duplicate samples and that were submitted by Coventry in 2010 and 2011. Optiro's analysis of the 101 identified quarter core duplicate samples indicates a poor repeatability of grades between paired samples with a correlation coefficient of 0.24. The results suggest that the duplicate samples are under reporting compared to the original grades at gold grades of less than 1 g/t Au, and over reporting compared to the original grades at gold grades of greater than 2 g/t Au.

The relative precision of a field duplicate dataset is determined by calculating the absolute difference between the two sample's grades divided by the mean of the sample pairs. Good or high precision suggests that the paired samples are consistent with each other, both samples have been well homogenised and that sample size (weight) is adequate to be representative of the material collected from the drillhole. Poor or low precision suggests that the samples have been poorly

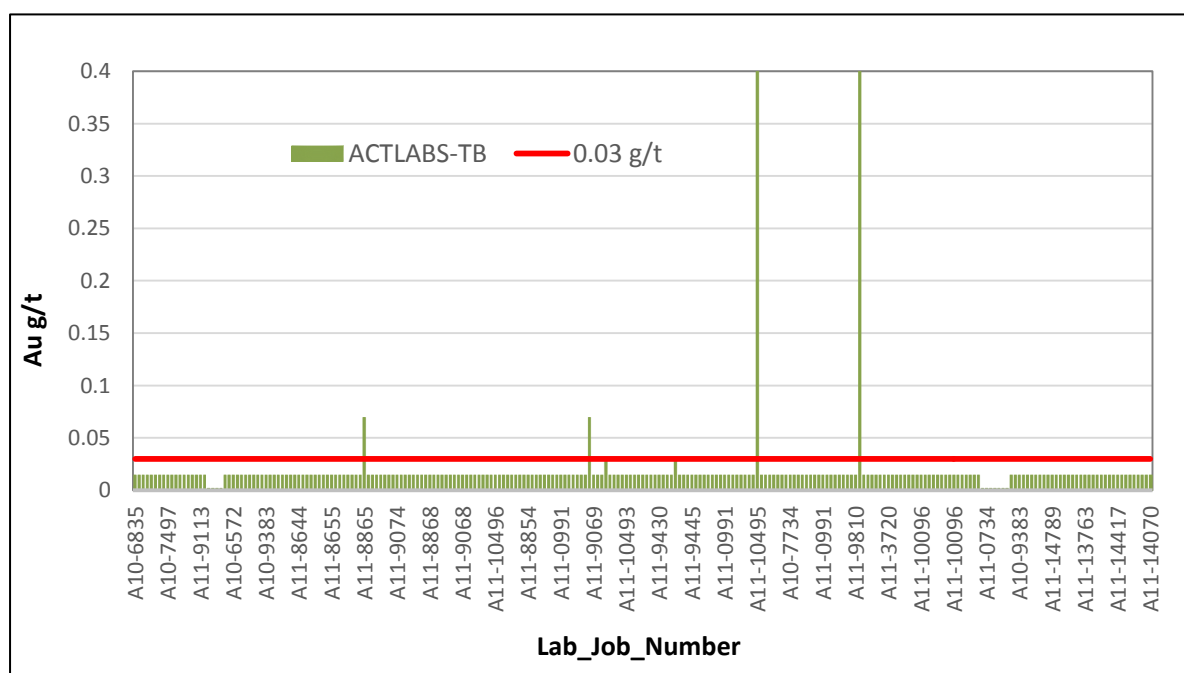
prepared, have a high inherent nugget, poor assaying, or are not large enough to be representative. Of the duplicates submitted to Actlabs 73% of assays were within 5% precision, 75% within 10% precision, and 76% within 15% precision.

Results from the scatter plot, precision plot and relative difference plots highlight a moderate to poor precision and poor repeatability of duplicates from this resample programme. In Optiro's opinion the repeatability and precision of these duplicates does not demonstrate a high level of confidence. However, the small number of samples does not in Optiro's opinion provide definitive evidence of issues with the duplicate repeatability. Optiro notes that consideration for differing sample volumes i.e. manually split half core (versus) sawn quarter core needs to be taken into account when reviewing duplicate analysis results. As such, whilst Optiro recommends that First Mining needs to review the performance of the Coventry resample programme further, Optiro considers these results to adequate for resource estimation.

## BLANKS

Using lab job numbers and BHID prefixes, Optiro has identified 249 blanks submitted by Coventry as part of its resample programmes in 2010 and 2011. Of the 249 blanks submitted four returned grades above 0.03 g/t Au (Figure 11.5). This represents a failure rate of less than 2%. Optiro considers these results to be adequate for resource estimation.

**Figure 11.5 Coventry Resources 2010 to 2011 blank results submitted as part of the resample program**



## STANDARDS

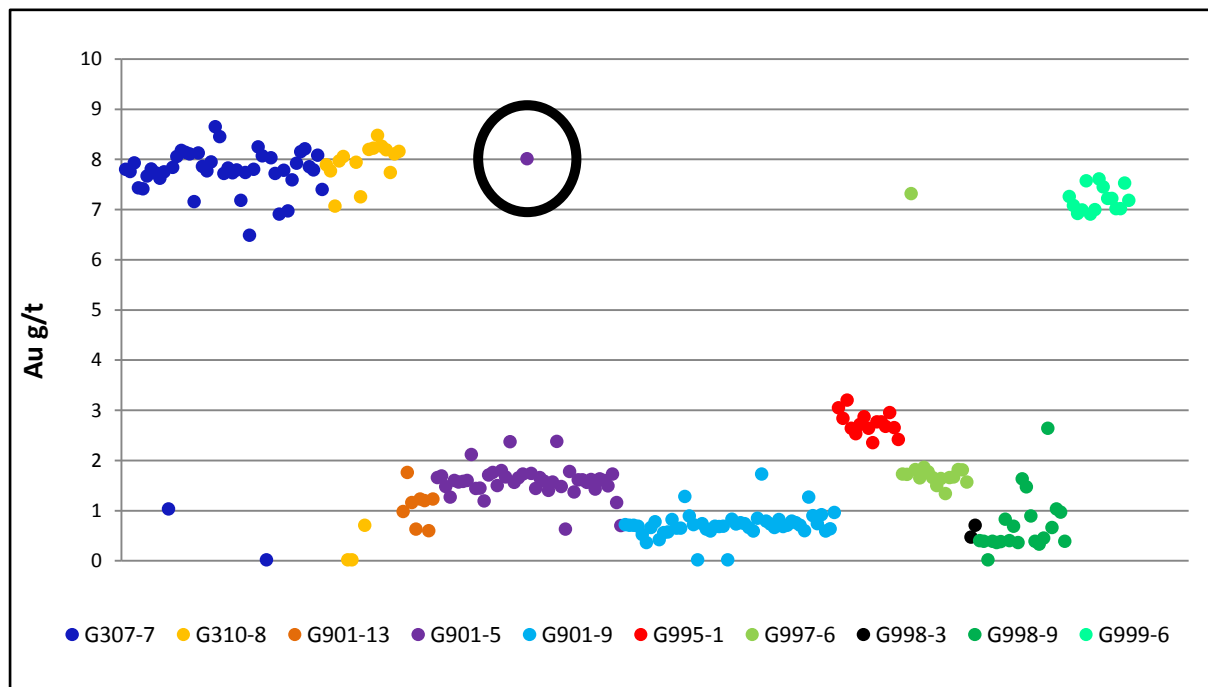
Using lab job numbers and BHID prefixes Optiro identified 236 standards submitted by Coventry as part of its resample programmes in 2010 and 2011. Of the 236 standards submitted, 10 different Certified Reference Material (CRM) standards with gold grades ranging from 0.38 g/t to 7.97 g/t Au were used during the Coventry resample programme (Table 11.3).

**Table 11.3 Internal certified standards submitted by Coventry Resources as part of the resample program**

Certified standard ID	Expected value Au (g/t)	No. Submitted
G307-7	7.87	47
G998-3	0.81	2
G901-13	1.18	8
G999-6	7.18	15
G997-6	1.68	16
G901-9	0.69	50
G995-1	2.75	15
G901-5	1.65	44
G310-8	7.97	18
G998-9	0.38	21
G307-7	7.87	2
G998-3	0.81	2

A total of 55 gold standards fall outside three standard deviations which represents a failure rate of approximately 23%. When graphed, it is evident that a large number of the standard failures are potential sample swaps (i.e. incorrect standard labelling or blanks labelled as a standard) (Figure 11.6). However, due to the close gold grades of a number of standards, it is not possible to determine with 100% what the actual standard ID might be. For example the sample circled in black in Figure 11.6, is potentially a sample swap, but it is not possible to determine whether the correct standard ID is G307-7 or G310-8.

Optiro does not know whether Coventry resubmitted all failed batches for re-analysis.

**Figure 11.6 Coventry Resources resample programme CRM results**


Optiro considers that the sample swaps should be rectified in the database so that the QAQC performance is representative of the performance of the standards. In taking these into account, Optiro considers that the CRM assay performance is adequate for estimation

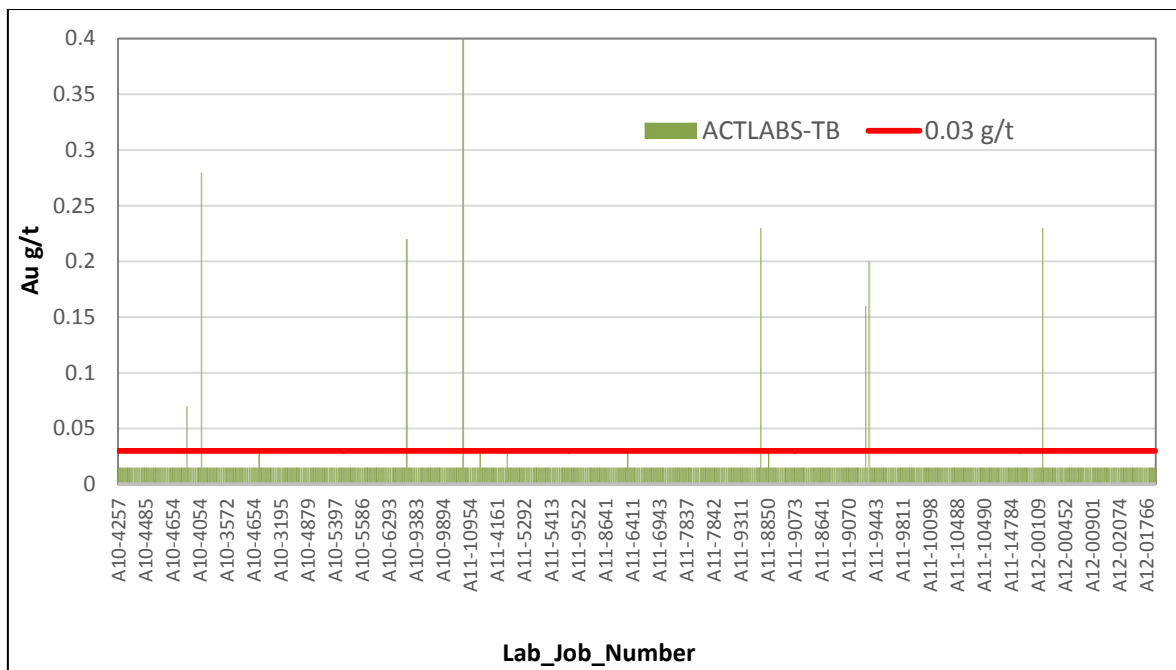
### 11.3.8. 2010 TO 2012 DRILL PROGRAMME (COVENTRY RESOURCES)

As part of their 2010 to 2012 drilling programmes, Coventry submitted standards, duplicates and blanks as part of their quality control programme.

#### BLANKS

According to the Coventry PEA Report (2013), the blank material was obtained from a granite quarry and whilst not certified, was considered by Coventry to be sufficiently homogenous and unmineralised to act as barren material. Of the 921 blanks submitted eight (8) returned grades above 0.03 g/t Au (Figure 11.7). This represents a failure rate of less than 2%. These failures were reviewed at the time by Coventry and were considered to be potential laboratory contamination issues. Optiro considers these results adequate for resource estimation.

Figure 11.7 Coventry Resources 2010 to 2012 blank results



#### STANDARDS

Of the 921 standards submitted, six were recorded as have grades of -99. Optiro removed these standards from the database prior to any further analysis. A total of 12 different CRM standards with gold grades ranging from 0.69 g/t Au to 7.97 g/t Au were used during the Coventry drill programmes (Table 11.4).

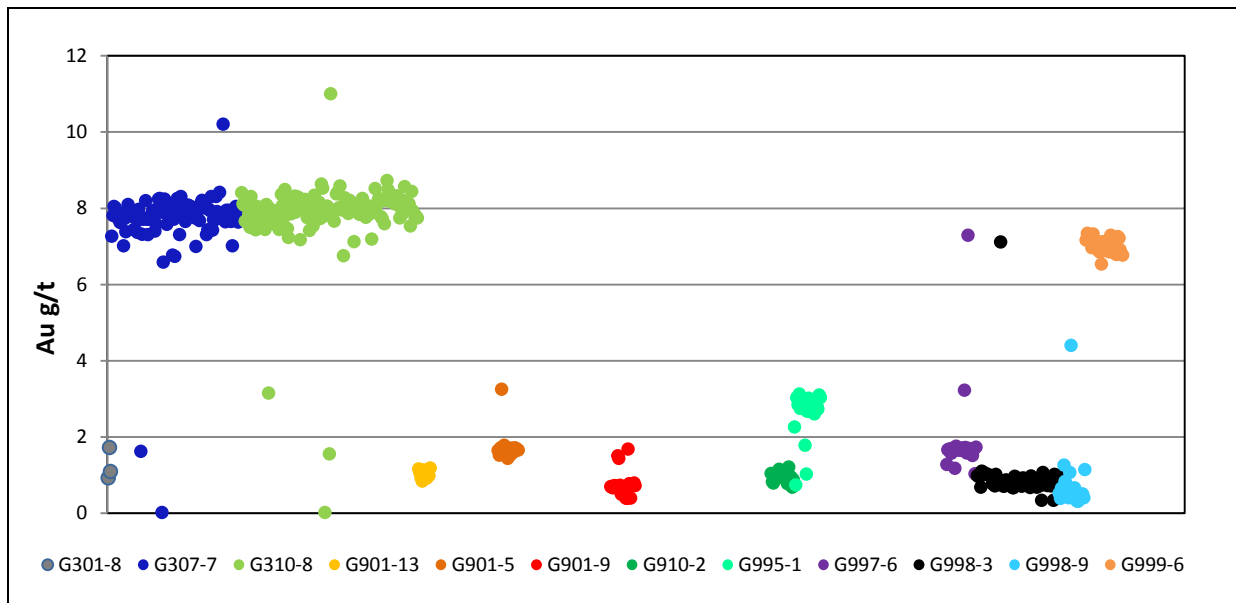


**Table 11.4 Internal certified standards submitted by Coventry Resources**

Certified standard ID	Expected value Au (g/t)	No. submitted
G301-8	1.19	3
G307-7	7.87	111
G998-3	0.81	70
G901-13	1.18	68
G999-6	7.18	80
G997-6	1.68	26
G901-9	0.69	137
G995-1	2.75	130
G901-5	1.65	96
G310-8	7.97	151
G998-9	0.38	23
G910-2	0.9	20

A total of 160 gold standards fell outside of three standard deviations which represents a failure rate of approximately 17%. Some of the failures are potential sample swaps (Figure 11.8), but poor data management/data entry does not account for all of these standard failures. Furthermore, Optiro notes the presence of what appears to be cyclic trends in the standard results. Further investigation into these trends is recommended.

Optiro is unaware whether Coventry resubmitted all failed batches for re-analysis.

**Figure 11.8 Coventry Resources 2010 to 2012 CRM results**


Optiro recommends that First Mining resolves the sample swap issue in the database and carries out further work to identify and establish the significance of any trends in the data. In taking these into account, Optiro considers that the CRM assay performance is adequate for estimation

## DUPLICATES

The provided database contained 901 quarter core duplicate samples collected by Coventry during the 2010 to 2012 drilling programmes. The duplicates demonstrate a moderate correlation coefficient (0.83) indicating moderate repeatability of grades between paired samples.

The relative precision of a field duplicate dataset is determined by calculating the absolute difference between the two sample's grades divided by the mean of the sample pairs. Good or high precision suggests that the paired samples are consistent with each other, both samples have been well homogenised and that sample size (weight) is adequate to be representative of the material collected from the drillhole. Poor or low precision suggests that the samples have been poorly prepared, have a high inherent nugget, poor assaying, or are not large enough to be representative. Of the duplicates submitted to Actlabs, 74% of assays were within 5% precision, 76% within 10% precision, and 78% within 15% precision.

Results from the scatter plot, precision plot, and relative difference plots highlight a moderate to poor precision and moderate to poor repeatability of duplicates from these phases of drilling. Part of this could be due to the use of chisel vs. saw splitting, or the use of quarter vs. half core samples, which Optiro does not consider to be a true representative duplicate sample when dealing with gold mineralisation. As previously stated, taking into account consideration for differing sample volumes (i.e. half core versus quarter core), Optiro considers these results to be adequate for resource estimation.

### **11.3.9. 2014 RESAMPLE PROGRAMME (CHALICE RESOURCES)**

In 2014, Chalice undertook a resampling programme to provide additional confidence in the underlying drillhole sample assays results used for Mineral Resource estimation. The samples selected were considered to be spatially representative of the majority of the Cameron Gold Deposit with an emphasis on near surface locations (Chalice, 2014). A total of 492 pulps and 325 coarse rejects were selected from the existing drillholes within the following series: -

- historical holes – resample of pulp samples only
- Coventry 2010 holes – pulps and rejects
- Coventry 2011 holes – pulps and rejects.

## PULP PROGRAM

The following is an overview of the pulp sampling program taken from the Chalice 2014 Report.

- Selected pulp samples were sent to AGAT Laboratories of Mississauga, Ontario – the Umpire Laboratory
- The samples were not re-numbered given the sample sequence had never been seen by this laboratory
- the laboratory was requested to place an “A” prefix to the start of the sample number to distinguish these results from the original results.
- Standards and Blanks were included with these samples positioned in the same location sequence as in the original submission; a new Standard was placed in the position of the

original Standard (the original Standard sample being exhausted by the analytical process) whilst the Blanks were retained from the original submissions.

**REJECTS PROGRAM**

The following is an overview of the pulp sampling program taken from the Chalice 2014 Report.

- The selected samples were renumbered (for disguise) and re-submitted to ActLabs to preparation and analysis by the method adopted by Coventry and described in previous reports.
- Standards and Blanks were included with these samples positioned in the same location sequence as in the original submission; a new Standard was placed in the position of the original Standard (the original Standard sample being exhausted by the analytical process) whilst the Blanks were retained from the original submissions.

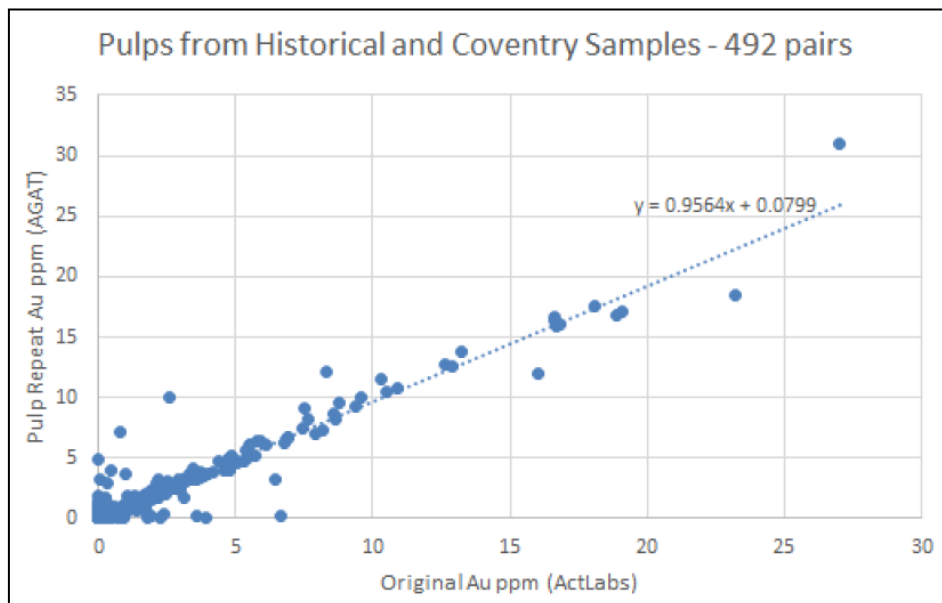
Results from the pulp duplicate analysis indicates a good repeatability of pulps (Table 11.5 and Figure 11.9), whilst results from the coarse reject analysis illustrates that the average grade of the rejects is 4% lower than the original sample (Table 11.6 and Figure 11.10). Optiro was not provided with this data and as such has not been able to replicate these results

Optiro considers the assay performance of the pulp and reject samples to provide good support for the representivity of the analytical results and for Mineral Resource estimation.

**Table 11.5 Pulp duplicates results**

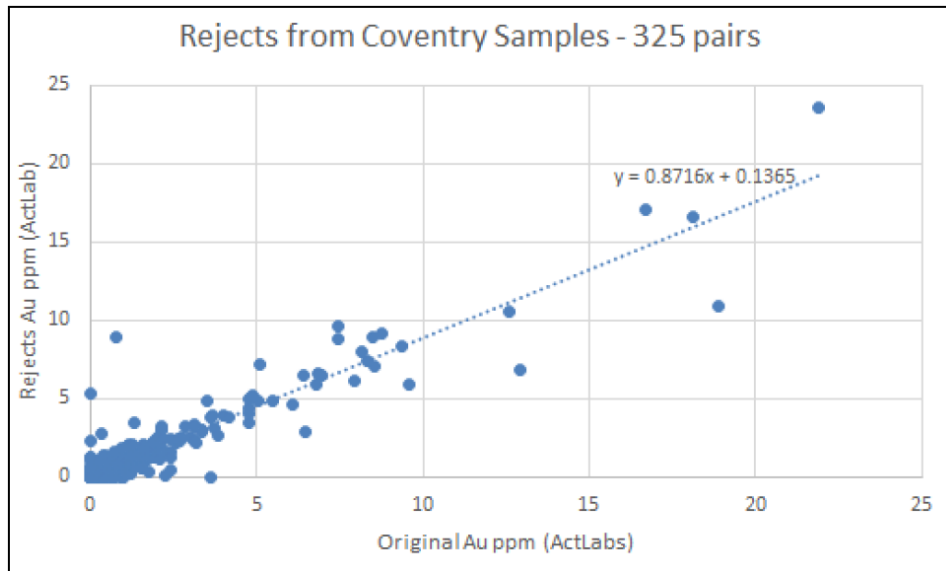
Type	Lab	Average Au g/t	Standard Deviation
Original	Actlabs	1.78	3.30
Pulp Repeat	AGAT	1.78	3.27

**Figure 11.9 Pulp duplicates results**



**Table 11.6 Coarse rejects results**

Type	Average Au g/t	Standard Deviation	Replace	DL
Original	1.54	2.86	91	<0.03
Reject	1.48	2.67	75	<0.03

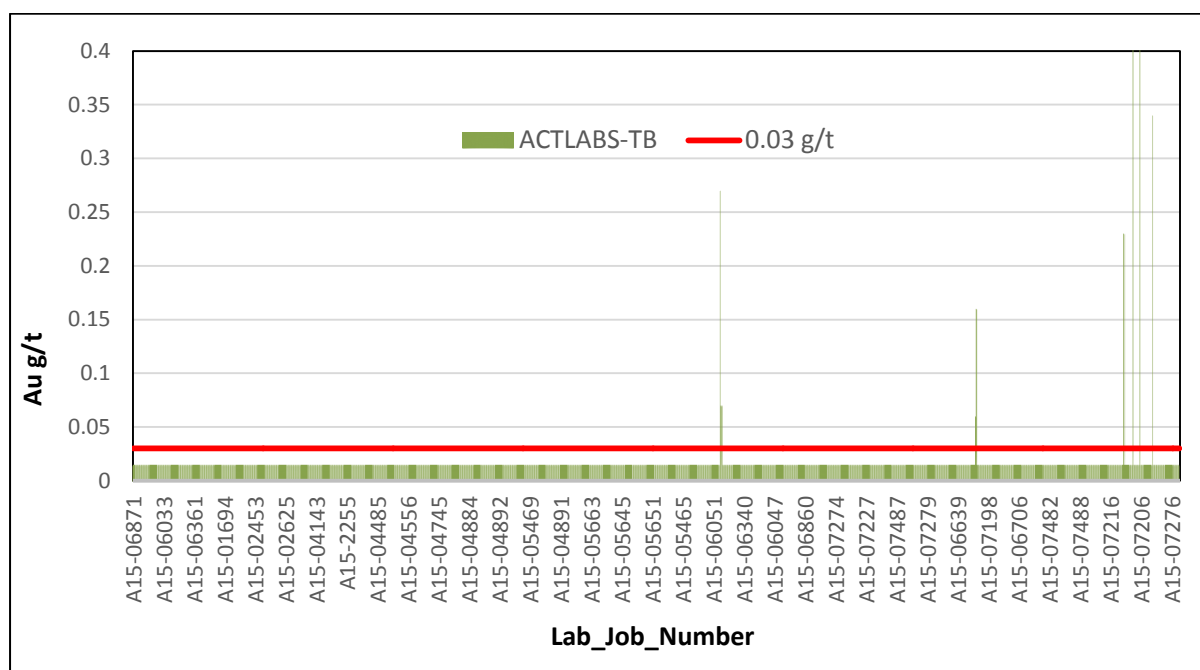
**Figure 11.10 Coarse rejects results**


### 11.3.10. 2015 RESAMPLE PROGRAMME (CHALICE RESOURCES)

In 2015, Chalice undertook two resampling programmes of unsampled intervals within the CSZ. Optiro has based the following analysis of standards, duplicates and blanks submitted as part of the 2015 resampling programmes based on the coding in the provided database.

#### BLANKS

Of 1,608 blanks submitted during the 2015 resample programme, 10 returned grades above 0.03 g/t Au (Figure 11.11). This represents a failure rate of less than 1%. Optiro considers these results to be a good measure of the sample preparation process and acceptable for resource estimation.

**Figure 11.11 Chalice Resources resample programme blank results**


## STANDARDS

Of 1,644 Standards submitted, 10 were recorded as ‘sample consumed’. Optiro removed these standards from the database prior to any further analysis. A total of 9 different CRM standards with gold grades ranging from 0.34 g/t Au to 7.97 g/t Au were used during the Chalice resample programmes (Table 11.7).

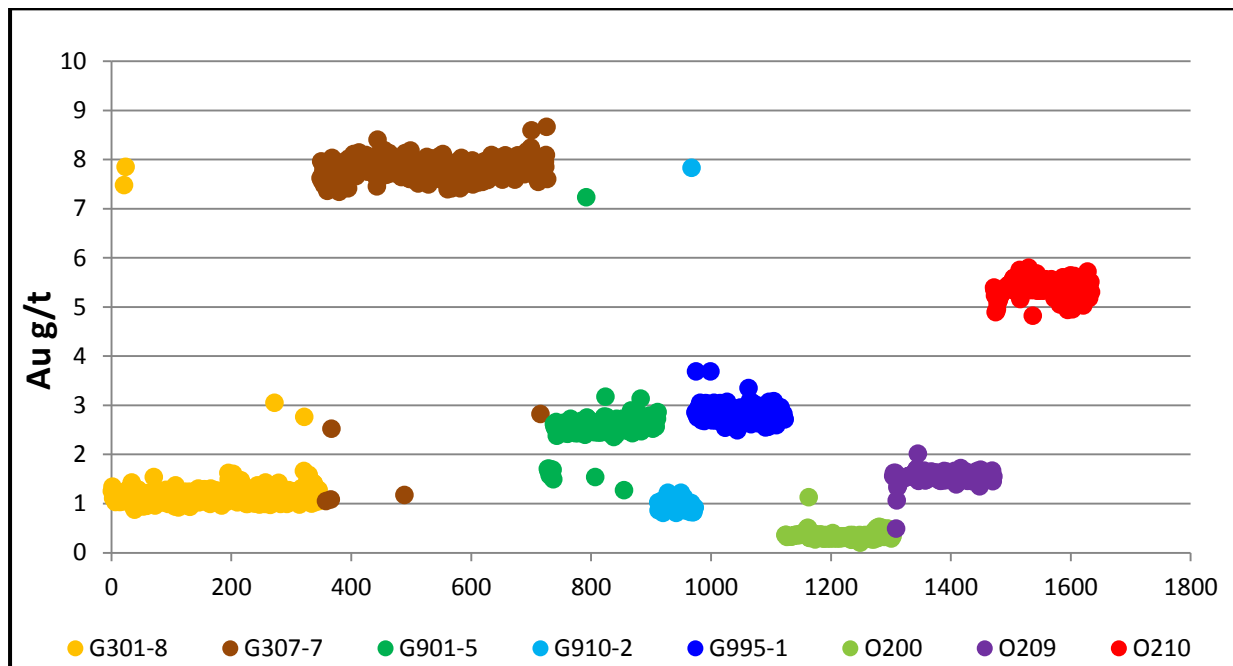
**Table 11.7 Internal certified standards submitted by Chalice Resources**

Certified standard ID	Expected value Au (g/t)	No. submitted
G301-8	1.19	348
G307-7	7.87	379
G995-1	2.75	150
G901-5	1.65	10
G910-2	0.90	62
G909-5	2.63	174
O200	0.34	180
O209	1.58	168
O210	5.49	163

A total of 144 gold standards fell outside of three standard deviations, which represents a failure rate of approximately 9%. The majority (but not all) of the failures appear to be sample swaps (i.e. incorrect standard labelling or blanks labelled as a standard) (Figure 11.12). In this programme Chalice did not resubmit failed batches for re-analysis but Optiro recommends implementation of this protocol for future programmes. In addition, Optiro notes the presence of what appears to be cyclic trends in the standard results. Further investigation into these trends is recommended.

These results show that there are continuing issues of mislabelling and standard swaps that are poorly reflecting on the QAQC results. Improvements to the sample documentation and submission protocols are recommended. As previously stated Optiro considers that these should be corrected in the database to provide an accurate measure of assay performance. When these are taken into account the information is considered to be adequate for estimation.

**Figure 11.12 Chalice Resources 2015 resample programme CRM results**



## DUPLICATES

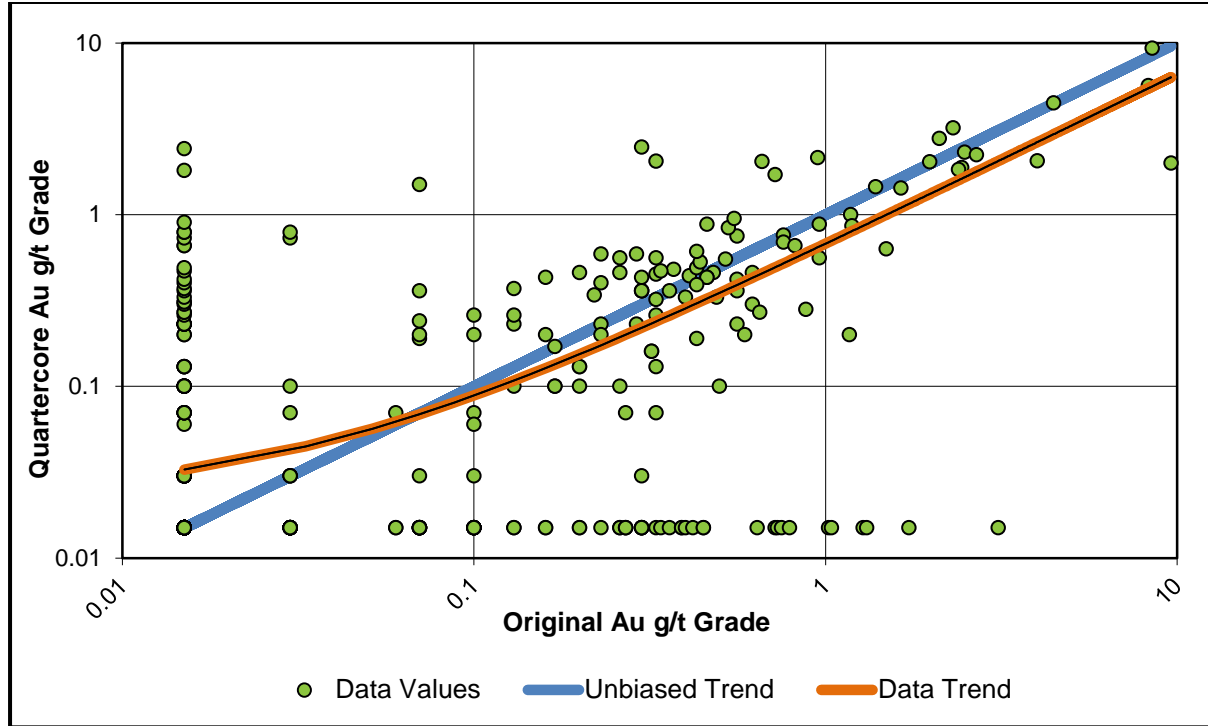
Of 1,629 quarter core duplicates submitted, one was recorded as having a grade of -99. Optiro removed this sample from the database prior to any further analysis. The duplicates demonstrate a moderate correlation coefficient (0.79) indicating a moderate repeatability of grades between paired samples. Optiro notes there are number of original samples (43) with barren grade (<0.03 g/t Au) where the duplicate has returned gold grades ranging from 0.1 g/t Au to 2.42 g/t Au. Furthermore, there a number of duplicate samples (47) of barren grade with an original grade ranging from 0.1 g/t Au to 3.1 g/t Au, suggesting that there are potentially sample swaps (Figure 11.13).

The relative precision of a field duplicate dataset is determined by calculating the absolute difference between the two sample's grades divided by the mean of the sample pairs. Good or high precision suggests that the paired samples are consistent with each other, both samples have been well homogenised and that sample size (weight) is adequate to be representative of the material collected from the drillhole. Poor or low precision suggests that the samples have been poorly prepared, have a high inherent nugget, poor assaying, or are not large enough to be representative. Of the duplicates submitted to Actlabs 86% of assays were within 5% precision, 87% within 10% precision, and 88% within 15% precision.

Results from the scatter plot, precision plot, and relative difference plots highlight a moderate precision and a moderate repeatability of duplicates from these resampling programmes.

Based on the good correlation coefficient and moderate repeatability performance of the duplicate samples Optiro considers the results from the Chalice 2015 resampling programme to be acceptable for use in a Mineral Resource estimate.

Figure 11.13 Chalice resample programme duplicate scatter plot



#### 11.4. UMPIRE DUPLICATES

Aside from the pulp resample programme undertaken by Chalice in 2014, Optiro is unaware of any additional umpire duplicate sampling that has taken place at Cameron Gold Project.

## 12. DATA VERIFICATION

### 12.1. DATA

A summary of available drillholes recorded in the Chalice Cameron Lake deposit database provided to Optiro are summarised in Table 12.1. Drillholes completed by Noranda in 1960, 1961 and 1974, and by Zahavy in 1972 are not in the database and were not utilised for the Mineral Resource estimate.

**Table 12.1 Summary of drillholes recorded in the Cameron Lake Deposit Database**

Year Drilled	Company	No. Holes Drilled	Metres drilled
1981	Nuinsco	19	1,734.84
1983	Nuinsco & Lockwood Petroleum	70	19,681.26
1984	Nuinsco & Lockwood Petroleum	20	4,675.34
1985	Nuinsco & Lockwood Petroleum	31	4,971.25
1986	Nuinsco	2	435.67
1987-1989	Nuinsco & Echo Bay Mines Ltd	508	26,647.19
1989	Nuinsco	32	13,720.45
1996	Cambior Inc.	13	8,012
2003	Nuinsco	13	1,845.7
2004	Nuinsco	2	1,063
2010	Coventry	88	13,160.99
2011	Coventry	124	18,747
2012	Coventry	30	4,116
<b>Total</b>		<b>952</b>	<b>118,809.69</b>

### 12.2. DATABASE AUDIT

Optiro audited the Cameron database named 'Cameron\_2015\_PEA\_6Oct2015.accb' (6 October 2015) as part of the January 2017 Mineral Resource estimate. The database was provided to Optiro in Microsoft Access format.

The Access database contained a total of 30 tables (Table 12.2) of which Optiro exported a number of the relevant tables into CSV format. Optiro imported the CSV files into Datamine Studio 3 and carried out an audit on the provided information.



**Table 12.2 Database tables within the master database**

Table Name
ARCHIVE_ExpedioComments_Survey
Cam_Alt_2015
Cam_Litho_2015
Cam_Struct_2015
Master_Assay
Master_Box_Number
Master_Collar
Master_Density
Master_Geochem
Master_Magsus
Master_RQD
Master_Survey
QAQC-Duplicates
QAQC-Duplicates Geochem
QAQC – Standards & Blanks
QAQC – Standards & Blacks Geochem
REF_AssayMethod
REF_AssayNames
REF_GridNames_Fields
REF_Grids_Transformations
REF_Laboratory
REF_Prospects
REF_QAQC_StageType
REF_RL
REF_Standards
REF_StandardsReference
REF_SurveyType
REF_Translations
Styles
Styles1

A series of data validations were completed prior to de-surveying the drillhole data into a three dimensional format. These included:

- visual investigation and checks of the relative magnitudes of downhole survey data in order to identify erroneous downhole survey values
- geology and assay dataset examination for sample overlaps and/or gaps in downhole logging data
- examination for sample overlaps and/or gaps in downhole survey, sampling and geological logging data

No database validation issues were identified during the drillhole de-surveying. Optiro notes however that 660 samples in the assay database were recorded as '0' in the AU\_FINAL column. Optiro considers that converting assay values at the lower limit of detection (LOD) to half the LOD is industry best practice.

### 12.2.1. LOGGING AND SAMPLING CHECKS

Furthermore, Optiro randomly selected 15 drillholes from the database, (approximately 12% of the database) for a detailed review and audit. A number of source data files were provided to Optiro in order to check the database for data loading or data transposition errors. The results of this review of the original logging and sampling data sheets showed that there are some transcription errors related to poor quality scans of the original logging and sampling sheets (Table 12.3), and minor sample interval errors related to the conversion from feet to metre depths. Chalice spent considerable time in error checking and correcting issues in the database and the issues found by Optiro are not considered to be material to the quality of the Mineral Resource estimate.

**Table 12.3 Sampling sheet error summary**

BHID	Comment	Source File
NC-89-121/ NC-89-121A	<p><b><u>NC-89-121</u></b></p> <ul style="list-style-type: none"> <li>• 2370.8 to 2373.6 ft</li> <li>• 2373.6 to 2374.2 ft</li> </ul> <p>Which should be</p> <ul style="list-style-type: none"> <li>• 2370.8 to <b>2373.0</b> ft</li> <li>• <b>2373.0</b> to 2374.2 ft</li> </ul> <p>And incorrect sample number recorded for interval</p> <ul style="list-style-type: none"> <li>• 229.2 to 2230.2 ft</li> <li>• Should be sample number 19920, not 9959</li> </ul> <p><b><u>NC-89-121A</u></b></p> <ul style="list-style-type: none"> <li>• 2398.7 to 2400.8 ft</li> <li>• 2400.8 to 2403 ft</li> </ul> <p>Which should be</p> <ul style="list-style-type: none"> <li>• 2398.7 to <b>2400.0</b> ft</li> <li>• <b>2400.0</b> to 2403 ft</li> </ul>	NC121_Grace1989.pdf & NC121A_Grace1989.pdf

### 12.2.2. DOWNHOLE SURVEY CHECKS

Optiro’s review of the downhole survey information in the database showed that there have been ten methods used to determine downhole survey values, and these are tabulated in Table 12.4. The observations from the review are noted below:

- 84.6% are listed as Lightlog, Reflex EZ Shot, Tropari, Sperry or acid etch survey types
- 8% listed as “Planned” and are all zero depth surveys – they appear to be 2 point collar pickups to give azimuth values
- 12.9% are projected from adjacent or previous survey readings, and it is common to add a projected survey for the base of hole depth.
- Survey values are flagged with priority codes for screening of outlier results

Optiro has carried out visual validation of drillhole traces for excessive deviation, and as a secondary check they were compared against wireframes from the 2014 Mineral Resource. No significant issues were identified and Optiro considers this information to be acceptable for the purposes of Mineral Resource estimation.

**Table 12.4 Survey type summary**

Survey Type	Database No. of Surveys	Percentage of total	UG Holes %	Surface Holes %	Comments
Acid	18	0.2%		100%	NC81 series and CL96-05. Dip only - Azimuth estimated
Acid Projected	854	7.2%	49%	51%	NC + NCX 81-89 series. Uses acid dip and planned azimuth
Estimated	16	0.1%		100%	NC-83-63 and NC-83-65 for intervals 150m/170m to EOH (396m,365m) using previous Lightlog values.
Light Log	7,607	64.6%	14%	86%	NC and NCX series holes
Planned	938	8.0%	76%	24%	Collar values (zero depth) using 2 point collar pickup azimuth for UG holes.
Projected	665	5.6%	76%	24%	Projected EOH survey from previous survey value
Reflex EZ Shot	1,419	12.0%		100%	CCD surface holes
Sperry	98	0.8%		100%	NC-127 to NC-141 holes
Tropari	166	1.4%		100%	Some CL96, NC83 and NCX83 holes
Tropari Projected	2	0.0%		100%	NC-82-22 and NC-82-24
<b>Total Surveys</b>	<b>11,783</b>	<b>100%</b>	<b>23%</b>	<b>77%</b>	

### 12.2.3. ASSAY CERTIFICATE CHECK

Optiro completed a database check of the assay data files/sample sheets on the drillholes where the requested source data was provided (Table 12.5). Optiro identified the following issues during the assay certificate check:

- Assay values of less than 0.002 gold oz/T recorded in database as either:
  - absent in 'Au\_UNK\_ozt' field and 0.001 g/t in 'AU\_FINAL' field, or
  - 0.002 gold oz/T in 'Au\_UNK\_ozt.'
- Gold oz/T values in database have been truncated to two decimal places (not rounded) which accounts for the vast majority of differences identified between the gold oz/T values on the assay certificates and in the database.
- The AU\_FINAL field does not always equal 'Au\_UNK\_ozt' field multiplied by 34.284 as specified in the 'Comments' column. Optiro understands (from email communication with Chalice Gold) that some of these differences are due to averaging the lab duplicated results into the value (i.e. the average of Au\_UNK\_ozt' and the lab duplicate value multiplied by 34.284). This approach has not been documented in the database.

These issues were not resolved prior to resource estimation. In Optiro's opinion these difference are due to changes in methodology of the previous companies carrying out the exploration drilling and are not material to the Mineral Resource estimate. Optiro recommends that Chalice continue to review and audit the database and procedures and that all assay data be validated such that:

- Assay data to be recorded in the database as per the laboratory reports (i.e. to the same number of decimal places) and should not be rounded (or truncated) in the main database.
- Assay values should not be averaged with lab duplicate results.

**Table 12.5 Assay certificate validation summary**

BHID	Comment
490-02	Gold oz/T values in database have been truncated to two decimal places (not rounded) Differing calculated AU_FINAL values for samples 6171, 6172, 6181, 6190, and 6199 Assay values of <0.002 gold oz/T recorded in database as absent in 'Au_UNK_ozt' field and 0.001 g/t in 'AU_FINAL' field.
490-25	<b>Data entry error for sample number 6344 (0.574 Oz/t on assay certificate and 0.54 oz/T in database)</b> Gold oz/T values in database have been truncated to two decimal places (not rounded) Assay values of <0.002 gold oz/T recorded in database as 0.002 gold oz/T in 'Au_UNK_ozt' rather than half the LOD
CCD-11-137	Assay values of <0.03 recorded in database as 0.01 g/t instead of 0.015 g/t (i.e. half the LOD) <b>Sample Number 893152 is 0.86 g/t on assay certificate and 1.61 g/t in database</b>
D-28	Gold oz/T values in database have been truncated to two decimal places (not rounded) <b>Sample Number 1424 is 0.364 oz/t on assay certificate and 0.63 oz/t in database</b>

#### 12.2.4. COLLAR CO-ORDINATE CHECK

During Optiro's site visit in July 2015, seven drillhole collars were located and surveyed using a Garmin GPSMAP handheld GPS (accuracy +/- 10 m). A comparison of these results with the drillhole collars recorded in the database is tabulated in Table 12.6. No significant differences were identified.

**Table 12.6 Results of the collar audit**

Hole ID	Database Easting	Source Easting	Difference	Database Northing	Source Northing	Difference
CCD-11-204	446867.74	446865	2.74	5459999.51	5460004	-4.49
CCD-10-057	447136.19	447133	3.19	5460015.54	5460016	-0.46
CCD-11-100	447154.63	447152	2.63	5459966.18	5459967	-0.82
CCD-10-058	447122.48	447121	1.48	5459998.60	5460000	-1.40
CCD-11-203	446883.14	446882	1.14	5460014.17	5460018	-3.83
CCD-10-022	446986.86	446983	3.86	5460174.60	5460174	0.60
CCD-11-209	446983.04	446983	0.04	5460008.53	5460011	-2.47

#### 12.3. LABORATORY REPEATS

Optiro did not review any of Actlabs internal laboratory QC results as part of this scope of work.

#### 12.4. TWINNED HOLES

There are no twinned holes in the Cameron Lake Gold Project.

#### 12.5. INDEPENDENT SAMPLING

As part of the site visit Mark Drabble of Optiro carried out sampling of the Cameron deposit trench exposures and selected intervals of diamond drilling. Four rock chip samples were taken from in-situ vein material in a trenched area over the deposit. The sample area is to the south of the exploration office. The grades of these rock chip samples are reported in Table 12.7 below.

Optiro reviewed the database prior to the site visit and independently selected a number of drillholes to be laid out for review. From these drillholes Optiro selected 11 drill core samples to be collected from half core intersections of holes CCD-10-13, CCD-10-14, CCD-10-64 and CCD-10-65). These intervals were sampled completely (not cut into quarter core) and notes made on the sample tags that these intervals of core were removed for sampling validation.

Optiro supervised the rock chip sampling and labelled and sealed all sample bags. Optiro placed the drill core samples into bags and checked that the sample numbers matched the sample tags and record sheet before placing the sample bags into polyweave sacks. These were sealed using numbered cable tie closures. The details were recorded on a sample despatch notice with instructions that results were to be sent to Mark Drabble only. The samples were sent Activation Laboratories Ltd, 1428 Sandhill Drive, Ancaster, ON, L9G 4V5, Canada.

The average grade of the rock chip samples is 5.88 g/t Au. These were hosted in lithologies and structures that are typical of the Cameron mineralised system. Comparison of the drill core independent samples to the original values showed some quite large variations, however this is consistent with a high nugget gold deposit, and the tenor of the results are sufficiently similar to confirm the presence of gold mineralisation. Optiro considers that the independent samples support the magnitude of gold mineralisation reported at the Cameron Gold deposit.

**Table 12.7 Independent sample assay comparison to original results**

Sample Number	FA-GRA Au g/t	Original Value	Repeat %	Type	Location	Description
129951	3.46			Rock chip	Outcrop	Silicified ZZV + Py alteration Main zone
129952	6.6			Rock chip	Outcrop	Silicified ZZV + Py alteration Main zone
129953	5.64			Rock chip	Outcrop	Silicified ZZV + Py alteration Main zone ridge
129954	7.82			Rock chip	Outcrop	QV and altered ZZV - footwall zone
129955	18.5	32.2	57%	Diamond core	CCD-10-64	QZ + ZZV, feld. alteration, blebby f.g. pyrite
129956	0.42	5.62	7%	Diamond core	CCD-10-64	ZZV foliated sericite alteration
129957	6.14	9.63	64%	Diamond core	CCD-10-65	ZZV contact with meta basalt
129958	1.91	2.02	95%	Diamond core	CCD-10-13	ZZV strongly sheared
129959	3.27	2.15	152%	Diamond core	CCD-10-13	Sheared QV
129960	10.7	18.9	57%	Diamond core	CCD-10-13	Qtz BX within ferro-carbonate altered ZZV
129961	4.43	2.81	158%	Diamond core	CCD-10-14	Altered and sheared Meta basalt, silic'n + Py
129962	1.46	1.68	87%	Diamond core	CCD-10-14	ZZV, str ankerite altered + pyrite
129963	2.72	5.03	54%	Diamond core	CCD-10-14	Altered ZZV + QV + pyrite
129964	2.47	2.38	104%	Diamond core	CCD-10-14	Altered metabasalt + silic'n + f.g. pyrite
129965	2.01	2.28	88%	Diamond core	CCD-10-14	Sheared metabasalt + qtz/carb veinlets, Ank

**Figure 12.1 Rock chip sample (left) and quarter core interval with sample tags**


Field checks of seven drillhole collars were carried out using a handheld GPS unit and the results tabulated in Table 12.6. Photographs were taken of collar casing and labelled hole caps (Figure 12.2). In general, the results were within 1 to 3 m of the database values, with some holes varying up to 4.5 m in X or Y but this is not considered significant. In general, Optiro is satisfied that the drill collar locations are within acceptable limits of the field check values.

**Figure 12.2 GPS and compass checks of Cameron drill collar locations and dip, CCD-11-100 drillhole cap with hole number at deposit outcrop**


Data verification has been carried out by the author to verify the following elements:

- Deposit location and geology confirmed by site visit to view outcrop exposures, drill core samples and photographs of drillcore
- Drill collar locations and grid co-ordinates verified by GPS check of randomly selected drill hole co-ordinates
- Downhole survey deviation compared on a random selection of drill holes
- Quantum of stated mineralisation supported by independent sampling of mineralisation
- Assay integrity verified by sample QAQC analysis, no significant bias identified
- Primary source data (surveys, downhole survey information, assay certificates) checked against database for errors and no material issues identified.

The results of the data validation process have verified the accuracy and integrity of the information provided by Chalice. It is the opinion of the author that the Cameron database is acceptable for the purpose of Mineral Resource estimation.

## 13. MINERAL PROCESSING AND METALLURGICAL TESTING

### 13.1. METALLURGICAL TESTWORK

A number of preliminary and advanced metallurgical investigations have been conducted on samples from the Cameron Gold Deposit over the period from 1985 to 2011. Previous multi-element geochemical assays have revealed that the mineralised material from the Cameron Gold Deposit does not contain deleterious elements.

Previous metallurgical testwork conducted on samples from the Cameron Gold Deposit can be summarised as follows:

- In general samples tested responded well to direct cyanidation after being ground to 75 µm. Gold recoveries ranged from 92% to 93%.
- Samples were grind sensitive with maximum gold recoveries occurring at grind P<sub>80</sub> sizes in the range 53 to 75 µm.
- Samples also responded well to an alternative processing regime of flotation of sulphide mineral (mainly pyrite); regrind of flotation concentrate followed by intensive cyanidation of flotation concentrate and cyanidation of flotation tailings. Overall gold recoveries were marginally higher than the direct cyanidation route.
- Cyanidation tests identified that provided the samples were ground to 75 µm the optimum leach time was approximately 24 hours.

In 2012, Coventry initiated a test programme utilising a composite sample from 17 drill intercepts from 14 separate drillholes. The sample is considered by Optiro to be spatially and volumetrically representative of the deposit and mineral resource estimate. The test work was completed by SGS Canada in Vancouver, British Columbia. In 2014, some additional cyanide consumption reduction tests were performed on the Cameron Gold Deposit composite by SGS Canada.

As part of the 2012 test programme a suite of comminution tests were completed to allow design parameters for a comminution circuit to be derived. The results are summarised as follows:

- Abrasion Index Ai: 0.328
- Rod Mill Work Index: 15.5 kWh/t
- Ball Mill Work Index: 12.4 kWh/t
- JK Breakage Parameters
  - A: 100
  - B: 0.31
  - A x b: 31.0
  - Ta: 0.28
  - SG: 2.8

Salient outcomes from the comminution testwork programme are:

- The bond rod and ball mill work indices are moderate to low.



- The abrasion index is moderate and within the typical range for a dolerite-basalt ore.
- The JK breakage parameters indicate the ore is highly competent.

A number of cyanidation tests were conducted to determine overall gold recoveries and the effect of grind size on gold recoveries. Gravity recoverable gold was observed to be typically 25% but no improvement in overall gold recovery was observed when this was applied followed by cyanidation of the gravity tails.

Salient outcomes from the leach test work are as follows:

- Gold extractions ranged from 84.3% at a grind of 131  $\mu\text{m}$  to 93.6% at a grind of 45  $\mu\text{m}$ . The test work data indicates that gold extraction for the composite sample is sensitive to grind size.
- Pre-aeration and a grind of 75  $\mu\text{m}$  was selected as the most efficient leach conditions and achieved recoveries of 92% after a 30 hour leach period
- Reagent consumptions were moderate, typically at 1.0 kg/t for cyanide and 0.8 kg/t for lime.

Chalice requested SGS Canada carry out tests specifically aimed at lowering cyanide consumption at the preferred 75  $\mu\text{m}$  grind size. The tests were carried out on the Cameron Gold Deposit composite sample with the results indicating that cyanide consumption was significantly reduced compared to the 2012 results by reducing the maintained level of free cyanide. This result pertains to direct cyanide leaching with cyanide consumption as low as 0.11 kg/t with lime consumption approximately 1 kg/t. Gold extraction is reduced by mild pregnant liquor robbing (95% drops to 90% gold extraction) not previously noticeable because of the higher cyanide addition.

The lower recovery could be improved to 92.5% using a carbon-in-leach (CIL) process with cyanide consumption raised to 0.19 kg/t and lime consumption to 1.2 kg/t.

The following conclusions can be drawn from the current and previous metallurgical and comminution test work programmes:

- The Cameron Gold deposit is moderately abrasive, highly competent material with a comparatively low Bond ball mill index.
- The Cameron Gold deposit is free-milling with a high gold recovery (95%) from direct cyanide leaching with moderate reagent consumptions - 1.0 kg/t for cyanide and 0.8 kg/t for lime at a 75  $\mu\text{m}$  grind size.
- At the same grind size the Cameron Gold Deposit returns a slightly lower recovery using CIL (92.5%) but there is a significant reduction in cyanide consumption (0.19 kg/t) and only a modest increase in lime consumption (to 1.2 kg/t.)
- Gravity recoverable gold is low to moderate but at the anticipated grind size  $P_{80}$  of 75  $\mu\text{m}$  overall gold recovery is not impacted by a gravity step.
- To the extent known, no processing issues or deleterious elements have been identified that could have a significant effect on potential economic extraction." (Ball, 2014)

## 14. MINERAL RESOURCE ESTIMATES

### 14.1. INTRODUCTION

The Cameron Mineral Resource estimate was prepared by Mark Drabble (MAusIMM, MAIG) and Kahan Cervoj (MAusIMM, MAIG). Both Mr. Drabble and Mr. Cervoj meet the requirements of an independent Qualified Person as set out in Section 22 of NI 43-101 and the attached Certificates of Qualified Person.

The estimate was prepared in December 2017 from a block model developed during the period from September to December 2015 from 3D block models based on geostatistical applications using commercial mining software, AranzGeo 'Leapfrog Geo' (version 2.2.1) and Dassault Systemes Geovia 'Surpac' (version 6.6) software.

### 14.2. DATA FOR MINERAL RESOURCE MODELLING

The drillhole collar, down hole surveys and assay data used for the Leapfrog modelling was imported to SURPAC and used for the gold grade modelling and estimation.

Assay intervals that were either not sampled or were missing assays were assigned a default grade of 0.004 g/t Au. This was to ensure the narrow mineralisation style and interpreted envelopes would not bias the resultant grade estimate. As only mineralised intervals were sampled anything not sampled was assumed to be not mineralised. A summary of the sample data by type is shown in Table 14.1.

There is a large bulk density data set (14,868 determinations) that has been stored as point data.

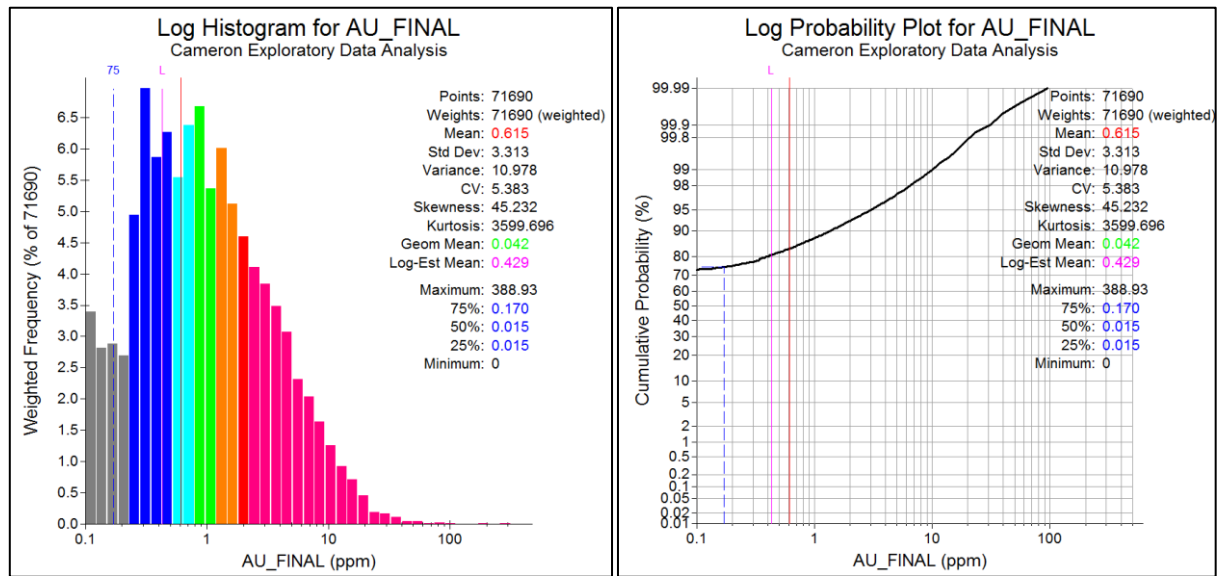
**Table 14.1 Summary of sample types**

Date	Type	Number of samples		Sample length	
		Number	%	Total	%
Assay	Sampled	71,690	55%	63,669	54%
	Missing assay	0		0	
	Data	<b>71,690</b>	<b>55%</b>	<b>63,669</b>	<b>54%</b>
	Not sampled/default assigned	57,896	45%	55,141	46%
	<b>Total</b>	<b>129,586</b>		<b>118,810</b>	
Bulk Density	Density determinations	<b>14,868</b>		<b>N/A – point data</b>	

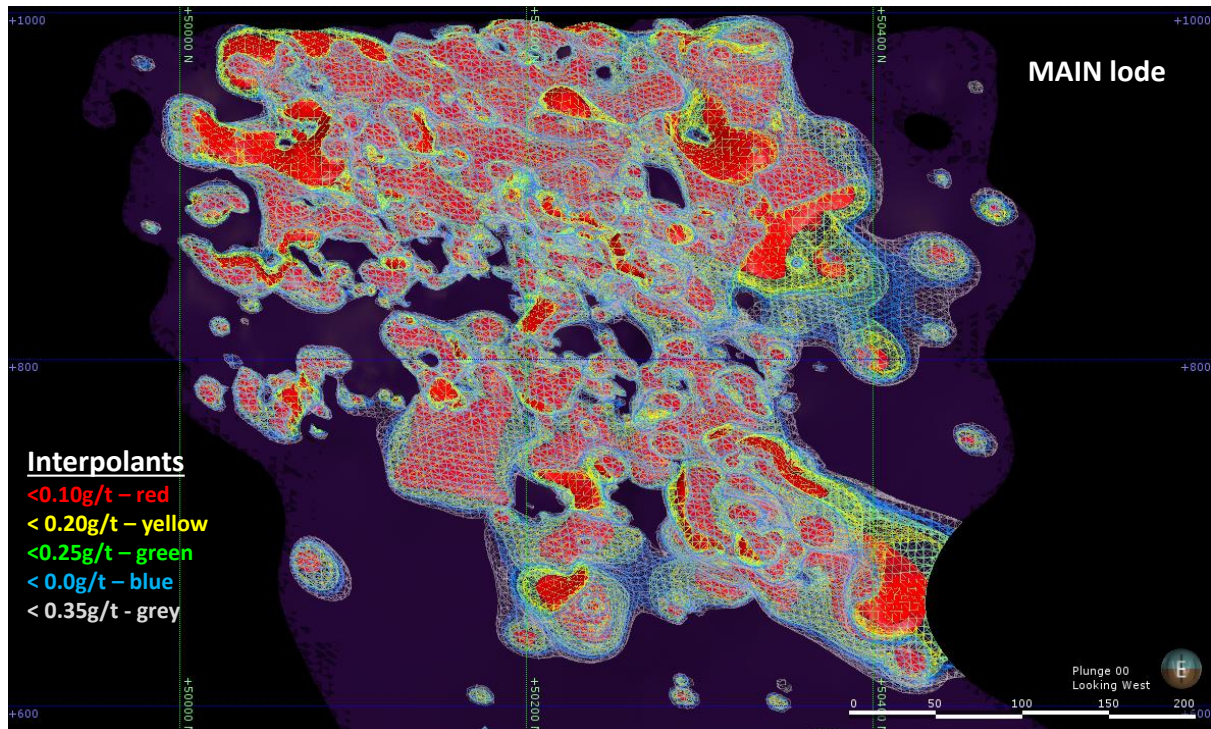
### 14.3. MINERALISATION

A full description of the modelling of the mineralisation is in section 7.4. Upon completion of the mineralisation model, Optiro reviewed the sample statistics for the mineralised domains and identified discernible area within the overall mineralisation envelopes that were poorly mineralised. These lower grade areas represent undeformed lithologies within the mineralised shear system.

To define the low-grade zones an initial statistical review indicated a cut-off below 0.35 g/t was most appropriate, as presented in Figure 14.1. To reflect the observed geology of the Cameron deposit, low grade zones were constructed within the mineralised interpretations as shown below in Figure 14.2.

**Figure 14.1 Length-weighted gold grade distribution (samples)**


The combined sample and assigned sample data was imported into Leapfrog v2.2 and an initial spatial review conducted. The review showed the low grade distribution reflected a disseminated rather than a mosaic grade model (i.e. within the low grade zone there was a gradual zonation of grade rather than over-printing) as illustrated in Figure 14.2.

**Figure 14.2 View looking west showing MAIN lode and low grade interpolants**


Further spatial review identified 0.25 g/t Au being the most appropriate grade cut-off to use, and subsequent interpolants were constructed using the parameters shown in Table 14.2.

Table 14.2 Leapfrog parameters – low grade interpolants

Mineralised Zone	Low Grade Zone	Leapfrog Parameters			
ALL		Compositing	Length = 1 m, minimum of 50% entire drillhole		
		Value transform	Log		
		Resolution	5 m non-adaptive		
FW1 Mineralisation	FW1 Low Grade	Trend	Dip 55	Dip direction 87	Pitch 30
		Ratios	5	3	1
		Interpolant	Spheroidal	Sill	9
		Nugget Drift	0 Constant	Base range Accuracy	75 0.0004
MID Mineralisation	ID Low Grade	Trend	Dip 54	Dip direction 82	Pitch 30
		Ratios	4	3	1
		Interpolant	Spheroidal	Sill	9
		Nugget Drift	0 Constant	Base range Accuracy	800 0.0004
MAIN Mineralisation	MAIN Low Grade	Trend	Dip 61	Dip direction 85	Pitch 30
		Ratios	4	3	1
		Interpolant	Spheroidal	Sill	9
		Nugget Drift	0 Constant	Base range Accuracy	75 0.0004
HW Mineralisation	Not used	Trend	Dip 80	Dip direction 85	Pitch 30
		Ratios	4	3	1
		Interpolant	Spheroidal	Sill	9
		Nugget Drift	0 Constant	Base range Accuracy	800 0.0004
NTH FW Mineralisation	NITH FW Low Grade	Trend	Dip 55	Dip direction 87	Pitch 30
		Ratios	5	3	1
		Interpolant	Spheroidal	Sill	9
		Nugget Drift	0 Constant	Base range Accuracy	75 0.0004
NTH MAIN Mineralisation	NTH MAIN Low Grade	Trend	Dip 61	Dip direction 85	Pitch 30
		Ratios	4	3	1
		Interpolant	Spheroidal	Sill	9
		Nugget Drift	0 Constant	Base range Accuracy	800 0.0004
NTH HW Mineralisation	Not used	Trend	Dip 80	Dip direction 85	Pitch 30
		Ratios	4	3	1
		Interpolant	Spheroidal	Sill	9
		Nugget Drift	0 Constant	Base range Accuracy	800 0.0004

Figure 14.3 show a plan view of the resulting mineralised and low grade zones at Cameron. Figure 14.4 through to Figure 14.7 show long-section views of the mineralised lodes and the respective low grade zones within the mineralisation.

Figure 14.3 Plan view (875 mRL) showing mineralised zone outlines and interpolant low grade (blue)

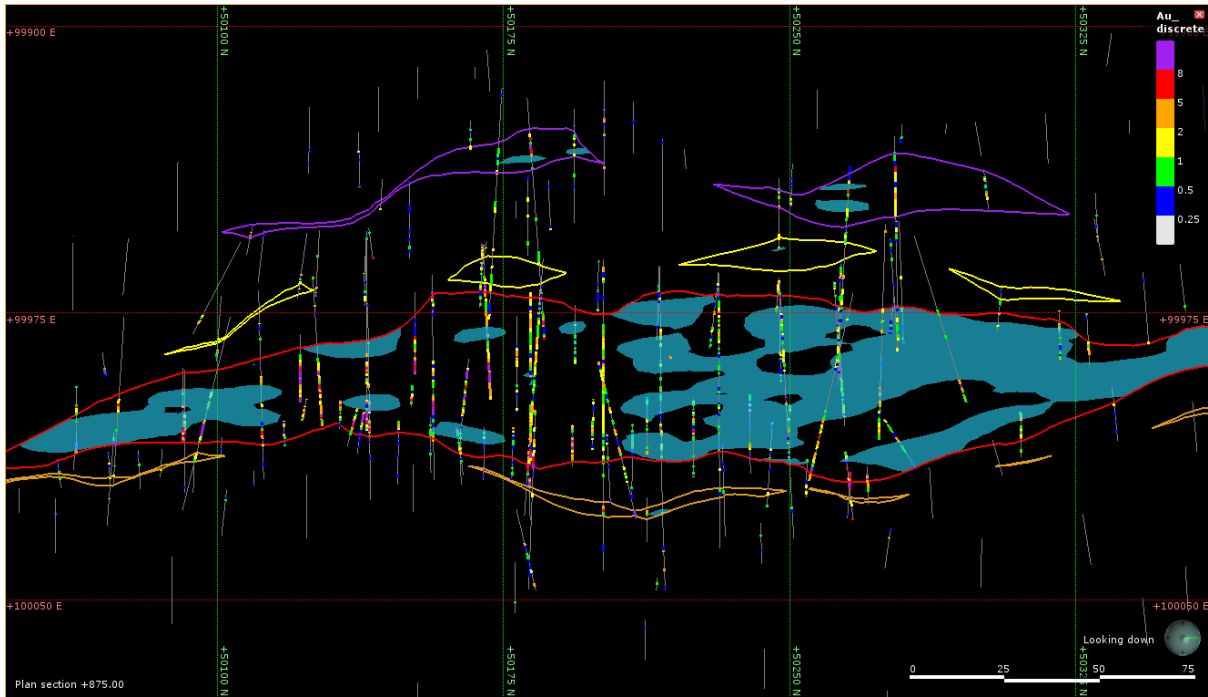


Figure 14.4 View looking west showing FW1 and FW Nth mineralised zones (purple) and low grade (blue)

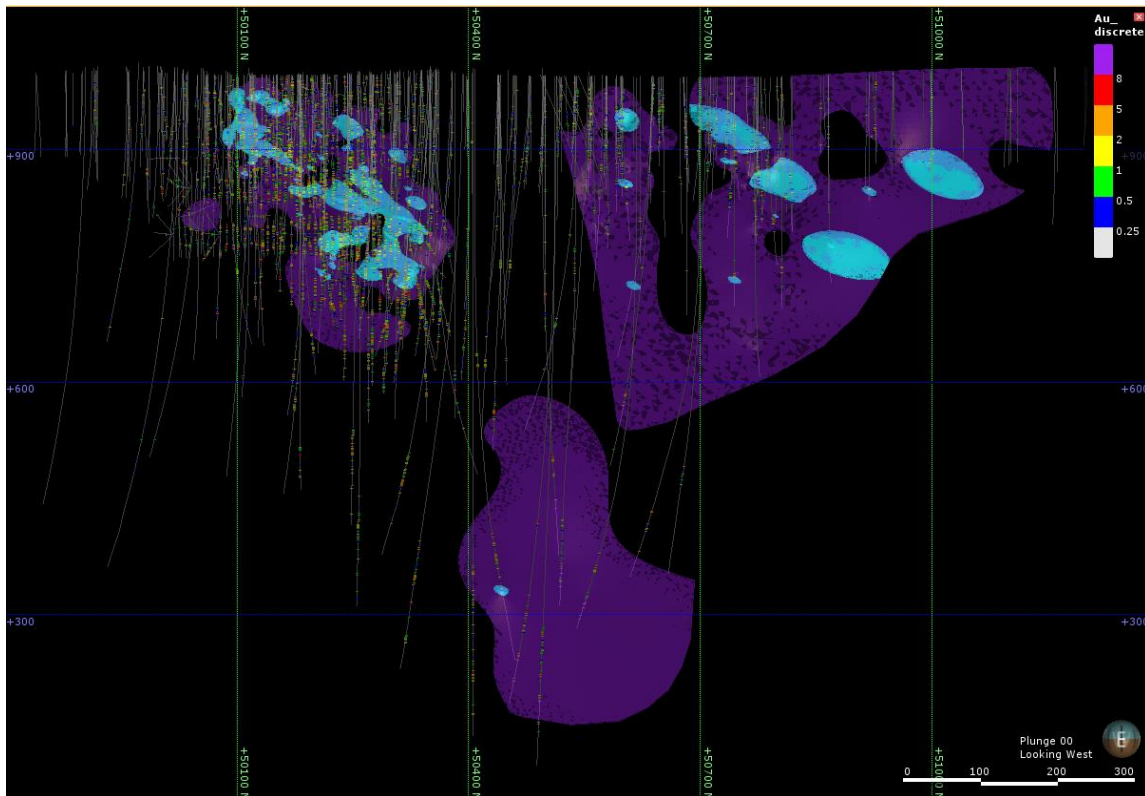


Figure 14.5 View looking west showing the Mid mineralised zones (olive green) and low grade (blue)

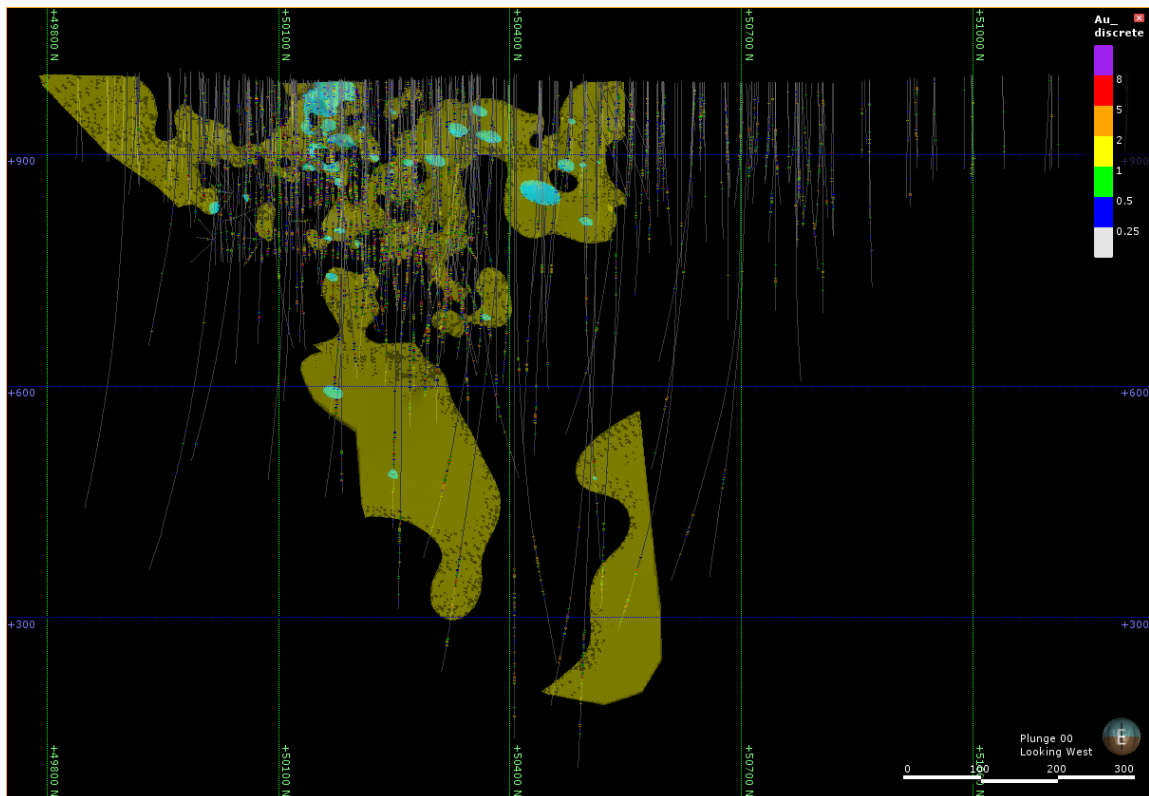


Figure 14.6 View looking west showing Main and Main north mineralised zones (red) and low grade (blue)

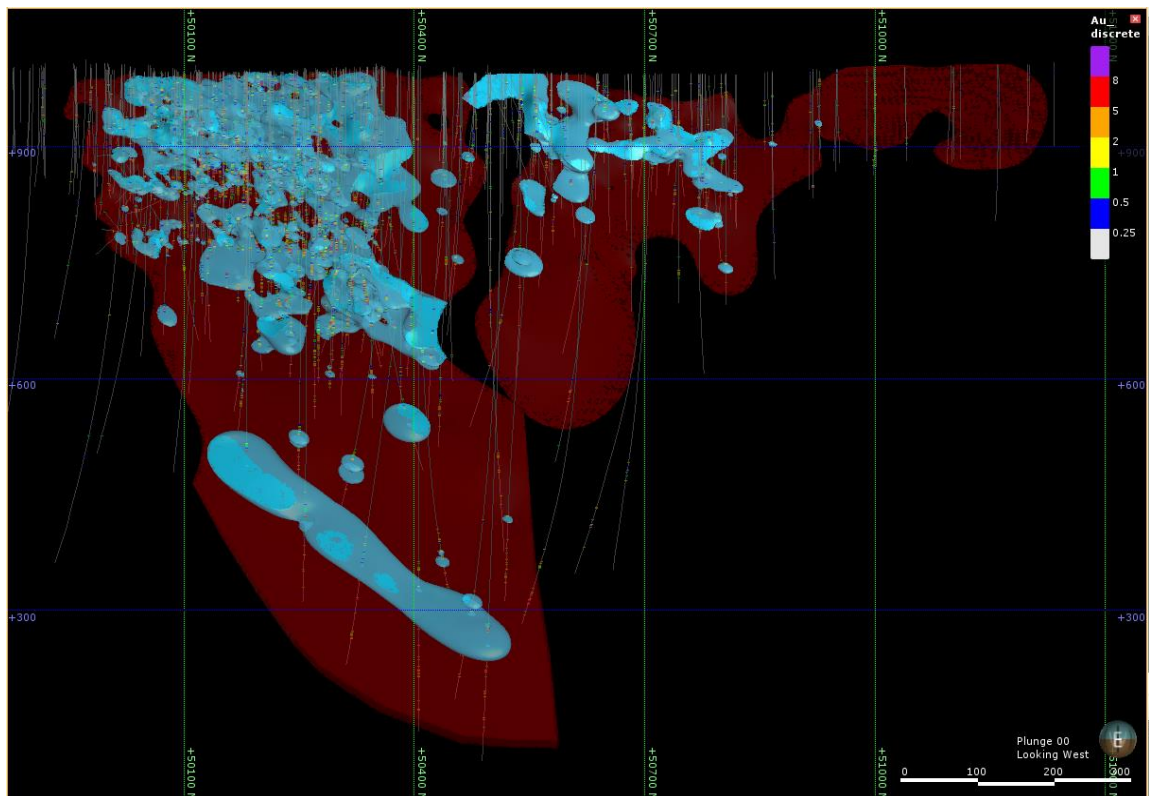
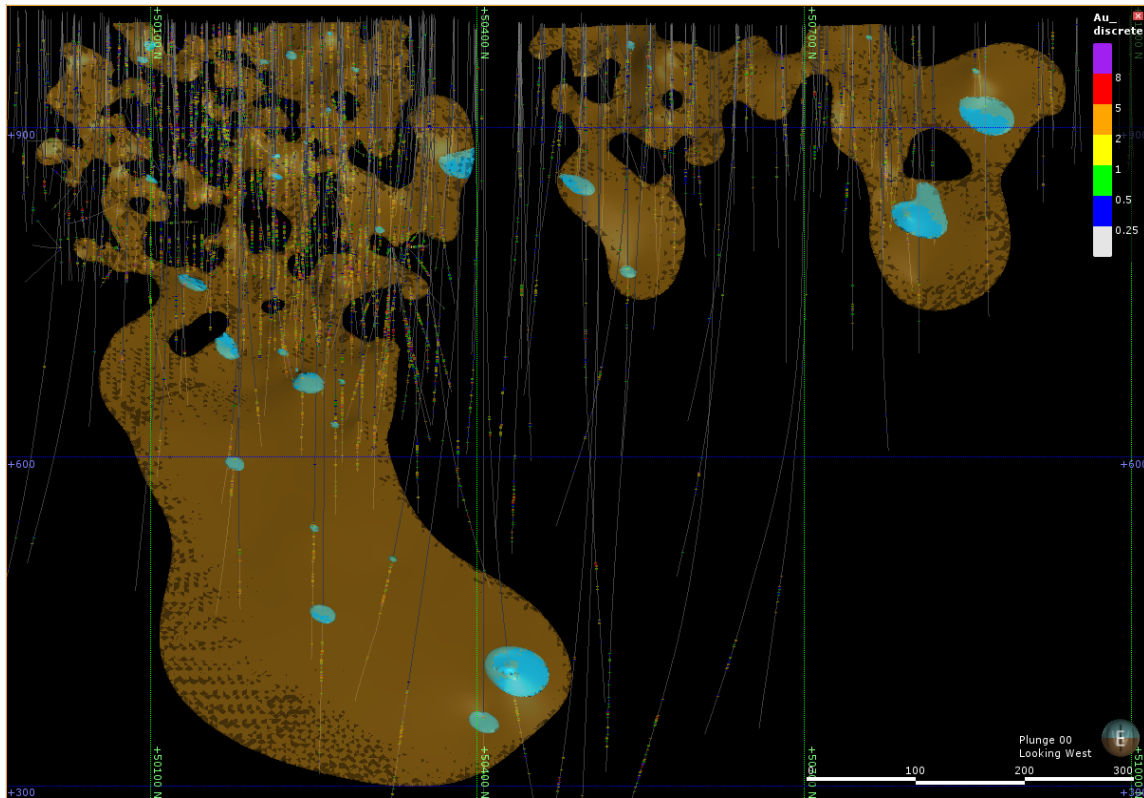


Figure 14.7 View looking west showing HW and HW north mineralised zones (brown) and low grade (blue)



There is no low grade interpolant for the FW mineralisation. Although low grade interpolants for the hanging wall and north hanging wall lodes (zone 50 and 150, shown in Figure 14.7) were created in Leapfrog, these were not incorporated to the block model as they consisted of ellipses generated by single intercepts and did not exhibit any three dimensional continuity.

Only low grade interpolants with a volume greater than 300 m<sup>3</sup> were exported to SURPAC to be incorporated with the block model. Volumes less than this were considered isolated intersections that lacked spatial support to define the geometry. The de-surveyed assay drillhole data was selected within the mineralised and low grade wireframes and each sample interval was coded with a mineralisation zone and lode code for estimation as shown in Table 14.3.

Table 14.3 Cameron January 2017 zone identifiers

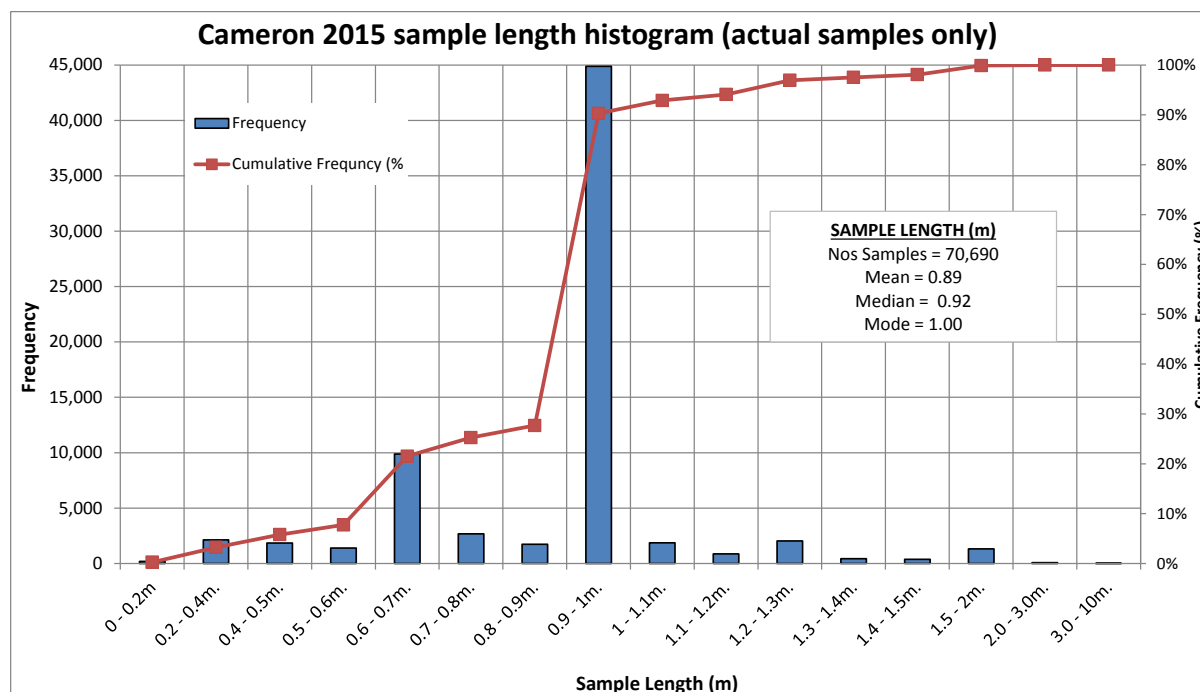
ZONE/LODE		South					Nth		
		FW1	FW2	MID	Main	HW	FW1	Main	HW
ZONE ID	Mineralised	10	20	30	40	50	110	140	150
	Low Grade	1010		1030	1040		1110	1140	
	Non-Mineralised	1000							

### 14.3.1. DATA COMPOSITING

Both actual and assigned assay samples (where 0.004 assigned for example) were used for the creation of composite samples. The coded drillhole data was used to control creation of the composite samples and subsequent statistical, geostatistical analysis and grade estimation.

The distribution of actual sample lengths guided the selection of a 1.0 m composite sample length (Figure 14.8). Approximately 90% of the data has a sample length less than (or equal to) 1.0 m and the modal sample length is 1.0 m.

**Figure 14.8 Histogram of sample lengths**



Variable composite parameters were used to account for the different average widths observed in the different zones of mineralisation as shown in Table 14.4. A ‘best fit’ algorithm was selected for the narrower mineralisation to maximise the samples being included in the composites.

**Table 14.4 Average lode width and composite creation parameters**

Lode	Sub-domain	Zone	Average width (m)	Composite Parameters			Composite lengths (m)	
				Method	Min. length	Composite length	Minimum	Maximum
FW1	Mineralised	10	1.9	Best Fit	45%	1.0	0.50	1.40
	Low Grade	1010	1.5	Best Fit	45%	1.0	0.77	1.46
FW2	Mineralised	20	2.3	Best Fit	45%	1.0	0.83	1.46
MID	Mineralised	30	1.4	Best Fit	45%	1.0	0.45	1.49
	Low Grade	1030	1.4	Best Fit	45%	1.0	0.77	1.31
Main	Mineralised	40	7.9	Fixed Length	45%	1.0	0.45	1.00
	Low Grade	1040	3.4	Fixed Length	45%	1.0	0.45	1.00
HW	Mineralised	50	1.7	Best Fit	45%	1.0	0.45	1.47
Nth FW	Mineralised	110	1.1	Best Fit	45%	1.0	0.48	1.15
	Low Grade	1110	2.0	Best Fit	45%	1.0	0.99	1.10
Nth Main	Mineralised	140	2.4	Fixed Length	45%	1.0	0.45	1.31
	Low Grade	1140	2.1	Fixed Length	45%	1.0	0.76	1.37
Nth HW	Mineralised	150	0.8	Best Fit	45%	1.0	0.65	1.36
Non-Mineralised		1000	N/A	Fixed Length	45%	1.0	0.45	1.00



Table 14.5 shows are the pre and post composite statistics demonstrating that no material bias has been introduced in the composite process.

**Table 14.5 Pre and post composite sample statistics**

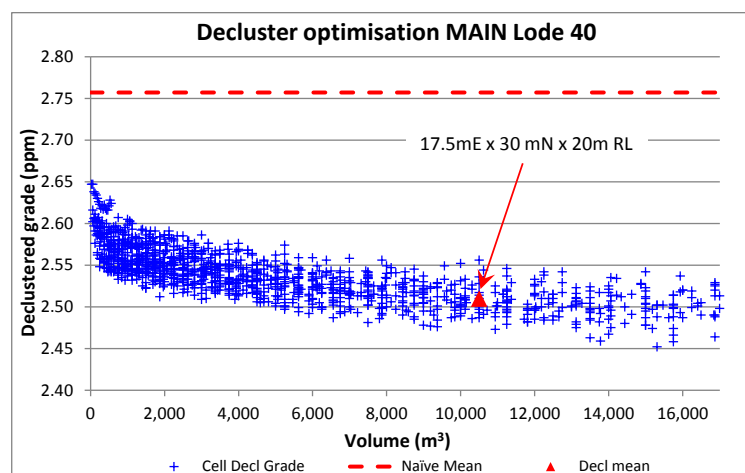
Lode	Zone	Raw			Composite			Residual		
		Length (m)		Gold g/t Au	Length (m)		Gold g/t Au	Length		Gold g/t Au
		No	Total		No	Total		m	%	
FW1	10	1,097	889.2	2.15	896	888.6	2.15	0.6	0.00%	1.84
FW1-LG	1010	326	286.2	0.09	286	285.9	0.09	0.3	0.00%	0.70
FW2	20	84	62.3	1.83	62	62.3	1.83			
MID	30	1,078	867.2	1.95	881	864.7	1.95	2.5	0.00%	1.43
MID-LG	1030	215	199.4	0.13	199	199.4	0.13			
Main	40	13,250	9,746.1	2.77	9,817	9,623.4	2.78	122.7	0.00%	1.92
Main-LG	1040	6,387	5,364.8	0.13	5,402	5,280.1	0.13	84.6	0.00%	0.22
HW	50	852	690.3	2.68	702	688.0	2.68	2.4	0.00%	3.40
Nth FW	110	125	122.2	1.57	125	122.2	1.57			
Nth FW-LG	1110	80	72.6	0.18	72	72.6	0.18			
Nth Main	140	451	470.5	2.06	472	470.5	2.06			
Nth Main-LG	1140	477	474.6	0.15	474	474.6	0.15			
Nth HW	150	196	201.5	1.65	202	201.5	1.65			
Non-mineralised	1000	104,968	99,362.6	0.05	99,493	99,184.1	0.05	178.5	0.00%	0.08

#### 14.4. STATISTICAL ANALYSIS

The objective of the mineralisation interpretations was to define the volume of mineralisation, separate mixed populations and reduce internal variability. This thereby assists with spatial analysis and provides a more robust estimate.

Statistical analysis of the data, including spatial statistics was carried out using Snowden Mining Industry Consultants' (Snowden) Supervisor software. The data was initially grouped by zone and sub-domain and an optimal decluster cell size identified using a cell declustering technique. Figure 14.9 shows the cell decluster optimisation for the Main zone. Table 14.6 summarises the impact declustering has on the naïve uncapped average grades.

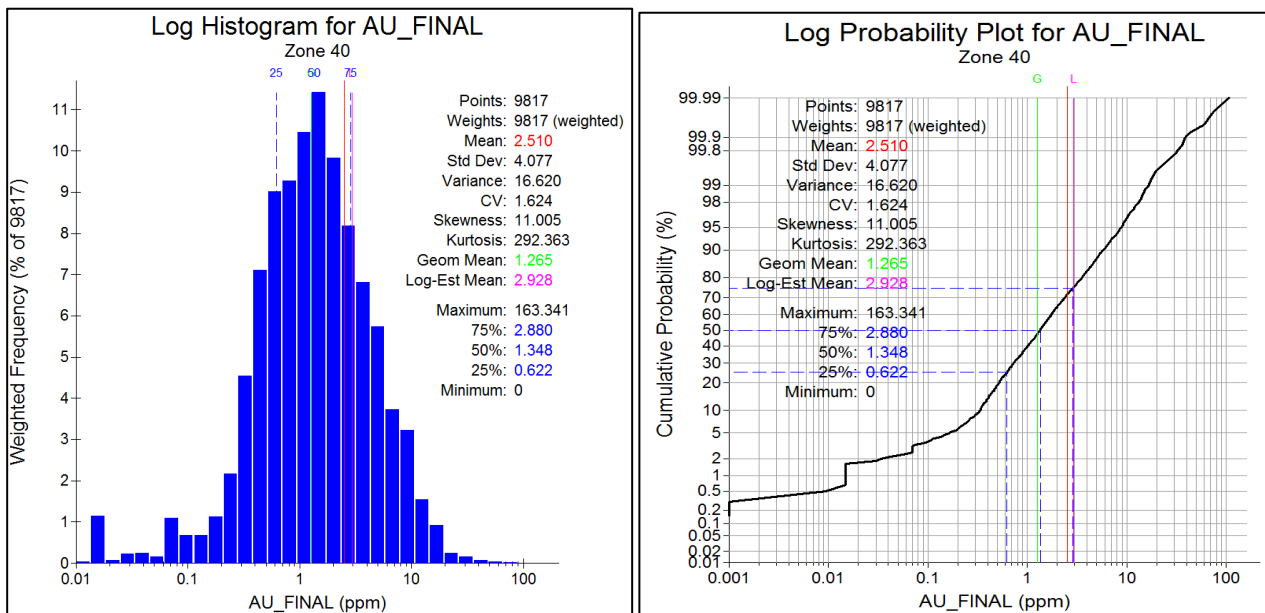
**Figure 14.9 Decluster optimisation of Main Lode (Zone 40)**

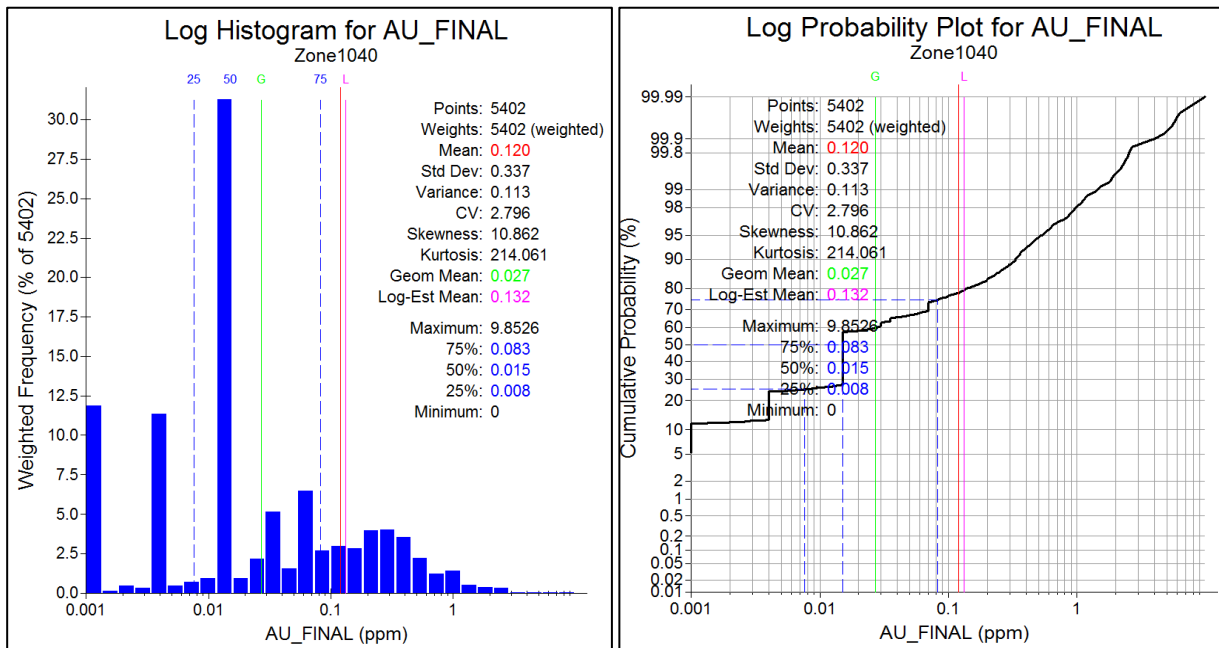


**Table 14.6 Naïve and declustered uncapped sample mean**

Lode	Zone	Naïve Mean	Decluster cell size	Declustered Mean
FW1	10	2.16	17.5 mE, 60 mN, 22.5 mRL	2.17
	1010	0.09	12.5 mE, 85 mN, 10 mRL	0.08
FW2	20	1.84	10 mE, 22.5 mN, 17.5 mRL	1.91
	30	1.95	5 mE, 70 mN, 20 mRL	1.79
MID	40	2.76	17.5 mE, 30 mN, 20 mRL	2.51
	1030	0.13	15 mE, 70 mN, 15 mRL	0.09
Main	50	2.67	20 mE, 50 mN, 25 mRL	2.59
	1040	0.13	15 mE, 70 mN, 17.5 mRL	0.12
Nth FW	110	1.57	7.5 mE, 80 mN, 15 mRL	1.79
	1110	0.18	15 mE, 75 mN, 25 mRL	0.21
Nth Main	140	2.12	20 mE, 60 mN, 20 mRL	2.52
	1140	0.15	10 mE, 85 mN, 25 mRL	0.14
Nth HW	150	1.65	17.5 mE, 50 mN, 22.5 mRL	1.46
Non-min.	1000	0.05	17.5 mE, 80 mN, 17.5 mRL	0.03

Data distribution for gold was then investigated by zone and lode. Figure 14.10 shows the log-histogram and log-probability plots for the Main lode/Zone 40. Figure 14.11 shows the grade distribution plots for the Main low-grade/Zone 1040 for comparison.

**Figure 14.10 Declustered histogram and probability plot Main/Zone 40**


**Figure 14.11 Declustered histogram and probability plot Main low-grade/Zone 1040**


Grade capping was applied to minimise the impact of any extreme high grade values (outliers) and in doing so manage the coefficient of variation (CV) for each zone. The capped values were derived by reviewing a combination of grade-distributions, the disintegration of the grade distribution and the mean and variance plots. Note that the pre/post capped statistics have not been declustered.

**Table 14.7 Pre and post capped naïve statistics**

Domain	Lode	Zone	Cap Value	Data	Count	Maximum	Mean	Std.Dev.	CV	SKEW	Nos Capped	Capped Proportion
SOUTH	FW1	10	25.00	Raw	896	100.53	2.16	4.64	2.14	13.1	2	99.7%
				Capped	896	25.00	2.05	2.96	1.45	4.2		
				% Difference	0%	75%	5%	36%	32%	68%		
	LG FW1	1010	0.70	Raw	286	2.24	0.09	0.21	2.45	5.8	5	98.5%
				Capped	286	0.70	0.08	0.15	1.90	2.8		
				% Difference	0%	69%	12%	32%	23%	52%		
	FW2	20	6.00	Raw	62	17.37	1.84	2.46	1.33	4.7	2	97.2%
				Capped	62	6.00	1.61	1.32	0.82	1.4		
				% Difference	0%	65%	13%	46%	38%	69%		
	MID	30	18.00	Raw	881	29.93	1.95	2.77	1.42	4.2	6	99.4%
				Capped	881	18.00	1.92	2.54	1.33	3.2		
				% Difference	0%	40%	2%	8%	7%	24%		
	LG MID	1030	0.70	Raw	199	3.43	0.13	0.41	3.19	6.1	8	96.0%
				Capped	199	0.70	0.09	0.17	2.02	2.6		
% Difference				0%	80%	33%	57%	37%	57%	4.02%		
Main	40	70.00	Raw	9,817	163.34	2.76	4.93	1.79	11.7	7	99.9%	
			Capped	9,817	70.00	2.73	4.36	1.59	6.4			
			% Difference	0%	57%	1%	12%	11%	46%			0.07%
LG Main	1040	2.00	Raw	5,402	9.85	0.13	0.35	2.71	9.7	29	99.4%	
			Capped	5,402	2.00	0.12	0.27	2.20	4.1			
			% Difference	0%	80%	5%	23%	19%	58%			0.54%
HW	50	30.00	Raw	286	2.24	0.09	0.21	2.45	5.8	5	98.5%	
			Capped	286	0.70	0.08	0.15	1.90	2.8			
			% Difference	0%	69%	12%	32%	23%	52%			1.75%

Domain	Lode	Zone	Cap Value	Data	Count	Maximum	Mean	Std.Dev.	CV	SKEW	Nos Capped	Capped Proportion
NORTH	FW	110	10.00	Raw	125	40.90	1.57	3.82	2.44	9.1	1	99.2%
				Capped	125	10.00	1.32	1.62	1.23	3.1		
				% Difference	0%	76%	16%	58%	50%	66%		
	LG FW	1110	0.95	Raw	72	2.84	0.18	0.43	2.40	4.2	4	94.8%
				Capped	72	0.95	0.14	0.25	1.84	2.3		
				% Difference	0%	67%	23%	41%	24%	45%		
	Main	140	15.00	Raw	472	42.86	2.12	3.92	1.85	6.6	7	98.6%
				Capped	472	15.00	1.92	2.46	1.29	3.2		
				% Difference	0%	65%	9%	37%	31%	52%		
	LG Main	1140	1.50	Raw	474	3.96	0.15	0.34	2.36	5.5	7	98.7%
				Capped	474	1.50	0.14	0.27	2.00	3.2		
				% Difference	0%	62%	7%	21%	15%	42%		
	HW	150	18.00	Raw	199	3.43	0.13	0.41	3.19	6.1	8	96.0%
				Capped	199	0.70	0.09	0.17	2.02	2.6		
				% Difference	0%	80%	33%	57%	37%	57%		

Table 14.8 shows the summary declustered top-cut statistics for Cameron. Statistical analysis confirms that the selected mineralised zones are reasonably defined and that although there is some minor mixing of low/high grade populations within the zones it is not to any significant extent. For the mineralised zones the coefficient of variation (CV) is acceptable for use in ordinary kriging. The CV is higher for the lower grade zones but this is not considered significant.

Table 14.8 Summary declustered capped statistics for the 2015 Cameron composite samples

Lode	FW1		FW2	MID		Main		HW	North FW		North Main		North HW	Waste
	Min.	Low grade	Min.	Min.	Low grade	Min.	Low grade	Min.	Min.	Low grade	Min.	Low grade	Min.	Non-mineralised
Zone	10	1010	20	30	1030	40	1040	50	110	1110	140	1140	150	1000
Samples	896	286	62	881	199	9,817	5,402	702	125	72	472	474	202	99,493
Minimum	0.000	0.000	0.055	0.000	0.001	0.000	0.000	0.000	0.004	0.015	0.004	0.001	0.001	0.000
Maximum	25.00	0.70	6.00	18.00	0.70	70.00	2.00	30.00	10.00	0.95	15.00	1.50	18.00	1.50
Mean	<b>2.01</b>	<b>0.07</b>	<b>1.60</b>	<b>1.77</b>	<b>0.07</b>	<b>2.50</b>	<b>0.11</b>	<b>2.17</b>	<b>1.40</b>	<b>0.17</b>	<b>2.09</b>	<b>0.13</b>	<b>1.45</b>	<b>0.03</b>
Std. Deviation	<b>2.99</b>	<b>0.14</b>	<b>1.28</b>	<b>2.11</b>	<b>0.14</b>	<b>3.77</b>	<b>0.26</b>	<b>3.65</b>	<b>1.64</b>	<b>0.27</b>	<b>2.65</b>	<b>0.26</b>	<b>2.06</b>	<b>0.12</b>
CV	<b>1.48</b>	<b>1.93</b>	<b>0.80</b>	<b>1.19</b>	<b>1.96</b>	<b>1.51</b>	<b>2.25</b>	<b>1.69</b>	<b>1.17</b>	<b>1.54</b>	<b>1.26</b>	<b>1.99</b>	<b>1.42</b>	<b>4.42</b>
Variance	8.92	0.02	1.65	4.46	0.02	14.20	0.07	13.35	2.68	0.07	7.00	0.07	4.24	0.02
Skewness	4.38	2.82	1.32	3.22	2.96	6.24	4.39	4.73	2.95	1.84	3.12	3.27	4.38	8.85
Log mean	0.05	-4.01	0.09	-0.05	-3.84	0.23	-3.61	-0.03	-0.18	-2.95	0.08	-3.44	-0.30	-4.88
Log variance	1.54	3.21	0.96	1.85	2.18	1.68	3.15	1.98	1.34	2.42	1.95	2.75	1.79	1.20
Geometric mean	1.05	0.02	1.10	0.95	0.02	1.26	0.03	0.97	0.83	0.05	1.08	0.03	0.74	0.01
<b>10%</b>	0.336	0.001	0.345	0.320	0.004	0.339	0.001	0.253	0.340	0.015	0.300	0.015	0.320	0.004
<b>20%</b>	0.48	0.00	0.36	0.46	0.01	0.52	0.00	0.44	0.42	0.02	0.55	0.02	0.40	0.00
<b>30%</b>	0.65	0.02	0.78	0.63	0.02	0.73	0.02	0.60	0.49	0.02	0.75	0.02	0.52	0.00
<b>40%</b>	0.83	0.02	0.96	0.82	0.02	1.01	0.02	0.78	0.59	0.02	0.93	0.02	0.58	0.00
<b>50%</b>	<b>1.02</b>	<b>0.02</b>	<b>1.26</b>	<b>1.08</b>	<b>0.02</b>	<b>1.35</b>	<b>0.02</b>	<b>1.01</b>	<b>0.88</b>	<b>0.02</b>	<b>1.25</b>	<b>0.02</b>	<b>0.72</b>	<b>0.00</b>
<b>60%</b>	1.36	0.02	1.65	1.47	0.02	1.75	0.03	1.40	1.02	0.07	1.73	0.02	0.94	0.00
<b>70%</b>	1.76	0.03	2.04	1.90	0.03	2.40	0.07	1.81	1.25	0.17	2.12	0.07	1.37	0.02
<b>80%</b>	2.72	0.07	2.52	2.65	0.05	3.55	0.14	2.74	2.12	0.31	3.01	0.17	2.15	0.02
<b>90%</b>	4.86	0.23	3.05	3.85	0.24	5.79	0.33	5.23	3.26	0.53	4.05	0.40	3.30	0.02
<b>95%</b>	6.83	0.39	3.64	5.83	0.38	8.85	0.54	8.67	3.82	0.85	6.76	0.59	4.77	0.07
<b>97.5%</b>	9.62	0.55	4.40	7.82	0.42	11.96	0.88	10.90	5.43	0.95	11.30	0.97	5.63	0.24
<b>99%</b>	16.10	0.70	6.00	9.80	0.70	16.64	1.44	13.71	9.54	0.95	15.00	1.50	9.37	0.60

### 14.4.1. BOUNDARY ANALYSIS

Contact profiles were generated for each mineralised zone testing the mineralised/non-mineralised boundary (Figure 14.12 through to Figure 14.15). For all zones, the boundary is considered sharp and has been treated as a hard boundary for estimation.

Figure 14.12 Cameron boundary analysis FW1/Zone 10 (left) and FW2/Zone 20 (right)

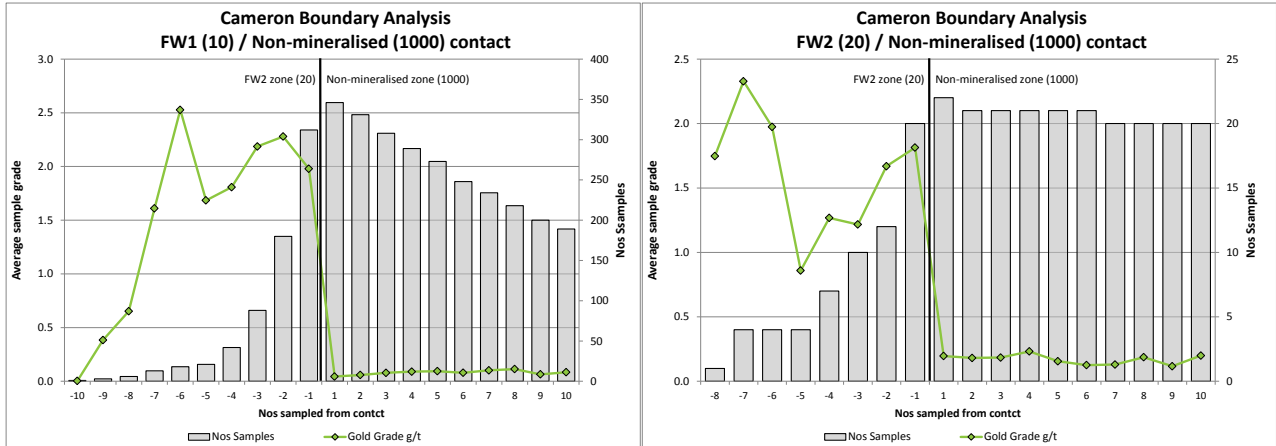


Figure 14.13 Cameron boundary analysis MID/Zone 30 (left) and Main/Zone 40 (right)

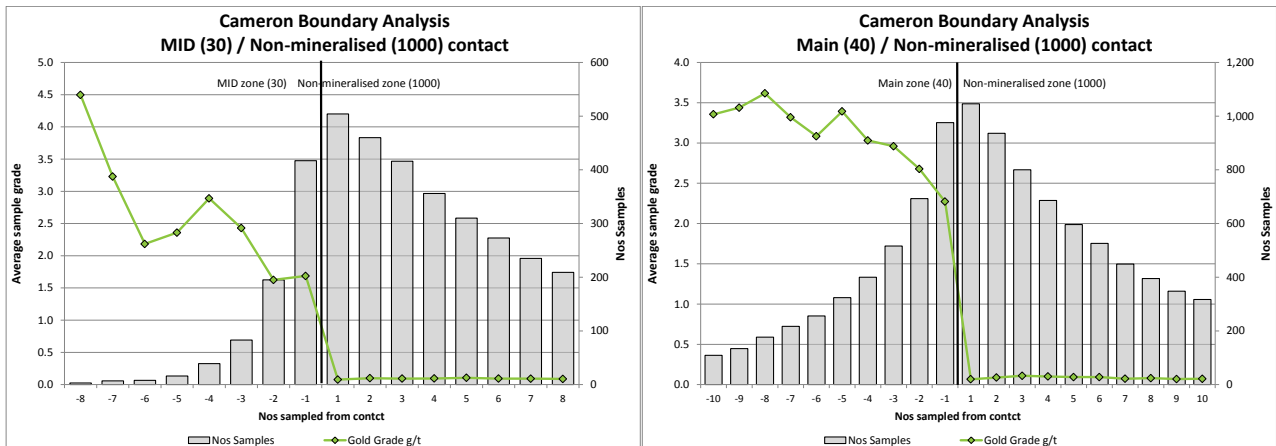
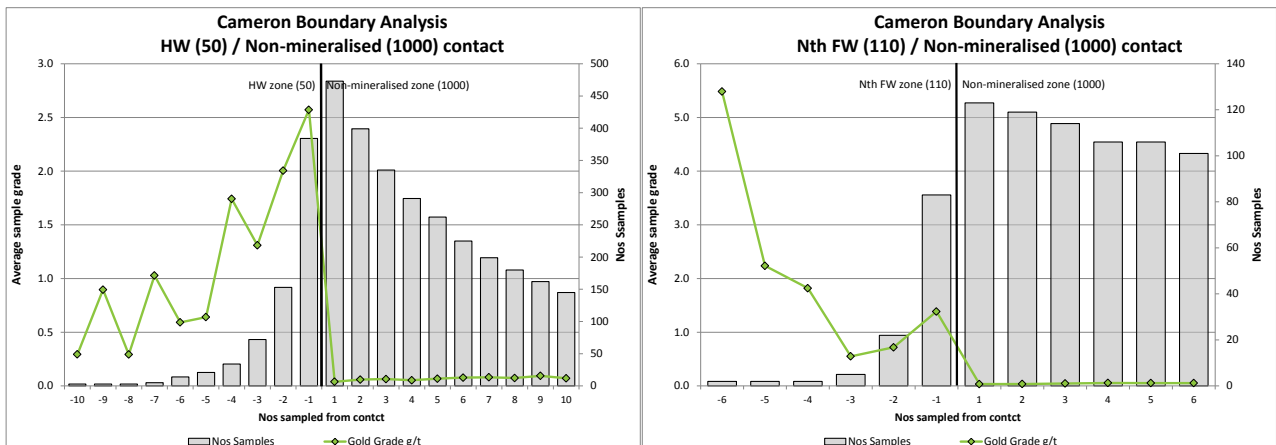
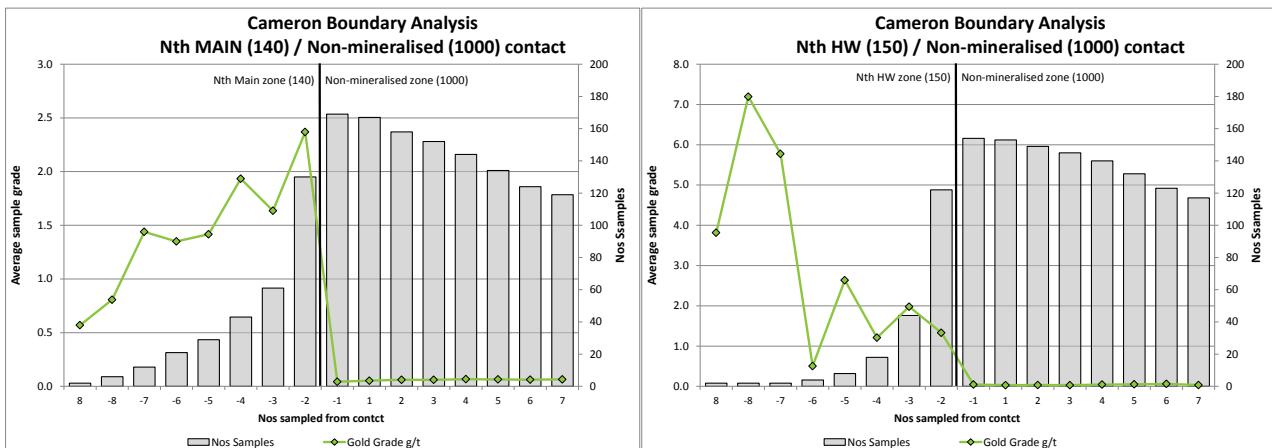
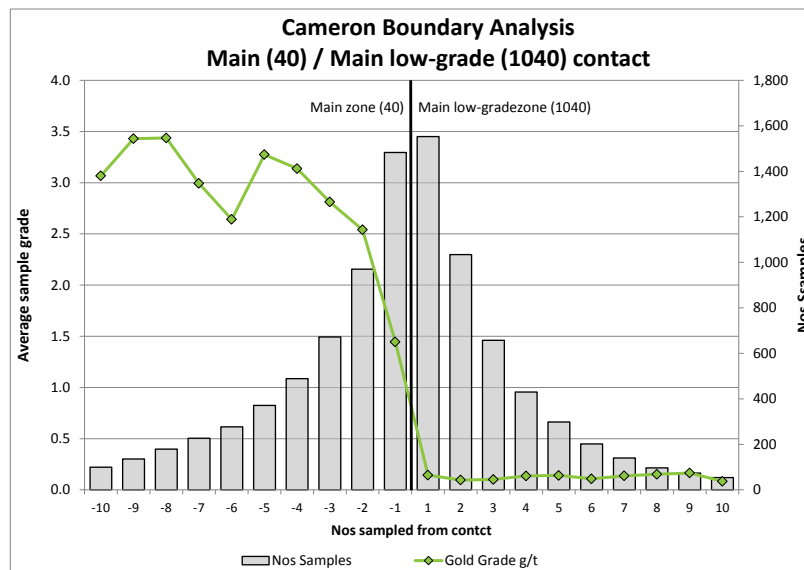


Figure 14.14 Cameron boundary analysis HW/Zone 50 (left) and Nth FW/Zone 110 (right)



**Figure 14.15 Cameron boundary analysis Nth Main/Zone 140 (left) and Nth HW/Zone 150 (right)**


As Main lode is considerably wider than the other lodes, boundary analysis was also undertaken for the mineralised/low-grade boundary as shown in Figure 14.16. The boundary between the mineralised and non-mineralised zone is sharp indicating estimation should use a hard boundary between the two zones.

**Figure 14.16 Cameron boundary analysis Main mineralisation/low grade (Zone 40 / 1040)**


## 14.5. VARIOGRAM ANALYSIS

Variography for gold was undertaken using composite samples on an individual lode basis. The following methodology was applied:

- the principal axes of anisotropy were determined using variogram fans based on normal scores variograms
- directional normal scores variograms were calculated for each of the principal axes of anisotropy
- downhole normal scores variograms were modelled for each domain to determine the normal scores nugget effect

- variogram models were determined for each of the principal axes of anisotropy using the nugget effect from the downhole variogram
- the variogram parameters were standardised to a sill of 1.
- the variogram models were back-transformed to the original distribution and used to guide search parameters and complete ordinary kriging estimation.

The variogram models are shown below in Table 14.9 and Table 14.10 with the back-transformed models shown in Figure 14.17. The variogram models used for the grade estimate are presented in Table 14.9. Zone 20, 1030, 1110 and 1140 had insufficient samples to create meaningful variography and the variogram from analogous zones was applied to these zones.

**Table 14.9 Modelled variograms (back transformed sills) for southern zones**

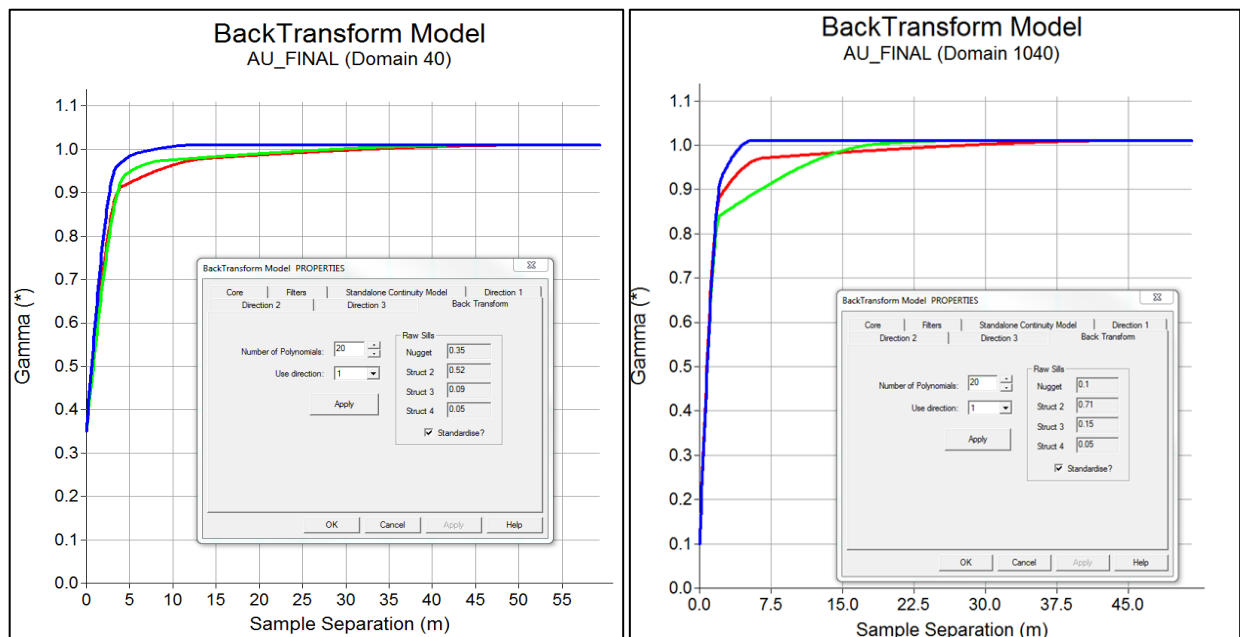
Area	Lode	Zone	Axis	Orientation	Surpac Rotation	Nugget	C1	A1	C2	A2	C3	A3
South	Sth FW1 Min.	10	Major Intermediate Minor	-49/041 -26/164 -30/270	40.9 -48.6 -80.9	0.57	0.38	33.50 1.91 22.33	113.50 0.05 7.83	1.89	0	
	FW1 LG	1010	Major Intermediate Minor	-09/015 -59/119 -30/280	15 -8.6 -59.6	0.09	0.85	53.90 2.38 11.72	136.00 0.06 2.04	2.04	0	
	FW2 Min.	20	Major Intermediate Minor	N/A - insufficient samples use variography from 10								
	MID Min.	30	Major Intermediate Minor	-62/053 -19/183 -20/280	53.2 -62 -43.2	0.42	0.345	7.50 0.54 3.00	25.50 1.76 6.38	1.76	0	
	MID LG	1030	Major Intermediate Minor	N/A - insufficient samples use variography from 30								
	Main Min.	40	Major Intermediate Minor	-19/027 -62/157 -20/200	27.1 -18.7 -68.8	0.35	0.52	4.00 0.89 1.14	14.00 1.65 2.33	1.65	0.05	54.0 1.14 4.15
	Main LG	1040	Major Intermediate Minor	-54/119 28/161 -20/240	119.4 -54.5 53.9	0.10	0.71	2.10 1.00 0.91	6.60 0.35 1.20	0.35	0.05	47.0 1.65 8.39
	HW MIN	50	Major Intermediate Minor	-50/070 00/160 -40/250	70 -50 0	0.43	0.54	9.50 0.54 3.96	209.60 3.76 83.84	3.76	0	



Table 14.10 Modelled variograms (back transformed sills) for northern and the non-mineralised zone

Area	Lode	Zone	Axis	Orientation	Surpac Rotation	Nugget	C1	A1	C2	A2	C3	A3	
North	FW Min.	110	Major	-42/021	20.8	0.32	0.4	111.40	0.28	111.50	0		
			Intermediate	-34/147	-41.6								
			Minor	-30/260	-48.1								
	FW LG	1110	Major	N/A insufficient samples, used variography from zone 1010									
	Main Min.	140	Major	-70/090	90	0.35	0.5	36.90	0.14	102.90	0.01	110.9	
Intermediate			00/180	-70									
Minor			-20/270	0									
Main LG	1140	Major	N/A insufficient samples, used variography from zone 1040										
HW Min.	Nth HW 150	Major	00/005	5	0.72	0.22	34.30	0.06	242.70	0			
		Intermediate	-80/095	0									
		Minor	-10/275	-80									
Non-mineralised (1000)			Major	-09/353	353.5	0.38	0.22	15.00	0.13	15.10	0.26	39.6	
			Intermediate	-68/107	-9.4								
			Minor	-20/260	-69.7								

Figure 14.17 Modelled back-transformed normal-score variograms mineralised Main/40 (left) and Main low-grade/1040 (right)



The experimental variograms were well structured. The nugget structures for the mineralised domains (10 through to 150) were mostly low to moderate, with the zones FW1, Mid and northern HW lodes (zone 10, 30 and 150 respectively) having higher nuggets.

Most zones exhibited a horizontal strike direction that was oblique to the orientation. All of the better sampled lodes had a flat/vertical or moderate northerly plunge which was commensurate

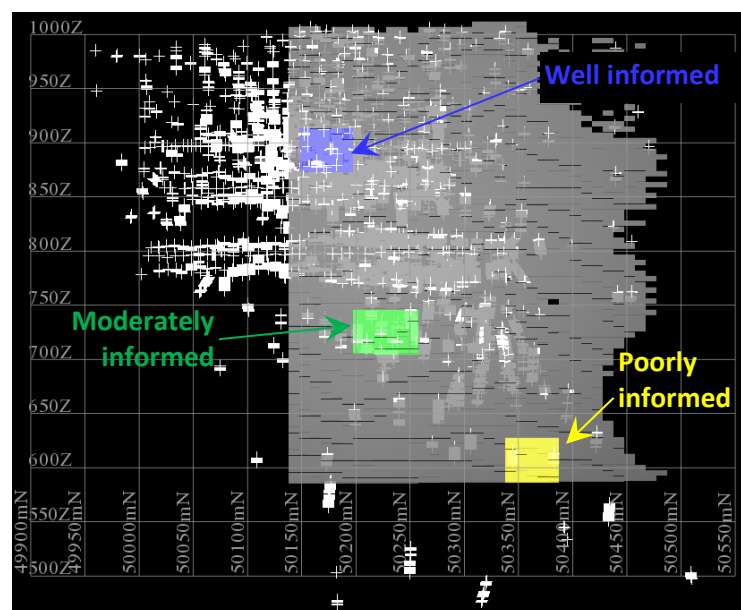
with the known geology. Only the Main low-grade (zone 1040) had a southerly plunge which is likely to reflect the conjugate structural orientation to the mineralisation.

## 14.6. KRIGING NEIGHBOURHOOD ANALYSIS

A detailed kriging neighbourhood analysis (KNA) was undertaken to determine the optimal block size, to test for the optimal search ellipse orientation and dimensions and to test the minimum and maximum numbers of samples to be used for grade estimation. This analysis used the variogram parameters and an iterative series of estimates with varying block size, search and sample number, using kriging efficiency (KE) and slope of regression (slope) values to provide a metric of estimation performance.

Discrete areas that represent well (4 to 15 m centred sampling), moderately (15 to 50 m centred sampling) and poorly (>50 m sampling) sampled areas were identified for each of the significant lodes (FW1, MID, Main and HW). An example is shown for Main in Figure 14.18. The contrast in available sample density makes selection of the parent cell size and search strategy an exercise in compromise between efficiency in undertaking the estimate, reliability of the estimate and reflecting the known geology.

**Figure 14.18 Kriging neighbourhood analysis – block size optimisation and Main lode areas**



### 14.6.1. BLOCK SIZE SELECTION

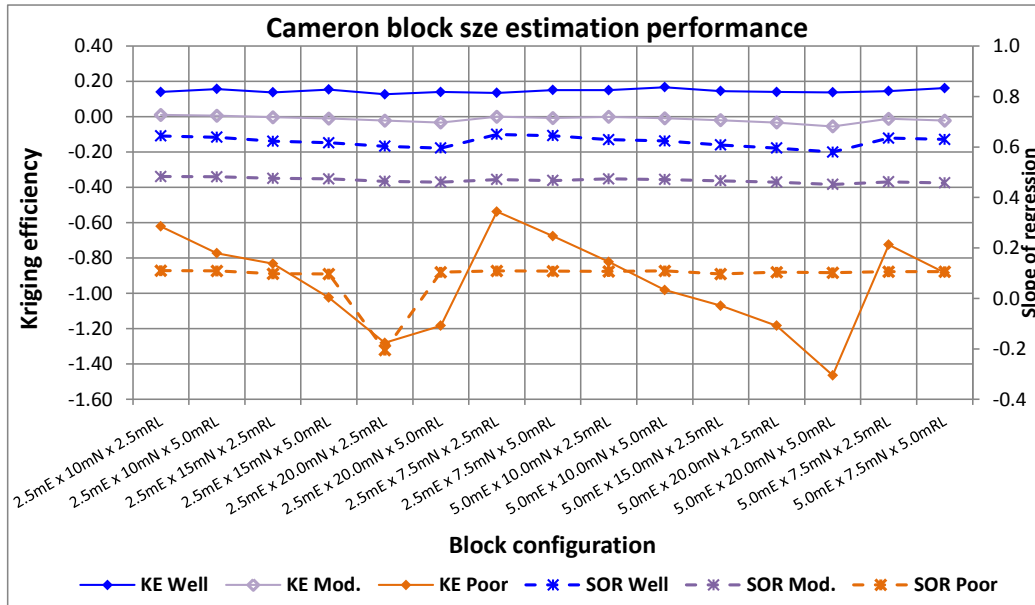
Main lode is the most significant mineralisation at Cameron and the block size optimisation was based on this lode exclusively. Block configurations varying between 2.5 and 5.0 mE, 7.5 to 20.0 mN and 2.5 to 5.0 mRL were tested using an initial search orientation based on the Main variography.

The results (Figure 14.19) indicate that the kriging efficiency (KE) is consistently low, irrespective of the block configuration and no significant variation was observed within the well and moderately informed areas for the differing parent cell configurations. A cyclic pattern was observed in the poorly informed areas with a configuration using 2.5 mRL and either 2.5 mE or 5.0 mE cells were

optimal, but only in the poorly informed areas. The slope of regression (SOR) did not exhibit much variation in any of areas except for the 2.5 mE x 20 mN x 2.5 mRL cell configuration in the poorly informed areas, which was the worst performing.

As a significant portion of the mineralisation has been tightly drilled from underground and was considered likely to be classified as a Measured Resource, a parent cell size of 5 mE x 10 mN x 5 mRL was selected as it provided the maximum kriging efficiency for the well informed areas.

**Figure 14.19 Kriging neighbourhood analysis to optimise block size**



**14.6.2. OPTIMISATION OF SEARCH AND SAMPLE NUMBERS**

For the subsequent search and number of samples testing, the block size was set to 5.0 mE by 10.0 mN by 5.0 mRL. The test work was done for FW1, Mid, Main and HW lodes only, as these were the best informed and most significant structures. All tested lodes exhibited a similar pattern in regards to the number of samples. More than 44 samples resulted in only marginal improvement in the estimation metrics and a minimum of 8 to 12 samples were required.

Figure 14.20 shows the KNA results for FW1/Zone 10. Using the variogram parameters for the search resulted in only the well informed area being estimated. None of the subsequent search options estimated the poorly informed areas. The optimal search strategy identified was v4 which uses a search orientation rotated into the plane of the mineralisation and a primary search radius of 75 m with intermediate and minor anisotropies reproducing the variogram.

Figure 14.20 KNA search and number of samples for FW1/Zone 10 (upper - kriging efficiency, lower – slope of regression)

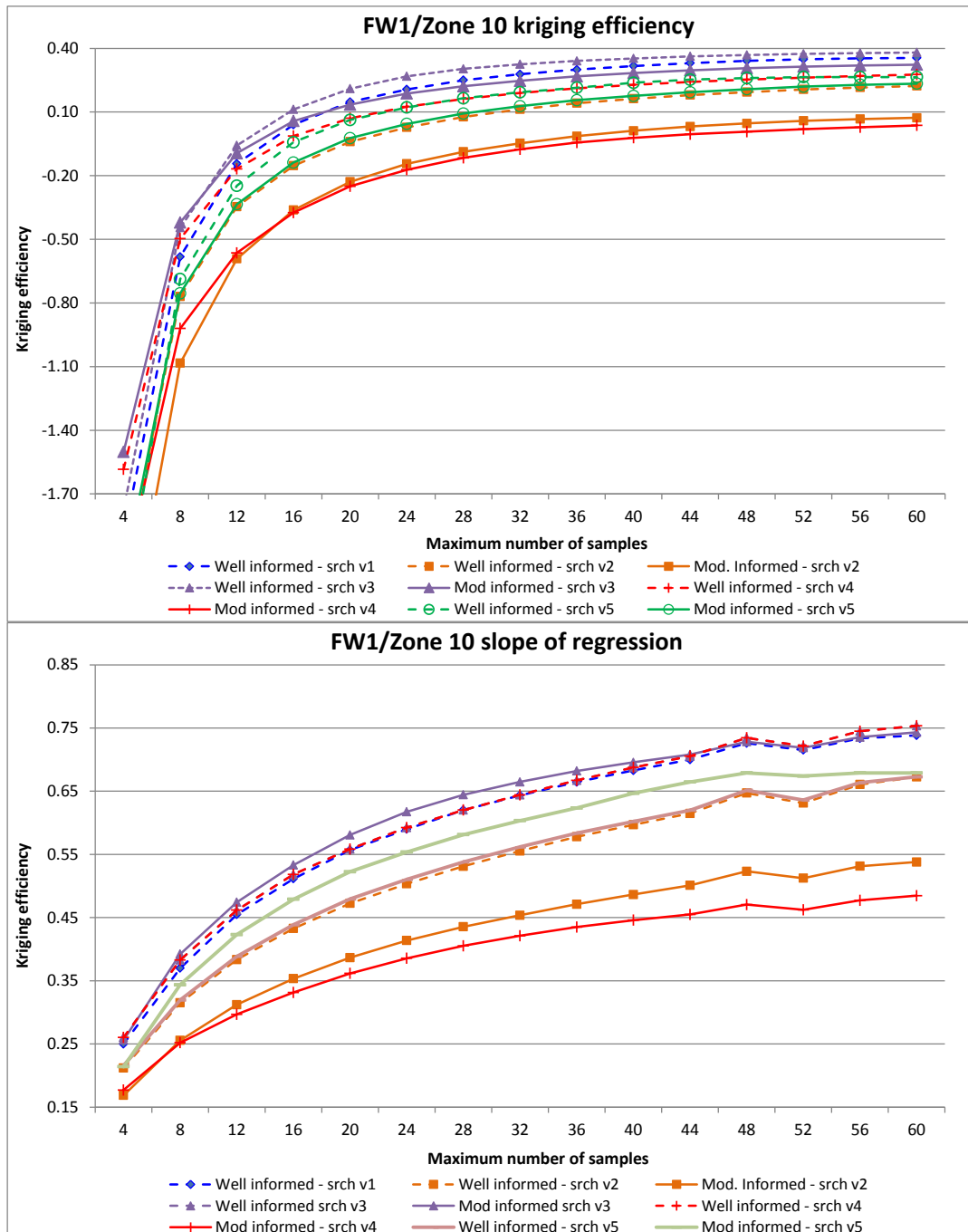


Figure 14.21 shows the KNA results for MID/Zone 30. None of the trialed parameters were able to estimate any of the moderately or poorly informed areas, primarily as a function of the very narrow width of the Mid lode combined with the oblique orientation of the variogram to the lode. The optimal search strategy identified was v4 which uses a search orientation rotated into the plane of the mineralisation and a primary search radius of 75 m, but with an increased ratio/search distance for the 3<sup>rd</sup> axis.

Figure 14.21 KNA search and number of samples for MID/Zone 30 (upper - kriging efficiency, lower – slope of regression)

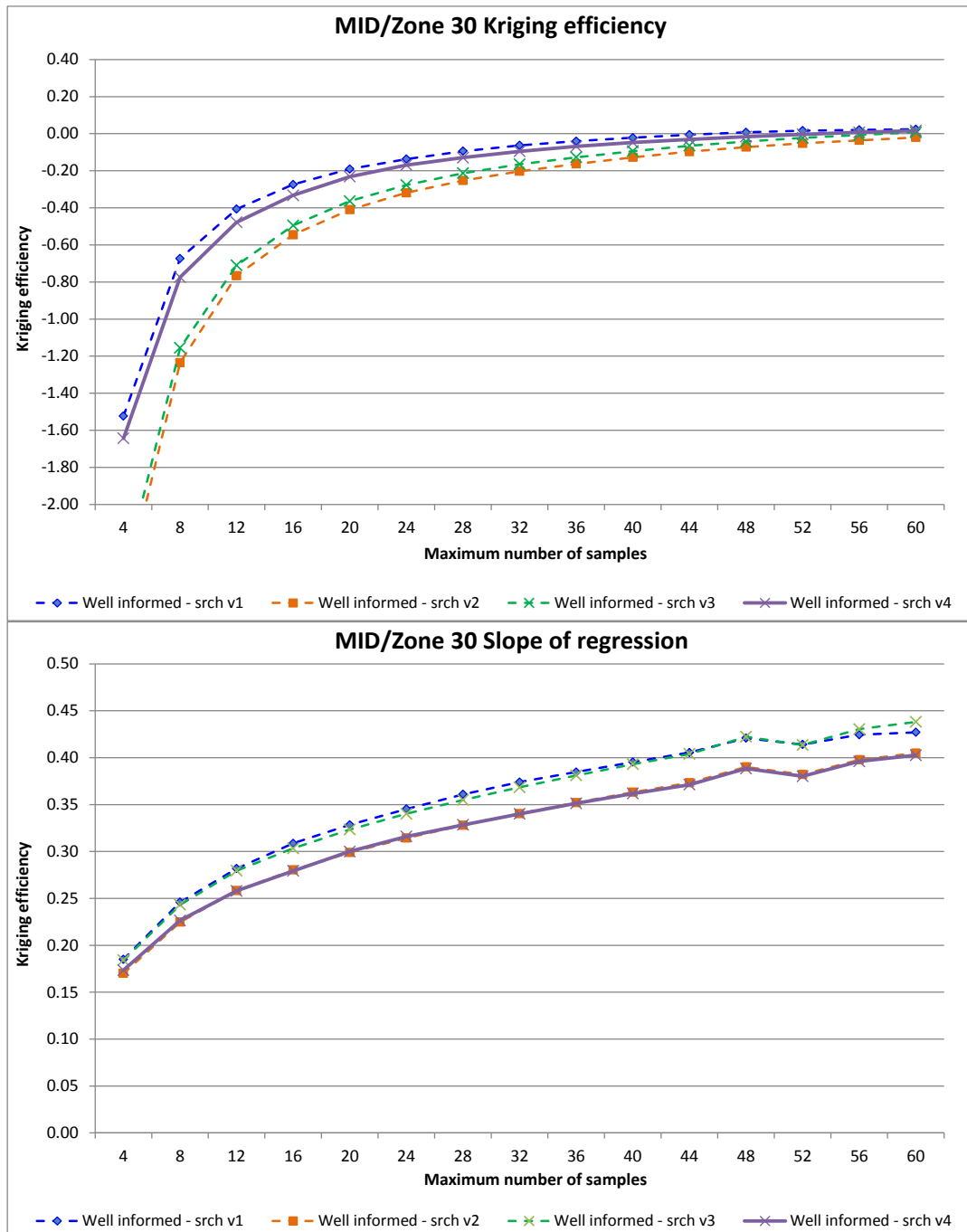


Figure 14.22 shows the KNA results for Main/Zone 40 (note that only the well and moderately informed results are shown). A total of 6 different search strategies were trialed. The optimal search strategy identified was v4 which used the variogram orientations but reducing the primary search distance to 30 m.

Figure 14.22 KNA search and number of samples for Main/Zone 40 (upper - kriging efficiency, lower – slope of regression)

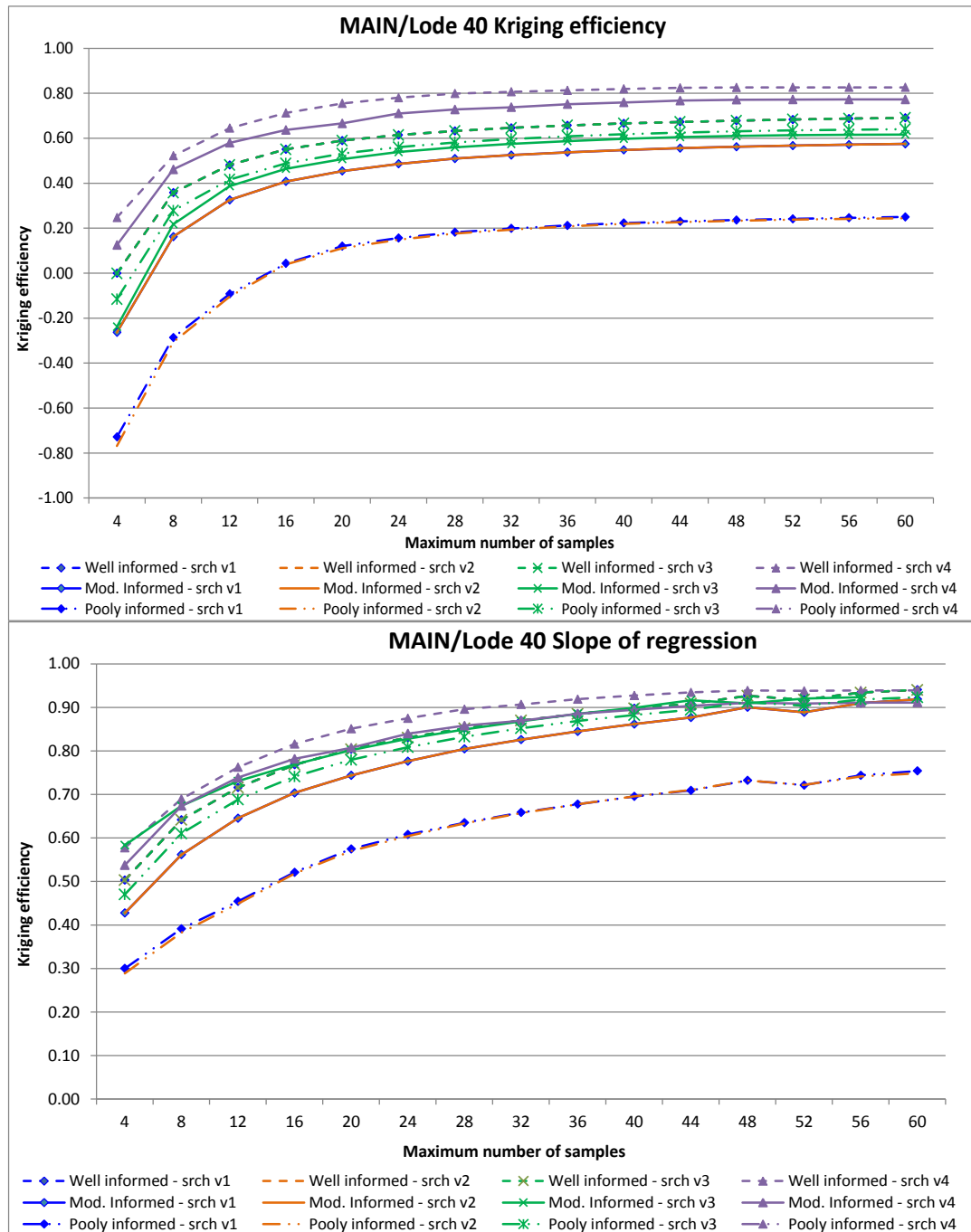
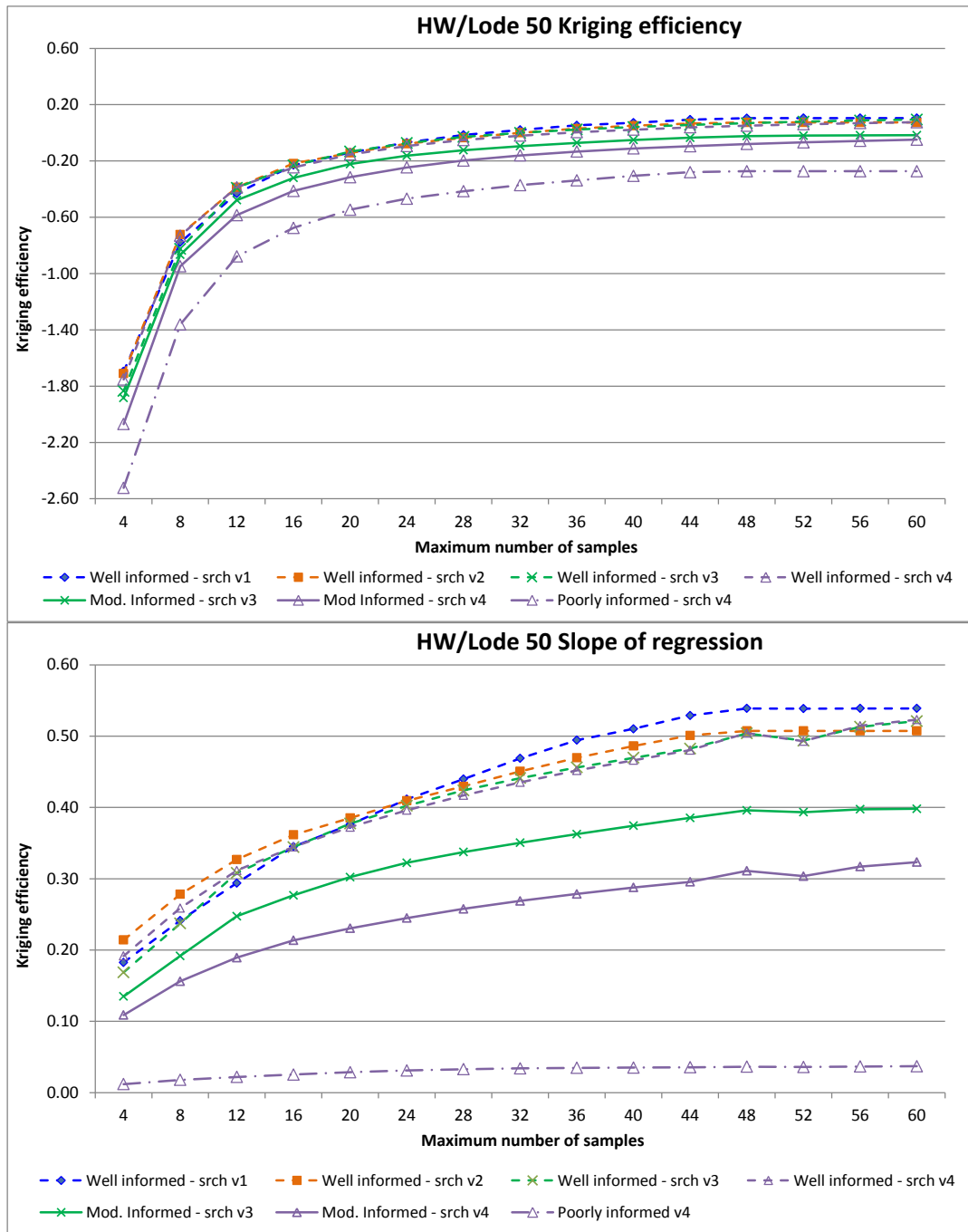


Figure 14.23 shows the KNA results for HW/Zone 50. Four different strategies were trialled but the first strategy using the variogram orientation and ratios were optimal in terms of estimation metrics. However the poorly informed area was not estimated in the first 3 search strategies because of the very narrow minor search range.

Figure 14.23 KNA search and number of samples for HW/Zone 50 (upper - kriging efficiency, lower – slope of regression)



## 14.7. BLOCK MODEL

A 3D prototype block model was developed that covers the entire Cameron project area. Details of this model are given in Table 14.11. The topography used was sourced from a Leapfrog topographic surface created in late October 2015.

**Table 14.11 Block model dimensions**

	Block model extents		Parent block size (m)	Sub-blocking size (m)
	Minimum	Maximum		
<b>Easting</b>	99650	100500	5	0.625
<b>Northing</b>	49705	51300	10	2.5
<b>Elevation</b>	80	1025	5	1.25

Table 14.12 shows a comparison between the wireframe volumes and the block model volumes by the respective zones. There is good correlation between the wireframe and block model volumes.

## 14.8. GRADE ESTIMATION

### 14.8.1. ORDINARY KRIGING INTERPOLATION

The gold grade was estimated into parent blocks within the mineralised domains using ordinary kriging (OK) of capped composite samples. Estimation parameters for kriging were based on a combination of observed geology, spatial distribution of data and using the results of KNA as the basis for final search parameters which are shown in Table 14.13.

All boundaries were treated as hard boundaries, and a three pass expanded search protocol was used. Estimation was also undertaken for the non-mineralised zone to provide a dilution blanket for any subsequent assessment of the deposit and to capture any lower-grade mineralisation adjacent to the mineralisation. The final search parameters used are given in Table 14.13. For the first pass only, a maximum of 4 samples per drillhole was used to minimise extrapolation and improve the representivity of the estimate in areas of close spaced drilling.

As the low-grade north FW lode (zone 1110) did not have a lot of samples, was low grade and had very low variability, the declustered, top-cut average grade was assigned to the zone.

Cells not estimated within the 3 search passes had the nearest estimated grade assigned to the cell and a search pass value of '4' assigned.



Table 14.12 Cameron January 2017 wireframe/block model fill comparison

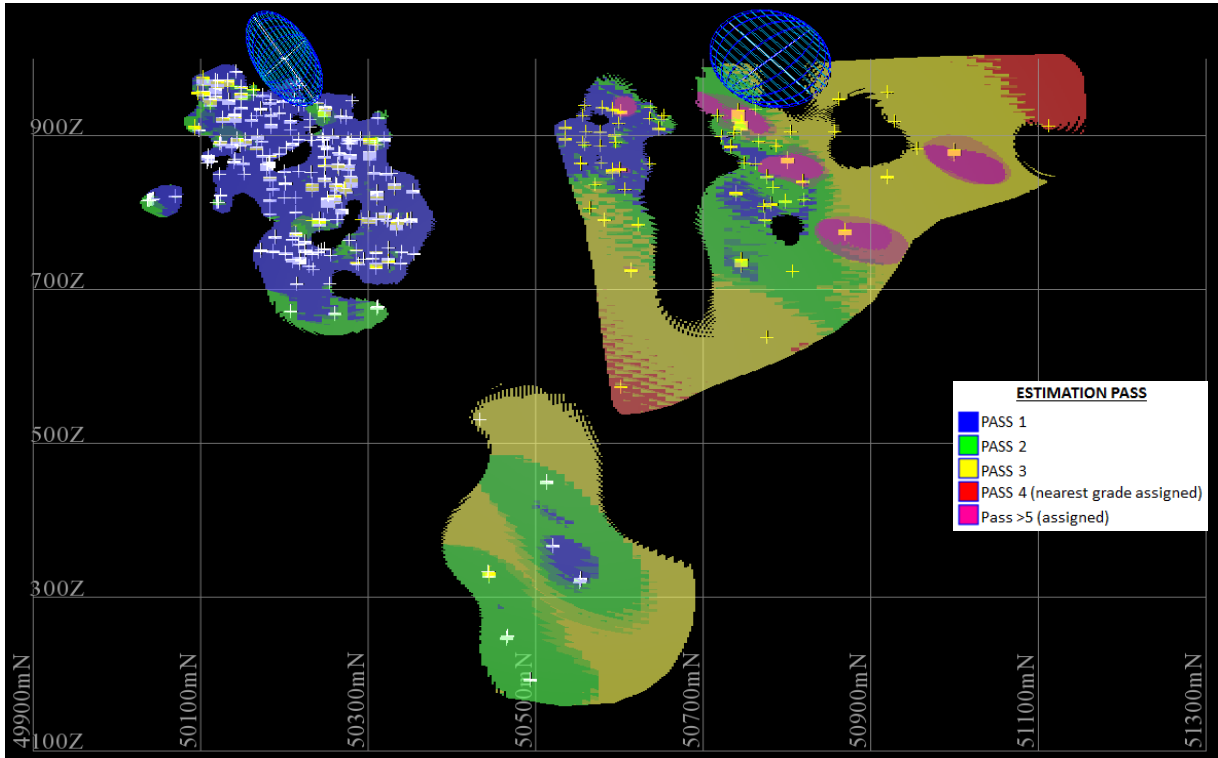
LODE	ZONE	Wireframe volume (m <sup>3</sup> )			Block model (m <sup>3</sup> )					
		Total	Mineralisation	Low-grade	Total	%	Mineralisation	% Diff.	Low-grade	% Diff.
FW1	10 / 1010	643,237	569,449	73,788	643,080	0.0%	569,178	0.0%	73,902	0.2%
FW2	20	957,743	957,743		958,416	0.1%	958,416	0.1%		
MID	30 / 1030	587,217	557,522	29,695	587,035	0.0%	557,283	0.0%	29,752	0.2%
Main	40 / 1040	6,480,501	5,015,959	1,464,542	6,480,446	0.0%	5,015,932	0.0%	1,464,514	0.0%
HW	50*	716,583	716,583		716,115	-0.1%	716,115	-0.1%		
Nth_FW	110 / 1110	398,583	313,614	84,969	397,857	-0.2%	312,900	-0.2%	84,957	0.0%
Nth_Main	140 / 1140	791,693	598,813	192,880	791,528	0.0%	599,811	0.2%	191,717	-0.6%
Nth_HW	150*	125,048	125,048		125,082	0.0%	125,082	0.0%		
All mineralisation		10,700,605	8,854,731	1,845,874	10,699,559	0.0%	8,854,717	0.0%	1,844,842	-0.1%

Table 14.13 Cameron January 2017 Mineral Resource estimate search parameters

ZONE	SURPAC Rotation			Primary search					Secondary search				Tertiary search			
	1	2	3	Distance	Ratio 1	Ratio 2	Samples	Samples/Hole	Distance	Ratio 1	Ratio 2	Samples	Distance	Ratio 1	Ratio 2	Samples
10	20	-48.6	-55	75	39.7	9.6	8-44	4	150	79.4	19.2	8-44	300	158.7	38.3	4-12
1010	15	-8.6	-59.6	75	36.8	3.1	8-44	4	150	73.5	6.3	8-44	300	147.1	12.6	4-12
20	65.6	-58.5	-16.7	100	73.0	7.6	4-8	N/A	200	146.0	15.2	4-8	300	219.0	22.8	2-8
30	040	-62	-43.2	75	42.6	11.8	8-44	4	150	85.2	23.5	8-44	250	142.0	39.2	4-12
1030	040	-62	-43.2	50	28.4	7.8		N/A	100	56.8	15.7		200	113.6	31.3	
40	010	-18.7	-68.8	50	43.9	12.0	8-44	4	100	87.7	24.1	8-44	200	175.4	48.2	4-12
1040	119.4	-54.5	53.9	30	18.2	3.6		N/A	60	36.4	7.2		120	72.7	14.3	
50	070	-60	000	50	13.3	2.0	8-44	4	125	33.2	5.0	8-44	250	66.5	10.0	4-12
110	020.8	-41.6	-48.1	75	71.4	2.5	8-44	999	150	142.9	5.0	8-44	250	238.1	8.3	4-12
1110																Assigned
140	090	-70	00	75	37.5	5.3		N/A	150	75.0	10.6	8-44	250	125.0	17.6	4-12
1140	119.4	-54.5	53.9	75	45.5	8.9	8-44	N/A	150	90.9	17.9	-844	250	151.5	29.8	4-12
150	005	000	-80	100	72.5	3.3	8-44	N/A	200	144.9	6.7	8-44	350	253.6	11.7	4-12
1000																

Figure 14.24 to Figure 14.28 shows the search ellipses for the first pass and available samples for the respective lodes with the resultant estimate coloured by estimation pass. Note that the ellipses for the low grade zones are not shown.

**Figure 14.24 FW1 and North FW (zones 10 and 110) search ellipses, samples and model coloured by estimation pass**



**Figure 14.25 FW2 (zones 20) search ellipse, samples and model coloured by estimation pass**

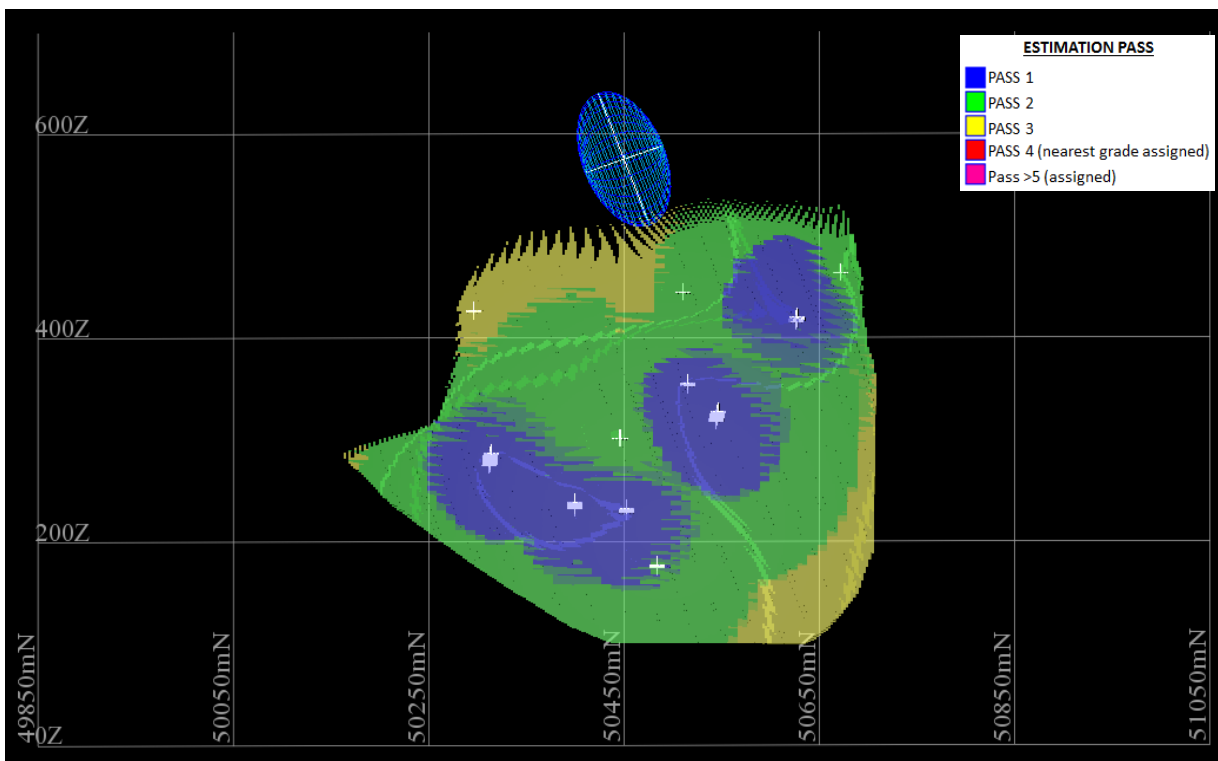


Figure 14.26 Mid (zones 30) search ellipses, samples and model coloured by estimation pass

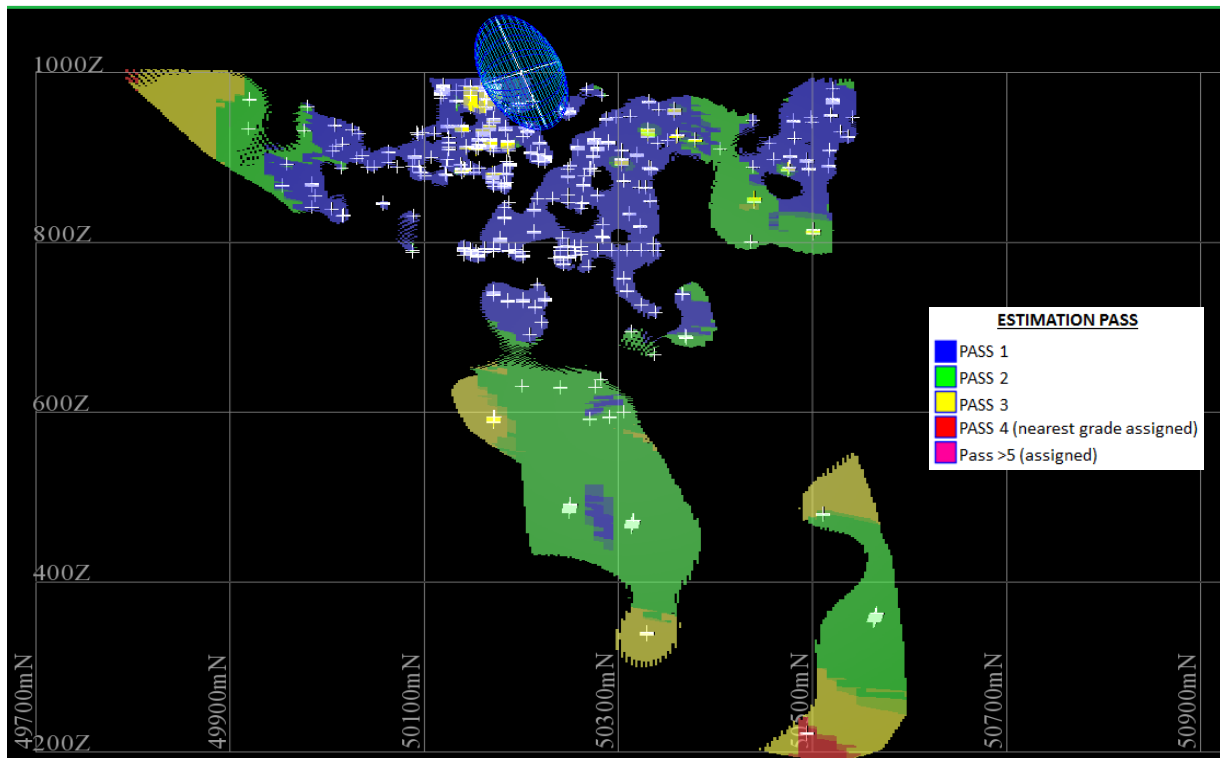


Figure 14.27 Main and North Main (zones 40 and 140) search ellipses, samples and model coloured by estimation pass

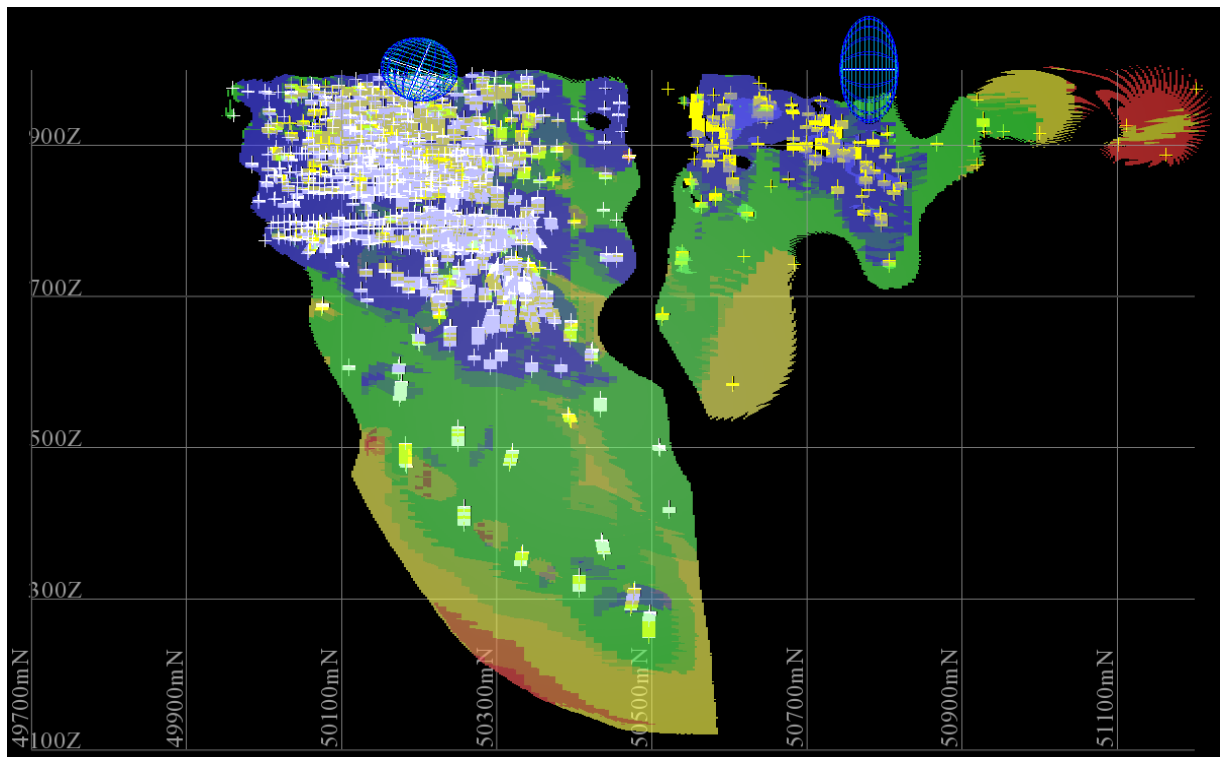
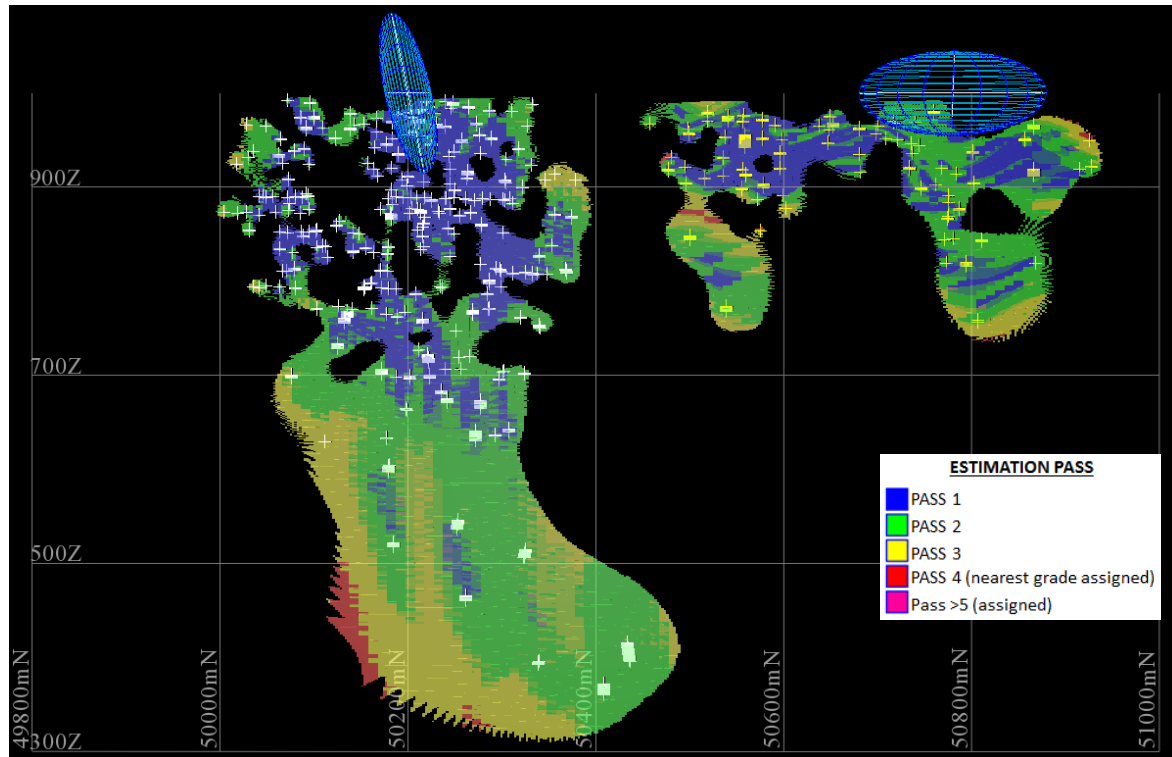


Figure 14.28 HW and North HW (zones 50 and 150) search ellipses, samples and model coloured by estimation pass



## 14.9. MODEL FIELDS

Table 14.14 shows the final model attributes in the block model. In addition to the various grade estimation, zone and lode fields, the model was coded with fields to capture the modelled rock and material type, dry bulk density resource classification and a mined flag.

Table 14.14 Block model attributes 'cameron\_151105\_depleted.mdl'

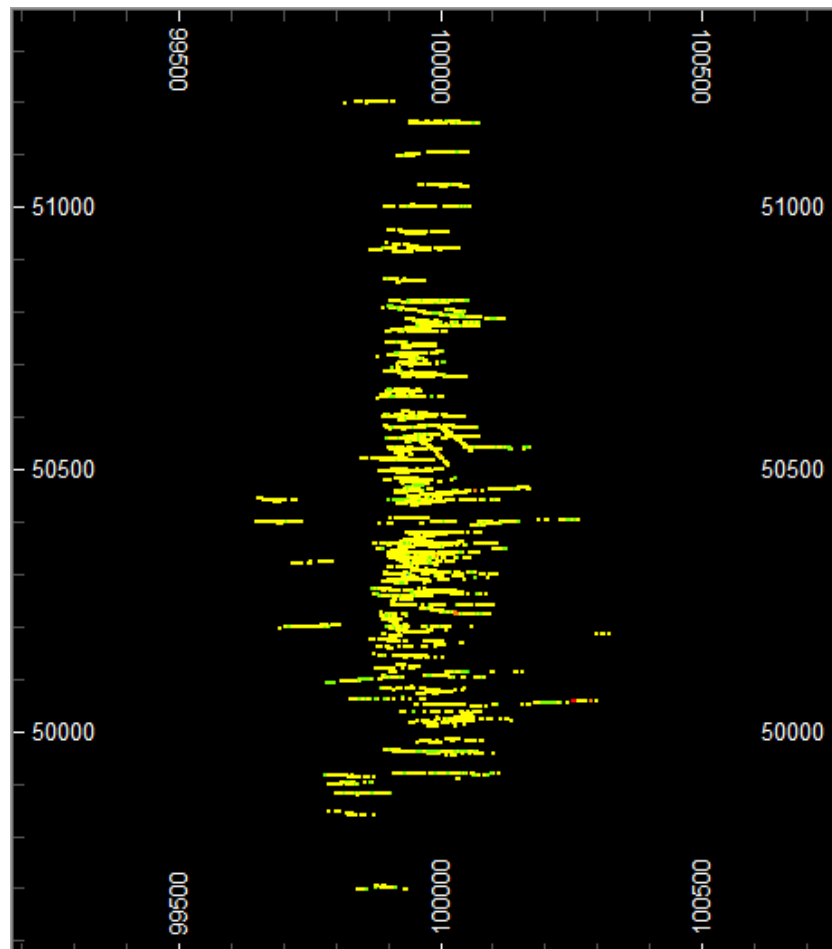
Attribute Name	Type	Decimals	Background	Description
au_ad	Float	3	-99	Average distance samples informing estimate
au_dn	Float	3	-99	Distance to nearest sample informing estimate
au_ke	Float	3	-99	Estimate kriging efficiency
au_kv	Float	3	-99	Estimate kriging variance
au_nnegw	Integer	-	-99	Number of negative kriging weights informing estimate
au_ns	Integer	-	-99	Number of samples informing estimate
au_pass	Integer	-	0	Estimation search pass identifier 1, 2 and 3 are OK estimate; 5=assigned value
au_ppm	Float	3	-99	ppm cut gold grade
au_ppm_uncut	Float	3	-99	ppm uncut gold grade - do not report
au_slope	Float	3	-99	Slope of regression of gold estimate
density	Float	3	0	Bulk density
lode	Integer	-	0	Mineralised lode identifier: FW1, FW2, Mid, Main, HW, NTH FW, NTH Main and NTH HW
material	Character	-	air	Material type
mined	Integer	-	0	Mined field (0 = unmined, 1 = mined/void)

Attribute Name	Type	Decimals	Background	Description
rescat	Character	-	none	Resource classification: Measured, Indicated, Inferred, Unclassified
rock	Character	-	air	Rock unit/type
rpt_flag	Character	-	None	Underground/opencut reporting field OC Min = RL > 750 mRL and gold cut >=0.5g/t, OC W = RL > 750 mRL and gold cut <0.5g/t UG Min = RL < 750 mRL and gold cut >=1.75g/t UG W = RL < 750 mRL and gold cut <1.75g/t None = outside of mineralisation envelope
s_dom	Character	-		
zone	Integer	-	0	Gold mineralisation zone code (10, 1010, 20, 30, 1030, 40, 1040, 50, 110, 1110, 140, 1140, 150, 1000)

### 14.10. BULK DENSITY

A total of 14,868 bulk density readings were taken over 119 diamond holes located across the Cameron deposit (Figure 14.29) of which 1,510 were within the mineralised zones. All measurements were taken using water immersion techniques. The available density data was coded by interpreted rock type and mineralisation lode/zone and used for subsequent analysis.

**Figure 14.29 Plan view of available density samples at the Cameron Project (north to right)**



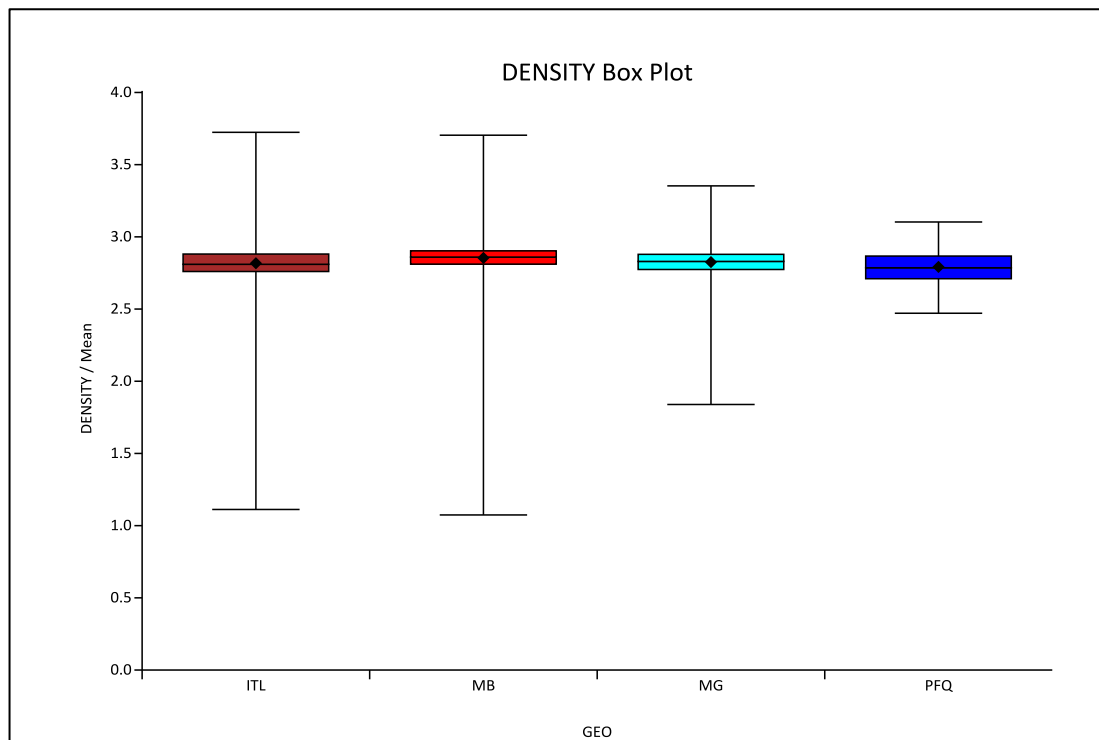
### 14.10.1. LITHOLOGY

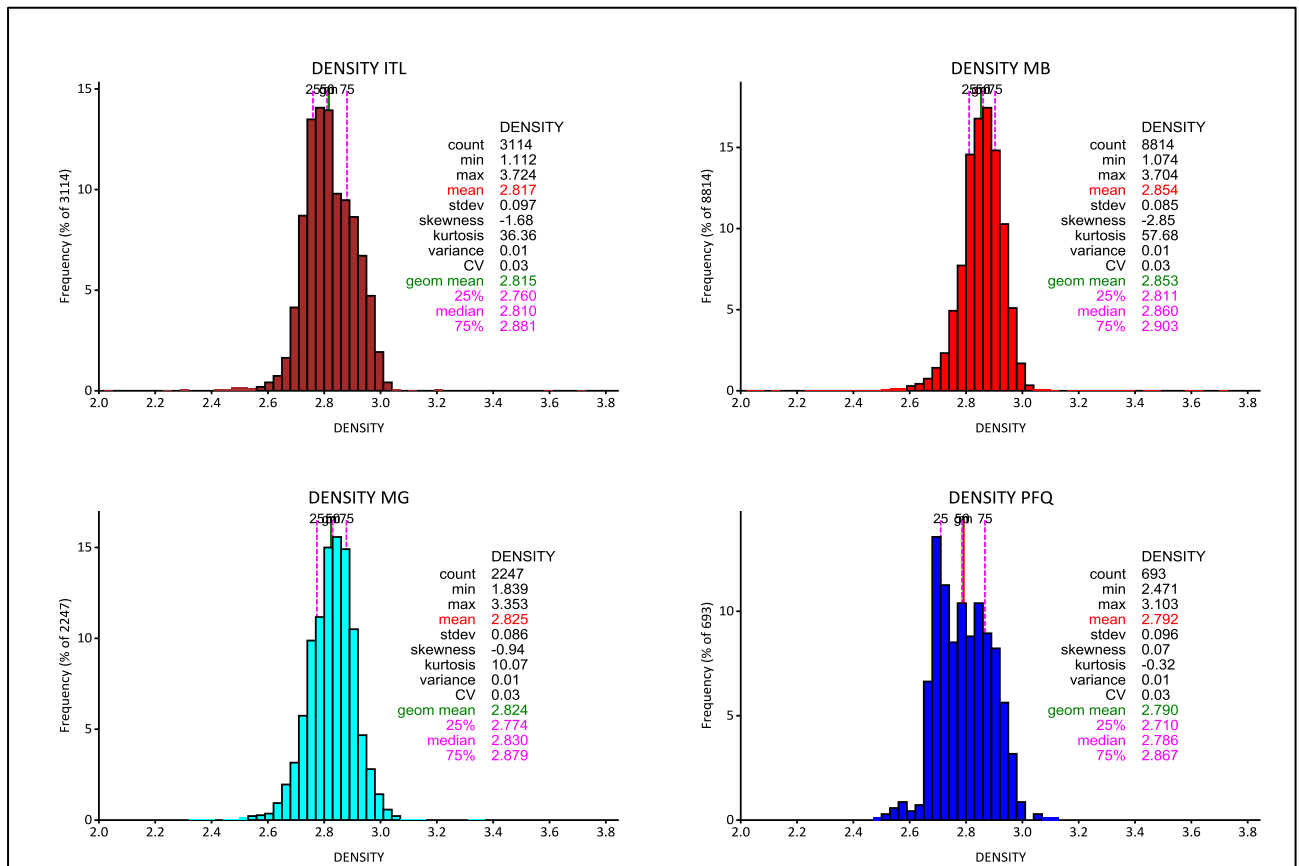
Summary bulk density statistics for each lithology are shown in Table 14.15. Box plots and histograms by lithology for all samples are shown in Figure 14.30 and Figure 14.31

**Table 14.15 Summary bulk density statistics, by rock type**

Domain	All	MB	MG	ITL	PFQ
Count	14,868	8,814	2,247	3,114	693
Min	1.074	1.074	1.839	1.112	2.471
Max	3.724	3.704	3.353	3.724	3.103
Mean	<b>2.839</b>	<b>2.854</b>	<b>2.825</b>	<b>2.817</b>	<b>2.792</b>
Total	42211	25155	6348	8773	1935
Variance	0.01	0.01	0.01	0.01	0.01
StDev	0.09	0.085	0.086	0.097	0.096
CV	0.03	0.03	0.03	0.03	0.03

**Figure 14.30 Bulk density box plot by lithology (all samples)**



**Figure 14.31 Histograms by lithology (all samples)**


### 14.10.2. MINERALISATION

Summary statistics for all mineralisation zones, irrespective of lithology, are presented in Table 14.16. Box plots and histograms for each mineralisation zone are displayed in Figure 14.32 to Figure 14.33 and demonstrate that overall, there is little variation in the average density of each domain (ranging from 2.807 to 2.866 t/m<sup>3</sup>).

**Table 14.16 Summary statistics, by mineralisation zone**

ZONE	GLOBAL	FW1	MID	Main	HW	Nth_FW	Nth_Main	Non-Mineralised
		10	30	40	50	110	140	
<b>Count</b>	14868	200	268	1100	182	81	603	12434
<b>Minimum</b>	1.074	2.647	2.667	1.074	2.044	2.484	2.471	1.112
<b>Maximum</b>	3.724	3.07	3.219	3.625	3.724	2.95	3.316	3.704
<b>Mean</b>	<b>2.839</b>	<b>2.866</b>	<b>2.862</b>	<b>2.853</b>	<b>2.86</b>	<b>2.807</b>	<b>2.878</b>	<b>2.835</b>
<b>Variance</b>	0.01	0	0.01	0.01	0.01	0.01	0.01	0.01
<b>Std.Dev.</b>	0.09	0.068	0.077	0.091	0.122	0.077	0.092	0.089
<b>CV</b>	0.03	0.02	0.03	0.03	0.04	0.03	0.03	0.03

Figure 14.32 Box plot of density data, grouped by mineralisation domain (Zone)

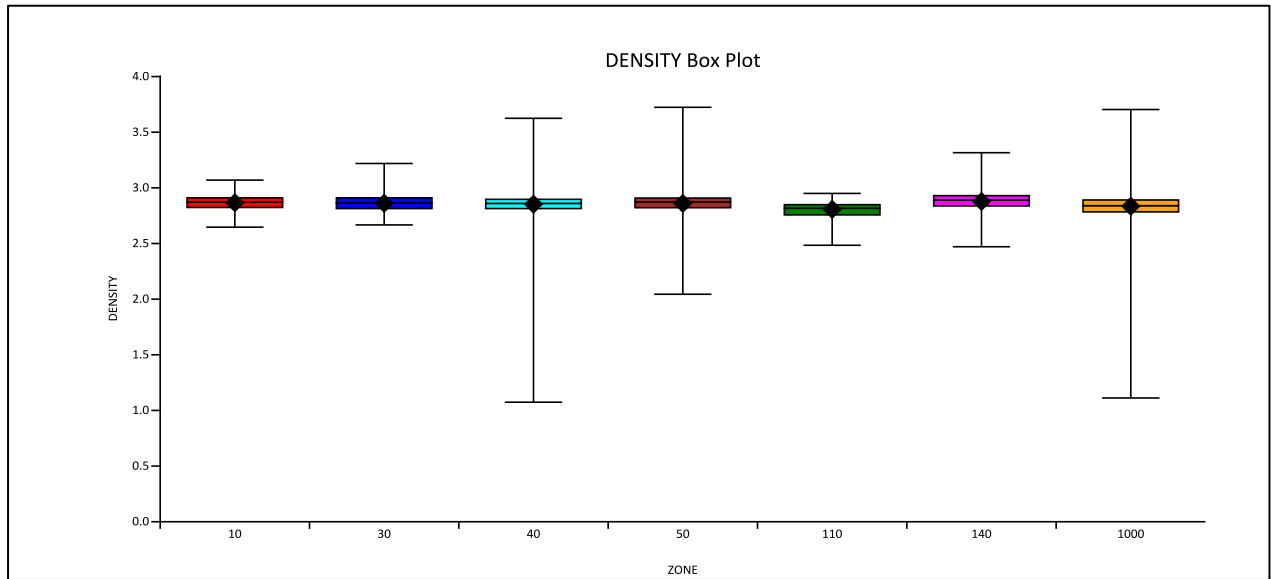
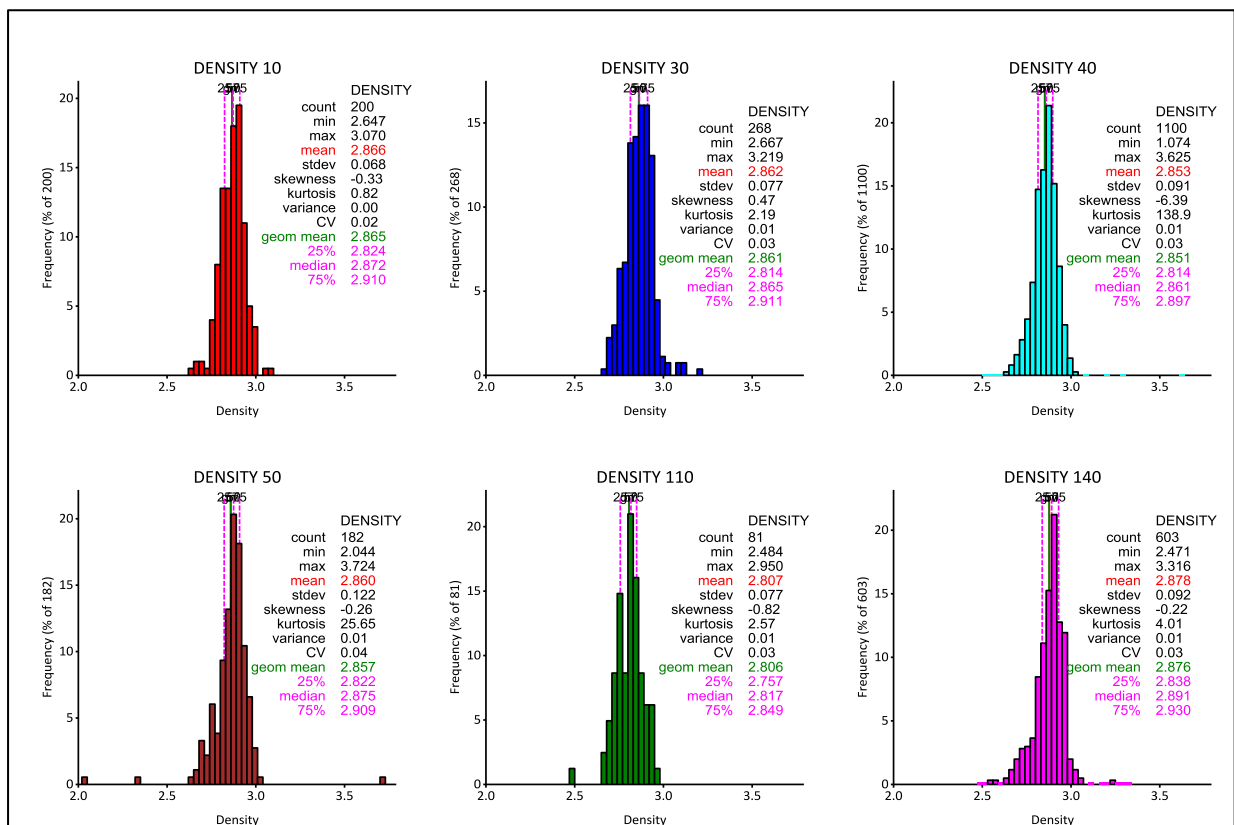


Figure 14.33 Histograms of the density data, by mineralised domain





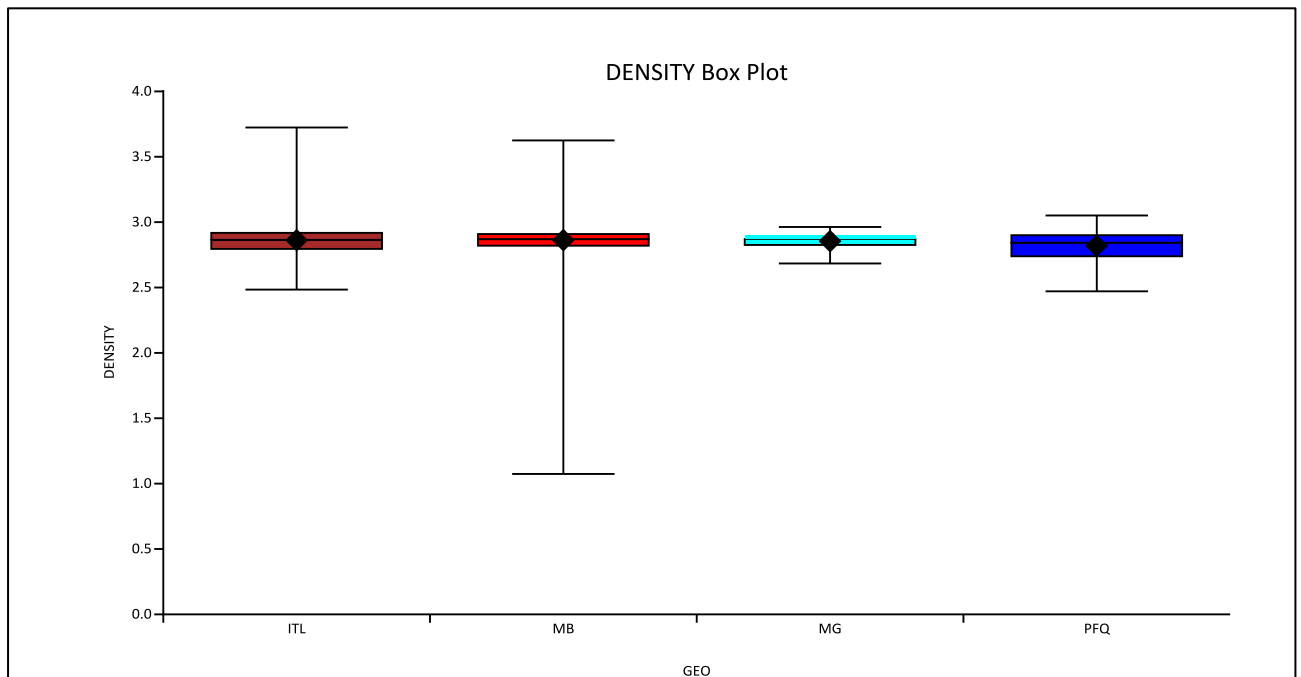
Average bulk density per mineralised zone based on lithology is presented in Table 14.17.

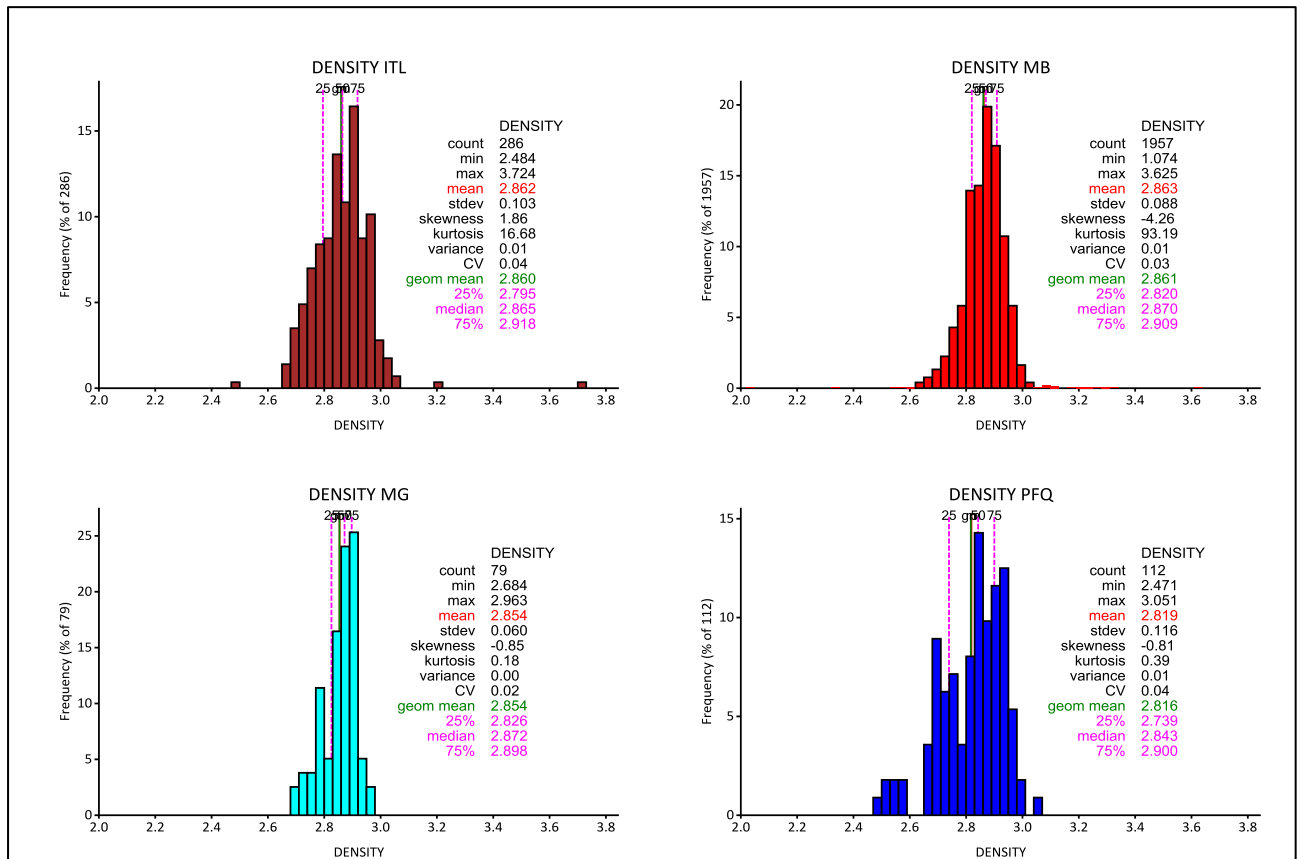
**Table 14.17** Number of samples and mean values by mineralised domain and rock type

Zone		MB		MG		ITL		PFQ	
		Count	Average	Count	Average	Count	Average	Count	Average
FW1	10	125	2.86	10	2.82			5	2.83
FW2	20	None							
MID	30	177	2.86			7	2.83	3	2.93
Main	40	617	2.86	60	2.87			39	2.81
HW	50	81	2.85			19	2.89	5	2.81
Nth FW	110	24	2.83			18	2.77		
Nth Main	140	178	2.88			121	2.86	21	2.78
All Min		1202	2.86	70	2.86	165	2.86	73	2.81

Box plots and histograms of the mineralised samples only are presented in Figure 14.34 and Figure 14.35.

**Figure 14.34** Box plot of density data grouped by lithology for mineralised samples only (Zone ≠ 1000)



**Figure 14.35 Histograms of density data grouped by lithology for mineralised samples only (ZONE ≠ 1000)**


### 14.10.3. DENSITY ASSIGNMENT

In considering density estimating, Optiro opted to assign density primarily based on lithology, modified by the mineralised state as presented in in Table 14.18. This was on the basis of the restricted range and low variation observed for density within the lithology/mineralisation groups.

**Table 14.18 Density assignments based on mineralisation and lithology**

Lode	Assigned dry bulk density (t/m <sup>3</sup> )			
	MB	MG	ITL	PFQ
<b>Mineralised lodes</b> (FW1, FW2, Mid, Main, HW, Nth FW, Nth Main, Nth-HW)	2.87	2.87	2.87	2.82
<b>Non-mineralised and low-grade lodes</b> (Zones 1000, 1010, 1030, 1040, 1110, 1140)	2.85	2.82	2.81	2.79

### 14.11. MODEL VALIDATION

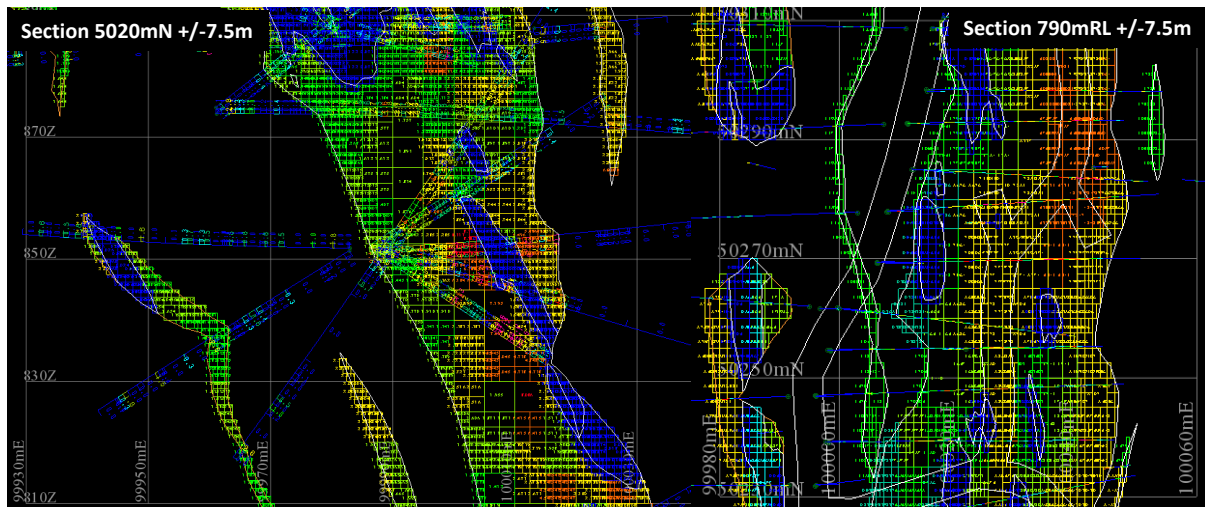
Optiro validated the OK block grades by utilising the following processes:

- visual comparisons of drillholes and estimated block grades
- statistical comparison of mean composite grades and block model grades
- examining swath plots of the input data and estimated block grades.

Initial visual validation of the block model was carried out by examining cross-section, long-section and plan views of the drillhole data and the estimated block grades. An example cross-section and

plan view is given in Figure 14.36 showing good correlation of the estimated block grades with the input drillhole data can be observed

**Figure 14.36 Visual validation of OK block grades**



The block estimates were then validated against the informing composites. Initial comparisons between the global, naïve and declustered averages compared to the block model ranged from poor to good, depending on the mean sample statistics (naïve versus declustered). This is common in datasets with a mixed degree of sampling. To provide a more definitive comparison, a nearest neighbour declustering method was used to provide an additional decluster grade which is presented in Table 14.19. Those zones that had a poor correlation between the naïve and declustered samples and model grades correlated better with the nearest neighbour average grade.

**Table 14.19 Global capped and model estimate comparison**

Lode	Samples				Model Average	Percentage Difference		
	No Samples	Naïve Mean	Declustered	NN Mean		Naïve	Declustered	NN
10	896	2.05	2.01	3.77	2.95	44%	47%	-22%
20	62	1.61	1.60	3.81	1.67	4%	4%	-56%
30	881	1.92	1.77	2.12	2.15	12%	21%	1%
40	9,817	2.73	2.50	2.07	2.15	-21%	-14%	4%
50	702	2.12	2.17	1.45	1.39	-34%	-36%	-4%
110	125	1.32	1.40	1.00	1.23	-7%	-12%	23%
140	472	1.92	2.09	3.18	2.06	8%	-1%	-35%
150	202	1.62	1.45	1.28	1.29	-21%	-11%	0%
1010	286	0.08	0.07	N/A	0.07	-11%	-4%	N/A
1030	199	0.09	0.07		0.08	-3%	18%	
1040	5,402	0.12	0.11		0.14	13%	27%	
1110	72	0.14	0.17		0.17	22%	0%	
1140	474	0.14	0.13		0.15	12%	16%	
1000	99,493	0.04	0.03		0.02	-51%	-43%	

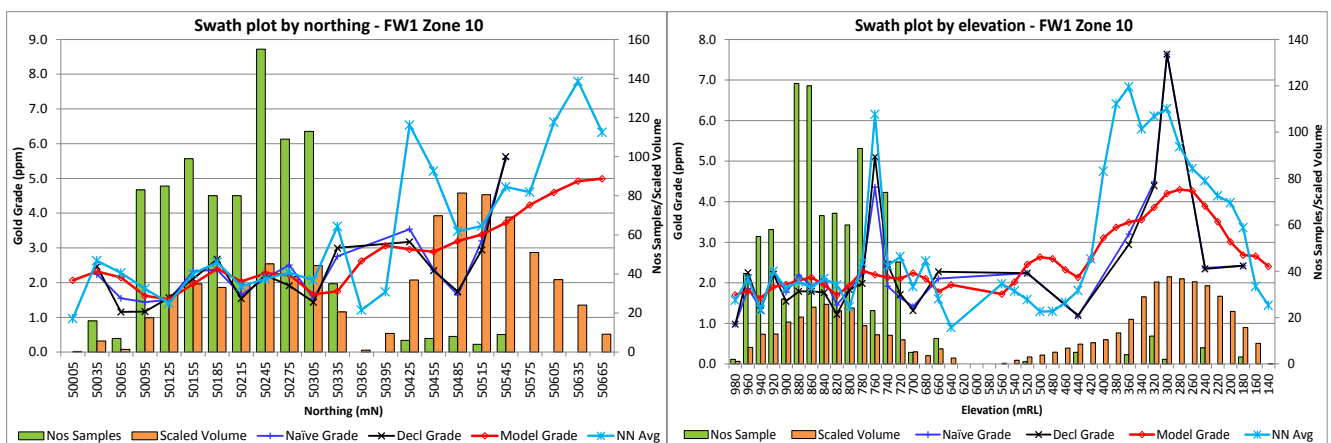
As an additional check, a similar comparison was undertaken for those portions of the block model that were estimated in Pass 1 only and the adjacent samples (within +/- 10 m of those areas) which are presented in Table 14.20. As expected the correlation within the pass 1 area is improved.

**Table 14.20 Pass 1 estimate and adjacent capped samples and model estimate comparison**

Lode	Samples			Model Average	Percentage Difference			
	Nos Samples	Naïve Mean	Declustered		Naïve	Declustered	NN	
10	886	2.04	2.01	2.94	2.11	3%	5%	-28%
20	62	1.61	1.60	1.77	1.65	2%	3%	-7%
30	859	1.89	1.74	2.07	1.82	-4%	5%	-12%
40	9,817	2.73	2.50	2.20	2.43	-11%	-3%	10%
50	659	2.19	2.20	1.71	1.78	-19%	-19%	4%
110	113	1.32	1.42	1.13	1.31	-1%	-8%	16%
140	433	1.90	1.96	2.66	1.80	-5%	-8%	-32%
150	202	1.62	1.45	1.25	1.41	-13%	-3%	12%
1010	280	0.08	0.07	N/A	0.07	-13%	-8%	N/A
1030	182	0.09	0.08		0.09	1%	16%	
1040	5,256	0.12	0.11		0.12	0%	9%	
1110	72	0.14	0.17		0.17	22%	-2%	
1140	20	0.15	0.13		0.15	2%	19%	

Swath plots in northing and elevation were prepared by individual lode for the mineralised zones only (Figure 14.37 to Figure 14.44). There is good correlation between the sample grade and the estimated trends. Where there is a significant difference between the sample and model, they coincide with areas of either reduced number of samples and/or reduced model volume (and hence no estimate exists to compare against).

The poor global comparison observed in the FW1 lode (zone 10) can be understood in reviewing the swath plots. At depth and to the northern extensions of the FW1 mineralisation, there are significantly fewer samples supporting the estimate and these fewer samples are at a higher average grade.

**Figure 14.37 Validation swath plot Zone 10 by northing (left) and elevation (right)**


With the FW2 lode (zone 20) there is good overall comparison except with the nearest neighbour mean at depth below 300 mRL and north of 50395 mN. A single very high grade sample has impacted the overall grade distribution and (arguably) biased the global nearest neighbour global mean.

Figure 14.38 Validation swath plot Zone 20 by northing (left) and elevation (right)

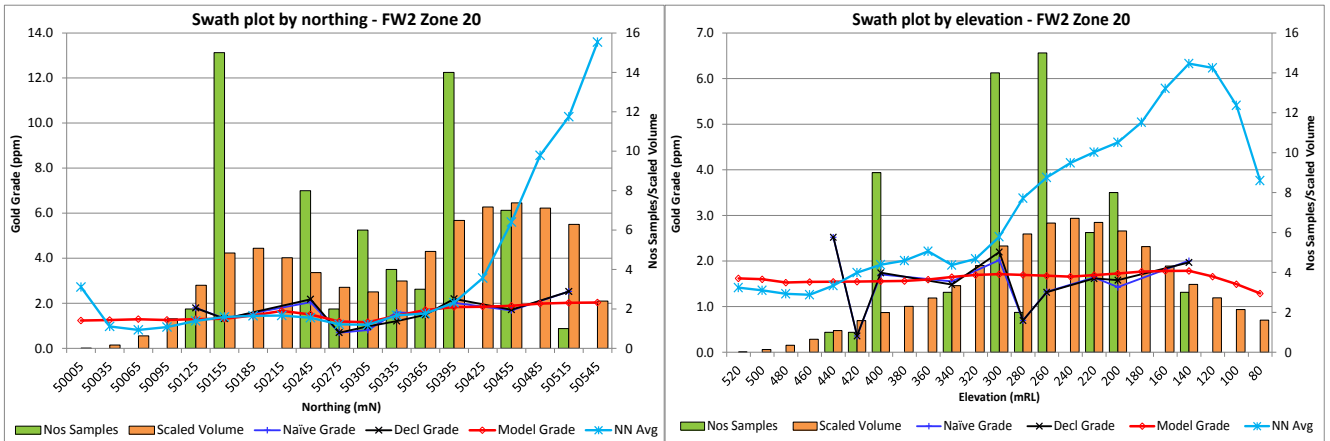


Figure 14.39 Validation swath plot Zone 30 by northing (left) and elevation (right)

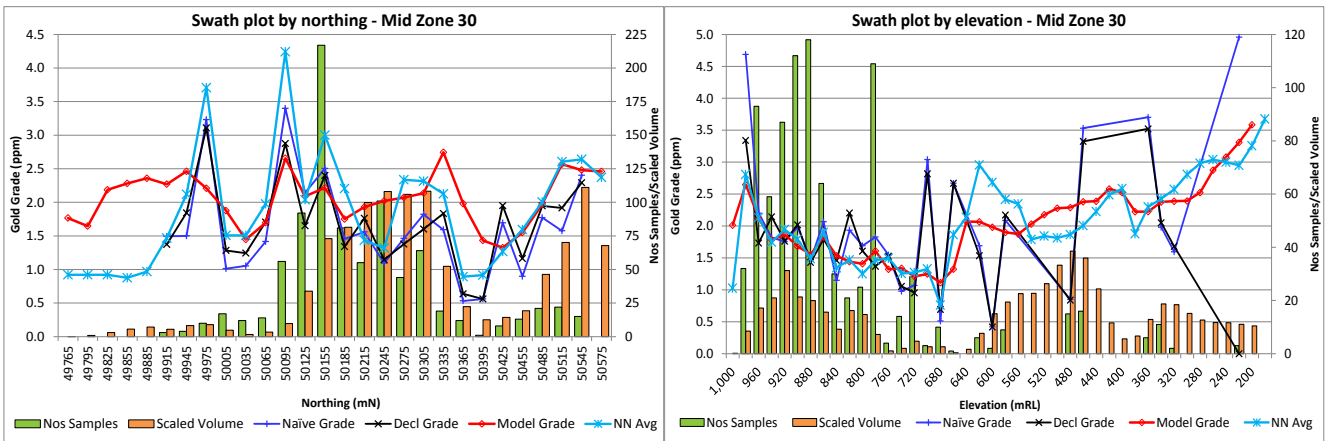


Figure 14.40 Validation swath plot Zone 40 by northing (left) and elevation (right)

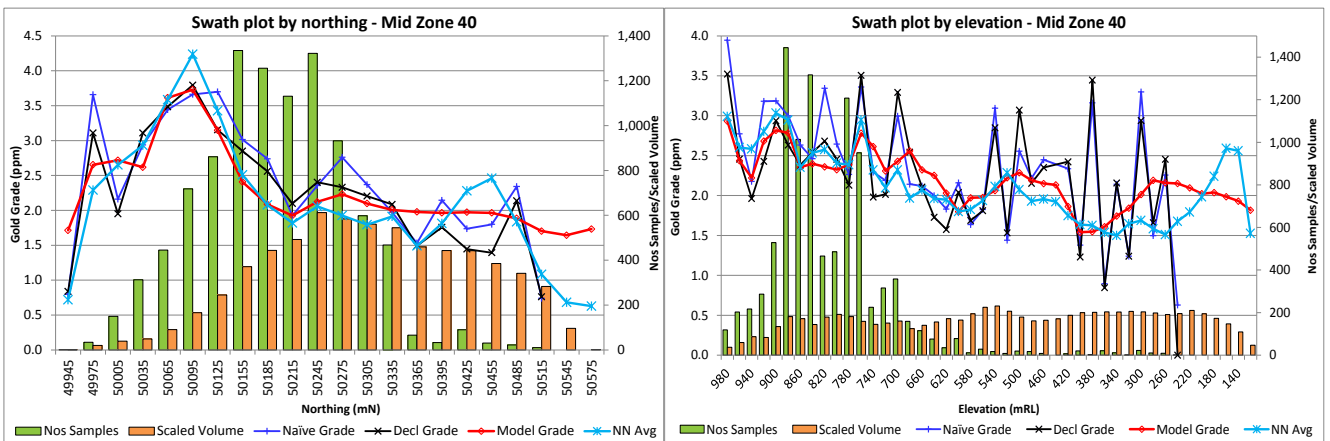


Figure 14.41 Validation swath plot Zone 50 by northing (left) and elevation (right)

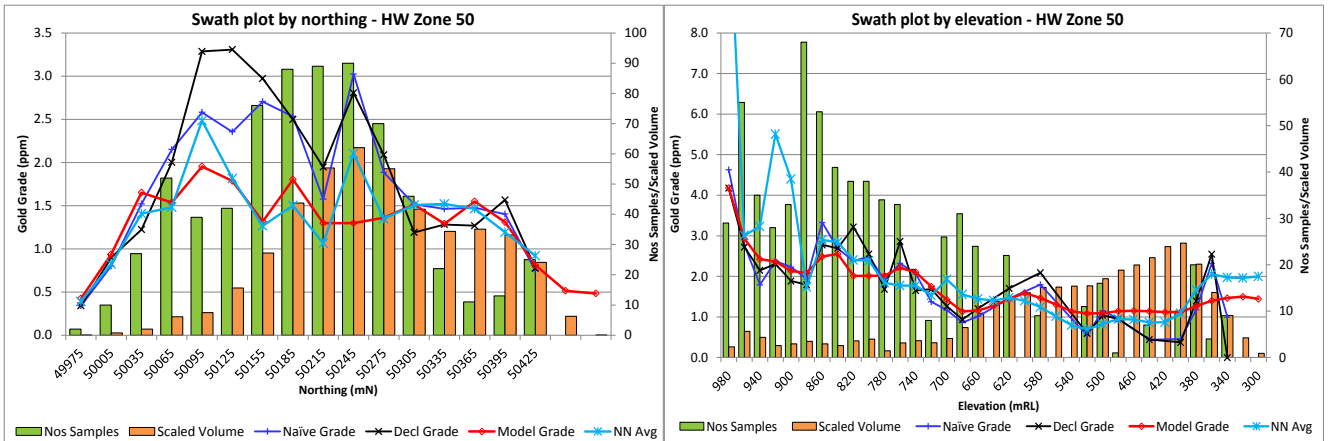


Figure 14.42 Validation swath plot Zone 110 by northing (left) and elevation (right)

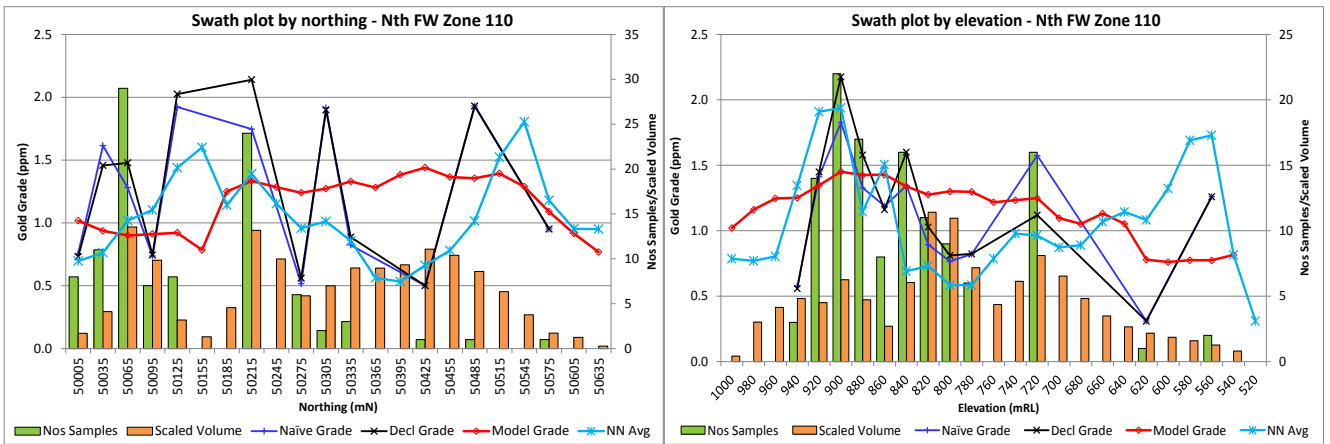
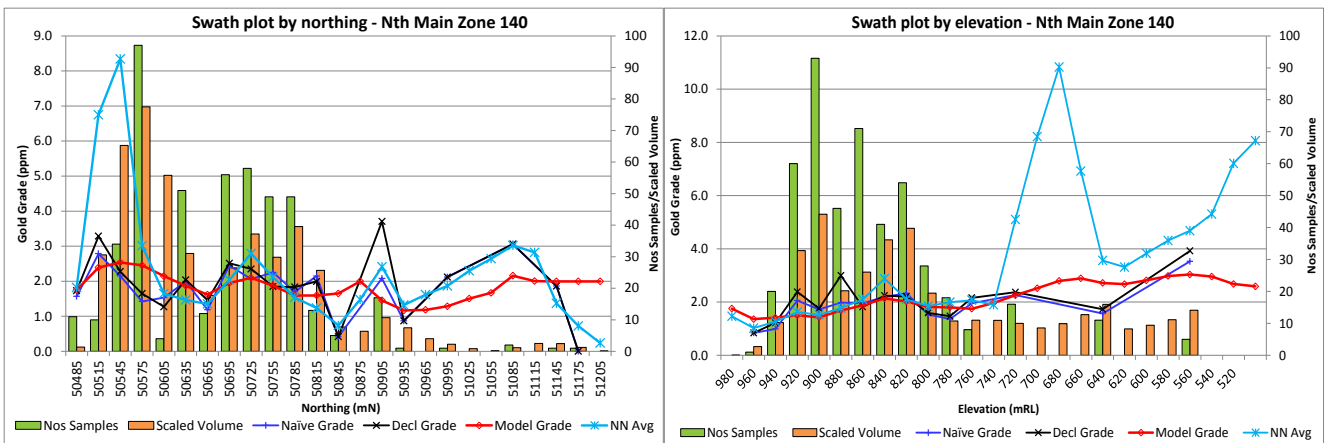
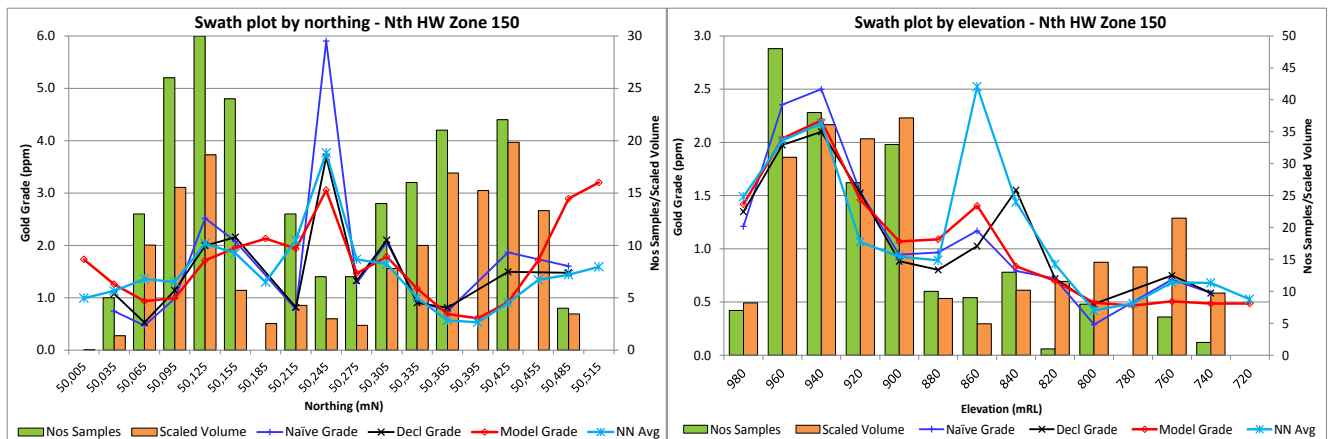


Figure 14.43 Validation swath plot Zone 140 by northing (left) and elevation (right)



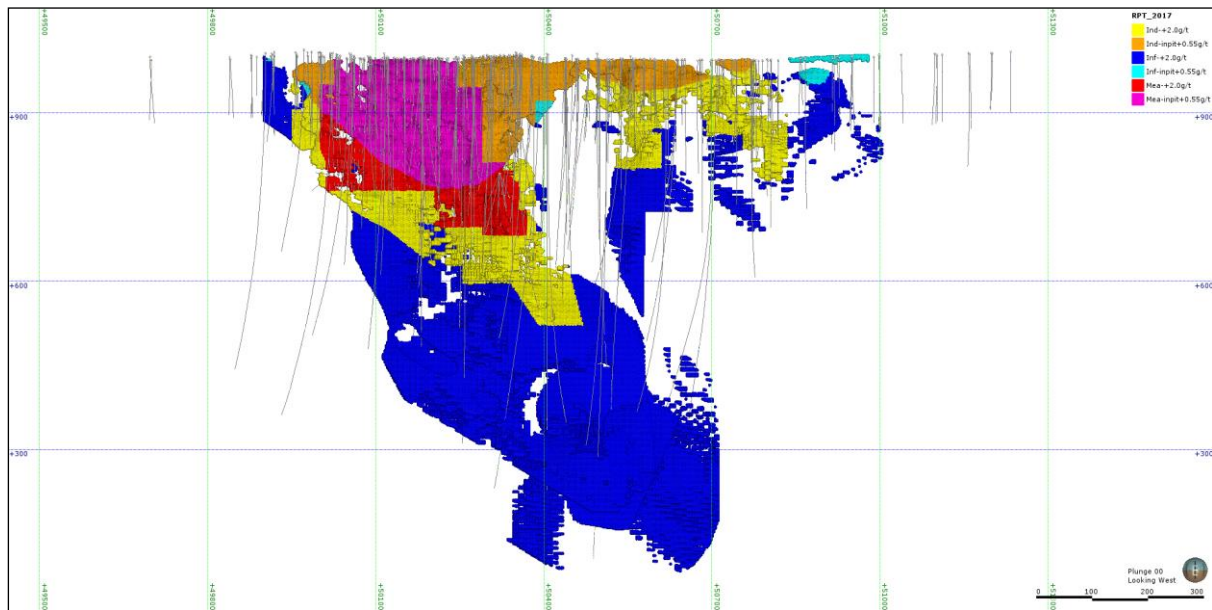
**Figure 14.44 Validation swath plot Zone 150 by northing (left) and elevation (right)**


## 14.12. MINERAL RESOURCE CLASSIFICATION AND REPORTING

The Cameron January 2017 Mineral Resource has been classified and reported using the guidelines of the Standards on Mineral Resources and Reserves of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM, 2014) and has been applied on the following basis:

- The available QAQC data has shown the available sampling and assaying has sufficient precision and accuracy to support Measured, Indicated and Inferred Mineral Resources.
- Measured Mineral Resources are those areas with sufficient assay and density data that further sampling or drilling will not materially improve the confidence in the resource estimate. Drilling density is as low as 4 m spacing in the underground workings, but averages 15 m centres. The block grade has been estimated in pass 1, has high kriging efficiency and slope of regression, and partial underground development through this area.
- Indicated Mineral Resources are those areas where the geology **and** grade continuity has been demonstrated to a confidence level sufficient to support this classification by drilling density of 25 to 50 m spaced drilling, high level of understanding of the geological controls and estimation confidence.
- Inferred Mineral Resources are those areas where geological continuity has been demonstrated, but grade continuity is inferred or extrapolated using broader spaced drilling.

The Mineral Resource classification as applied to the 2017 Cameron estimate is shown in long-section looking west in Figure 14.45.

**Figure 14.45 Cameron Mineral Resource classification domains – long-section view looking west**


There is material that has not been classified as a Mineral Resource on the basis that grade and geological continuity has not been demonstrated. This material represents mineralisation that can be considered exploration potential.

Currently there are no known factors related to environmental, permitting, legal, title, taxation, socioeconomic, marketing or political issues that could materially affect the Mineral Resource.

### 14.13. MINERAL RESOURCE ESTIMATE COMPARISONS

The January 2017 reported Mineral Resource was compared to the previous December 2015 Mineral Resource tabulation. Chalice used a single 0.5g/t Au cut-off grade to report the December 2015 Mineral Resource. The January 2017 Mineral Resource reported by First Mining used the December 2015 model and applied the following reporting criteria:

- 0.55g/t Au applied above the US\$1,350 shell for material amenable to open pit mining
- 2.00g/t Au cut-off grade below the pit shell for material amenable to underground exploitation.

The block model used is the same for both reports, and the differences between them is due to the changes in cut-off grade(s) and the application of a constraining US\$1,350 open-pit shell. As expected the Au grades have increased in all categories, but with a commensurate decrease in tonnage resulting in net losses of 20 Koz of metal in the Measured, 96 Koz of metal in the Indicated categories and 328 Koz in the Inferred category.



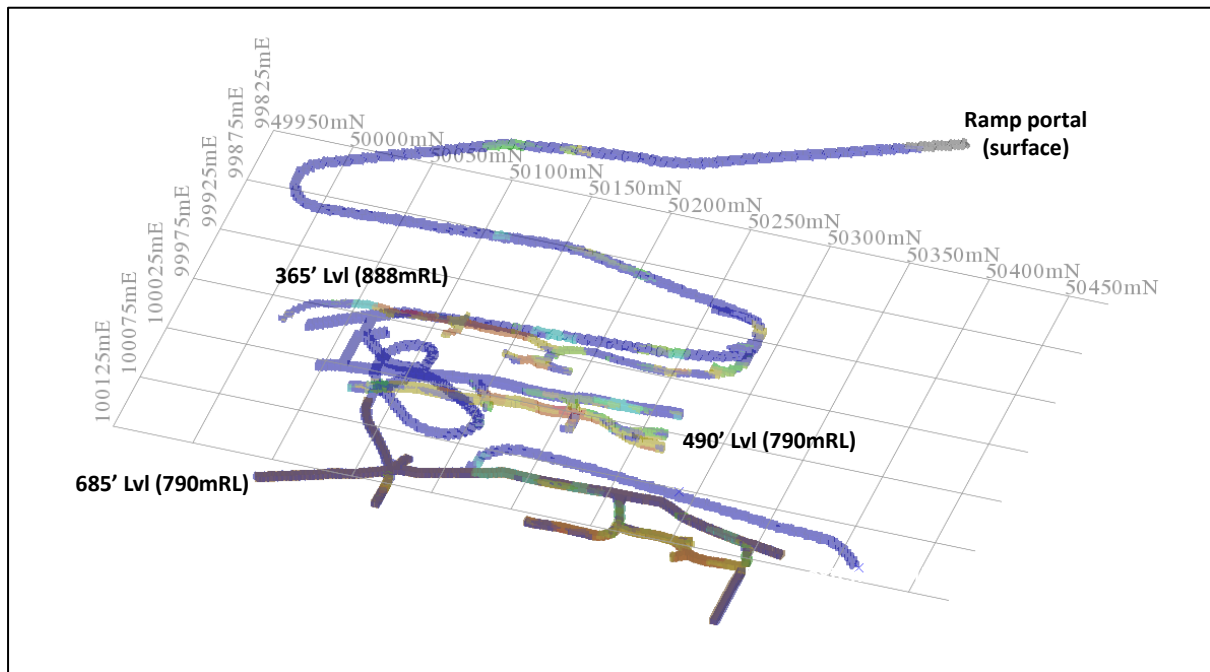
**Table 14.21 January 2017 and December 2015 Mineral Resource comparison**

		Comparison Table									
		Jan. 2017 model			Dec. 2015 model			Percentage difference			
Classification	Au cut-off grade g/t	Tonnes (x1,000)	Gold g/t	Gold Kozs	Au cut-off grade g/t	Tonnes (x1,000)	Gold g/t	Gold Kozs	Tonnes	Gold g/t	Gold Kozs
<b>Measured</b>	0.55	2,670	2.66	228	0.50	3,682	2.68	317	-8.7%	2.6%	-6.3%
	2.0	690	3.09	69							
<b>Indicated</b>	0.55	820	1.74	46	0.5	3,713	2.03	243	-41.6%	17.9%	-31.3%
	2.0	1,350	2.80	121							
<b>Measured + Indicated</b>		<b>5,520</b>	<b>2.61</b>	<b>464</b>	<b>0.5</b>	<b>7,395</b>	<b>2.36</b>	<b>560</b>	<b>-25.4%</b>	<b>10.8%</b>	<b>-17.1%</b>
<b>Inferred</b>	0.55	35	2.45	3	0.5	13,167	2.03	861	<b>-50.4%</b>	<b>25.0%</b>	<b>-31.8%</b>
	2.0	6,500	2.54	530							

#### 14.14. DEPLETION FOR MINING

The voids from the exploration development were supplied by Chalice, as three AutoCAD dxf files representing the ramp, and underground development on the 365 and 685 mRL. The void files were imported into SURPAC and inspected visually but upon validation were not immediately useable due to numerous intersecting faces. The intersections were corrected and valid SURPAC voids created which were used to flag the 'mined' field within the block model as show in Figure 14..

The available documentation of the underground mining was reviewed. The only reference to material management practices was for the 365 level and that '...the ore being visually determined by geological personnel on a mineralogical basis with the resultant muck being stockpiled'. It was also mentioned that all muck from the seven raises were sent to the high grade stockpile. No tabulation of the final volume, tonnes or predicted grade of the stockpiles has been identified to date. A direct and reliable reconciliation between the 2015 block model back to actual production grades is therefore currently not feasible.

**Figure 14.46 Cameron oblique view looking to the southwest showing depleted/mined cells**


The depleted tonnes and grade for the drift/level development were reported globally by material type (Table 14.22) and at a variety of grade cut-offs by level (presented in Table 14.22).

**Table 14.22 January 2017 depleted cells by material type (all development)**

Level	MINERALISATION			LOW-GRADE			NON-MINERALISED	
	Tonnes	Grade	Ozs	Tonnes	Grade	Ozs	Tonnes	Grade
365	8,789	3.60	1,018	2,879	0.11	10	4,483	0.1
490	16,372	3.36	1,769	2,924	0.14	13	16,221	0.1
685	10,383	3.37	1,124	994	0.11	3.5	26,704	0.1
<b>TOTAL</b>	<b>35,544</b>	<b>3.42</b>	<b>3,911</b>	<b>6,797</b>	<b>0.12</b>	<b>27</b>	<b>47,408</b>	<b>0.1</b>

## 14.15. CUT-OFF GRADE ASSUMPTIONS

The Cameron Mineral Resource estimate has been reported using separate cut-off grades for Mineral Resources within a constraining pit shell, and below this for material amenable to underground mining methods. Pit optimisation scenarios were run using the following parameters as listed in Table 14.23.

**Table 14.23 Optimisation Input Parameters**

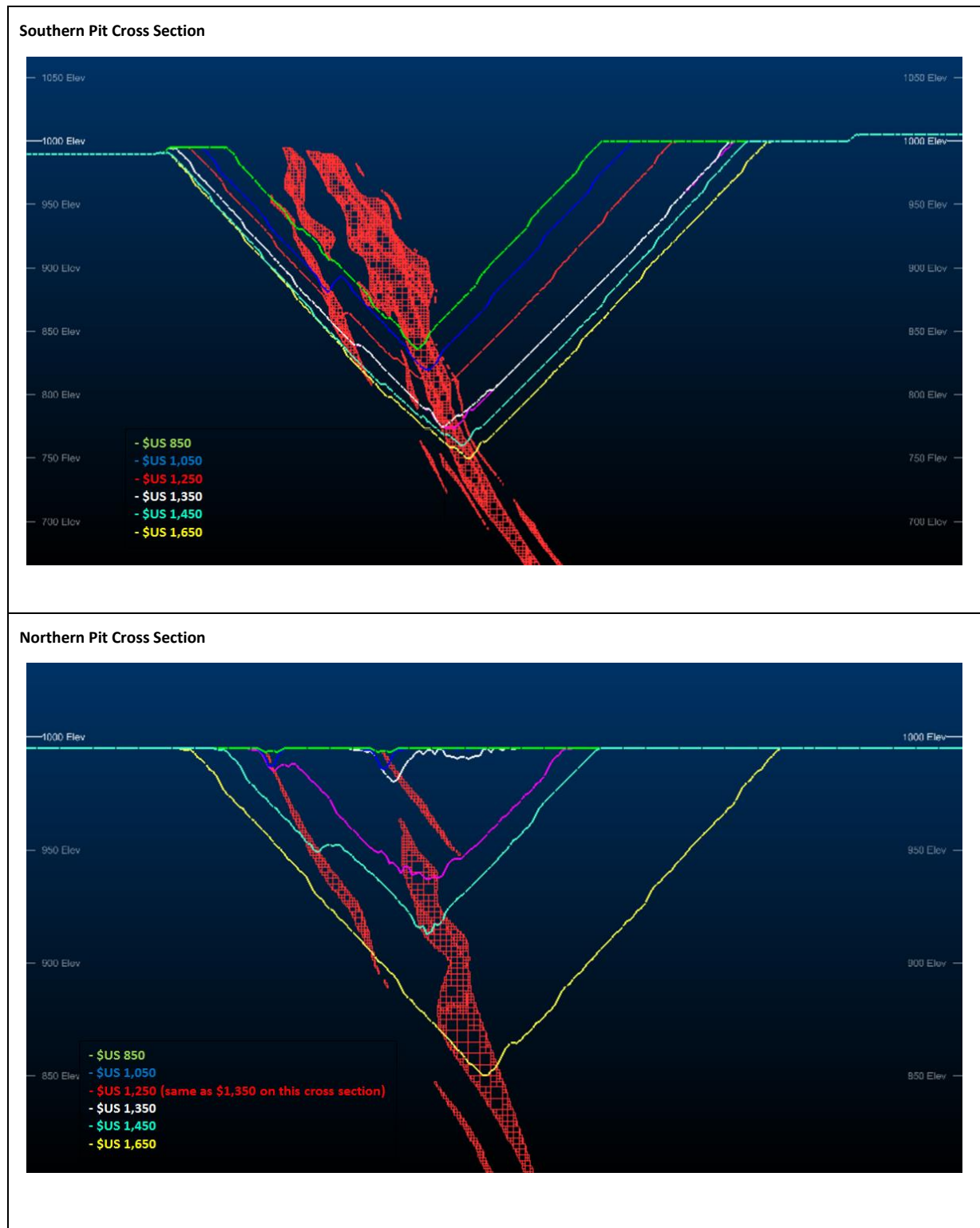
Item	Units	Amount	Comment / Source
<b>Financial</b>			
Gold Price	US\$	1,350	\$50 increments from \$US 850 to \$1,850 per oz
Exchange Rate	US\$ : CDN	1.25	First Mining Finance Corp
Discount Rate	%	5	First Mining Finance Corp
<b>Capital Expenditure</b>			
Initial Capital Allowance	US\$	0	
Sustaining Capital	US\$ /yr	0	
<b>Production Factors</b>			
Dilution	%	5	Optiro estimate
Mining recovery	%	95	Optiro estimate
Mining Rate – Ore Movement	ktpa	1,000	Nominal rate for optimisation purposes
Rehabilitation cost	US\$ /t waste	0.05	Optiro estimate
<b>Mining Costs</b>			
Mining Cost	US\$ /t	2.0	Surface cost (incl. D&B, L&H and mining admin)
Cost Increase with depth	US\$ /t/10m	0.05	Optiro estimate
Grade Control	US\$ /t ore	0.50	Optiro estimate
<b>Geotechnical</b>			
Overall slope, all rock types	degrees	48	First Mining Finance Corp
<b>Processing</b>			
Recovery, All rock types	%	91.5	2012 and 2014 SGS test work
Processing Cost, all rock types	US\$	20	First Mining Finance Corp
<b>Selling Cost</b>			
Refining	US\$ / oz	3	Optiro estimate
<b>Royalties</b>			
Total royalty	%	1.0	As per mining lease CLM305

Two cross sections through the deposit are shown in 14.48 to illustrate the pit shell outlines.

The Mineral Resource below the constraining US\$1,350 open pit shell has been reported using a 2 g/t Au cut-off grade.

The assumptions made are that the geometry, dip and style of mineralisation are amenable to underground mining using a sub level long hole open stoping mining method either with or without backfill. Using a gold price of US\$1,350/oz and mining cost of USD \$78/tonne (for mining (US\$55.50/tonne), processing (US\$20/tonne) and G & A (US\$2.50/tonne)) a cut-off grade of 2 g/t Au is considered appropriate for reporting of Mineral Resources. The cut-off grade calculation is presented as:

- $(\text{Process cost}) + (\text{G\&A cost}) + (\text{mining cost}) / (\$1350/\text{oz}) \times (0.915) / (31.103\text{g}/\text{oz})$ , or:
- $(\text{US\$}78/\text{tonne}) / (\text{US\$}39.71/\text{recovered gram Au}) = 1.96\text{g}/\text{t}$

**Figure 14.47 Pit Cross Sections**


A number of preliminary metallurgical studies have been carried out on samples from the Cameron deposit from 1985 to the present. Multi-element geochemical assays of the samples from the Coventry drillholes have indicated that concentrations of deleterious elements (such as sulphur) are not significant.

Metallurgical testwork carried out on samples of the Cameron Gold deposit showed that recoveries of 92% to 93% were returned from direct cyanidation of samples ground to 75 µm. The results also showed that the recoveries were grind sensitive with maximum recoveries at a P<sub>80</sub> grind size in the range 53 to 75 µm. An alternative processing regime of sulphide flotation (mainly pyrite), regrind of flotation concentrate followed by intensive cyanidation of flotation concentrate and flotation tailings provided gold recoveries marginally higher than direct cyanidation. At a grind size of 75 µm the optimum leach time was approximately 24 hours.

Testwork completed by SGS Vancouver in 2013 used a composite sample taken from 17 drillhole intersections from 14 separate drillholes at Cameron. Comminution tests indicated that:

- rod and ball mill bond work indices are low
- moderate abrasion index within typical ranges for dolerite-basalt material
- JK breakage parameters indicating the material is highly competent.

Gravity recoverable gold is typically around 25% with no improvement in overall recovery after gravity recovery with cyanidation of the gravity tails. Test work carried out in 2014 showed that cyanide in leach processing at a P<sub>80</sub> of 75 µm would recover 92.5% of gold with a cyanide usage of 0.2 kg/t and lime usage of 1.2 kg/t. This result was an improvement on direct cyanidation in terms of reagent usage with a lower recovery (92.5% vs. <95% cyanidation). No processing issues or deleterious element have been identified that could have a significant effect on potential mineral extraction in metallurgical test work completed to date.

The cut-off grades used are:

- 0.55 g/t Au applied above the US\$1,350 shell for material amenable to open pit mining
- 2.00 g/t Au cut-off grade below the pit shell for material amenable to underground exploitation.

## 14.16. MINERAL RESOURCE TABULATION

The final block model in SURPAC format is named 'cameron\_151105\_depleted.mdl'. The January 2017 Mineral Resource (for Measured and Indicated Mineral Resources) is tabulated in Table 14.24. The block model is the same one used to report the December 2015 Mineral Resource, but now has constraints applied to the reporting. The reported January 2017 figures are depleted for mining, and are constrained using a US\$1,350 pit shell, as shown in Figure 14.46. The cut-off grades used are:

- 0.55 g/t Au applied above the US\$1,350 shell for material amenable to open pit mining
- 2.00 g/t Au cut-off grade below the pit shell for material amenable to underground exploitation.

The Inferred Mineral Resources are tabulated in Table 14.25 using the same reporting criteria.

**Table 14.24 Cameron Measured & Indicated Mineral Resource statement as at January 2017**

Mineral Resource Classification	Open-Pit Constraint	Gold cut-off (Au g/t)	Tonnes	Gold g/t	Gold (Ounces)
Measured Mineral Resource	Within US\$1,350 open-pit shell	0.55	2,670,000	2.66	228,000
Indicated Mineral Resource	Within US\$1,350 open-pit shell	0.55	820,000	1.74	46,000
<b>Measured + Indicated</b>		<b>0.55</b>	<b>3,490,000</b>	<b>2.45</b>	<b>274,000</b>
Mineral Resource Classification	Underground Constraint	Gold cut-off (Au g/t)	Tonnes	Gold g/t	Gold (Ounces)
Measured Mineral Resource	Below US\$1,350 open-pit shell	2.00	690,000	3.09	69,000
Indicated Mineral Resource	Below US\$1,350 open-pit shell	2.00	1,350,000	2.80	121,000
<b>Measured + Indicated</b>		<b>2.00</b>	<b>2,040,000</b>	<b>2.90</b>	<b>190,000</b>
<b>Total Measured + Indicated</b>			<b>5,530,000</b>	<b>2.61</b>	<b>464,000</b>

**Table 14.25 Cameron Inferred Mineral Resource statement as at January 2017**

Mineral Resource Classification	Open-Pit Constraint	Gold cut-off (Au g/t)	Tonnes	Gold g/t	Gold (Ounces)
Inferred Mineral Resource	Within US\$1,350 open-pit shell	0.55	35,000	2.45	3,000
Mineral Resource Classification	Underground Constraint	Gold cut-off (Au g/t)	Tonnes	Gold g/t	Gold (Ounces)
Inferred Mineral Resource	Below US\$1,350 open-pit shell	2.00	6,500,000	2.54	530,000
<b>Total Inferred</b>			<b>6,535,000</b>	<b>2.54</b>	<b>533,000</b>

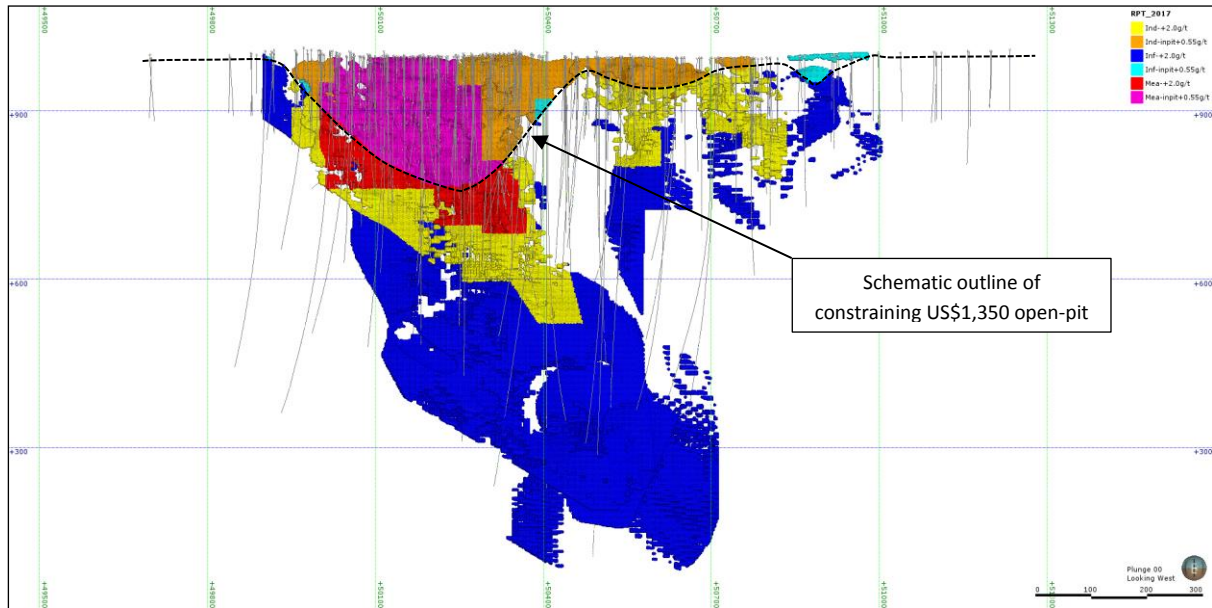
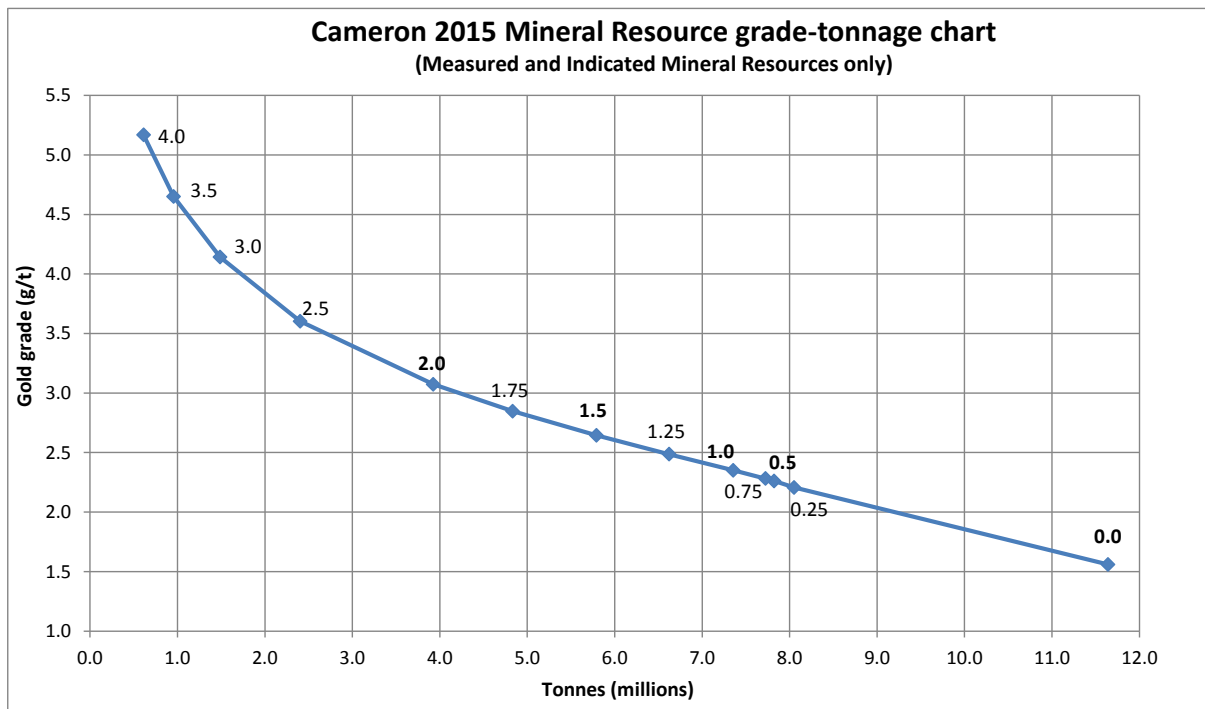
**Figure 14.46 Mineral Resources with schematic US\$1,350 shell outline - long section view looking west**


Table 14.26 and Figure 14.47 present the grade-tonnage data for the Cameron 2017 Mineral Resource. Note that this information is changed as the Mineral Resource has been re-estimated using more stringent reporting standards including a constraining pit at a re-calculated cut-off for open pit material and a recalculated cut-off grade for material below the pit consistent with sub-level open stoping underground mining methods.

**Table 14.26 Cameron January 2017 grade-tonnage data**

Gold cut-off g/t Au	Measured and Indicated Mineral Resources			
	Volume (x10 <sup>6</sup> m <sup>3</sup> )	Tonnes (x10 <sup>6</sup> )	Gold Grade g/t Au	Gold ozs (x1,000)
0.25	2.81	8.05	2.21	571
<b>0.5</b>	<b>2.73</b>	<b>7.82</b>	<b>2.26</b>	<b>569</b>
0.75	2.69	7.72	2.28	567
<b>1.0</b>	<b>2.57</b>	<b>7.36</b>	<b>2.35</b>	<b>556</b>
1.25	2.31	6.62	2.49	529
<b>1.5</b>	<b>2.02</b>	<b>5.79</b>	<b>2.64</b>	<b>492</b>
1.75	1.69	4.83	2.85	442
<b>2.0</b>	<b>1.37</b>	<b>3.92</b>	<b>3.07</b>	<b>388</b>
2.5	0.84	2.40	3.60	278
<b>3.0</b>	<b>0.52</b>	<b>1.49</b>	<b>4.14</b>	<b>198</b>
3.5	0.33	0.96	4.65	143
<b>4.0</b>	<b>0.21</b>	<b>0.61</b>	<b>5.17</b>	<b>102</b>

Figure 14.47 Cameron grade-tonnage curves for Measured and Indicated material only



#### 14.17. MINERAL RESOURCE ESTIMATE MATERIAL IMPACT

Currently no known environmental, permitting, legal, title, taxation, socio-economic marketing, political or other relevant factor have been identified as currently, materially affecting the Mineral Resource estimate.



## 15. MINERAL RESERVE ESTIMATES

No Mineral Reserve estimates have been completed.

## 16. MINING METHODS

Mining methods selection are conceptual in nature and made only for the purpose of demonstrating reasonable expectations for eventual economic recovery as described in Section 14.15

## 17. RECOVERY METHODS

Recovery methods selection are conceptual in nature and made only for the purpose of demonstrating reasonable expectations for eventual economic recovery as described in Section 14.15

## 18. PROJECT INFRASTRUCTURE

No evaluation of the infrastructure requirements of the project has been done.

## **19. MARKET STUDIES AND CONTRACTS**

No market studies or contracts have been prepared for the Cameron January 2017 Mineral Resource estimate.

## **20. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT**

Not applicable.

## 21. CAPITAL AND OPERATING COSTS

No capital or operating cost estimates have been prepared for the Cameron January 2017 Mineral Resource estimate.

## 22. ECONOMIC ANALYSIS

No economic analyses have been prepared for the Cameron January 2017 Mineral Resource estimate.



## 23. ADJACENT PROPERTIES

### 23.1. EAST CEDARTREE

The East Cedartree Property is located between the West Cedartree and Cameron Gold Projects (Table 23.1). This property has geological characteristics that are similar to those of the Cameron Gold Project. The East Cedartree Gold Project (ECGP) is located about 7 km to the west of the Cameron Gold Deposit and abuts the WCGP to the south and southeast. The ECGP is held by Metalore Resources Limited (TSX: MET).

The geology of the ECGP is dominated by a series of folded gabbroic sills intruding mostly mafic volcanic rocks. This sequence is intruded by heterogeneous felsic intrusive body, the Stephen Lake Stock. At least three areas of gold mineralisation have been the subject of significant exploration within the ECGP, with the Main Zone being the most advanced.

Gold mineralisation occurring at the Main Zone comprises a disseminated style associated with pyrite as well as a series of high-grade silica-pyrite lodes. On 12 March 2012, MET announced an NI 43-101 compliant Mineral Resource estimate for the Main Zone (Table 23.1).

**Table 23.1 Main Zone Gold Deposit March 2012 Mineral Resource estimate reported above a 0.3 g/t gold cut-off grade.**

Mineral Resource classification	Tonnes	Gold grade (g/t Au)	Gold (ounces)
Indicated Mineral Resource	2,112,554	1.36	92,950
<b>Measured + Indicated Mineral Resources</b>	<b>2,112,554</b>	<b>1.36</b>	<b>92,950</b>
Inferred Mineral Resource	2,165,460	1.36	92,980

The Author has been unable to verify the information supporting the resource estimate presented for East Cedartree Project and the information presented is not necessarily indicative of the mineralization on the property that is the subject of the technical report.

## 24. OTHER RELEVANT DATA AND INFORMATION

No other significant information concerning the Cameron Gold Project property is considered relevant to the Technical Report at this time that would make the report more understandable or, if undisclosed would make this Technical Report misleading.

## 25. INTERPRETATION AND CONCLUSIONS

The Cameron Gold deposit is a shear hosted gold deposit within a structurally complex belt of arcuate greenstones and felsic intrusive bodies. The regional controls are well documented in terms of the major structural elements and their interactions. The local geology has been mapped at the surface in trenches and outcrops and also in underground drift development. There has been extensive drilling coverage of the deposit from surface and underground and the information is exclusively from high quality diamond drilling samples and logging. There are no other forms of samples used in the Mineral Resource estimate (such as rock chip, channel or reverse circulation drilling).

Review of the data quality found that there are some issues with the sampling QAQC protocols in terms of standard and blank swaps, however there is no evidence to suggest that there is a demonstrated bias in the input data. Checks of the survey locations and downhole survey control did not return any significant issues that would be material to the estimate. Optiro visited the site in July 2015 and was given full access to all of the data relevant to the update of a Mineral Resource estimate. Independent sampling of mineralised zones supported the tenor of mineralisation reported by Chalice and previous companies. Checks of drillhole collars were within acceptable limits of the database values for northing and easting.

The author considers that the data provided by Chalice to be reliable and representative of the mineralisation at the Cameron Gold Deposit and that it is of sufficient quality and confidence to justify the definition and classification of a Mineral Resource as defined by the CIM 2014 Definition Standards.

The interpretation of the deposit scale geological model was done in a collaborative manner, with the Chalice site geological team (who were responsible for the re-logging of the drilling) involved in the interpretation of sectional and wireframe interpretations of the geology and mineralisation. These interpretations were used by Optiro as a guide to compile the 3D geological model using Leapfrog Geo 3D software. The geological modelling process was iterative with discussions and amendments made in order to validate the definition of the lithological and structural elements into an integrated model. The risk of the geological interpretation is considered to be low given the very close spaced drilling, surface and underground mapping information, high level of geological understanding and the consistent relationship of the logged lithological units.

The mineralisation interpretations began with a spatial analysis of the 3D correlation of grade to the lithology and structure to establish relationships that could be used to constrain the mineralisation boundaries. The correlation with logged pyrite is high but it is apparent that there are internal zones within the Cameron Shear Zone that are heterogeneously deformed, altered and mineralised. Progressive deformation of features such as quartz veins is clear in drillcore and outcrop, as are highly deformed (anastomosing mylonite zones) metre scale shear corridors wrapping around undeformed mafic lithons (with preserved textures such as pillow basalts).

The mineralisation interpretation is reflective of this and varies from previous interpretations in terms of not using digitised 2D cross-sectional interpretation around mineralised intersections using a nominal cut-off grade. The close section spacing and variable orientation of the underground drill

holes makes the selective interpretation of cross-sectional outlines and the snapping of points to each drillhole overly complex. For this reason, the Optiro model interpretation was carried out in 3D using graphical selection of drillhole intersections that appeared to have spatial continuity and that correlated in orientation with the lithology or structures in the geological model. Optiro used a nominal 0.4 g/t Au cut-off grade for the initial interpretations and then refined the models dynamically during the sectional and flitch validation process.

The models were compared to the site interpretations and found to be generally similar, with local variations discussed with Chalice. This produced a number of shear parallel mineralised domains that were split into northern and southern estimation zones by a set of cross-cutting northwest-southeast structures in the centre of the deposit. This correlated with a change in dominant host lithology and mineralisation abundance and supported the distinction into separate estimation domains.

The presence of internal anastomosing structures and strain partitioning visible in the outcrop exposures were used to correlate consistent sub-domains of lower grade mineralisation within the CSZ and within the mineralised domains. Optiro was able to generate grade shell models using a 0.25 g/t gold cut-off that were modelled to be consistent with the moderate north plunge characteristic of the grade and thickness trends modelled in the main part of the CSZ. By using this technique Optiro was able to estimate the subdomains separately to avoid the smoothing of grades into low grade parts of the model.

The risk of the mineralisation interpretations is also considered to be low, as the underground drilling spacing is down to 4 m in area and averages 15 m in the southern part of the deposit. The issue of grade variability within the shear hosted domain has been addressed in part by the ability to subdomain out low grade areas of mineralisation and this has improved the quality of the local grade estimate by reducing the amount of smoothing in the estimate. The grade risk has been reduced by detailed analyses of various grade continuity models to assess the impact of alternative interpretations. The re-logging and sampling of previously unsampled intervals has improved the sample population within the mineralised domains and the definition of short scale grade continuity parameters/trends. Separation of low grade sub-domains has reduced the amount of smoothing in the model and increased the confidence of the grade estimate accordingly.

With respect to the tonnage and metal risk, the volumetric controls of thickness and extent of the mineralised domains are considered to be robust and well constrained by the geological interpretations. The density assignment is based on the results of 1,202 measurements that were grouped by lithology. The average values assigned are considered to be representative of the lithologies.

The Mineral Resource has been reported using two Au cut-off grades. The parts of the deposit considered amenable to open pit mining methods have been reported using a 0.55 g/t Au cut-off grade applied within a constraining open pit shell down to a depth of 235 m below natural surface. Below this the deposit has been reported at a 2 g/t Au cut-off grade, which is considered to be appropriate for underground mining using the longhole open stoping method. A gold price of USD \$1350 and metallurgical recovery of 91.5% has been used. The parameters for the optimisation process and assumptions for the underground mining are included in Section 16.

The Cameron Gold Deposit Mineral resource estimate has been updated using an additional 30,000 samples which combined with the re-logging of approximately 771 diamond holes (103,000m) has increased the confidence of the geological and mineralisation interpretations. The definition of grade domains and continuity is considered to be robust and with greater confidence at a more local scale than previous estimates due to the much greater number of samples.

The key constraints of geological controls and mineralisation continuity are well understood and the confidence in the input data and estimation process reported in this document are considered to be of a standard suitable to support the definition of a Mineral Resource under the CIM 2014 Definition Standards.

## 26. RECOMMENDATIONS

Optiro makes the following recommendations to improve the presentation and analysis of QAQC information in the database:

1. Correct identified QAQC standard and blank swaps in the database to remove these from the control plots.
2. Review duplicate sample performance of quarter core against half core samples to account for manually split versus sawn samples to assess if there is any volume related trends.
3. Consider use of coarse crush duplicates rather than quarter core for field duplicates.
4. Undertake additional drilling to advance Inferred Mineral Resources to Indicated Mineral Resources and expand the resource along strike and down dip.

Optiro has outlined a single phase program of drilling to advance Inferred class material to higher categories and extend the current resource down plunge of identified mineralized trends. In addition Optiro recommends that First Mining commence Environmental Baseline studies and continue development of relations with First Nations stakeholders. The cost estimate for the recommendations is presented below in Table 26.1.

**Table 26.1 Recommended work for Cameron**

Recommended Activities	cost estimate
Drilling 8,000 m @US\$250/m all in cost:	\$2,000,000
Engineering tests and studies:	\$25,000
NI 43-101 Compliant Report:	\$75,000
Community Relations:	\$50,000
Environmental Baseline Studies:	\$200,000
totals/averages:	\$2,350,000

## 27. REFERENCES

- Chalice, 2015** Chalice Gold Mines Limited Annual Information Form. SEDAR. September 28, 2015
- Ball, P., 2014** Technical Report Cameron Gold Camp Project Mineral Resource Summary Western Ontario, Canada. NI 43-101 Technical Report for Chalice Gold Mines Ltd. 25 July, 2014.
- Ball, P., 2012** Technical Report Cameron Gold Project Western Ontario, Canada. NI 43-101 Technical Report for Coventry Resources Limited and Crescent Resources Group. 5 July, 2012.
- Coventry, 2013** Revised Technical Report on the Cameron Gold Camp Project Western Ontario, Canada. NI 43-101 Technical Report for Coventry Resources Inc. by Lycopodium, DATAGEO Geological Consultants and AMC Consultants. 5 July, 2012.
- Dubé, B and Gosselin, P., 2006**, Greenstone-hosted quartz-carbonate vein deposits, in Goodfellow, W. D., ed., Mineral Deposits of Canada, Geological Association of Canada, Special Publication No. 5, p. 49-73.
- Groves, D.I., Goldfarb, R. J., Robert, F., and Hart, C.J. R., 2003**, **Gold deposits in metamorphic belts:** Overview of current understanding, outstanding problems, future research, and exploration significance, *Economic Geology*, v. 98, p. 1-29).
- Robert, F., Paulsen, K.H., Cassidy, K.F., and Hodgson, C. J., 2005**, Gold Metallogeny of the Superior and Yilgarn Cratons: *Economic Geology*, v. 100, p. 1001-1033.
- Robert, F., Brommecker, R., Bourne, B. T., Dobak, P. J., McEwan, C. J., Rowe, R. J., and Zhou, X., 2007**, Models and Exploration Methods for Major Gold Deposit Types, in Milkereit, B., ed., *Proceedings of Exploration 07*, p.691-711.
- Puritch, E., Jones, P., 2004**, Cameron Lake Project Exploration Summary & Mineral Resource Estimate for the Cameron Lake Deposit. Report for Nuinsco Resources Limited, April 19, 2004.

## 28. CERTIFICATES OF QUALIFIED PERSONS

As an author of the report “Technical Report on the Cameron Gold Deposit, Ontario, Canada”, dated effective 17 January, 2017 (the “Technical Report”) prepared for First Mining Finance Corp, I hereby certify that:

1. My name is Mark Jeremy Drabble, Principal Consultant of Optiro Pty Ltd, with a business address at Level 1, 16 Ord Street, West Perth WA 6005, Australia.
2. I am a graduate of the University of Technology, Sydney and hold a BSc in Applied Science (Geology) which was awarded in 1990.
3. I am a Member of the Australian Institute of Geoscientists (membership number 6246).
4. I have 25 years’ experience in underground and open pit production, resource development, resource estimation, consulting and geological management at operational and corporate levels. I have commodity experience in gold, nickel, manganese, chromite, copper, lead and zinc. As a consultant I carry out geological modeling, due diligence audits, mineral resource estimation and signoff, reconciliation reviews, grade control studies and high level corporate reviews.
5. I have read the definition of “qualified person” set out in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (the “Instrument”) and certify that by reason of my education, affiliation with a professional association (as defined in the Instrument) and past relevant work experience, I fulfil the requirements to be a “qualified person” for the purposes of the Instrument.
6. I travelled to the Cameron Lake Gold Project on the 4 and 5 July, 2015 and inspected outcrop exposures of the deposit, reviewed a representative suite of core from exploration drillholes, obtained independent samples for analysis, confirmed collar locations, inspected the sampling facilities and reviewed the geological interpretations with Chalice Gold Mines Limited personnel.
7. The mineral resource estimates are in accordance with the Canadian Institute of Mining and Metallurgy and Petroleum (“CIM”) 2014 Definition Standards as required under the Instrument.
8. I am responsible for all sections of the Technical Report (apart from Section 14) which has been compiled from work carried out by Optiro Pty Ltd, Chalice Gold Mines Limited, First Mining Finance Corp and information submitted in SEDAR reports.
9. As of the effective date of the Technical Report, to the best of my knowledge, information and belief the Technical Report contains all relevant scientific and technical information that is required to make the Technical Report not misleading.
10. I have no prior involvement with the property, other than having completed a technical report for Chalice Gold Mines Limited on the same property in December, 2015.
11. I am independent of First Mining Finance Corp pursuant to Section 1.5 of the Instrument.
12. I have read the Instrument and Form 43-101F1 (the “Form”) and the Technical Report has been prepared in compliance with the Instrument and the Form.

Dated at West Perth, Western Australia, on 17 January, 2017.

*“Original signed by  
Mark Drabble, B.App.Sci (Geology),  
MAIG, MAusIMM”*

---

**Mark Drabble** B.App.Sci (Geology), MAIG, MAusIMM



As an author of the report “Technical Report on the Cameron Gold Deposit, Ontario, Canada”, dated effective 17 January, 2017 (the “Technical Report”) prepared for First Mining Finance Corp, I hereby certify that:

1. My name is Kahan Mit-hat Cervo, Principal Consultant of Optiro Pty Ltd, with a business address at Level 1, 16 Ord Street, West Perth WA 6005, Australia.
2. I am a graduate of Curtin University of Technology, Perth and hold a BSc in Applied Science (Geology) which was awarded in 1990. I have also completed a post-graduate certificate in geo-statistics from Edith Cowan University in 2002.
3. I am a Member of the Australian Institute of Geoscientists (membership number 6302).
4. I have 25 years’ experience in underground and open pit production, resource exploration and development, resource estimation, consulting and geological management at operational and corporate levels. I have commodity experience in gold, nickel, manganese, copper, lead, zinc and iron ore. As a consultant I carry out geological modeling, due diligence audits, mineral resource estimation and signoff, reconciliation reviews, grade control studies and high level corporate reviews.
5. I have read the definition of “qualified person” set out in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (the “Instrument”) and certify that by reason of my education, affiliation with a professional association (as defined in the Instrument) and past relevant work experience, I fulfil the requirements to be a “qualified person” for the purposes of the Instrument.
6. I have not visited the Cameron Lake Gold Project.
7. I prepared and am responsible for Section 14 of the technical report.
8. The mineral resource estimates are in accordance with the Canadian Institute of Mining and Metallurgy and Petroleum (“CIM”) 2014 Definition Standards as required under the Instrument.
9. As of the effective date of the Technical Report, to the best of my knowledge, information and belief the Technical Report contains all relevant scientific and technical information that is required to make the Technical Report not misleading.
10. My previous involvement with the Cameron Lake Gold Project was as co-author of the December 6, 2015 technical report entitled "Technical Report on the Cameron Gold Deposit, Ontario, Canada, December 2015 Mineral Resource Estimate" that was prepared for Chalice Gold Mines Limited.
11. I am independent of First Mining Finance Corp pursuant to Section 1.5 of the Instrument.
12. I have read the Instrument and Form 43-101F1 (the “Form”) and the Technical Report has been prepared in compliance with the Instrument and the Form.

Dated at West Perth, Western Australia, on 17 January, 2017.

*“Original signed by  
Kahan Cervo, B.App.Sci (Geology),  
MAIG, MAusIMM”*

---

**Kahan Cervo** B.App.Sci (Geology), MAIG, MAusIMM

---

**Appendix A      Drillhole Collar Listing**

## Drillhole collar information

NOTES: COORDINATES AND AZIMUTH IN NAD83 ZONE 15, NEGATIVE DIPS ARE DOWN (NB: MANY UNDERGROUND HOLES EXIST WHICH ARE THE REASON FOR LOW ANGLE AND UPWARD DIPS).

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
365-01	447329.14	5459933.57	244.39	18.29	43.17	0.80
365-02	447321.92	5459926.49	244.14	14.78	224.89	-1.85
365-03	447313.98	5459928.93	244.26	57.91	43.62	1.25
365-04	447308.70	5459924.64	244.11	15.85	227.89	-0.22
365-05	447323.68	5459927.01	244.12	45.72	102.50	-0.78
365-06	447210.88	5460042.56	242.50	30.48	41.71	6.10
365-07	447201.07	5460054.02	242.79	21.95	41.81	4.83
365-08	447198.37	5460051.33	242.65	16.92	225.60	0.75
365-09	447222.66	5460032.44	242.48	29.26	45.44	4.99
365-10	447199.01	5460047.80	242.30	16.76	225.19	0.23
365-101	447289.68	5459937.13	245.74	21.95	45.00	75.00
365-102	447260.88	5459962.39	246.35	47.55	45.00	64.00
365-103	447248.97	5459972.10	246.04	46.33	45.00	73.00
365-104	447227.75	5459994.12	244.52	30.48	45.00	38.00
365-105	447222.12	5459999.31	244.52	29.57	45.00	45.00
365-106	447221.47	5459998.65	245.43	43.28	45.00	80.00
365-107	447216.92	5460004.92	244.21	25.60	45.00	35.00
365-108	447210.63	5460009.45	244.82	39.93	45.00	75.00
365-109	447212.78	5460033.25	244.82	39.01	225.00	-37.00
365-11	447304.50	5459930.18	244.15	30.48	45.07	1.57
365-110	447189.63	5460031.68	241.47	30.78	225.00	-53.00
365-111	447193.30	5460035.37	245.13	28.96	45.00	61.00
365-12	447301.57	5459927.23	243.80	14.94	224.12	0.56
365-13	447297.88	5459934.39	244.09	31.09	46.57	0.06
365-14	447294.58	5459931.03	244.05	16.75	225.69	-0.96
365-15	447290.89	5459938.27	243.96	26.82	45.94	0.71
365-16	447183.27	5460036.22	242.34	73.76	225.00	-0.22
365-17	447283.92	5459941.88	244.06	24.38	44.46	0.44
365-18	447280.68	5459937.84	243.94	13.72	223.93	-1.78
365-19	447277.42	5459946.73	243.93	25.30	45.58	0.06
365-20	447274.16	5459943.45	244.13	15.24	225.23	3.92
365-21	447272.54	5459952.39	244.03	26.21	44.54	2.38
365-22	447269.63	5459949.53	243.94	16.15	224.50	-0.75
365-23	447268.31	5459959.59	243.76	24.38	44.67	-0.86
365-24	447264.93	5459956.22	243.97	16.46	226.49	3.77
365-25	447261.62	5459963.13	243.93	28.04	47.12	2.56
365-26	447258.14	5459959.62	243.81	15.85	222.90	-0.57
365-27	447249.68	5459972.92	243.58	46.94	43.79	1.35
365-28	447246.16	5459969.34	243.60	45.72	225.90	1.55
365-29	447248.03	5459990.60	243.76	46.33	43.86	2.00
365-30	447235.33	5459978.29	243.58	50.60	222.87	1.92
365-31	447227.74	5459994.59	243.27	47.24	44.28	0.86
365-32	447224.63	5459991.47	243.26	45.72	228.44	-0.88

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
365-33	447217.31	5460005.45	243.19	37.80	44.74	2.01
365-34	447213.87	5460001.96	243.06	31.70	225.25	-0.37
365-35	447203.47	5460012.99	242.78	72.54	228.21	-13.38
365-36	447196.39	5460028.26	242.28	74.98	220.87	-9.80
365-37	447175.23	5460049.82	242.51	30.48	43.72	2.36
365-38	447172.41	5460047.00	242.57	35.97	224.15	0.81
365-39	447165.87	5460062.00	242.53	29.26	44.54	2.38
365-40	447162.70	5460058.83	242.56	27.43	225.41	2.07
365-41	447155.57	5460073.28	242.56	28.96	43.18	3.27
365-42	447152.26	5460069.99	242.54	55.47	225.11	0.87
365-43	447144.66	5460083.92	241.56	39.32	49.12	1.00
365-44	447141.28	5460080.83	241.37	54.86	228.43	-9.98
365-45	447141.13	5460080.61	240.51	56.39	226.80	-35.49
365-46	447130.92	5460092.51	241.39	35.66	43.80	1.87
365-47	447127.45	5460089.38	241.18	59.74	224.08	-13.43
365-48	447127.57	5460089.42	240.69	60.66	221.31	-34.76
365-49	447115.29	5460098.00	241.23	31.39	44.34	1.42
365-50	447103.11	5460096.01	241.54	46.94	30.54	2.68
365-51	447102.87	5460096.14	241.57	41.76	45.00	0.00
365-52	447252.47	5459965.07	243.72	17.68	223.78	1.45
365-53	447255.80	5459968.28	243.81	30.18	46.48	3.17
365-54	447240.61	5459974.62	243.52	19.20	225.28	1.17
365-55	447244.25	5459978.29	243.52	24.99	44.21	3.74
365-56	447229.50	5459985.62	243.46	31.39	223.41	2.89
365-57	447232.86	5459989.19	243.43	25.60	44.30	2.98
365-58	447219.53	5459996.89	243.00	46.48	223.09	0.97
365-59	447222.59	5460000.07	243.11	24.99	43.68	3.36
365-60	447225.64	5460025.79	242.61	30.48	45.81	6.36
365-61	447222.59	5460022.84	242.49	16.76	45.00	0.00
365-62	447210.20	5460031.81	242.43	9.45	195.82	6.97
365-63	447215.42	5460036.06	242.56	27.13	44.97	1.33
365-64	447203.26	5460045.56	242.80	13.72	225.69	0.11
365-65	447206.23	5460048.56	242.47	25.60	44.70	3.96
365-66	447208.31	5460006.92	243.11	35.66	225.01	2.69
365-67	447200.74	5460020.95	242.94	30.78	222.08	1.55
365-68	447190.34	5460032.55	242.91	34.44	226.94	1.59
365-69	447180.47	5460043.98	242.65	35.66	44.66	0.86
365-70	447176.96	5460040.56	242.71	29.87	226.27	2.76
365-71	447170.87	5460056.19	242.40	27.43	45.09	-2.60
365-72	447167.35	5460052.82	242.45	30.33	225.84	-0.24
365-73	447160.68	5460067.58	242.34	34.44	45.81	-0.20
365-74	447157.50	5460064.38	242.38	22.25	223.64	-0.10
365-75	447150.51	5460078.93	242.37	34.14	47.87	0.96
365-76	447146.85	5460075.60	242.22	20.76	227.74	-2.70
365-77	447138.13	5460088.05	241.62	32.61	43.89	-3.41
365-78	447134.55	5460084.30	241.73	21.64	223.91	-0.75
365-79	447123.65	5460096.49	241.28	38.10	43.72	0.50

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
365-80	447112.51	5460099.03	241.15	36.58	29.21	-2.04
365-81	447301.42	5459932.64	243.54	16.46	44.29	4.45
365-82	447294.28	5459936.10	243.53	18.90	44.20	4.06
365-83	447223.16	5460022.86	242.22	40.08	231.25	-47.49
365-84	447083.54	5460077.78	241.35	17.98	265.52	12.46
365-85	447206.95	5460016.15	243.70	29.26	45.00	75.00
365-86	447206.95	5460016.15	243.20	27.43	45.00	40.00
365-87	447210.87	5460003.83	243.08	7.32	225.00	0.00
365-88	447216.40	5459998.69	243.30	7.92	225.00	0.00
365-89	447221.79	5459993.40	243.10	9.75	225.00	0.00
365-90	447226.83	5459987.86	243.36	7.62	225.00	0.00
365-91	447235.86	5459987.75	244.21	28.96	45.00	40.00
365-92	447237.73	5459975.76	243.55	7.32	225.00	0.00
365-93	447243.15	5459971.29	243.56	6.40	225.00	0.00
365-94	447249.36	5459966.58	243.66	7.62	225.00	0.00
365-95	447255.35	5459961.65	243.76	7.92	225.00	0.00
365-96	447261.43	5459957.37	243.89	9.75	225.00	0.00
365-97	447267.10	5459952.16	243.96	8.23	225.00	0.00
365-98	447283.55	5459941.02	244.96	17.68	45.00	40.00
365-99	447283.55	5459941.02	242.96	26.82	45.00	-40.00
490-01	447136.80	5460074.70	207.54	51.82	38.69	23.08
490-02	447137.12	5460075.45	206.88	51.82	41.81	0.00
490-03	447137.15	5460075.39	206.54	51.82	41.22	-18.77
490-04	447148.01	5460065.02	207.83	49.68	48.48	32.40
490-05	447148.30	5460065.43	206.79	42.37	46.02	1.01
490-06	447148.32	5460065.37	204.77	44.20	45.23	-19.38
490-07	447159.80	5460055.60	207.33	55.08	43.32	28.05
490-08	447173.13	5460043.01	206.91	60.96	43.47	1.37
490-09	447173.20	5460043.12	206.65	72.54	42.34	-19.93
490-10	447171.11	5460045.03	206.94	63.70	46.01	9.81
490-100	447180.26	5460032.28	206.75	53.64	223.70	0.47
490-101	447180.12	5460032.29	206.33	48.77	222.85	-31.80
490-102	447192.31	5460023.65	205.98	47.24	224.62	-31.77
490-103	447309.80	5459935.15	205.82	37.80	77.57	43.32
490-104	447310.01	5459935.15	205.62	37.80	77.48	0.31
490-105	447311.03	5459935.34	204.94	44.87	76.98	-40.35
490-106	447288.51	5459902.29	206.82	88.39	58.30	15.83
490-107	447288.44	5459902.23	206.47	88.41	60.50	2.24
490-108	447288.38	5459902.11	206.09	96.62	59.13	-17.79
490-11	447170.98	5460044.94	206.61	77.11	46.44	-8.67
490-12	447182.60	5460034.68	206.73	58.22	46.17	3.16
490-12A	447182.47	5460034.91	207.31	45.42	42.01	33.12
490-13	447182.71	5460034.74	206.54	62.18	43.12	-17.25
490-14	447182.79	5460034.81	206.34	34.14	41.46	-33.57
490-15	447195.60	5460026.64	206.73	40.84	45.91	4.85
490-16	447195.53	5460026.66	206.15	38.40	42.45	-24.09
490-17	447206.18	5460014.99	205.73	40.23	45.77	43.46

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
490-18	447206.71	5460015.68	205.33	32.61	45.02	5.13
490-19	447206.75	5460015.76	204.83	44.20	44.76	-29.45
490-20	447216.36	5460004.65	205.78	41.45	44.35	47.73
490-21	447216.71	5460004.88	205.24	32.00	46.06	0.81
490-22	447216.85	5460005.12	204.69	41.15	46.25	-29.82
490-23	447226.89	5459993.57	205.22	36.88	54.11	51.23
490-24	447227.46	5459994.04	204.80	32.31	43.89	0.50
490-25	447227.53	5459994.12	204.23	39.32	43.43	-31.04
490-26	447239.82	5459984.11	205.36	30.48	55.74	67.18
490-27	447240.21	5459984.87	204.62	30.18	44.36	1.73
490-28	447240.28	5459984.92	204.13	39.93	45.98	-31.36
490-29	447253.03	5459976.12	206.48	30.48	45.22	33.87
490-30	447253.17	5459976.09	205.58	39.62	45.38	-0.06
490-31	447253.04	5459975.99	205.10	45.72	45.70	-27.14
490-32	447265.11	5459966.70	205.73	35.97	46.51	42.82
490-33	447265.40	5459966.64	205.66	32.92	45.60	2.48
490-34	447265.32	5459966.64	205.73	44.81	44.92	-27.81
490-35	447277.47	5459956.59	205.70	35.97	41.65	49.84
490-36	447278.22	5459957.10	205.13	39.93	48.23	0.26
490-37	447278.19	5459957.13	204.73	58.83	47.28	-24.10
490-38	447290.30	5459948.36	205.71	30.48	50.21	60.78
490-39	447290.94	5459949.07	205.08	30.48	45.91	0.90
490-40	447291.00	5459949.09	204.67	58.52	46.00	-24.24
490-41	447304.62	5459941.01	206.30	29.57	45.65	44.88
490-42	447304.87	5459941.30	205.81	36.64	41.09	0.43
685-60	447190.41	5460043.20	145.14	44.81	44.92	0.97
685-61	447190.17	5460043.39	144.80	53.04	43.78	-32.80
685-62	447195.72	5460036.75	146.12	45.42	43.85	31.70
685-63	447195.62	5460036.66	145.26	42.37	43.36	1.90
685-64	447198.08	5460039.18	144.39	56.39	41.24	-30.45
685-65	447201.50	5460032.77	145.70	40.69	44.95	30.63
685-66	447201.62	5460033.00	144.80	45.11	44.71	1.69
685-68	447201.63	5460033.03	144.02	57.91	43.26	-33.10
685-69	447209.62	5460029.19	145.80	40.54	46.63	29.56
685-70	447209.80	5460029.42	145.18	51.51	44.68	0.79
685-71	447209.54	5460029.31	144.46	51.51	46.83	-31.49
685-72	447212.83	5460022.57	146.26	45.72	45.77	29.38
685-73	447212.84	5460022.67	144.72	45.72	44.58	3.73
685-74	447212.87	5460022.70	144.02	50.90	45.12	-31.70
685-75	447220.48	5460017.46	145.71	36.88	44.09	30.46
685-76	447220.41	5460017.29	144.88	35.97	45.48	1.10
685-77	447220.39	5460017.29	144.23	59.44	47.14	-24.73
685-78	447223.74	5460011.48	145.49	44.20	43.75	31.88
685-79	447225.23	5460010.00	144.58	46.63	44.17	2.33
685-80	447223.68	5460011.25	144.07	54.56	43.31	-24.35
685-81	447233.35	5460009.83	145.58	35.36	44.65	30.15
685-82	447233.37	5460009.88	144.65	35.36	44.05	0.18

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
685-83	447233.34	5460009.84	144.06	39.62	45.29	-27.72
685-84	447238.97	5460005.43	145.08	41.15	45.24	31.25
685-85	447239.18	5460005.50	144.37	41.76	42.75	0.82
685-86	447239.06	5460005.47	143.61	53.64	45.24	-30.00
685-87	447246.32	5460003.12	145.03	43.59	42.81	30.11
685-88	447246.34	5460003.27	144.21	42.67	42.35	-0.11
685-89	447246.45	5460003.10	143.41	55.78	43.39	-31.78
685-90	447252.50	5459997.76	145.15	28.04	45.03	31.97
685-91	447252.75	5459997.52	144.12	45.11	44.06	2.87
685-92	447252.50	5459997.86	143.57	44.50	44.62	-24.94
685-93	447260.40	5459994.44	144.79	21.64	44.18	31.84
685-94	447260.31	5459994.40	143.87	38.40	43.54	1.24
685-95	447260.37	5459994.44	143.30	30.78	40.68	-26.80
685-96	447267.58	5459990.80	145.00	21.64	44.38	37.83
685-97	447267.63	5459990.95	144.08	28.96	43.98	2.13
685-98	447267.87	5459991.05	143.15	29.87	45.12	-35.92
685-99	447275.59	5459985.96	144.79	24.38	45.46	36.79
CCD-10-001	447192.86	5459901.75	348.20	206.00	225.00	-60.00
CCD-10-002	447220.27	5459932.56	348.90	122.00	225.00	-60.00
CCD-10-003	447333.93	5460043.52	352.22	254.00	225.00	-60.00
CCD-10-004	447221.13	5459873.13	347.36	134.00	225.00	-60.00
CCD-10-005	447248.38	5459903.15	349.16	122.00	225.00	-60.00
CCD-10-006	447389.04	5459900.57	357.35	161.00	225.00	-60.00
CCD-10-007	447419.43	5459928.52	359.43	194.00	225.00	-60.00
CCD-10-008	447361.53	5459871.86	355.03	167.00	225.00	-60.00
CCD-10-009	447332.35	5459843.06	354.62	134.00	225.00	-60.00
CCD-10-010	447392.39	5459846.37	355.79	164.00	225.00	-60.00
CCD-10-011	447421.47	5459873.03	357.95	140.00	225.00	-60.00
CCD-10-012	447452.98	5459901.04	359.97	170.00	225.00	-60.00
CCD-10-013	447117.86	5460059.46	351.10	182.00	225.00	-60.00
CCD-10-014	447148.95	5460078.11	351.38	149.00	225.00	-60.00
CCD-10-015	447149.90	5460173.78	357.36	252.00	225.00	-60.00
CCD-10-016	447093.65	5460120.23	354.78	152.00	225.00	-60.00
CCD-10-017	447066.09	5460114.61	355.07	155.00	225.00	-60.00
CCD-10-018	447075.30	5460154.21	355.33	194.00	225.00	-60.00
CCD-10-019	447046.86	5460186.71	353.43	182.00	225.00	-60.00
CCD-10-020	447024.72	5460098.89	353.34	112.21	225.00	-60.00
CCD-10-021	447041.30	5460229.52	351.84	169.00	225.00	-60.00
CCD-10-022	446986.87	5460174.60	349.87	74.00	225.00	-50.00
CCD-10-023	447024.36	5460270.92	350.37	221.00	225.00	-60.00
CCD-10-024	446971.92	5460267.13	350.17	220.00	225.00	-60.00
490-43	447304.79	5459941.24	205.69	45.73	44.51	-23.49
490-44	447134.14	5460072.98	206.30	39.62	254.94	-48.02
490-45	447134.86	5460072.93	205.98	30.48	220.94	-47.91
490-46	447134.95	5460073.01	205.91	42.06	210.45	-75.81
490-47	447141.67	5460070.26	207.07	44.50	45.65	22.30
490-48	447142.32	5460070.86	206.78	44.20	46.03	-0.41

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
490-49	447142.41	5460070.95	206.19	39.93	46.41	-31.87
490-50	447153.47	5460060.47	207.23	49.99	44.82	48.05
490-51	447154.24	5460061.23	206.80	35.05	46.17	0.68
490-52	447154.49	5460061.40	206.15	49.68	43.82	-33.60
490-53	447164.33	5460050.53	207.26	47.55	45.36	45.81
490-54	447165.07	5460051.45	207.33	44.20	43.12	-0.39
490-55	447165.11	5460051.48	206.14	44.50	45.11	-32.05
490-56	447175.67	5460039.43	207.00	47.24	45.56	35.32
490-57	447176.65	5460040.38	206.79	45.72	44.75	0.35
490-58	447176.55	5460040.36	206.18	46.02	47.06	-33.12
490-59	447188.87	5460030.05	206.60	35.54	45.15	40.49
490-60	447188.76	5460029.74	206.54	34.75	42.66	12.35
490-60A	447188.76	5460029.74	206.54	6.19	42.66	12.35
490-61	447188.97	5460029.91	207.17	44.20	41.18	-36.82
490-62	447201.39	5460021.44	207.66	38.10	46.91	41.14
490-63	447201.65	5460021.80	206.49	27.58	44.03	-0.50
490-64	447201.66	5460021.71	205.96	44.81	46.81	-38.49
490-65	447211.23	5460010.36	205.60	41.15	43.97	44.37
490-66	447211.73	5460010.85	205.23	28.96	44.39	0.67
490-67	447211.72	5460010.75	204.69	43.28	46.56	-33.15
490-68	447221.15	5459998.41	205.50	44.50	46.12	45.35
490-69	447221.73	5459999.00	204.97	32.61	46.24	-0.37
490-70	447221.71	5459999.07	204.43	43.28	45.31	-33.87
490-71	447233.39	5459988.93	205.26	34.75	46.61	62.82
490-72	447233.81	5459989.43	204.72	29.26	45.18	1.30
490-73	447233.94	5459989.51	204.24	35.66	47.32	-44.55
490-74	447246.17	5459979.80	204.92	30.18	42.85	56.97
490-75	447246.57	5459980.63	204.56	26.82	42.47	0.61
490-76	447246.72	5459980.60	203.97	39.62	42.83	-34.10
490-77	447258.49	5459971.07	206.43	26.52	49.05	49.71
490-78	447258.99	5459971.54	207.10	26.52	46.03	-0.08
490-79	447259.01	5459971.59	205.09	46.02	44.13	-29.94
490-80	447271.57	5459961.95	205.90	31.09	48.89	49.53
490-81	447271.35	5459961.90	205.47	28.35	45.74	1.69
490-82	447271.47	5459962.01	205.58	45.54	44.39	-29.71
490-83	447284.26	5459952.40	205.67	30.66	41.41	53.49
490-84	447284.88	5459953.14	204.91	32.71	44.27	0.67
490-85	447284.85	5459953.06	204.39	45.93	43.26	-29.58
490-86	447296.16	5459944.36	205.73	31.39	37.28	55.35
490-87	447295.83	5459943.95	205.08	33.83	44.75	1.29
490-88	447295.88	5459944.00	205.21	45.72	43.57	-27.37
490-89	447309.27	5459936.05	206.47	35.81	47.27	47.02
490-90	447309.85	5459936.70	205.55	43.89	44.41	0.27
490-91	447309.95	5459936.78	204.85	45.11	44.67	-34.94
490-92	447136.89	5460075.00	207.14	45.57	12.02	27.84
490-93	447137.00	5460075.55	206.93	45.72	12.18	0.46
490-94	447136.98	5460075.50	206.47	51.82	15.46	-25.35



Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
490-95	447145.80	5460063.03	207.30	34.14	226.96	19.58
490-96	447145.76	5460063.03	206.32	28.65	227.44	-24.91
490-97	447157.46	5460053.27	206.76	43.59	224.50	0.08
490-98	447157.42	5460053.28	205.98	45.11	226.86	-42.98
490-99	447168.72	5460042.77	206.82	46.33	225.33	0.87
555-01	447249.22	5459915.85	185.75	67.36	45.33	-15.87
555-02	447248.32	5459916.56	185.81	92.96	74.72	-14.97
620-01	447237.91	5459967.13	167.96	65.84	17.42	1.43
620-02	447238.95	5459966.61	168.23	58.52	43.87	11.67
685-01	447111.19	5460154.84	147.31	35.97	9.85	36.22
685-02	447111.12	5460154.74	146.35	38.40	13.52	0.76
685-03	447111.01	5460154.86	145.63	47.55	11.80	-28.96
685-04	447111.56	5460154.50	147.34	29.87	41.33	37.78
685-06	447111.47	5460154.38	146.36	30.48	43.69	-0.04
685-07	447111.37	5460154.41	145.74	46.94	41.32	-31.18
685-08	447114.03	5460149.55	147.80	30.78	42.31	33.09
685-09	447114.65	5460150.20	146.20	32.00	45.59	-3.33
685-10	447114.68	5460150.27	145.61	45.11	43.81	-26.61
685-100	447274.48	5459986.94	143.87	29.87	43.58	1.56
685-101	447275.53	5459986.00	143.14	46.94	42.08	-32.65
685-102	447278.94	5459981.18	144.99	23.47	42.32	40.40
685-104	447279.28	5459981.41	143.35	35.97	43.99	-31.89
685-105	447287.91	5459979.16	145.47	20.12	47.39	42.42
685-106	447288.21	5459979.47	144.24	21.34	45.79	0.05
685-107	447288.23	5459979.59	143.48	36.58	47.81	-34.92
685-108	447296.84	5459976.51	145.86	37.19	46.13	47.89
685-109	447297.19	5459976.89	144.53	28.65	45.35	2.27
685-11	447118.62	5460144.38	147.31	30.48	42.92	34.29
685-110	447297.06	5459976.73	143.64	42.98	45.53	-45.66
685-111	447298.76	5459976.18	145.62	61.26	67.99	29.93
685-112	447299.13	5459976.07	144.58	48.77	72.41	1.93
685-113	447299.21	5459976.13	143.69	61.26	71.82	-33.46
685-114	447108.56	5460151.38	146.38	49.99	224.14	-0.05
685-115	447115.22	5460141.14	145.97	47.55	223.40	-1.28
685-116	447123.81	5460128.68	145.77	46.02	226.08	0.12
685-117	447132.51	5460114.54	145.75	42.67	222.36	0.91
685-118	447139.96	5460101.03	145.70	36.27	222.91	-1.21
685-119	447145.33	5460084.08	145.90	37.19	229.52	0.60
685-12	447107.69	5460152.37	146.24	49.68	246.60	0.69
685-120	447153.51	5460070.87	145.63	36.58	222.45	-0.70
685-121	447164.23	5460060.47	145.42	36.88	225.17	1.01
685-122	447304.87	5459973.15	145.65	43.89	47.38	36.48
685-123	447304.89	5459973.18	144.62	43.59	47.08	0.93
685-124	447305.00	5459973.15	145.54	60.05	46.06	-30.53
685-125	447311.88	5459969.43	145.54	45.57	45.62	36.24
685-126	447311.88	5459969.37	146.18	44.50	45.58	-1.35
685-127	447311.95	5459969.39	144.04	59.13	46.80	-28.31

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
685-128	447319.44	5459966.65	145.80	45.72	43.61	31.54
685-129	447319.37	5459966.43	145.14	43.59	44.03	1.82
685-13	447118.68	5460144.48	145.60	42.98	42.67	-30.68
685-130	447319.48	5459966.56	144.35	58.52	43.49	-28.59
685-131	447327.14	5459963.35	145.80	43.75	44.94	31.57
685-132	447327.26	5459963.36	145.31	45.72	45.88	1.49
685-133	447327.38	5459963.31	144.67	60.05	44.20	-28.81
685-134	447334.26	5459960.13	146.16	44.81	48.46	34.66
685-135	447334.28	5459960.29	145.13	51.82	46.20	-1.86
685-136	447334.26	5459960.17	144.49	61.26	49.34	-30.08
685-137	447341.79	5459956.81	146.26	45.72	48.42	34.36
685-138	447341.98	5459957.14	145.23	45.72	44.56	-0.87
685-139	447341.88	5459956.99	144.57	60.35	44.06	-30.27
685-140	447349.75	5459953.88	146.33	45.72	47.57	34.29
685-141	447349.71	5459954.11	143.80	46.18	44.62	-0.15
685-142	447349.83	5459954.27	144.57	60.96	42.28	-30.45
685-143	447357.13	5459950.72	146.42	46.33	46.75	35.75
685-144	447357.21	5459950.81	145.25	43.89	45.14	0.57
685-145	447357.23	5459950.81	144.60	61.87	44.40	-31.78
685-146	447357.63	5459950.18	146.07	53.04	72.79	27.19
685-147	447357.63	5459950.21	145.25	51.82	73.87	0.48
685-148	447357.50	5459950.19	144.59	71.02	75.15	-26.27
685-150	447181.98	5460203.80	146.09	89.31	221.72	-51.00
685-151	447182.49	5460204.29	146.27	157.28	221.65	-66.00
685-152	447182.68	5460204.48	146.09	154.53	220.00	-80.00
685-153	447183.11	5460204.77	146.16	200.25	210.50	-85.00
685-154	447181.26	5460204.67	146.01	108.51	265.00	-57.00
685-155	447181.63	5460204.94	146.05	169.77	280.50	-77.00
685-156	447181.69	5460204.96	146.01	182.42	293.50	-80.00
685-157	447182.95	5460204.50	145.99	84.73	182.50	-58.00
685-158	447183.14	5460205.43	146.05	165.51	163.00	-79.00
685-159	447223.97	5460058.78	145.46	43.28	225.00	-39.00
685-160	447209.46	5460073.24	145.46	45.11	225.00	-43.00
685-161	447200.14	5460085.55	145.46	52.73	225.00	-40.00
685-162	447179.16	5460086.17	144.85	52.73	225.00	-45.00
685-163	447168.98	5460097.61	144.55	45.11	225.00	-42.00
685-164	447160.70	5460109.70	126.80	17.07	225.00	0.00
685-17	447126.97	5460134.29	146.78	32.61	43.55	32.99
685-18	447126.91	5460131.69	145.79	32.92	44.56	0.36
685-19	447126.96	5460131.75	145.07	53.95	43.36	-32.75
685-20	447133.80	5460123.61	146.87	40.59	46.03	30.04
685-21	447134.18	5460124.38	146.01	38.71	45.51	1.50
685-22	447133.52	5460123.75	145.27	57.30	44.99	-31.57
685-23	447135.41	5460117.55	146.83	42.98	45.04	33.53
685-24	447135.35	5460117.57	145.82	36.27	44.22	0.28
685-25	447135.19	5460117.39	145.17	59.44	47.40	-34.68
685-26	447162.56	5460134.36	146.90	39.62	45.87	33.60

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
685-27	447141.20	5460112.51	146.12	39.93	48.01	0.97
685-28	447141.42	5460112.71	145.47	61.26	50.35	-31.00
685-29	447143.55	5460104.76	147.08	36.58	43.33	32.05
685-30	447143.27	5460104.66	145.79	45.72	41.47	0.11
685-31	447143.30	5460104.56	144.80	68.58	44.16	-35.52
685-32	447148.17	5460097.35	146.86	44.50	40.88	30.23
685-33	447148.24	5460097.37	146.17	44.20	44.05	1.18
685-34	447148.35	5460097.43	145.52	67.36	46.36	-29.43
685-35	447146.89	5460085.11	146.75	45.11	47.46	30.74
685-36	447148.89	5460087.29	144.86	42.67	51.86	3.01
685-37	447149.24	5460087.40	145.10	67.67	51.89	-30.72
685-38	447152.75	5460081.12	146.55	41.76	44.74	26.51
685-39	447153.01	5460081.40	145.80	45.72	44.23	1.33
685-40	447153.09	5460081.35	145.37	70.10	43.19	-27.23
685-41	447156.83	5460074.21	146.82	46.94	45.00	30.00
685-42	447156.74	5460074.28	145.75	51.82	42.86	1.09
685-43	447156.62	5460074.18	145.15	70.41	42.45	-27.85
685-44	447163.77	5460070.26	146.72	44.20	45.00	29.00
685-45	447163.36	5460069.92	145.68	48.59	44.67	1.00
685-46	447163.34	5460069.94	145.07	67.06	43.75	-28.96
685-47	447178.67	5460053.38	146.35	53.64	46.62	37.85
685-48	447178.67	5460053.42	145.15	47.85	44.32	0.90
685-49	447178.70	5460053.47	144.68	60.66	43.52	-31.19
685-50	447174.61	5460059.23	146.39	44.50	46.60	29.67
685-51	447174.56	5460059.57	145.69	46.33	46.53	0.78
685-52	447174.51	5460059.14	144.94	56.69	44.43	-29.45
685-53	447190.26	5460043.15	145.80	50.29	45.15	26.40
685-54	447174.59	5460059.47	145.65	52.43	34.35	0.28
685-55	447167.31	5460063.44	145.80	70.10	38.23	-29.00
685-56	447185.60	5460049.73	146.30	44.20	46.48	31.23
685-57	447186.02	5460049.86	145.25	44.20	46.02	-0.17
685-58	447185.58	5460049.74	144.54	45.72	44.95	-33.09
685-59	447167.37	5460063.78	146.48	51.82	44.77	29.69
CCD-10-025	446911.80	5460215.04	347.28	143.00	225.00	-60.00
CCD-10-026	446966.10	5460214.40	349.46	122.00	225.00	-60.00
CCD-10-027	446996.82	5460120.89	352.75	59.00	225.00	-60.00
CCD-10-028	446901.52	5460258.40	348.45	110.00	225.00	-60.00
CCD-10-029	446994.79	5460355.16	348.76	251.00	225.00	-60.00
CCD-10-030	446894.34	5460308.98	349.58	152.00	225.00	-60.00
CCD-10-031	446952.62	5460364.76	348.69	248.00	225.00	-60.00
CCD-10-032	446897.54	5460368.28	349.93	196.00	225.00	-60.00
CCD-10-033	446897.30	5460419.53	347.79	241.00	225.00	-60.00
CCD-10-034	446838.48	5460311.74	347.94	113.00	225.00	-60.00
CCD-10-035	446838.69	5460367.56	348.27	163.00	225.00	-60.00
CCD-10-036	446797.53	5460380.24	348.10	140.00	225.00	-60.00
CCD-10-037	446834.57	5460423.75	349.11	185.00	225.00	-60.00
CCD-10-038	446810.90	5460454.99	348.11	155.00	225.00	-60.00

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
CCD-10-039	446873.26	5460549.59	347.00	300.00	225.00	-60.00
CCD-10-040	446782.65	5460452.27	348.88	152.00	225.00	-60.00
CCD-10-041	446684.35	5460468.09	351.51	95.00	225.00	-60.00
CCD-10-042	446754.09	5460452.45	349.43	161.00	225.00	-60.00
CCD-10-043	446751.87	5460394.58	349.65	71.00	225.00	-60.00
CCD-10-044	446723.38	5460431.20	349.97	75.00	225.00	-60.00
CCD-10-045	446716.30	5460496.24	350.62	121.00	225.00	-60.00
CCD-10-046	446656.03	5460530.59	354.86	122.00	225.00	-60.00
CCD-10-047	447073.22	5460061.71	352.16	62.00	225.00	-60.00
CCD-10-048	447095.61	5460081.68	352.11	118.00	225.00	-60.00
CCD-10-049	447156.84	5460147.75	355.92	202.00	225.00	-60.00
CCD-10-050	447206.49	5460197.10	357.39	280.00	225.00	-60.00
CCD-10-051	447218.86	5460153.84	354.67	262.00	225.00	-60.00
CCD-10-052	447192.52	5460127.55	353.83	220.00	225.00	-61.00
CCD-10-053	447082.82	5460048.62	351.68	67.18	225.00	-60.00
CCD-10-054	447094.64	5460060.32	351.28	79.00	225.00	-60.00
CCD-10-055	447098.32	5460028.79	351.19	101.00	225.00	-60.00
CCD-10-056	447122.08	5460029.81	350.69	77.00	225.00	-60.00
CCD-10-057	447136.19	5460015.55	350.60	101.00	225.00	-60.00
CCD-10-058	447122.49	5459998.60	349.15	62.00	225.00	-60.00
CCD-10-059	447147.62	5459993.38	351.64	74.00	225.00	-60.00
CCD-10-060	447160.76	5460008.07	350.54	101.00	225.00	-60.00
CCD-10-061	447248.87	5460097.82	351.13	212.00	225.00	-60.00
CCD-10-062	447150.23	5460057.23	350.92	122.00	225.00	-60.00
CCD-10-063	447158.86	5459980.29	351.44	101.00	225.00	-60.00
CCD-10-064	447190.46	5459983.42	350.03	111.00	225.00	-60.00
CCD-10-065	447160.91	5459951.86	350.08	62.00	225.00	-60.00
CCD-10-066	447163.97	5459931.32	348.25	62.00	225.00	-60.00
CCD-10-067	447227.45	5459996.95	351.16	152.40	225.00	-60.00
CCD-10-068	447227.52	5459965.95	350.61	101.00	225.00	-60.00
CCD-10-069	447190.46	5459926.89	348.77	62.00	225.00	-60.00
CCD-10-070	447276.75	5459894.88	350.07	71.00	225.00	-60.00
CCD-10-071	447278.17	5459931.37	350.35	77.00	225.00	-60.00
CCD-10-072	447282.48	5459957.29	350.86	104.00	225.00	-60.00
CCD-10-073	447316.76	5459997.84	351.56	140.00	225.00	-59.00
CCD-10-074	447369.39	5459989.20	356.32	207.20	225.00	-58.00
CCD-10-075	447340.13	5459957.89	353.25	161.00	225.00	-60.00
CCD-10-076	447478.18	5459931.71	362.97	191.00	225.00	-60.00
CCD-10-077	447448.12	5459955.48	362.23	200.00	225.00	-60.00
CCD-10-078	447507.43	5460154.93	360.11	449.00	225.00	-60.00
CCD-10-079	446714.01	5460581.87	351.74	194.00	225.00	-60.00
CCD-10-081	446869.32	5460396.75	349.21	151.00	225.00	-60.00
CCD-10-082	446824.92	5460392.48	348.16	131.00	225.00	-60.00
CCD-10-083A	446812.51	5460424.88	348.93	151.00	225.00	-60.00
CCD-10-084	446771.01	5460386.47	348.39	100.00	225.00	-60.00
CCD-10-085	446841.59	5460510.21	347.34	220.00	225.00	-60.00
CCD-10-086	446829.24	5460311.28	348.06	70.00	225.00	-60.00

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
CCD-10-087	446932.43	5460244.70	349.02	101.00	225.00	-60.00
CCD-10-088A	446856.26	5460342.49	348.68	115.00	225.00	-60.00
CCD-10-089	446924.04	5460282.67	349.15	131.00	225.00	-60.00
CCD-11-090	447102.42	5460075.42	351.60	111.00	225.00	-60.00
CCD-11-091	447132.93	5460107.94	354.09	141.00	225.00	-60.00
CCD-11-092	447199.36	5460180.60	356.91	255.00	225.00	-60.00
CCD-11-093	447147.68	5460181.24	357.69	222.00	225.00	-60.00
CCD-11-094	447089.12	5460095.89	353.82	112.00	225.00	-60.00
CCD-11-095	447118.82	5460122.11	354.74	150.00	225.00	-60.00
CCD-11-096	447060.51	5460098.66	354.26	78.00	225.00	-60.00
CCD-11-097	447120.39	5460154.66	356.76	168.00	225.00	-60.00
CCD-11-098	447092.01	5460038.01	351.12	75.00	225.00	-60.00
CCD-11-099	447124.87	5460043.97	351.08	99.00	225.00	-60.00
CCD-11-100	447154.64	5459966.19	350.14	39.20	225.00	-60.00
CCD-11-101	447151.43	5459962.67	349.91	84.00	225.00	-58.00
CCD-11-102	447171.30	5459981.66	350.54	99.00	225.00	-60.00
CCD-11-103	447158.36	5459997.47	350.84	102.00	225.00	-60.00
CCD-11-104	447134.56	5460000.65	349.75	69.00	225.00	-60.00
CCD-11-105	447216.82	5459939.06	349.82	72.00	225.00	-60.00
CCD-11-106	447271.42	5459940.71	350.33	60.00	225.00	-60.00
CCD-11-107	447269.92	5459906.88	349.95	51.00	225.00	-60.00
CCD-11-108	447314.22	5459951.01	351.72	102.00	225.00	-60.00
CCD-11-109	447354.22	5459934.63	354.12	102.00	225.00	-60.00
CCD-11-110	447329.17	5459905.48	354.08	60.00	225.00	-60.00
CCD-11-111	447271.95	5460080.11	351.21	252.00	225.00	-60.00
CCD-11-112	447216.44	5460052.47	351.16	189.00	225.00	-60.00
CCD-11-113	447209.57	5459973.97	351.09	120.00	225.00	-60.00
CCD-11-114	446912.16	5460268.90	348.82	99.00	225.00	-60.00
CCD-11-115	446941.52	5460300.70	350.52	141.00	225.00	-60.00
CCD-11-116	446950.47	5460315.98	350.70	180.00	225.00	-60.00
CCD-11-117	446966.87	5460326.16	350.37	18.00	225.00	-60.00
CCD-11-117A	446967.87	5460327.16	350.37	30.00	225.00	-60.00
CCD-11-117B	446968.87	5460328.16	350.37	201.00	225.00	-60.00
CCD-11-118	446864.62	5460281.79	347.78	78.00	225.00	-60.00
CCD-11-119	446907.49	5460321.43	350.36	141.00	225.00	-60.00
CCD-11-120	446919.92	5460333.97	350.35	159.00	225.00	-60.00
CCD-11-121	446933.39	5460349.43	350.17	180.00	225.00	-60.00
CCD-11-122	446838.31	5460325.50	348.71	90.00	225.00	-60.00
CCD-11-123	446870.40	5460354.27	349.54	138.00	225.00	-60.00
CCD-11-124	447164.07	5460293.77	350.06	369.00	225.00	-60.00
CCD-11-125	446814.32	5460373.42	348.31	111.00	225.00	-60.00
CCD-11-126	446829.06	5460385.42	348.52	132.00	225.00	-60.00
CCD-11-127	446853.54	5460412.86	349.46	198.00	225.00	-60.00
CCD-11-128	446803.79	5460412.53	349.05	111.00	225.00	-60.00
CCD-11-129	446828.19	5460436.66	349.30	159.00	225.00	-60.00
CCD-11-130	446629.46	5460497.70	355.24	99.00	225.00	-60.00
CCD-11-131	447106.16	5460327.22	349.89	351.00	225.00	-60.00

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
CCD-11-132	446690.45	5460553.46	351.15	180.00	225.00	-60.00
CCD-11-133	446884.34	5460269.84	348.58	99.00	225.00	-60.00
CCD-11-134	446898.18	5460283.17	348.56	108.00	225.00	-60.00
CCD-11-135	446909.46	5460295.72	349.55	132.00	225.00	-60.00
CCD-11-136	446927.22	5460314.85	350.39	150.00	225.00	-60.00
CCD-11-137	447135.05	5460356.02	350.05	402.00	225.00	-60.00
CCD-11-138	446940.37	5460326.03	350.76	171.00	225.00	-60.00
CCD-11-139	446980.06	5460367.35	348.71	252.00	225.00	-60.00
CCD-11-140	446909.01	5460241.10	348.80	81.00	225.00	-60.00
CCD-11-141	446922.61	5460252.32	348.79	108.00	225.00	-61.00
CCD-11-142	446938.15	5460266.65	349.20	111.00	225.00	-61.00
CCD-11-143	446954.07	5460282.04	350.11	141.00	225.00	-61.00
CCD-11-144	447077.66	5460409.42	350.42	40.00	225.00	-65.00
CCD-11-144A	447055.60	5460384.13	348.74	456.00	225.00	-67.00
CCD-11-145	446898.87	5460202.71	349.36	51.00	225.00	-60.00
CCD-11-146	446925.25	5460228.03	347.28	72.00	225.00	-60.00
CCD-11-147	446940.86	5460215.90	347.37	114.00	225.00	-60.00
CCD-11-148	446955.87	5460255.40	349.57	120.00	225.00	-61.00
CCD-11-149	446969.16	5460240.86	349.90	144.00	225.00	-61.00
CCD-11-150	446983.60	5460254.48	350.36	168.00	225.00	-62.00
CCD-11-151	447248.96	5460382.06	351.59	451.00	225.00	-60.00
CCD-11-152	446997.61	5460268.91	350.71	180.00	225.00	-62.00
CCD-11-153	446981.92	5460227.68	350.03	129.00	225.00	-61.00
CCD-11-154	446995.91	5460240.57	350.44	162.00	225.00	-61.00
CCD-11-155	447010.17	5460253.92	350.54	174.00	225.00	-62.00
CCD-11-156	446983.46	5460199.17	350.01	99.00	225.00	-61.00
CCD-11-157	446995.91	5460212.77	350.26	129.00	225.00	-61.00
CCD-11-158	447010.29	5460228.29	350.93	150.00	225.00	-62.00
CCD-11-159	447015.15	5460203.13	351.14	135.00	225.00	-61.00
CCD-11-160	447068.20	5460170.61	354.33	132.00	225.00	-60.00
CCD-11-161	447108.53	5460297.25	350.39	321.00	225.00	-63.00
CCD-11-162	447094.51	5460198.42	355.62	192.00	225.00	-61.00
CCD-11-163	447122.47	5460226.35	356.45	276.00	225.00	-62.00
CCD-11-164	447052.48	5460128.94	355.15	111.00	225.00	-60.00
CCD-11-165	447111.06	5460184.88	357.05	231.00	225.00	-62.00
CCD-11-166	447051.17	5460096.63	354.19	75.00	225.00	-60.00
CCD-11-167	447090.97	5460138.52	356.54	141.00	225.00	-61.00
CCD-11-168	447123.78	5460170.06	357.29	213.00	225.00	-62.00
CCD-11-169	447137.03	5460212.05	358.06	252.00	225.00	-63.00
CCD-11-170	447151.51	5460198.81	357.88	15.00	225.00	-62.00
CCD-11-170A	447152.55	5460199.75	357.99	255.00	225.00	-62.00
CCD-11-171	447164.47	5460236.64	357.65	291.00	225.00	-63.00
CCD-11-172	447179.38	5460237.78	357.08	291.00	225.00	-63.00
CCD-11-173	446826.70	5460296.92	347.58	72.00	225.00	-60.00
CCD-11-174	446853.94	5460326.43	349.06	120.00	225.00	-61.00
CCD-11-175	446811.66	5460398.52	348.57	126.00	225.00	-61.00
CCD-11-176	446790.89	5460448.12	348.77	162.00	225.00	-62.00

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
CCD-11-177	446828.97	5460357.51	348.04	123.00	225.00	-61.00
CCD-11-178	446818.84	5460477.84	347.82	164.30	225.00	-62.00
CCD-11-179	446854.59	5460382.82	348.68	171.00	225.00	-61.00
CCD-11-180	446847.59	5460505.66	347.42	240.00	225.00	-63.00
CCD-11-181	447214.62	5459894.89	348.13	51.00	225.00	-60.00
CCD-11-182	446812.14	5460498.81	348.03	216.00	225.00	-63.00
CCD-11-183	446784.37	5460510.73	348.11	243.00	225.00	-60.00
CCD-11-184	446806.57	5460506.56	348.06	219.00	225.00	-63.00
CCD-11-185	446796.16	5460522.83	348.05	231.00	225.00	-60.00
CCD-11-186	446649.07	5460562.14	355.54	147.00	225.00	-61.00
CCD-11-187	446663.39	5460575.91	354.83	141.00	225.00	-62.00
CCD-11-188	446677.49	5460589.03	354.38	156.80	225.00	-62.00
CCD-11-189	447225.10	5459904.52	348.28	72.00	225.00	-60.00
CCD-11-190	447244.88	5459924.81	349.08	90.00	225.00	-60.00
CCD-11-191	447314.68	5459908.64	352.03	111.00	225.00	-60.00
CCD-11-192	447342.62	5459937.40	353.33	141.00	225.00	-61.00
CCD-11-193	447370.53	5459965.28	356.64	189.00	225.00	-62.00
CCD-11-194	447390.64	5459985.43	359.57	231.00	225.00	-63.00
CCD-11-195	447419.83	5460015.68	360.75	279.00	225.00	-64.00
CCD-11-196	447348.52	5459887.58	355.89	120.00	225.00	-60.00
CCD-11-197	447370.79	5459908.55	356.02	141.00	225.00	-61.00
CCD-11-198	447419.34	5459956.91	361.77	231.00	225.00	-63.00
CCD-11-199	447111.14	5460126.70	355.26	159.00	225.00	-62.00
CCD-11-200	446840.95	5460029.03	344.27	120.00	225.00	-60.00
CCD-11-201	446826.73	5460015.32	344.09	102.00	225.00	-60.00
CCD-11-202	446811.80	5459999.82	344.01	102.00	225.00	-60.00
CCD-11-203	446883.14	5460014.18	345.62	102.00	225.00	-60.00
CCD-11-204	446867.74	5459999.52	345.15	105.00	225.00	-60.00
CCD-11-205	446853.63	5459986.29	344.72	101.70	225.00	-60.00
CCD-11-206	446839.76	5459971.93	344.79	102.00	225.00	-60.00
CCD-11-207	446946.48	5459967.57	344.67	120.00	225.00	-60.00
CCD-11-208	446972.35	5459995.67	347.63	123.00	225.00	-60.00
CCD-11-209	446983.04	5460008.53	348.43	120.00	225.00	-60.00
CCD-12-210	447023.65	5459872.70	344.28	120.00	225.00	-60.00
CCD-12-211	447052.02	5459900.15	344.78	120.00	225.00	-60.00
CCD-12-212	447080.63	5459928.83	347.19	120.00	225.00	-60.00
CCD-12-213	447307.72	5459702.51	351.65	117.00	225.00	-60.00
CCD-12-214	447335.95	5459730.85	355.86	126.00	225.00	-60.00
CCD-12-215	447358.75	5459753.91	357.65	132.00	225.00	-60.00
CCD-12-216	446978.22	5460272.73	350.53	123.00	270.00	-60.00
CCD-12-217	447007.74	5460272.76	350.82	174.00	270.00	-61.00
CCD-12-218	446987.74	5460322.42	350.38	102.00	270.00	-60.00
CCD-12-219	447013.53	5460322.24	349.66	177.00	270.00	-61.00
CCD-12-220	447283.41	5459730.24	351.51	120.00	225.00	-60.00
CCD-12-221	447311.96	5459755.29	355.74	120.00	225.00	-60.00
CCD-12-222	447293.49	5459718.04	352.20	120.00	225.00	-60.00
CCD-12-223	447321.46	5459747.90	356.13	120.00	225.00	-60.00

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
CCD-12-224	447333.84	5459675.24	349.96	120.00	225.00	-60.00
CCD-12-225	447364.20	5459704.61	353.81	120.00	225.00	-60.00
CCD-12-226	447479.84	5459621.31	349.04	126.00	225.00	-60.00
CCD-12-227	447504.56	5459643.91	354.00	135.00	225.00	-60.00
CCD-12-228	446642.33	5460622.82	357.13	150.00	225.00	-60.00
CCD-12-229	446668.81	5460651.41	355.28	150.00	225.00	-60.00
CCD-12-230	446614.62	5460651.86	357.77	123.00	225.00	-60.00
CCD-12-231	446641.29	5460679.02	357.11	141.00	225.00	-60.00
CCD-12-232	446567.49	5460695.91	357.56	150.00	225.00	-60.00
CCD-12-233	446596.17	5460722.93	357.53	144.00	225.00	-60.00
CCD-12-234	446541.75	5460752.02	359.59	165.00	225.00	-60.00
CCD-12-235	446570.01	5460777.88	360.96	246.00	225.00	-60.00
CCD-12-236	446402.91	5460667.62	361.00	120.00	225.00	-60.00
CCD-12-237	446429.04	5460696.54	360.54	120.00	225.00	-60.00
CCD-12-238	446541.83	5460664.44	359.68	150.00	225.00	-60.00
CCD-12-239	446611.64	5460593.64	358.59	165.00	225.00	-60.00
CL96-01	447743.34	5460174.64	361.12	667.00	227.00	-70.00
CL96-02	447696.16	5460297.32	360.86	744.00	229.00	-73.00
CL96-03	447139.41	5460467.58	351.60	575.00	229.00	-70.00
CL96-04	447407.61	5460485.99	358.33	732.00	233.00	-72.00
CL96-05	447087.54	5460660.71	346.64	741.00	219.00	-72.00
CL96-06	446941.78	5460319.72	351.12	307.00	227.00	-72.00
CL96-07	447546.00	5460190.58	359.89	573.00	222.00	-72.00
CL96-08	447004.12	5460474.01	349.42	456.00	229.00	-72.00
NC-85-90	447162.15	5460030.85	351.55	135.98	222.22	-54.00
NC-85-91	447315.15	5459931.48	351.88	108.81	224.82	-50.00
NC-85-92	447334.23	5459902.40	353.59	94.51	225.00	-50.00
NC-85-93	447149.63	5460020.66	351.48	108.51	227.53	-55.00
NC-85-94	447354.76	5459924.12	354.25	115.85	223.70	-50.00
NC-85-95	447377.31	5459950.70	357.55	136.25	226.10	-54.50
NC-85-96	447406.50	5459976.99	361.59	167.68	227.30	-55.00
NC-85-97	447149.53	5460039.94	351.65	117.68	226.78	-40.00
NC-85-98	447430.76	5460000.62	362.69	198.17	227.10	-55.00
NC-85-99	447147.91	5460037.93	351.65	105.49	228.02	-55.00
NC-86-114	447464.92	5460012.99	362.79	219.21	225.00	-55.00
NC-86-115	447464.92	5460012.99	362.87	216.46	225.00	-49.00
NC-89-116	447469.26	5460202.52	353.83	453.35	225.00	-74.00
NC-89-117	447360.25	5460423.80	362.63	134.15	225.00	-76.00
NC-89-117A	447355.78	5460430.46	359.52	25.30	225.00	-82.00
NC-89-117B	447357.68	5460421.90	360.85	596.65	225.00	-84.00
NC-89-118	447291.71	5460497.78	357.16	584.45	225.00	-84.00
NC-89-119	447440.89	5460271.82	355.21	557.01	221.00	-81.00
NC-89-120	447326.29	5460617.38	348.68	928.96	225.00	-82.00
NC-89-120B	447321.72	5460617.49	347.70	876.91	220.20	-82.00
NC-89-121	447388.10	5460529.65	360.01	916.77	225.00	-81.00
NC-89-121A	447384.78	5460529.92	358.59	837.50	225.00	-81.00
NC-89-122	447436.15	5460368.52	356.81	723.02	228.00	-80.50



Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
NC-89-123	447437.21	5460368.40	356.83	642.38	223.00	-75.00
NC-89-124	447261.60	5460530.07	359.75	708.81	225.00	-76.00
NC-89-125	447233.91	5460587.64	355.30	752.13	216.00	-80.50
NC-89-126	447275.93	5460711.70	348.44	102.74	225.00	-80.00
NC-89-126A	447270.53	5460711.20	347.76	835.06	228.00	-80.00
NCX-83-01	446690.01	5460656.69	354.63	185.06	225.00	-50.00
NCX-83-02	446809.64	5460213.59	347.02	137.77	225.00	-50.00
NCX-83-03	447089.55	5460152.12	357.16	169.82	225.25	-55.00
NCX-83-04	447138.04	5460203.39	358.38	200.30	220.33	-55.00
NCX-83-05	447175.54	5460223.09	357.01	273.48	224.90	-60.00
NCX-83-06	447223.86	5460284.13	350.30	377.13	225.00	-65.00
NCX-83-07	447263.73	5460330.29	352.05	291.69	213.77	-70.00
NCX-83-08	447266.32	5460330.07	352.10	422.87	225.00	-70.00
NCX-83-09	446831.57	5460019.00	344.61	148.48	225.00	-50.00
NCX-83-10	446505.95	5460818.58	363.17	160.67	225.00	-45.00
NCX-84-14	447015.08	5460203.09	351.72	123.17	225.00	-45.00
NCX-84-15	446896.00	5460300.22	350.99	136.59	225.00	-45.00
NCX-84-16	446804.33	5460424.84	349.00	146.34	225.00	-45.00
NCX-84-17	446851.60	5460342.31	348.97	121.95	225.00	-45.00
NCX-84-18	446701.07	5460494.52	352.45	167.79	225.00	-45.00
NCX-84-19	446965.88	5460239.96	351.29	94.51	225.00	-45.00
NCX-84-20	446852.47	5460473.14	349.10	227.74	225.00	-50.00
NCX-84-21	446852.47	5460473.14	349.10	242.38	225.00	-66.50
NCX-84-22	446874.13	5460451.55	349.95	215.55	223.00	-50.00
NCX-84-23	446830.82	5460494.73	348.00	203.35	225.00	-50.00
NCX-84-24	446960.69	5460408.44	350.00	276.52	225.00	-65.00
NCX-84-25	446852.40	5460516.38	349.13	215.55	224.00	-54.00
NCX-84-26	446852.40	5460516.38	349.13	213.36	226.00	-64.00
NCX-84-27	446873.99	5460538.05	349.22	267.38	224.00	-62.00
NCX-84-28	446839.82	5460546.11	348.11	227.74	228.00	-60.00
NCX-85-29	447079.85	5460268.07	351.24	200.25	225.00	-56.00
NCX-85-30	446949.97	5460354.36	349.22	215.55	225.00	-55.00
NCX-85-31	446830.95	5460408.23	349.00	138.72	225.00	-55.00
NCX-85-32	446787.56	5460494.66	348.05	169.82	225.00	-54.50
NCX-85-33	446787.43	5460581.15	349.58	303.96	225.00	-73.00
NCX-85-34	446549.40	5460688.90	358.30	182.01	225.00	-45.00
NCX-85-35	446777.46	5460051.35	344.07	114.94	225.00	-50.00
NCX-86-37	446700.93	5460581.02	352.47	173.78	225.00	-45.00
NCX-89-38	446852.34	5460559.64	349.42	328.35	225.00	-67.00
NCX-89-39	446895.66	5460516.45	349.12	331.40	225.00	-69.00
NCX-89-40	446733.46	5460527.01	349.73	224.09	225.00	-55.00
NCX-89-41	446919.34	5460579.21	348.51	428.35	225.00	-72.50
CL96-09	447511.58	5460039.88	367.06	411.00	226.00	-72.00
CL96-10	447068.12	5460538.28	350.40	565.00	221.00	-76.00
CL96-11	447590.00	5460321.70	359.69	612.00	229.00	-70.00
CL96-12	447151.33	5460706.67	346.37	762.00	229.00	-75.00
CL96-13	447449.65	5460571.85	351.00	867.00	224.00	-75.00

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
D-01	447092.11	5459998.91	325.41	22.25	200.85	0.86
D-02	447110.34	5459981.69	323.23	28.04	210.00	0.00
D-03	447138.17	5459948.13	316.18	21.64	225.00	0.00
D-04	447136.54	5459934.83	331.96	56.39	46.10	0.81
D-05	447159.44	5459925.90	312.39	12.50	220.86	4.86
D-06	447154.74	5459942.15	314.47	67.67	16.07	0.38
D-07	447155.72	5459941.73	314.55	74.68	46.15	2.68
D-08	447156.35	5459941.05	314.85	80.77	72.50	12.97
D-09	447203.43	5459907.38	305.83	85.65	45.58	28.35
D-10	447238.05	5459897.42	301.09	72.85	46.95	33.82
D-100	447129.04	5460057.54	121.69	152.40	45.00	-30.00
D-101	447107.16	5460078.91	117.72	158.50	45.00	-30.00
D-102	447107.16	5460078.91	118.33	124.05	45.00	-15.00
D-103	447101.76	5460084.31	117.11	146.30	45.00	-25.00
D-104	447095.02	5460099.22	115.59	128.63	45.00	-17.00
D-105	447095.02	5460099.22	115.28	152.40	45.00	-30.00
D-106	447079.23	5460105.03	113.15	130.45	45.00	-5.00
D-107	447079.23	5460105.03	113.15	168.55	45.00	-23.00
D-108	447067.11	5460114.53	110.71	138.38	45.00	-10.00
D-109	447067.11	5460114.53	110.41	179.22	45.00	-25.00
D-11	447238.13	5459897.11	299.48	74.37	45.13	-0.35
D-110	447060.38	5460129.44	107.66	182.88	45.00	-32.00
D-111	447053.90	5460122.94	107.97	109.73	45.00	-10.00
D-112	447152.43	5460037.68	127.48	151.22	45.00	-32.50
D-113	447053.90	5460122.94	107.66	185.01	37.00	-32.00
D-114	447140.95	5460047.83	125.34	155.49	45.00	-31.00
D-115	447163.13	5460004.98	227.80	30.48	225.00	-50.00
D-116	447053.90	5460122.94	107.97	120.09	37.00	-10.00
D-117	447163.07	5460005.04	228.80	30.18	225.00	8.00
D-118	447173.04	5459993.39	224.80	30.48	225.00	-43.00
D-119	447148.34	5460022.76	229.80	32.00	225.00	-21.00
D-12	447260.60	5459876.53	296.20	67.06	44.70	44.87
D-120	447129.92	5460047.59	233.80	20.42	225.00	-26.00
D-121	447135.82	5460010.20	253.80	12.19	225.00	-40.00
D-122	447139.10	5459991.82	258.80	69.80	45.00	55.00
D-123	447139.10	5459991.82	257.80	72.24	45.00	15.00
D-124	447159.67	5459969.15	263.80	72.24	45.00	19.00
D-125	447159.67	5459969.15	262.80	60.96	45.00	0.00
D-126	447215.08	5459938.09	273.80	64.01	45.00	47.00
D-127	447215.08	5459938.09	272.80	66.75	45.00	20.00
D-128	447242.35	5459922.13	277.80	57.30	45.00	45.00
D-129	447242.35	5459922.13	277.80	57.61	45.00	16.00
D-13	447287.10	5459901.52	283.62	49.07	45.70	1.14
D-14	447258.66	5459916.30	280.33	62.18	44.00	35.14
D-15	447243.10	5459902.84	280.75	20.12	223.96	61.29
D-16	447258.82	5459916.70	278.80	68.58	40.90	0.65
D-17	447152.43	5459983.59	259.47	121.92	47.11	-17.38

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
D-18	447152.41	5459983.06	259.80	107.59	31.47	-19.76
D-19	447092.06	5460050.49	245.82	69.95	27.63	-13.52
D-20	447092.37	5460050.33	245.74	77.72	46.76	-17.14
D-21	447092.73	5460050.07	245.96	88.39	58.27	-9.50
D-22	447111.46	5460027.93	250.90	92.96	44.63	-7.88
D-23	447111.72	5460027.79	250.82	18.59	51.10	-4.96
D-24	447120.48	5460019.08	250.82	17.07	61.82	-10.53
D-25	447111.39	5460028.00	251.51	81.38	46.79	15.11
D-26	447151.32	5459984.53	259.22	69.80	16.60	-17.25
D-27	447176.04	5459964.54	264.87	122.22	31.54	-19.07
D-28	447176.44	5459964.40	264.79	72.54	48.94	-22.08
D-29	447176.85	5459963.99	264.88	84.73	60.00	-22.55
D-30	447176.62	5459964.52	265.41	72.54	46.49	0.27
D-31	447176.62	5459964.53	266.06	72.85	46.22	22.51
D-32	447203.27	5459947.63	270.85	60.96	46.84	36.87
D-33	447203.36	5459947.79	269.35	74.37	45.21	-7.75
D-34	447203.20	5459947.67	268.95	30.78	44.58	-20.07
D-35	447231.19	5459932.12	275.66	77.42	48.80	31.35
D-36	447231.27	5459932.17	274.98	62.94	51.87	2.65
D-37	447203.34	5459947.79	269.99	68.88	44.96	14.36
D-38	447202.72	5459947.14	271.19	74.07	47.54	55.79
D-39	447176.12	5459964.10	267.46	30.48	45.25	46.39
D-40	447152.14	5459983.94	260.31	78.94	46.74	1.89
D-41	447152.06	5459983.87	260.94	65.53	46.95	24.18
D-42	447151.87	5459983.63	261.67	72.54	49.01	42.26
D-43	447132.87	5460007.36	254.61	58.22	44.68	-11.59
D-44	447132.94	5460007.36	255.40	64.31	46.17	14.90
D-45	447132.18	5460006.76	256.96	72.24	37.76	60.59
D-46	447111.60	5460028.21	252.54	72.54	47.86	29.11
D-47	447092.37	5460050.35	247.50	69.19	52.58	31.20
D-48	447091.74	5460050.05	248.16	50.60	49.55	65.51
D-50	447203.99	5459907.18	304.95	83.52	52.64	17.69
D-51	447112.84	5460075.04	241.88	55.17	48.71	65.47
D-52	447102.50	5460064.81	240.05	65.23	43.04	-29.45
D-53	447125.72	5460063.73	238.71	57.30	42.88	39.64
D-54	447125.83	5460064.02	236.93	78.33	40.75	-23.55
D-55	447135.35	5460053.11	235.99	56.08	49.39	24.63
D-56	447135.18	5460053.03	234.94	68.88	41.80	-11.00
D-57	447135.16	5460053.00	234.56	78.64	44.15	-28.82
D-58	447145.38	5460040.67	234.13	61.26	47.33	43.28
D-59	447145.58	5460041.00	233.12	72.09	44.79	-3.12
D-60	447145.57	5460041.06	232.60	67.06	51.76	-31.37
D-61	447155.33	5460028.63	231.88	64.01	44.56	34.97
D-62	447155.26	5460028.87	230.60	88.09	44.56	-10.92
D-63	447155.28	5460028.88	230.42	55.78	47.37	-27.65
D-64	447165.33	5460016.21	229.84	65.23	46.07	37.82
D-65	447164.40	5460017.19	228.80	81.38	45.00	0.00

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
D-66	447175.43	5460005.75	226.15	67.36	49.15	-1.09
D-67	447183.90	5459991.81	225.19	73.15	47.39	42.93
D-68	447184.03	5459992.04	224.13	42.06	42.16	11.74
D-69	447184.10	5459992.12	223.68	59.44	42.18	-7.65
D-70	447212.58	5459956.35	217.10	55.17	41.44	14.34
D-71	447198.92	5459988.13	224.17	71.02	43.94	57.40
D-72	447199.80	5459989.04	222.95	52.73	44.55	0.20
D-73	447203.23	5459968.31	220.92	74.16	47.09	46.26
D-74	447201.63	5459967.16	218.58	85.34	37.05	69.99
D-75	447203.55	5459968.50	219.80	70.10	44.18	1.37
D-76	447212.69	5459958.03	216.95	64.01	43.30	-0.28
D-77	447219.97	5459947.28	216.89	80.31	51.57	56.24
D-78	447222.01	5459946.19	215.08	70.71	43.46	17.39
D-79	447235.33	5459932.70	212.12	73.15	45.00	10.00
D-80	447243.21	5459920.65	211.46	96.07	50.28	53.46
D-81	447244.08	5459921.52	210.48	76.50	48.72	20.45
D-82	447244.06	5459921.35	209.90	82.91	49.29	8.56
D-83	447222.33	5459944.76	215.75	89.92	72.54	38.20
D-84	447222.14	5459945.25	214.80	80.77	58.90	12.30
D-85	447221.54	5459944.76	217.03	92.66	56.62	67.46
D-86	447222.03	5459945.42	213.96	103.63	43.36	-23.17
D-87	447213.07	5459956.23	218.81	74.98	53.18	49.08
D-88	447203.11	5459968.05	221.57	84.73	48.22	55.64
D-89	447203.61	5459968.51	220.80	62.48	45.00	20.00
D-90	447182.80	5459992.19	226.27	90.53	55.03	65.32
D-92	447203.53	5459991.49	137.53	140.21	45.00	-32.00
D-93	447192.06	5460001.64	135.10	152.10	45.00	-35.00
D-94	447180.58	5460011.78	132.66	143.26	45.00	-35.00
D-95	447169.32	5460022.14	130.52	158.19	45.00	-36.00
D-96	447158.28	5460032.72	128.39	124.36	45.00	-24.00
D-97	447158.28	5460032.72	128.09	158.50	45.00	-40.00
D-98	447146.58	5460042.65	126.87	167.34	45.00	-35.00
D-99	447135.54	5460053.23	124.43	144.48	45.00	-28.50
NC-127	447290.83	5460165.69	352.60	383.00	223.00	-74.00
NC-128	447361.19	5460117.15	353.00	377.00	225.00	-69.00
NC-129	447178.39	5460066.10	351.04	140.00	225.00	-60.00
NC-130	447251.56	5460014.71	351.32	164.00	225.00	-55.00
NC-131	447263.93	5459973.27	351.33	116.70	225.00	-55.00
NC-132	447307.35	5459976.52	352.03	85.50	225.00	-55.00
NC-133	447175.02	5460011.56	350.21	74.00	225.00	-50.00
NC-134	447166.02	5460021.75	350.31	68.00	225.00	-50.00
NC-135	447300.87	5459970.01	351.84	131.00	225.00	-55.00
NC-136	447182.29	5460039.42	350.47	119.00	225.00	-50.00
NC-137	447242.50	5459965.60	351.01	65.00	225.00	-50.00
NC-138	447264.15	5459944.01	351.03	65.00	225.00	-50.00
NC-139	447293.37	5459930.00	351.19	57.50	225.00	-50.00
NC-140	447410.97	5460236.58	352.89	482.00	225.00	-76.00

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
NC-141	447410.97	5460236.58	352.89	581.00	225.00	-81.00
NC-81-01	446749.81	5459755.06	343.90	77.13	225.00	-45.00
NC-81-02	446749.81	5459755.06	343.90	68.60	225.00	-75.00
NC-81-03	447210.11	5459943.91	349.98	74.09	225.00	-45.00
NC-81-04	447220.90	5459954.75	350.30	107.62	225.00	-45.00
NC-81-05	447199.31	5459933.08	350.64	64.94	225.00	-45.00
NC-81-06	447210.14	5459922.29	348.85	61.89	225.00	-45.00
NC-81-07	447209.32	5459964.78	350.54	107.62	225.00	-45.00
NC-81-08	447229.90	5459994.03	350.64	138.11	225.00	-45.00
NC-81-09	447189.24	5459944.63	351.26	64.94	225.00	-45.00
NC-81-10	447176.79	5459953.81	348.86	64.94	225.00	-45.00
NC-81-11	447165.53	5459964.17	349.33	61.59	225.00	-45.00
NC-81-12	447176.10	5459976.51	351.02	64.94	225.00	-45.00
NC-81-13	447188.45	5459965.50	350.10	67.68	225.00	-45.00
NC-81-14	447209.18	5459986.29	351.02	113.72	225.00	-45.00
NC-81-15	447241.64	5460025.37	350.82	162.50	225.00	-47.00
NC-81-16	447251.59	5460076.40	350.88	205.18	225.00	-47.00
NC-81-17	447189.40	5460053.08	351.00	165.55	225.00	-60.00
NC-81-18	447161.38	5459992.49	350.99	31.40	225.00	-45.00
NC-81-19	447150.55	5460003.29	351.03	31.40	225.00	-45.00
NC-83-20	447273.35	5460054.19	350.82	215.55	225.00	-50.00
NC-83-21	447271.99	5460097.63	351.28	233.84	225.00	-50.00
NC-83-22	447292.08	5460074.80	353.18	236.89	225.00	-50.00
NC-83-23	447293.48	5460075.58	350.88	276.52	225.00	-60.00
NC-83-24	447271.99	5460097.63	351.28	264.33	225.00	-60.00
NC-83-25	447271.99	5460097.63	351.28	246.04	225.00	-55.00
NC-83-26	447248.93	5460117.90	351.96	233.84	225.00	-55.00
NC-83-27	447248.93	5460117.90	351.96	249.17	225.00	-65.00
NC-83-28	447296.35	5460116.42	351.77	276.52	225.00	-60.00
NC-83-29	447316.14	5460056.17	351.19	221.59	225.45	-50.00
NC-83-30	447335.31	5460077.85	351.89	258.23	225.00	-50.00
NC-83-31	447293.91	5460032.77	350.94	200.30	228.13	-50.00
NC-83-32	447325.03	5460024.70	351.07	203.35	229.33	-50.00
NC-83-33	447314.25	5459723.51	354.16	93.90	225.00	-50.00
NC-83-34	447271.42	5460012.17	350.88	175.91	226.12	-50.00
NC-83-35	447306.02	5459998.96	351.04	175.91	225.72	-50.00
NC-83-36	447348.24	5460045.03	354.30	212.50	225.00	-50.00
NC-83-37	447343.06	5459999.09	352.80	175.91	225.00	-50.00
NC-83-38	447324.37	5459980.63	352.01	145.43	225.00	-50.00
NC-83-39	447302.36	5459955.36	351.19	114.94	225.00	-50.00
NC-83-40	447281.40	5459979.02	350.85	139.33	224.18	-48.00
NC-83-41	447336.21	5459946.30	352.74	111.86	220.27	-50.00
NC-83-42	447270.30	5460137.44	353.23	285.67	225.67	-65.00
NC-83-43	447293.45	5460162.10	352.64	310.06	223.62	-67.00
NC-83-44	447252.32	5460164.83	353.26	291.77	225.00	-65.00
NC-83-45	447231.34	5460144.23	353.84	255.18	223.90	-65.00
NC-83-46	447270.87	5460186.61	352.71	314.33	226.45	-66.00

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
NC-83-47	447315.58	5460186.61	352.70	345.43	225.00	-65.00
NC-83-48	447317.95	5460142.27	352.38	322.26	225.00	-65.00
NC-83-49	447302.78	5460219.16	352.10	337.69	220.18	-65.00
NC-83-50	447319.97	5460103.91	351.92	282.62	225.00	-65.00
NC-83-51	447271.96	5460231.03	352.10	344.82	225.97	-65.00
NC-83-52	447260.79	5460264.52	350.76	361.59	219.22	-67.00
NC-83-53	447283.25	5460283.23	351.99	416.77	220.35	-72.00
NC-83-54	447293.47	5460252.35	351.00	391.77	222.50	-71.00
NC-83-55	447251.03	5460206.12	354.88	303.96	227.07	-60.00
NC-83-56	447329.05	5460241.95	351.46	374.09	224.43	-67.50
NC-83-57	447213.02	5460221.61	357.00	316.17	222.88	-67.00
NC-83-58	447356.97	5459967.47	355.21	145.43	225.00	-55.00
NC-83-59	447347.66	5460260.13	351.65	441.16	225.50	-72.00
NC-83-60	447377.44	5459987.89	357.30	173.48	225.00	-60.00
NC-83-61	447369.86	5460019.32	356.67	206.40	225.00	-61.00
NC-83-62	447372.89	5460065.53	353.81	242.93	225.00	-55.00
NC-83-63	447257.96	5460361.85	351.98	442.07	217.78	-70.00
NC-83-64	447406.66	5460018.15	358.02	206.40	225.00	-61.00
NC-83-65	447281.73	5460242.39	351.16	365.85	221.28	-68.00
NC-83-66	447201.23	5460259.78	351.28	313.11	233.87	-62.00
NC-83-67	447315.16	5460273.36	351.34	442.07	225.00	-75.00
NC-83-68	447287.94	5460396.26	353.84	504.57	225.00	-75.00
NC-83-69	447295.11	5460363.46	355.36	502.13	216.87	-75.00
NC-83-70	447222.65	5460414.52	351.37	529.57	219.97	-76.00
NC-83-71	447336.85	5460295.57	351.74	489.94	220.00	-76.00
NC-83-72	447171.64	5460361.11	350.08	425.91	230.15	-76.50
NC-83-73	447306.60	5460306.22	353.00	483.72	227.17	-77.50
NC-83-74	447147.14	5460338.83	350.02	364.94	225.00	-70.00
NC-83-75	447344.87	5460342.22	355.00	82.30	225.00	-75.00
NC-83-75A	447339.83	5460342.58	355.00	38.71	225.00	-75.00
NC-83-75B	447339.83	5460342.58	355.00	465.55	224.93	-83.00
NC-83-76	447402.22	5460138.69	354.00	394.21	231.03	-77.00
NC-83-77	447401.03	5460139.45	354.00	337.50	227.85	-70.00
NC-84-78	447359.52	5460181.51	353.85	411.89	229.85	-79.50
NC-84-79	447343.82	5460165.04	353.06	357.93	240.15	-71.50
NC-84-80	447420.08	5460109.94	355.88	365.85	214.00	-80.00
NC-84-81	447401.61	5460093.99	354.52	401.52	225.00	-70.00
NC-84-82	447210.37	5460162.26	356.65	258.23	225.00	-67.00
NC-85-100	447410.51	5460065.85	355.91	273.48	223.35	-65.00
NC-85-101	447158.49	5460051.44	351.60	123.75	225.00	-55.00
NC-85-102	447455.80	5460020.50	362.54	227.74	224.98	-55.00
NC-85-103	447455.80	5460020.50	362.54	235.61	226.57	-60.00
NC-85-104	447194.27	5460021.30	352.00	142.34	225.00	-42.00
NC-85-105	447423.22	5460034.73	359.20	230.79	226.43	-61.50
NC-85-106	447142.62	5460098.00	352.65	142.38	231.70	-60.00
NC-85-107	447193.04	5460020.18	352.00	132.93	225.00	-53.00
NC-85-108	447230.85	5460054.54	350.93	175.91	220.73	-45.00

Drillhole	Easting (m)	Northing (m)	RL (m)	Max Depth (m)	Azimuth (°)	Dip (°)
NC-85-109	447175.75	5460002.75	351.85	87.50	225.00	-40.00
NC-85-110	447207.17	5460010.46	351.68	121.95	225.00	-40.00
NC-85-111	447204.09	5460009.32	351.68	136.77	225.00	-60.00
NC-85-112	447217.51	5460020.95	351.68	144.21	225.00	-60.00
NC-85-113	447134.14	5460050.05	350.64	66.46	225.00	-45.00
NC-85-83	447202.67	5460122.13	353.35	239.94	224.70	-66.00
NC-85-84	447167.70	5460084.17	352.27	175.91	227.13	-63.00
NC-85-85	447166.48	5460119.54	354.04	212.45	228.00	-67.00
NC-85-86	447120.80	5460075.22	351.06	113.72	224.80	-55.00
NC-85-87	447118.42	5460120.79	355.20	178.96	221.53	-67.00
NC-85-88	447160.26	5460169.00	355.89	224.70	224.00	-68.00
NC-85-89	447375.22	5460104.05	352.97	294.82	218.68	-62.00
NCX-89-42	446895.86	5460386.71	349.42	227.74	225.00	-68.00
NCX-89-43	446938.97	5460473.28	349.12	340.55	225.00	-68.00
NCX-89-44	447047.33	5460322.08	349.74	266.77	225.00	-65.00
NCX-89-45	447090.51	5460365.39	349.74	398.98	225.00	-69.00

---

**Appendix B – Tenement Disposition List**



---

<b>First Mining: Summary of Cameron land holdings</b>		
	Total number	Area (ha)
Patented Claims:	24	373.9
Unpatented Claims:	226	42,720.0
Leases:	4	1,673.8
Licenses of Occupation:	7	85.5
Total:	261	44,853.2

## PATENTS

Number	Claim Number	Owner	Project	Township	G-No.	PIN	Parcel	Patent	Rights	Ownership	Area (Ha.)
1	K2766	Cameron Gold Operations Ltd	Cameron	ROWAN LAKE AREA	10100195	42185-0720		Pa8441	MRO	100%	19.77
2	K2767	Cameron Gold Operations Ltd	Cameron	ROWAN LAKE AREA	10100189	42185-0722		Pa8442	MRO	100%	5.14
3	K2768	Cameron Gold Operations Ltd	Cameron	ROWAN LAKE AREA	10100190	42185-0724		Pa8443	MRO	100%	2.75
4	K4712	Cameron Gold Operations Ltd	Cameron	ROWAN LAKE AREA	10100194	42185-0726		Pa9901	MRO	100%	7.68
5	K10058	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	10100256	42185-0580		Pa12522	MR+SR	100%	12.22
6	K9999	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	10100257	42185-0581		Pa12523	MR+SR	100%	7.26
7	K10000	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	10100258	42185-0807		Pa12524	MR+SR	100%	14.40
8	K10011	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	10100259	42185-0584		Pa12526	MR+SR	100%	16.42
9	K9990	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	10100260	42185-0208		Pa12530	MR+SR	100%	17.01
10	K9992	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	10100261	42185-0585		Pa12531	MR+SR	100%	16.41
11	K9996	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	10100262	42185-0588		Pa12536	MR+SR	100%	13.74
12	K9991	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	1010053	42185-0586		Pa12534	MR+SR	100%	15.05
13	K9993	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	10100255	42185-0577		Pa12519	MR+SR	100%	16.52
14	K9994	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	1010054	42185-0587		Pa12535	MR+SR	100%	17.52
15	K9995	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	1010055	42185-0578		Pa12520	MR+SR	100%	21.09
16	K9997	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	1010056	42185-0579		Pa12521	MR+SR	100%	13.54
17	K10010	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	1010057	42185-0583		Pa12525	MR+SR	100%	17.75
18	K10025	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	1010009	42185-0799		Pa14092	MR+SR	100%	13.33
19	K10026	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	1010010	42185-0801		Pa14093	MR+SR	100%	15.23
20	K10024	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	1010012	42185-0796			MR+SR	100%	14.42
21	K10027	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	1010013	42185-0803		Pa14094	MR+SR	100%	15.92
22	K10028	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	1010014	42185-0593		Pa14095	MR+SR	100%	22.97
23	K10029	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	1010016	42185-0594			MR+SR	100%	27.74
24	K10030	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	1010017	42185-0595		Pa14097	MR+SR	100%	30.01
<b>Total</b>											<b>373.89</b>

## Unpatented Claims

Claim Number	Township /Area	Project	Area (Ha.)	Recording Date	Claim Due Date	Work Required	Total Reserve	Owner	Percentage Ownership
4283921	BLUFFPOINT LAKE AREA	Brooks Lake	112	22-Sep-14	22-Sep-17	\$2,800	\$54	Cameron Gold Operations Ltd	100%
4283922	BROOKS LAKE AREA	Brooks Lake	160	22-Sep-14	22-Sep-17	\$4,000	\$77	Cameron Gold Operations Ltd	100%
4283923	BLUFFPOINT LAKE AREA	Brooks Lake	128	22-Sep-14	22-Sep-17	\$3,200	\$62	Cameron Gold Operations Ltd	100%
4283924	BLUFFPOINT LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283925	BLUFFPOINT LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283926	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283927	BROOKS LAKE AREA	Brooks Lake	224	22-Sep-14	22-Sep-17	\$5,600	\$108	Cameron Gold Operations Ltd	100%
4283928	BLUFFPOINT LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283929	BLUFFPOINT LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283930	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283931	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283932	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283933	BROOKS LAKE AREA	Brooks Lake	80	22-Sep-14	22-Sep-17	\$2,000	\$39	Cameron Gold Operations Ltd	100%
4283934	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283935	BLUFFPOINT LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283936	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283937	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283938	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283939	BROOKS LAKE AREA	Brooks Lake	80	22-Sep-14	22-Sep-17	\$2,000	\$39	Cameron Gold Operations Ltd	100%
4283940	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%

Claim Number	Township /Area	Project	Area (Ha.)	Recording Date	Claim Due Date	Work Required	Total Reserve	Owner	Percentage Ownership
4283941	BLUFFPOINT LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283942	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283943	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283944	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283945	BROOKS LAKE AREA	Brooks Lake	128	22-Sep-14	22-Sep-17	\$3,200	\$62	Cameron Gold Operations Ltd	100%
4283946	BLUFFPOINT LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283947	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283948	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283949	BROOKS LAKE AREA	Brooks Lake	256	22-Sep-14	22-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4283950	BROOKS LAKE AREA	Brooks Lake	128	22-Sep-14	22-Sep-17	\$3,200	\$0	Cameron Gold Operations Ltd	100%
1105444	ROWAN LAKE AREA	Cameron	160	12-May-95	12-May-17	\$4,000	\$8,638	Cameron Gold Operations Ltd	100%
1105445	ROWAN LAKE AREA	Cameron	16	12-May-95	12-May-17	\$400	\$265	Cameron Gold Operations Ltd	100%
1161574	ROWAN LAKE AREA	Cameron	64	12-May-95	12-May-17	\$1,600	\$630	Cameron Gold Operations Ltd	100%
1161575	ROWAN LAKE AREA	Cameron	64	12-May-95	12-May-17	\$1,600	\$2,600	Cameron Gold Operations Ltd	100%
1210120	ROWAN LAKE AREA	Cameron	128	4-Mar-96	4-Mar-18	\$3,200	\$1,087	Cameron Gold Operations Ltd	100%
1210121	ROWAN LAKE AREA	Cameron	32	4-Mar-96	4-Mar-18	\$800	\$450	Cameron Gold Operations Ltd	100%
1210122	ROWAN LAKE AREA	Cameron	176	6-Feb-96	6-Feb-18	\$4,400	\$43,471	Cameron Gold Operations Ltd	100%
1210123	ROWAN LAKE AREA	Cameron	192	6-Feb-96	6-Feb-18	\$4,800	\$14,462	Cameron Gold Operations Ltd	100%
1210124	ROWAN LAKE AREA	Cameron	192	6-Feb-96	6-Feb-18	\$4,800	\$92	Cameron Gold Operations Ltd	100%
1210125	ROWAN LAKE AREA	Cameron	240	6-Feb-96	6-Feb-18	\$6,000	\$738	Cameron Gold Operations Ltd	100%
1210126	ROWAN LAKE AREA	Cameron	240	6-Feb-96	6-Feb-18	\$6,000	\$116	Cameron Gold Operations Ltd	100%

Claim Number	Township /Area	Project	Area (Ha.)	Recording Date	Claim Due Date	Work Required	Total Reserve	Owner	Percentage Ownership
1210128	ROWAN LAKE AREA	Cameron	16	23-Jan-96	23-Jan-18	\$400	\$0	Cameron Gold Operations Ltd	100%
1210129	ROWAN LAKE AREA	Cameron	16	23-Jan-96	23-Jan-18	\$400	\$0	Cameron Gold Operations Ltd	100%
1210130	ROWAN LAKE AREA	Cameron	32	23-Jan-96	23-Jan-18	\$800	\$15	Cameron Gold Operations Ltd	100%
1210131	ROWAN LAKE AREA	Cameron	144	23-Jan-96	23-Jan-18	\$3,600	\$69	Cameron Gold Operations Ltd	100%
1210132	ROWAN LAKE AREA	Cameron	80	23-Jan-96	23-Jan-18	\$2,000	\$39	Cameron Gold Operations Ltd	100%
1210133	ROWAN LAKE AREA	Cameron	64	23-Jan-96	23-Jan-18	\$1,600	\$31	Cameron Gold Operations Ltd	100%
1210134	ROWAN LAKE AREA	Cameron	96	23-Jan-96	23-Jan-18	\$2,400	\$46	Cameron Gold Operations Ltd	100%
1210135	ROWAN LAKE AREA	Cameron	16	23-Jan-96	23-Jan-18	\$400	\$0	Cameron Gold Operations Ltd	100%
1210136	ROWAN LAKE AREA	Cameron	16	23-Jan-96	23-Jan-18	\$400	\$8	Cameron Gold Operations Ltd	100%
4248906	ROWAN LAKE AREA	Cameron	64	11-Mar-10	11-Mar-18	\$1,600	\$686	Cameron Gold Operations Ltd	100%
4254297	ROWAN LAKE AREA	Cameron	32	20-Sep-10	20-Sep-17	\$800	\$24,640	Cameron Gold Operations Ltd	100%
4255667	DOGPAW LAKE AREA	Cameron	112	22-May-12	22-May-17	\$2,800	\$41,666	Cameron Gold Operations Ltd	100%
4255668	DOGPAW LAKE AREA	Cameron	16	25-May-12	25-May-17	\$400	\$293	Cameron Gold Operations Ltd	100%
4255669	DOGPAW LAKE AREA	Cameron	256	22-May-12	22-May-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4257392	DOGPAW LAKE AREA	Cameron	32	10-Jun-11	10-Jun-17	\$800	\$665	Cameron Gold Operations Ltd	100%
4258281	ROWAN LAKE AREA	Cameron	176	20-Sep-10	20-Sep-17	\$4,400	\$35,704	Cameron Gold Operations Ltd	100%
4258282	ROWAN LAKE AREA	Cameron	192	20-Sep-10	20-Sep-17	\$4,800	\$1,857	Cameron Gold Operations Ltd	100%
4258283	ROWAN LAKE AREA	Cameron	128	20-Sep-10	20-Sep-17	\$3,200	\$62	Cameron Gold Operations Ltd	100%
4258284	ROWAN LAKE AREA	Cameron	224	20-Sep-10	20-Sep-17	\$5,600	\$70,023	Cameron Gold Operations Ltd	100%
4258285	ROWAN LAKE AREA	Cameron	160	20-Sep-10	20-Sep-17	\$4,000	\$77	Cameron Gold Operations Ltd	100%
4258286	ROWAN LAKE AREA	Cameron	240	20-Sep-10	20-Sep-17	\$6,000	\$2,803	Cameron Gold Operations Ltd	100%

Claim Number	Township /Area	Project	Area (Ha.)	Recording Date	Claim Due Date	Work Required	Total Reserve	Owner	Percentage Ownership
4258287	ROWAN LAKE AREA	Cameron	144	20-Sep-10	20-Sep-17	\$3,600	\$2,933	Cameron Gold Operations Ltd	100%
4258288	ROWAN LAKE AREA	Cameron	224	20-Sep-10	20-Sep-17	\$5,600	\$108	Cameron Gold Operations Ltd	100%
4258289	ROWAN LAKE AREA	Cameron	192	20-Sep-10	20-Sep-17	\$4,800	\$92	Cameron Gold Operations Ltd	100%
4258290	ROWAN LAKE AREA	Cameron	240	20-Sep-10	20-Sep-17	\$6,000	\$116	Cameron Gold Operations Ltd	100%
4258291	TADPOLE LAKE AREA	Cameron	192	20-Sep-10	20-Sep-17	\$4,800	\$92	Cameron Gold Operations Ltd	100%
4258292	TADPOLE LAKE AREA	Cameron	256	20-Sep-10	20-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4258421	ROWAN LAKE AREA	Cameron	240	20-Sep-10	20-Sep-17	\$6,000	\$14,384	Cameron Gold Operations Ltd	100%
4258422	ROWAN LAKE AREA	Cameron	256	20-Sep-10	20-Sep-17	\$6,400	\$14,248	Cameron Gold Operations Ltd	100%
4258423	ROWAN LAKE AREA	Cameron	256	20-Sep-10	20-Sep-17	\$6,400	\$3,990	Cameron Gold Operations Ltd	100%
4258424	ROWAN LAKE AREA	Cameron	240	20-Sep-10	20-Sep-17	\$6,000	\$7,162	Cameron Gold Operations Ltd	100%
4258425	BROOKS LAKE AREA	Cameron	256	20-Sep-10	20-Sep-17	\$6,400	\$6,702	Cameron Gold Operations Ltd	100%
4258426	ROWAN LAKE AREA	Cameron	224	20-Sep-10	20-Sep-17	\$5,600	\$108	Cameron Gold Operations Ltd	100%
4258427	ROWAN LAKE AREA	Cameron	256	20-Sep-10	20-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4258428	ROWAN LAKE AREA	Cameron	128	20-Sep-10	20-Sep-17	\$3,200	\$62	Cameron Gold Operations Ltd	100%
4258429	ROWAN LAKE AREA	Cameron	176	20-Sep-10	20-Sep-17	\$4,400	\$85	Cameron Gold Operations Ltd	100%
4258430	ROWAN LAKE AREA	Cameron	64	20-Sep-10	20-Sep-17	\$1,600	\$31	Cameron Gold Operations Ltd	100%
4258431	ROWAN LAKE AREA	Cameron	192	20-Sep-10	20-Sep-17	\$4,800	\$92	Cameron Gold Operations Ltd	100%
4258432	ROWAN LAKE AREA	Cameron	256	20-Sep-10	20-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4258433	LAWRENCE LAKE AREA	Cameron	256	20-Sep-10	20-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4258434	LAWRENCE LAKE AREA	Cameron	256	20-Sep-10	20-Sep-17	\$6,400	\$40,978	Cameron Gold Operations Ltd	100%
4258435	LAWRENCE LAKE AREA	Cameron	256	20-Sep-10	20-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%

Claim Number	Township /Area	Project	Area (Ha.)	Recording Date	Claim Due Date	Work Required	Total Reserve	Owner	Percentage Ownership
4258436	LAWRENCE LAKE AREA	Cameron	256	20-Sep-10	20-Sep-17	\$6,400	\$123	Cameron Gold Operations Ltd	100%
4258437	LAWRENCE LAKE AREA	Cameron	256	20-Sep-10	20-Sep-17	\$6,400	\$4,045	Cameron Gold Operations Ltd	100%
4258438	LAWRENCE LAKE AREA	Cameron	256	20-Sep-10	20-Sep-17	\$6,400	\$6,261	Cameron Gold Operations Ltd	100%
4258439	LAWRENCE LAKE AREA	Cameron	256	20-Sep-10	20-Sep-17	\$6,400	\$4,288	Cameron Gold Operations Ltd	100%
4258440	LAWRENCE LAKE AREA	Cameron	256	20-Sep-10	20-Sep-17	\$6,400	\$534	Cameron Gold Operations Ltd	100%
4258441	ROWAN LAKE AREA	Cameron	192	20-Sep-10	20-Sep-17	\$4,800	\$3,497	Cameron Gold Operations Ltd	100%
4258442	ROWAN LAKE AREA	Cameron	80	20-Sep-10	20-Sep-17	\$2,000	\$870	Cameron Gold Operations Ltd	100%
4258443	ROWAN LAKE AREA	Cameron	192	20-Sep-10	20-Sep-17	\$4,800	\$2,397	Cameron Gold Operations Ltd	100%
4258444	ROWAN LAKE AREA	Cameron	208	20-Sep-10	20-Sep-17	\$5,200	\$2,528	Cameron Gold Operations Ltd	100%
4258445	ROWAN LAKE AREA	Cameron	48	20-Sep-10	20-Sep-17	\$1,200	\$425	Cameron Gold Operations Ltd	100%
4258446	ROWAN LAKE AREA	Cameron	80	20-Sep-10	20-Sep-17	\$2,000	\$0	Cameron Gold Operations Ltd	100%
4258447	ROWAN LAKE AREA	Cameron	240	20-Sep-10	20-Sep-17	\$6,000	\$2,410	Cameron Gold Operations Ltd	100%
4258448	ROWAN LAKE AREA	Cameron	192	20-Sep-10	20-Sep-17	\$4,800	\$530	Cameron Gold Operations Ltd	100%
4258449	ROWAN LAKE AREA	Cameron	128	20-Sep-10	20-Sep-17	\$3,200	\$1,219	Cameron Gold Operations Ltd	100%
4258450	ROWAN LAKE AREA	Cameron	160	20-Sep-10	20-Sep-18	\$4,000	\$954	Cameron Gold Operations Ltd	100%
4274074	DOGPAW LAKE AREA	English I	16	14-Oct-14	14-Oct-17	\$400	\$0	Rubicon Minerals Corp.	Earn-in option
4274088	DOGPAW LAKE AREA	English I	176	22-Sep-14	22-Sep-17	\$4,400	\$0	Rubicon Minerals Corp.	Earn-in option
4274089	DOGPAW LAKE AREA	English I	128	22-Sep-14	22-Sep-17	\$3,200	\$62	Rubicon Minerals Corp.	Earn-in option
4274090	DOGPAW LAKE AREA	English I	32	22-Sep-14	22-Sep-18	\$800	\$15	Rubicon Minerals Corp.	Earn-in option
4274091	DOGPAW LAKE AREA	English I	16	22-Sep-14	22-Sep-17	\$400	\$0	Rubicon Minerals Corp.	Earn-in option
4274092	DOGPAW LAKE AREA	English I	128	22-Sep-14	22-Sep-17	\$3,200	\$62	Rubicon Minerals Corp.	Earn-in option

Claim Number	Township /Area	Project	Area (Ha.)	Recording Date	Claim Due Date	Work Required	Total Reserve	Owner	Percentage Ownership
4274093	ROWAN LAKE AREA	English I	32	22-Sep-14	22-Sep-17	\$800	\$15	Rubicon Minerals Corp.	Earn-in option
4274094	ROWAN LAKE AREA	English I	96	22-Sep-14	22-Sep-17	\$2,400	\$46	Rubicon Minerals Corp.	Earn-in option
4274095	ROWAN LAKE AREA	English I	192	22-Sep-14	22-Sep-17	\$4,800	\$218	Rubicon Minerals Corp.	Earn-in option
4274096	ROWAN LAKE AREA	English I	16	14-Oct-14	14-Oct-17	\$400	\$0	Rubicon Minerals Corp.	Earn-in option
4276500	DOGPAW LAKE AREA	English I	128	21-Nov-14	21-Nov-17	\$3,200	\$0	Rubicon Minerals Corp.	Earn-in option
4267651	BROOKS LAKE AREA	English II	192	21-Nov-14	21-Nov-17	\$4,800	\$92	Rubicon Minerals Corp.	Earn-in option
4267652	BROOKS LAKE AREA	English II	256	19-Nov-14	21-Nov-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4267653	BROOKS LAKE AREA	English II	96	19-Nov-14	21-Nov-17	\$2,400	\$46	Rubicon Minerals Corp.	Earn-in option
4267654	BROOKS LAKE AREA	English II	48	19-Nov-14	21-Nov-17	\$1,200	\$0	Rubicon Minerals Corp.	Earn-in option
4267655	BROOKS LAKE AREA	English II	192	19-Nov-14	21-Nov-17	\$4,800	\$92	Rubicon Minerals Corp.	Earn-in option
4267656	BROOKS LAKE AREA	English II	208	19-Nov-14	21-Nov-17	\$5,200	\$100	Rubicon Minerals Corp.	Earn-in option
4267657	BROOKS LAKE AREA	English II	176	19-Nov-14	21-Nov-17	\$4,400	\$85	Rubicon Minerals Corp.	Earn-in option
4276506	DOGPAW LAKE AREA	English II	96	2-Sep-14	2-Sep-17	\$2,400	\$46	Rubicon Minerals Corp.	Earn-in option
4276512	ROWAN LAKE AREA	English II	144	21-Nov-14	21-Nov-17	\$3,600	\$69	Rubicon Minerals Corp.	Earn-in option
4276513	BROOKS LAKE AREA	English II	208	21-Nov-14	21-Nov-17	\$5,200	\$100	Rubicon Minerals Corp.	Earn-in option
4276514	BROOKS LAKE AREA	English II	192	21-Nov-14	21-Nov-17	\$4,800	\$92	Rubicon Minerals Corp.	Earn-in option
4276515	BROOKS LAKE AREA	English II	256	21-Nov-14	21-Nov-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4276516	BROOKS LAKE AREA	English II	192	21-Nov-14	21-Nov-17	\$4,800	\$92	Rubicon Minerals Corp.	Earn-in option
4276517	BROOKS LAKE AREA	English II	256	21-Nov-14	21-Nov-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4276518	BROOKS LAKE AREA	English II	256	21-Nov-14	21-Nov-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4276519	BROOKS LAKE AREA	English II	256	21-Nov-14	21-Nov-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option



Claim Number	Township /Area	Project	Area (Ha.)	Recording Date	Claim Due Date	Work Required	Total Reserve	Owner	Percentage Ownership
4276522	BROOKS LAKE AREA	English II	256	21-Nov-14	21-Nov-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4276523	BROOKS LAKE AREA	English II	256	21-Nov-14	21-Nov-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4277987	BROOKS LAKE AREA	English II	96	1-Nov-13	1-Nov-17	\$2,400	\$46	Rubicon Minerals Corp.	Earn-in option
4283111	ROWAN LAKE AREA	English II	64	19-Nov-14	19-Nov-17	\$1,600	\$31	Rubicon Minerals Corp.	Earn-in option
4283112	ROWAN LAKE AREA	English II	64	19-Nov-14	19-Nov-17	\$1,600	\$31	Rubicon Minerals Corp.	Earn-in option
4283113	ROWAN LAKE AREA	English II	256	19-Nov-14	19-Nov-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4283114	ROWAN LAKE AREA	English II	192	19-Nov-14	19-Nov-17	\$4,800	\$92	Rubicon Minerals Corp.	Earn-in option
4283115	ROWAN LAKE AREA	English II	224	19-Nov-14	19-Nov-17	\$5,600	\$108	Rubicon Minerals Corp.	Earn-in option
4283116	ROWAN LAKE AREA	English II	192	19-Nov-14	19-Nov-17	\$4,800	\$92	Rubicon Minerals Corp.	Earn-in option
4283117	ROWAN LAKE AREA	English II	240	19-Nov-14	19-Nov-17	\$6,000	\$116	Rubicon Minerals Corp.	Earn-in option
4283118	ROWAN LAKE AREA	English II	240	19-Nov-14	19-Nov-17	\$6,000	\$116	Rubicon Minerals Corp.	Earn-in option
4283119	BROOKS LAKE AREA	English II	256	19-Nov-14	19-Nov-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4283120	BROOKS LAKE AREA	English II	48	19-Nov-14	19-Nov-17	\$1,200	\$23	Rubicon Minerals Corp.	Earn-in option
4283731	BROOKS LAKE AREA	English II	256	19-Nov-14	19-Nov-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4283732	BROOKS LAKE AREA	English II	256	19-Nov-14	19-Nov-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4283734	BROOKS LAKE AREA	English II	192	19-Nov-14	19-Nov-17	\$4,800	\$56,499	Rubicon Minerals Corp.	Earn-in option
4283735	BROOKS LAKE AREA	English II	256	19-Nov-14	19-Nov-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4283736	BROOKS LAKE AREA	English II	128	19-Nov-14	19-Nov-17	\$3,200	\$62	Rubicon Minerals Corp.	Earn-in option
4283737	BROOKS LAKE AREA	English II	256	19-Nov-14	19-Nov-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4283738	BROOKS LAKE AREA	English II	256	19-Nov-14	19-Nov-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4260059	HERONRY LAKE	New Stake	128	19-Jan-16	19-Jan-18	\$3,200		Cameron Gold Operations Ltd	100%
4260061	BROOKS	New Stake		7-Jan-16	7-Jan-18	\$5,600		Cameron Gold	100%

Claim Number	Township /Area	Project	Area (Ha.)	Recording Date	Claim Due Date	Work Required	Total Reserve	Owner	Percentage Ownership
	LAKE AREA		224					Operations Ltd	
4260065	BROOKS LAKE AREA	New Stake	128	7-Jan-16	7-Jan-18	\$3,200		Cameron Gold Operations Ltd	100%
4260067	BROOKS LAKE AREA	New Stake	128	7-Jan-16	7-Jan-18	\$3,200		Cameron Gold Operations Ltd	100%
4260068	BROOKS LAKE AREA	New Stake	96	7-Jan-16	7-Jan-18	\$2,400		Cameron Gold Operations Ltd	100%
4260069	BROOKS LAKE AREA	New Stake	64	7-Jan-16	7-Jan-18	\$1,600		Cameron Gold Operations Ltd	100%
4282651	HERONRY LAKE	New Stake	256	19-Jan-16	19-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282652	HERONRY LAKE	New Stake	256	19-Jan-16	19-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282653	HERONRY LAKE	New Stake	256	19-Jan-16	19-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282654	HERONRY LAKE	New Stake	256	19-Jan-16	19-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282655	HERONRY LAKE	New Stake	256	19-Jan-16	19-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282656	HERONRY LAKE	New Stake	224	19-Jan-16	19-Jan-18	\$5,600		Cameron Gold Operations Ltd	100%
4282657	HERONRY LAKE	New Stake	176	19-Jan-16	19-Jan-18	\$4,400		Cameron Gold Operations Ltd	100%
4282658	HERON LAKE AREA	New Stake	256	19-Jan-16	19-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282659	HERONRY LAKE	New Stake	256	19-Jan-16	19-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282660	HERONRY LAKE	New Stake	256	19-Jan-16	19-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282661	HERONRY LAKE	New Stake	256	19-Jan-16	19-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282662	HERONRY LAKE	New Stake	256	19-Jan-16	19-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282663	HERONRY LAKE	New Stake	256	14-Jan-16	14-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282664	HERONRY LAKE	New Stake	256	14-Jan-16	14-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282665	HERONRY LAKE	New Stake	256	14-Jan-16	14-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282666	HERONRY LAKE	New Stake	256	14-Jan-16	14-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282667	HERONRY LAKE	New Stake	256	13-Jan-16	13-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282668	HERONRY LAKE	New Stake	256	13-Jan-16	13-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282669	BROOKS LAKE AREA	New Stake	256	13-Jan-16	13-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282670	BROOKS LAKE AREA	New Stake	256	11-Jan-16	11-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282671	BROOKS LAKE AREA	New Stake	256	8-Jan-16	8-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282672	BROOKS LAKE AREA	New Stake	256	7-Jan-16	7-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%

Claim Number	Township /Area	Project	Area (Ha.)	Recording Date	Claim Due Date	Work Required	Total Reserve	Owner	Percentage Ownership
4282673	BROOKS LAKE AREA	New Stake	256	29-Dec-15	29-Dec-17	\$6,400		Cameron Gold Operations Ltd	100%
4282674	GODSON	New Stake	256	14-Jan-16	14-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282675	GODSON	New Stake	256	14-Jan-16	14-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282676	GODSON	New Stake	256	14-Jan-16	14-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282677	GODSON	New Stake	256	13-Jan-16	13-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282678	GODSON	New Stake	256	7-Jan-16	7-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282679	GODSON	New Stake	256	13-Jan-16	13-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282680	GODSON	New Stake	256	13-Jan-16	13-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282681	BROOKS LAKE AREA	New Stake	256	7-Jan-16	7-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282682	BROOKS LAKE AREA	New Stake	256	7-Jan-16	7-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282683	BROOKS LAKE AREA	New Stake	256	7-Jan-16	7-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282684	BROOKS LAKE AREA	New Stake	256	29-Dec-15	29-Dec-17	\$6,400		Cameron Gold Operations Ltd	100%
4282685	BROOKS LAKE AREA	New Stake	256	29-Dec-15	29-Dec-17	\$6,400		Cameron Gold Operations Ltd	100%
4282687	GODSON	New Stake	256	14-Jan-16	14-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282688	GODSON	New Stake	256	14-Jan-16	14-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282689	GODSON	New Stake	256	13-Jan-16	13-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282690	GODSON	New Stake	256	7-Jan-16	7-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282691	GODSON	New Stake	256	13-Jan-16	13-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282692	GODSON	New Stake	256	13-Jan-16	13-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282693	BROOKS LAKE AREA	New Stake	256	7-Jan-16	7-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282694	BROOKS LAKE AREA	New Stake	256	7-Jan-16	7-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282695	BROOKS LAKE AREA	New Stake	256	7-Jan-16	7-Jan-18	\$6,400		Cameron Gold Operations Ltd	100%
4282696	BROOKS LAKE AREA	New Stake	256	29-Dec-15	29-Dec-17	\$6,400		Cameron Gold Operations Ltd	100%
4282697	BROOKS LAKE AREA	New Stake	256	29-Dec-15	29-Dec-17	\$6,400		Cameron Gold Operations Ltd	100%
4282699	HERONRY LAKE	New Stake	96	19-Jan-16	19-Jan-18	\$2,400		Cameron Gold Operations Ltd	100%
4282700	HERONRY LAKE	New Stake	128	19-Jan-16	19-Jan-18	\$3,200		Cameron Gold Operations Ltd	100%

Claim Number	Township /Area	Project	Area (Ha.)	Recording Date	Claim Due Date	Work Required	Total Reserve	Owner	Percentage Ownership
4254638	DOGPAW LAKE AREA	Rainy Claims	240	15-Feb-11	15-Feb-18	\$6,000	\$116	Rubicon Minerals Corp.	Earn-in option
4257501	DOGPAW LAKE AREA	Rainy Claims	256	17-Jan-11	17-Jan-18	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4257508	DOGPAW LAKE AREA	Rainy Claims	128	17-Jan-11	17-Jan-18	\$3,200	\$62	Rubicon Minerals Corp.	Earn-in option
4257510	DOGPAW LAKE AREA	Rainy Claims	240	17-Jan-11	17-Jan-18	\$6,000	\$116	Rubicon Minerals Corp.	Earn-in option
4257511	DOGPAW LAKE AREA	Rainy Claims	128	17-Jan-11	17-Jan-18	\$3,200	\$62	Rubicon Minerals Corp.	Earn-in option
4257515	DOGPAW LAKE AREA	Rainy Claims	256	17-Jan-11	17-Jan-18	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4257516	DOGPAW LAKE AREA	Rainy Claims	256	17-Jan-11	17-Jan-18	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4257517	DOGPAW LAKE AREA	Rainy Claims	256	17-Jan-11	17-Jan-18	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4260366	DOGPAW LAKE AREA	Rainy Claims	256	15-Feb-11	15-Feb-18	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4260514	DOGPAW LAKE AREA	Rainy Claims	240	17-Jan-11	17-Jan-18	\$6,000	\$116	Rubicon Minerals Corp.	Earn-in option
4260515	DOGPAW LAKE AREA	Rainy Claims	128	17-Jan-11	17-Jan-18	\$3,200	\$62	Rubicon Minerals Corp.	Earn-in option
4260516	DOGPAW LAKE AREA	Rainy Claims	64	17-Jan-11	17-Jan-18	\$1,600	\$31	Rubicon Minerals Corp.	Earn-in option
4263609	DOGPAW LAKE AREA	Rainy Claims	240	27-Jul-11	27-Jul-17	\$6,000	\$116	Rubicon Minerals Corp.	Earn-in option
4266941	DOGPAW LAKE AREA	Rainy Claims	96	27-Jul-11	27-Jul-17	\$2,400	\$46	Rubicon Minerals Corp.	Earn-in option
4266942	DOGPAW LAKE AREA	Rainy Claims	192	27-Jul-11	27-Jul-17	\$4,800	\$92	Rubicon Minerals Corp.	Earn-in option
4266943	DOGPAW LAKE AREA	Rainy Claims	224	27-Jul-11	27-Jul-17	\$5,600	\$108	Rubicon Minerals Corp.	Earn-in option
4266944	DOGPAW LAKE AREA	Rainy Claims	256	27-Jul-11	27-Jul-17	\$6,400	\$123	Rubicon Minerals Corp.	Earn-in option
4272273	DOGPAW LAKE AREA	Rainy Claims	48	5-May-11	5-May-18	\$1,200	\$23	Rubicon Minerals Corp.	Earn-in option
1149862	DOGPAW LAKE AREA	West Cedar Tree	144	10-Apr-01	10-Apr-18	\$3,600	\$7,442	Cameron Gold Operations Ltd	100%
1196649	DOGPAW LAKE AREA	West Cedar Tree	32	16-Oct-95	16-Oct-18	\$800	\$1,001	Cameron Gold Operations Ltd	100%
3000802	DOGPAW LAKE AREA	West Cedar Tree	256	29-Aug-02	29-Aug-17	\$6,400	\$51,001	Cameron Gold Operations Ltd	100%

Claim Number	Township /Area	Project	Area (Ha.)	Recording Date	Claim Due Date	Work Required	Total Reserve	Owner	Percentage Ownership
3000803	DOGPAW LAKE AREA	West Cedar Tree	48	29-Aug-02	29-Aug-18	\$1,200	\$2,773	Cameron Gold Operations Ltd	100%
3000804	DOGPAW LAKE AREA	West Cedar Tree	16	29-Aug-02	29-Aug-18	\$400	\$403	Cameron Gold Operations Ltd	100%
3001240	DOGPAW LAKE AREA	West Cedar Tree	64	2-Jul-02	2-Jul-18	\$1,600	\$13,538	Cameron Gold Operations Ltd	100%
3001298	DOGPAW LAKE AREA	West Cedar Tree	160	29-Aug-02	29-Aug-17	\$4,000	\$3,337	Cameron Gold Operations Ltd	100%
3010497	DOGPAW LAKE AREA	West Cedar Tree	208	15-Oct-02	15-Oct-17	\$5,200	\$4,005	Cameron Gold Operations Ltd	100%
3012199	DOGPAW LAKE AREA	West Cedar Tree	16	22-Apr-03	22-Apr-18	\$400	\$473	Cameron Gold Operations Ltd	100%
	<b>Number</b>		<b>Area (Ha)</b>			<b>Work Required</b>	<b>Total Reserve</b>		
<b>Totals</b>	<b>226</b>		<b>42,720</b>			<b>\$1,068,000</b>	<b>\$522,213</b>		

## LEASES

Claim Number	Owner	Project	Township	G-No.	PIN	Anniversary	Lease #	Rights	Ownership	Area (Ha.)
<b>CLM305:</b> Claims K465069-K465075, K465351-K465358, K519950-K519965, K561022 <b>CLM306:</b> Claims K386816-K386818, K386888-K386900, K533901-	Cameron Gold Operations Ltd	Cameron	ROWAN LAKE AREA		42185-0716	30-Jun-30	108400	MR+SR	100%	979.347
<b>CLM289:</b> Claims K527548-K527567, Nucanolan property Claims: K314926, K351875- K351876, K314928- K314931, K273821	Cameron Gold Operations Ltd	Cameron	ROWAN LAKE AREA		42185-0511	30-Apr-27	108466	MR+SR	100%	316.974
Claims: K314927, K314932, K351873, K351874, K351877, K351878	Cameron Gold Operations Ltd	West Cedar Tree	DOGPAW LAKE AREA	19990001	42185-0206	31-Mar-25	107495	MRO	100%	129.087
<b>Totals</b>										<b>1673.784</b>

## LICENCES OF OCCUPATION

Claim Number	Owner	Project	Township	G-No.	PIN	Licence of Occupation	Patent	Rights	Ownership	Area (Ha.)
K4709	Cameron Gold Operations Ltd	Cameron	ROWAN LAKE AREA	10100191		10384			100%	13.638
K4711	Cameron Gold Operations Ltd	Cameron	ROWAN LAKE AREA	10100193		10405			100%	10.927
K4710	Cameron Gold Operations Ltd	Cameron	ROWAN LAKE AREA	10100192		10406			100%	8.563
K4712	Cameron Gold Operations Ltd	Cameron	ROWAN LAKE AREA	10100194		10407			100%	12.667
K2767	Cameron Gold Operations Ltd	Cameron	ROWAN LAKE AREA			3366			100%	5.14
K2768	Cameron Gold Operations Ltd	Cameron	ROWAN LAKE AREA			3367			100%	2.752
<b>Claims: K9990, K9992, K9993, K9996, K9999, K10000, K10011, K10058</b>	Cameron Gold Operations Limited	West Cedar Tree	DOGPAW LAKE AREA	1010052		11143			100%	31.8
									<b>Total</b>	<b>85.487</b>

## Claims subject to 1% NSR agreement between First Mining and Chalice Gold June 2016

Count	Tenement type	Claim	Number Registered holder	Percentage ownership
1	Unpatented claim - no royalties	4283921	Cameron Gold Operations Ltd	100%
2	Unpatented claim - no royalties	4283923	Cameron Gold Operations Ltd	100%
3	Unpatented claim - no royalties	4283924	Cameron Gold Operations Ltd	100%
4	Unpatented claim - no royalties	4283925	Cameron Gold Operations Ltd	100%
5	Unpatented claim - no royalties	4283928	Cameron Gold Operations Ltd	100%
6	Unpatented claim - no royalties	4283929	Cameron Gold Operations Ltd	100%
7	Unpatented claim - no royalties	4283935	Cameron Gold Operations Ltd	100%
8	Unpatented claim - no royalties	4283941	Cameron Gold Operations Ltd	100%
9	Unpatented claim - no royalties	4283946	Cameron Gold Operations Ltd	100%
10	Unpatented claim - no royalties	4283922	Cameron Gold Operations Ltd	100%
11	Unpatented claim - no royalties	4283926	Cameron Gold Operations Ltd	100%
12	Unpatented claim - no royalties	4283927	Cameron Gold Operations Ltd	100%
13	Unpatented claim - no royalties	4283930	Cameron Gold Operations Ltd	100%
14	Unpatented claim - no royalties	4283931	Cameron Gold Operations Ltd	100%
15	Unpatented claim - no royalties	4283932	Cameron Gold Operations Ltd	100%
16	Unpatented claim - no royalties	4283933	Cameron Gold Operations Ltd	100%
17	Unpatented claim - no royalties	4283934	Cameron Gold Operations Ltd	100%
18	Unpatented claim - no royalties	4283936	Cameron Gold Operations Ltd	100%
19	Unpatented claim - no royalties	4283937	Cameron Gold Operations Ltd	100%
20	Unpatented claim - no royalties	4283938	Cameron Gold Operations Ltd	100%
21	Unpatented claim - no royalties	4283939	Cameron Gold Operations Ltd	100%
22	Unpatented claim - no royalties	4283940	Cameron Gold Operations Ltd	100%
23	Unpatented claim - no royalties	4283942	Cameron Gold Operations Ltd	100%
24	Unpatented claim - no royalties	4283943	Cameron Gold Operations Ltd	100%
25	Unpatented claim - no royalties	4283944	Cameron Gold Operations Ltd	100%
26	Unpatented claim - no royalties	4283945	Cameron Gold Operations Ltd	100%



Count	Tenement type	Claim	Number Registered holder	Percentage
27	Unpatented claim - no royalties	4283947	Cameron Gold Operations Ltd	100%
28	Unpatented claim - no royalties	4283948	Cameron Gold Operations Ltd	100%
29	Unpatented claim - no royalties	4283949	Cameron Gold Operations Ltd	100%
30	Unpatented claim - no royalties	4283950	Cameron Gold Operations Ltd	100%
31	Unpatented claim - no royalties	4255667	Cameron Gold Operations Ltd	100%
32	Unpatented claim - no royalties	4255669	Cameron Gold Operations Ltd	100%
33	Unpatented claim - no royalties	4255668	Cameron Gold Operations Ltd	100%
34	Unpatented claim - no royalties	4257392	Cameron Gold Operations Ltd	100%
35	Unpatented claim - no royalties	4258425	Cameron Gold Operations Ltd	100%
36	Unpatented claim - no royalties	4258433	Cameron Gold Operations Ltd	100%
37	Unpatented claim - no royalties	4258434	Cameron Gold Operations Ltd	100%
38	Unpatented claim - no royalties	4258435	Cameron Gold Operations Ltd	100%
39	Unpatented claim - no royalties	4258436	Cameron Gold Operations Ltd	100%
40	Unpatented claim - no royalties	4258437	Cameron Gold Operations Ltd	100%
41	Unpatented claim - no royalties	4258438	Cameron Gold Operations Ltd	100%
42	Unpatented claim - no royalties	4258439	Cameron Gold Operations Ltd	100%
43	Unpatented claim - no royalties	4258440	Cameron Gold Operations Ltd	100%
44	Unpatented claim - no royalties	4254297	Cameron Gold Operations Ltd	100%
45	Unpatented claim - no royalties	4258281	Cameron Gold Operations Ltd	100%
46	Unpatented claim - no royalties	4258282	Cameron Gold Operations Ltd	100%
47	Unpatented claim - no royalties	4258283	Cameron Gold Operations Ltd	100%
48	Unpatented claim - no royalties	4258284	Cameron Gold Operations Ltd	100%
49	Unpatented claim - no royalties	4258285	Cameron Gold Operations Ltd	100%
50	Unpatented claim - no royalties	4258286	Cameron Gold Operations Ltd	100%
51	Unpatented claim - no royalties	4258287	Cameron Gold Operations Ltd	100%
52	Unpatented claim - no royalties	4258288	Cameron Gold Operations Ltd	100%
53	Unpatented claim - no royalties	4258289	Cameron Gold Operations Ltd	100%
54	Unpatented claim - no royalties	4258290	Cameron Gold Operations Ltd	100%
55	Unpatented claim - no royalties	4258421	Cameron Gold Operations Ltd	100%

Count	Tenement type	Claim	Number Registered holder	Percentage
56	Unpatented claim - no royalties	4258422	Cameron Gold Operations Ltd	100%
57	Unpatented claim - no royalties	4258423	Cameron Gold Operations Ltd	100%
58	Unpatented claim - no royalties	4258424	Cameron Gold Operations Ltd	100%
59	Unpatented claim - no royalties	4258426	Cameron Gold Operations Ltd	100%
60	Unpatented claim - no royalties	4258427	Cameron Gold Operations Ltd	100%
61	Unpatented claim - no royalties	4258428	Cameron Gold Operations Ltd	100%
62	Unpatented claim - no royalties	4258429	Cameron Gold Operations Ltd	100%
63	Unpatented claim - no royalties	4258430	Cameron Gold Operations Ltd	100%
64	Unpatented claim - no royalties	4258431	Cameron Gold Operations Ltd	100%
65	Unpatented claim - no royalties	4258432	Cameron Gold Operations Ltd	100%
66	Unpatented claim - no royalties	4258441	Cameron Gold Operations Ltd	100%
67	Unpatented claim - no royalties	4258442	Cameron Gold Operations Ltd	100%
68	Unpatented claim - no royalties	4258443	Cameron Gold Operations Ltd	100%
69	Unpatented claim - no royalties	4258444	Cameron Gold Operations Ltd	100%
70	Unpatented claim - no royalties	4258445	Cameron Gold Operations Ltd	100%
71	Unpatented claim - no royalties	4258446	Cameron Gold Operations Ltd	100%
72	Unpatented claim - no royalties	4258447	Cameron Gold Operations Ltd	100%
73	Unpatented claim - no royalties	4258448	Cameron Gold Operations Ltd	100%
74	Unpatented claim - no royalties	4258449	Cameron Gold Operations Ltd	100%
75	Unpatented claim - no royalties	4258450	Cameron Gold Operations Ltd	100%
76	Unpatented claim - no royalties	4258291	Cameron Gold Operations Ltd	100%
77	Unpatented claim - no royalties	4258292	Cameron Gold Operations Ltd	100%
78	Unpatented claim - no royalties	4260060	Not currently registered (in process of staking)	
79	Unpatented claim - no royalties	4260061	Cameron Gold Operations Ltd	100%
80	Unpatented claim - no royalties	4260065	Cameron Gold Operations Ltd	100%
81	Unpatented claim - no royalties	4260067	Cameron Gold Operations Ltd	100%
82	Unpatented claim - no royalties	4260068	Cameron Gold Operations Ltd	100%
83	Unpatented claim - no royalties	4260069	Cameron Gold Operations Ltd	100%
84	Unpatented claim - no royalties	4282669	Cameron Gold Operations Ltd	100%

Count	Tenement type	Claim	Number Registered holder	Percentage
85	Unpatented claim - no royalties	4282670	Cameron Gold Operations Ltd	100%
86	Unpatented claim - no royalties	4282671	Cameron Gold Operations Ltd	100%
87	Unpatented claim - no royalties	4282672	Cameron Gold Operations Ltd	100%
88	Unpatented claim - no royalties	4282673	Cameron Gold Operations Ltd	100%
89	Unpatented claim - no royalties	4282681	Cameron Gold Operations Ltd	100%
90	Unpatented claim - no royalties	4282682	Cameron Gold Operations Ltd	100%
91	Unpatented claim - no royalties	4282683	Cameron Gold Operations Ltd	100%
92	Unpatented claim - no royalties	4282684	Cameron Gold Operations Ltd	100%
93	Unpatented claim - no royalties	4282685	Cameron Gold Operations Ltd	100%
94	Unpatented claim - no royalties	4282693	Cameron Gold Operations Ltd	100%
95	Unpatented claim - no royalties	4282694	Cameron Gold Operations Ltd	100%
96	Unpatented claim - no royalties	4282695	Cameron Gold Operations Ltd	100%
97	Unpatented claim - no royalties	4282696	Cameron Gold Operations Ltd	100%
98	Unpatented claim - no royalties	4282697	Cameron Gold Operations Ltd	100%
99	Unpatented claim - no royalties	4282698	Not currently registered (in process of staking)	
100	Unpatented claim - no royalties	4282674	Cameron Gold Operations Ltd	100%
101	Unpatented claim - no royalties	4282675	Cameron Gold Operations Ltd	100%
102	Unpatented claim - no royalties	4282676	Cameron Gold Operations Ltd	100%
103	Unpatented claim - no royalties	4282677	Cameron Gold Operations Ltd	100%
104	Unpatented claim - no royalties	4282678	Cameron Gold Operations Ltd	100%
105	Unpatented claim - no royalties	4282679	Cameron Gold Operations Ltd	100%
106	Unpatented claim - no royalties	4282680	Cameron Gold Operations Ltd	100%
107	Unpatented claim - no royalties	4282687	Cameron Gold Operations Ltd	100%
108	Unpatented claim - no royalties	4282688	Cameron Gold Operations Ltd	100%
109	Unpatented claim - no royalties	4282689	Cameron Gold Operations Ltd	100%
110	Unpatented claim - no royalties	4282690	Cameron Gold Operations Ltd	100%
111	Unpatented claim - no royalties	4282691	Cameron Gold Operations Ltd	100%
112	Unpatented claim - no royalties	4282692	Cameron Gold Operations Ltd	100%
113	Unpatented claim - no royalties	4282658	Cameron Gold Operations Ltd	100%

Count	Tenement type	Claim	Number Registered holder	Percentage
114	Unpatented claim - no royalties	4260059	Cameron Gold Operations Ltd	100%
115	Unpatented claim - no royalties	4282651	Cameron Gold Operations Ltd	100%
116	Unpatented claim - no royalties	4282652	Cameron Gold Operations Ltd	100%
117	Unpatented claim - no royalties	4282653	Cameron Gold Operations Ltd	100%
118	Unpatented claim - no royalties	4282654	Cameron Gold Operations Ltd	100%
119	Unpatented claim - no royalties	4282655	Cameron Gold Operations Ltd	100%
120	Unpatented claim - no royalties	4282656	Not currently registered (in process of staking)	
121	Unpatented claim - no royalties	4282657	Not currently registered (in process of staking)	
122	Unpatented claim - no royalties	4282659	Cameron Gold Operations Ltd	100%
123	Unpatented claim - no royalties	4282660	Cameron Gold Operations Ltd	100%
124	Unpatented claim - no royalties	4282661	Cameron Gold Operations Ltd	100%
125	Unpatented claim - no royalties	4282662	Cameron Gold Operations Ltd	100%
126	Unpatented claim - no royalties	4282663	Cameron Gold Operations Ltd	100%
127	Unpatented claim - no royalties	4282664	Cameron Gold Operations Ltd	100%
128	Unpatented claim - no royalties	4282665	Cameron Gold Operations Ltd	100%
129	Unpatented claim - no royalties	4282666	Cameron Gold Operations Ltd	100%
130	Unpatented claim - no royalties	4282667	Cameron Gold Operations Ltd	100%
131	Unpatented claim - no royalties	4282668	Cameron Gold Operations Ltd	100%
132	Unpatented claim - no royalties	4282699	Cameron Gold Operations Ltd	100%
133	Unpatented claim - no royalties	4282700	Cameron Gold Operations Ltd	100%