

**TECHNICAL REPORT  
RUDDOCK CREEK LEAD-ZINC PROJECT  
Kamloops Mining Division  
British Columbia**

**NTS: 82M/15W**

**Prepared for**

**Selkirk Metals Corp.  
(Wholly owned subsidiary of Imperial Metals Corporation)  
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**B.C. Geographic System Map Sheet: 082M.076  
Latitude: 51° 46.6' N; Longitude 118° 54.1' W  
UTM (NAD 83): 5 737 900 N; 368 800 E; Zone 11**

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**TABLE OF CONTENTS**

<b>1</b>	<b>SUMMARY</b> .....	<b>5</b>
<b>2</b>	<b>INTRODUCTION AND TERMS OF REFERENCE</b> .....	<b>8</b>
<b>3</b>	<b>RELIANCE ON OTHER EXPERTS</b> .....	<b>8</b>
<b>4</b>	<b>PROPERTY DESCRIPTION AND LOCATION</b> .....	<b>9</b>
<b>5</b>	<b>ACCESSIBILITY, CLIMATE, LOCAL RESOURCES INFRASTRUCTURE AND PHYSIOGRAPHY</b> .....	<b>14</b>
5.1	Highways .....	14
5.2	Railways .....	15
5.3	Airports .....	15
5.4	Telecommunications.....	15
5.5	Power Supply.....	15
5.6	Climate .....	15
5.7	Vegetation .....	16
5.8	Hydrology .....	16
5.9	Physiography .....	16
<b>6</b>	<b>HISTORY</b> .....	<b>17</b>
<b>7</b>	<b>GEOLOGICAL SETTING</b> .....	<b>22</b>
7.1	Regional Geology .....	22
7.2	Local Geology.....	24
7.3	Property Geology.....	24
7.3.1	E Zone structural footwall lithologic domain .....	25
7.3.2	E Zone structural hanging wall lithologic domain.....	28
7.3.3	Creek Zone showing lithologic domain.....	28
7.3.4	T showing lithologic domain .....	28
7.3.5	Correlation between lithologic domains.....	28
7.3.6	Mineralization.....	30
<b>8</b>	<b>DEPOSIT TYPE</b> .....	<b>30</b>
<b>9</b>	<b>EXPLORATION</b> .....	<b>31</b>
<b>10</b>	<b>DRILLING</b> .....	<b>37</b>
10.1	SAMPLING METHOD AND APPROACH.....	53
<b>11</b>	<b>SAMPLE PREPARATION, ANALYSES AND SECURITY</b> .....	<b>53</b>
11.1	Sample Preparation .....	53
11.2	QA/QC.....	54
<b>12</b>	<b>DATA VERIFICATION</b> .....	<b>54</b>
12.1	Standard Reference Material .....	55
12.2	Blanks.....	58
12.3	Pulp re-checks .....	58
12.4	Conclusion.....	60
<b>13</b>	<b>MINERAL PROCESSING AND METALLURGICAL TESTING</b> .....	<b>60</b>
13.1	Ore Sample .....	60
13.2	Mineralogical Characterization.....	60
13.3	Heavy Liquid Separation.....	61
13.4	Flotation.....	62
13.5	Batch Cleaner Testing .....	63
13.6	Environmental Characterization .....	63
<b>14</b>	<b>MINERAL RESOURCE ESTIMATE</b> .....	<b>65</b>
14.1	Exploratory Data Analysis.....	65
14.2	Deposit Modeling .....	68
14.3	Compositing.....	70
14.4	Density.....	70

14.5	Variogram Analysis .....	71
14.6	Block Model and Grade Estimation Procedures .....	72
14.7	Mineral Resource Classification .....	77
14.8	Model Validation .....	80
14.9	Cut-off Determination.....	80
14.10	Mineral Resource Summary.....	81
<b>15</b>	<b>OTHER RELEVANT DATA AND INFORMATION .....</b>	<b>82</b>
15.1	Adjacent Properties.....	82
<b>16</b>	<b>CONCLUSIONS.....</b>	<b>82</b>
<b>17</b>	<b>RECOMMENDATIONS .....</b>	<b>84</b>
<b>18</b>	<b>REFERENCES.....</b>	<b>86</b>

**LIST OF TABLES**

Table 1-1	Ruddock Creek Mineral Resource Update - Lower E Zone (1 Mar 2012) .....	6
Table 1-2	Ruddock Creek Mineral Resource - Upper E Zone (15 July 2009) .....	6
Table 1-3	Ruddock Creek Mineral Resource – E Zone Combined.....	6
Table 1-4	Ruddock Creek Mineral Resource - Creek Zone (1 Mar 2012) .....	7
Table 1-5	Ruddock Creek Total Mineral Resource .....	7
Table 2-1	Units of measure .....	8
Table 4-1	Summary of Mineral Claims .....	12
Table 4-2	Claim Summary.....	13
Table 4-3	Assessment Work Filing Summary .....	14
Table 6-1	Ruddock Creek Property: Summary of Activities .....	19
Table 7-1	Property Geology Correlations .....	26
Table 10-1	Drill Hole Locations.....	38
Table 10-2	Significant Mineralized Intervals .....	43
Table 12-1	Reference Standards.....	55
Table 13-1	Head assay or zone composites.....	60
Table 13-2	Detailed Assay of Sink and Float Fractions .....	61
Table 13-3	Distribution of Base Metals in HLS Products .....	62
Table 14-1	E-Zone underground drilling .....	65
Table 14-2	Creek Zone surface drilling.....	65
Table 14-3	Sample statistics for Zn within mineral domains .....	66
Table 14-4	Sample statistics for Pb within mineral domains .....	66
Table 14-5	Sample statistics - Creek Zone.....	66
Table 14-6	Composite statistics for Zn by zone .....	70
Table 14-7	Composite statistics for Pb by zone.....	70
Table 14-8	Composite statistics for the Creek Zone .....	70
Table 14-9	Variogram models .....	71
Table 14-10	Block model parameters – Lower E Zone .....	72
Table 14-11	Search parameters for Pb and Zn.....	72
Table 14-12	Lower E Zone block model statistics by cut-off grade .....	72
Table 14-13	Creek Zone block model statistics by cut-off grade.....	73
Table 14-14	Global mean grade comparison – Lower E Zone.....	80
Table 14-15	Global mean grade comparison - Creek Zone .....	80
Table 14-16	Cut-off grade determination .....	80
Table 14-17	Ruddock Creek Mineral Resource Update - Lower E Zone (1 Mar 2012) .....	81
Table 14-18	Ruddock Creek Mineral Resource - Upper E Zone (15 July 2009).....	81
Table 14-19	Ruddock Creek Mineral Resource – E Zone Combined.....	81
Table 14-20	Ruddock Creek Mineral Resource - Creek Zone (1 Mar 2012) .....	81

Table 14-21 Ruddock Creek Total Mineral Resource .....82  
 Table 16-1 Ruddock Creek Total Mineral Resource .....83  
 Table 17-1 Budget Estimate .....85

**LIST OF FIGURES**

Figure 4-1 Location Map .....10  
 Figure 4-2 Claim Map .....11  
 Figure 7-1 Regional Geology.....23  
 Figure 7-2 Property Geology .....25  
 Figure 9-1 E Zone Drill Hole Plan - West Half.....34  
 Figure 9-2 E Zone Drill Hole Plan - East Half .....35  
 Figure 9-3 Drill Plan Overview.....36  
 Figure 9-4 E Zone Cross Section 368725 E .....37  
 Figure 12-1 Reference Standards - Sample sequence charts (2005 – 2008) .....55  
 Figure 12-2 2005 Check assays - Pb .....59  
 Figure 12-3 2005 Check assays - Zn.....59  
 Figure 14-1 Scatterplot of Zn vs Pb .....67  
 Figure 14-2 Cumulative probability for Zn.....67  
 Figure 14-3 Cumulative probability for Pb.....68  
 Figure 14-4 Lower E Zone solid models .....69  
 Figure 14-5 Creek Zone solid model .....69  
 Figure 14-6 Scatterplot of SG vs % Pb+Zn.....71  
 Figure 14-7 Block model parameters - Creek Zone .....72  
 Figure 14-8 Block model grade distribution – Lower E Zone 101.....74  
 Figure 14-9 Block model grade distribution – Lower E Zone 102.....74  
 Figure 14-10 Block model grade distribution – Lower E Zone 103.....75  
 Figure 14-11 Block model grade distribution – Lower E Zone 104 .....75  
 Figure 14-12 Block model grade distribution – Lower E Zone 105.....76  
 Figure 14-13 Block model Zn grade distribution - Creek Zone.....76  
 Figure 14-14 Block model Pb grade distribution - Creek Zone.....77  
 Figure 14-15 Block model classification – Lower E Zones 101 and 102 .....78  
 Figure 14-16 Block model classification – Lower E Zones 103 and 104 .....79  
 Figure 14-17 Block model classification – Lower E Zone 105.....79

## 1 SUMMARY

Selkirk Metals Corp. (“Selkirk”), a wholly owned subsidiary of Imperial Metals Corporation, and Geosim Services Inc. have prepared this technical report describing the Ruddock Creek Property (the “Property”) for the purposes of complying with disclosure and reporting requirements set forth in National Instrument 43-101: *Standards of Disclosure for Mineral Projects* (“NI 43-101”), Companion Policy 43-101CP and Form 43-101 F1. Selkirk is the Operator of the Property and the Ruddock Creek Joint Venture and holds an undivided 10% interest in the Property, the other participants being Mount Polley Mining Corporation (subsidiary of Imperial Metals Corporation) as to an undivided 55% interest, MK Mining Canada, Corporation (subsidiary of Mitsui Mining and Smelting Co. Ltd.) as to an undivided 21% interest and ICM Mining (Canada) Inc. (subsidiary of Itochu Corporation) as to an undivided 14% interest.

The Property is located between the headwaters of Ruddock Creek and Oliver Creek in the Scrip Range of the Monashee Mountains in southeast British Columbia, approximately 155 km northeast of Kamloops, 100 km north northwest of Revelstoke, 28 km east of Avola and 6.5 km west of Gordon Horne Peak. The principal mineral tenures are situated on NTS map sheet 82M/15W and B.C. Geographic System map sheet 082M.076.

There was no direct road access to the central portion of the Property until 2007 when an excavator trail was completed from the end of the existing logging road at the south end of Oliver Creek. Access was previously achieved by helicopter. In 2006 a camp was established at Tumtum Lake on the Adams River approximately 20 km northwest of the main drill area, which operated for the 2006 and 2007 programs. The 2008 underground work and the 2010-2011 underground and surface programs were all completed using a 40 person camp established at Light Lake in late 2007.

The Property contains “Sedex-Type” stratabound zinc-lead mineralization hosted by calc-silicate rocks, which have been intruded by pegmatite dykes and sills. The main deposit, which has been the historical focus of exploration on the Property is known as the E Zone. Detailed surface diamond drilling from 2005 to 2007 has shown the E Zone deposit to be continuous for in excess of 1.1 km east west, up to 400 m in width north south and varying in true thickness from less than 5 m to over 35 m. This work was successful in showing that the mineralization forms a planar sheet of sulphides dipping approximately 45 degrees to the north and plunging approximately 40 degrees to the west.

The 2010 exploration program by Selkirk consisted of 2.1 km of road and drill pad construction in the Creek Zone and the subsequent drilling of 17 NQ-2 sized diamond drill holes totaling 3,583 m by Atlas Drilling Ltd. from Kamloops. In addition, the E-Zone decline was dewatered and work commenced in late 2010 on the extension to the E-Zone decline. Underground drilling was also started in late 2010 with three holes (461 m) being completed. All work was supported from the 40 person camp established at Light Lake in 2007. The drilling program was designed to increase the drill hole density from the 2006/2007 program and define the mineralized horizon more closely.

The 2011 program consisted of a continuation of the E-Zone decline extension, the underground drilling program (January to July 2011) and surface drilling on the Creek, Q and V Zones (late July to mid-October 2011). The E-Zone extension saw the decline completed to 1,291 m from surface. A further 73 underground holes (14,148.47m) were

drilled from seven drill stations. The Creek Zone saw the completion of 17 NQ drill holes (5,701 m) while five holes (1,893 m) were completed on the Q Zone and eight holes (3,147 m) from a single drill station at the V Zone. Both the surface and underground drilling was carried out by Atlas Drilling Ltd. of Kamloops. Mineralization consists of sphalerite and galena with accessory sulphide minerals of pyrite and pyrrhotite.

An updated mineral resource has been estimated for the Lower E Zone using a total of 980 composites from 101 drill holes (2430m). At a base case cut-off grade of 4% combined Pb:Zn the Lower E Zone is estimated to contain an Indicated resource of 2,739,000T averaging 6.07% Zn and 1.22% Pb. An additional 3,305,000T grading 6.64% Zn and 1.25% Pb is classified as inferred. The combined E Zone indicated mineral resource at a 4% Pb:Zn cutoff grade presently amounts to 4,654,000T of 6.77% Zn and 1.38% Pb. An additional 3,703,000T grading 6.59% Zn and 1.24% Pb is classified as inferred. This mineral resource remains open to the west, the down dip portion of the mineralized horizon. The mineral resource at a range of cut-off grades is presented in Table 1-1 with a base case of 4% combined Zn-Pb.

**Table 1-1 Ruddock Creek Mineral Resource Update - Lower E Zone (1 Mar 2012)**

Cutoff Grade % Pb+Zn	INDICATED				INFERRED			
	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn
3.0	3,311	5.51	1.13	6.64	4,020	5.98	1.14	7.12
<b>4.0</b>	<b>2,739</b>	<b>6.07</b>	<b>1.22</b>	<b>7.29</b>	<b>3,305</b>	<b>6.64</b>	<b>1.25</b>	<b>7.89</b>
5.0	2,143	6.73	1.34	8.07	2,758	7.22	1.35	8.57

The existing mineral resource for the Upper E Zone and the updated combined E Zone resource are presented in the following tables:

**Table 1-2 Ruddock Creek Mineral Resource - Upper E Zone (15 July 2009)**

Cutoff Grade % Pb+Zn	INDICATED				INFERRED			
	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn
3.0	2,139	7.27	1.51	8.78	455	5.74	1.13	6.87
<b>4.0</b>	<b>1,915</b>	<b>7.78</b>	<b>1.62</b>	<b>9.40</b>	<b>398</b>	<b>6.15</b>	<b>1.18</b>	<b>7.33</b>
5.0	1,630	8.47	1.78	10.25	332	6.61	1.27	7.88

**Table 1-3 Ruddock Creek Mineral Resource – E Zone Combined**

Cutoff Grade % Pb+Zn	INDICATED				INFERRED			
	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn
3.0	5,450	6.20	1.28	7.48	4,475	5.96	1.14	7.09
<b>4.0</b>	<b>4,654</b>	<b>6.77</b>	<b>1.38</b>	<b>8.16</b>	<b>3,703</b>	<b>6.59</b>	<b>1.24</b>	<b>7.83</b>
5.0	3,773	7.48	1.53	9.01	3,090	7.15	1.34	8.50

Surface diamond drilling of the Creek Zone since 2006 has been of sufficient density to define an initial inferred mineral resource for this zone. Details are presented in Table 1-4 at

a range of cut-off grades with the base case of 4% combined Zn-Pb. This resource estimate utilized data from surface core drilling programs carried out between 2006 and 2011. A total of 91 composites from 33 drill holes (224 m) were used for block grade estimation in the block model.

**Table 1-4 Ruddock Creek Mineral Resource - Creek Zone (1 Mar 2012)**

Cutoff Grade % Pb+Zn	INFERRED			
	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn
3.0	1,778	6.70	1.40	8.10
<b>4.0</b>	<b>1,679</b>	<b>6.92</b>	<b>1.45</b>	<b>8.37</b>
5.0	1,472	7.37	1.55	8.92

The combined Ruddock Creek mineral resources tabulated below are from the Upper E, Lower E and the Creek Zone. No other zones on the property have enough recent drilling information to define a mineral resource.

**Table 1-5 Ruddock Creek Total Mineral Resource**

Cutoff Grade % Pb+Zn	INDICATED				INFERRED			
	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn
3.0	5,450	6.20	1.28	7.48	6,253	6.17	1.21	7.38
<b>4.0</b>	<b>4,654</b>	<b>6.77</b>	<b>1.38</b>	<b>8.16</b>	<b>5,382</b>	<b>6.69</b>	<b>1.31</b>	<b>8.00</b>
5.0	3,773	7.48	1.53	9.01	4,562	7.22	1.41	8.64

Block model grade estimation was carried out using Gemcom Surpac© software. For the E Zone, block grades were estimated using ordinary kriging constrained by zone domains. Three kriging passes with incremental search distances were implemented. Blocks estimated in the first two passes using a maximum anisotropic search distance of 31 m were classified as indicated. Blocks estimated in the 3<sup>rd</sup> pass using a maximum anisotropic search distance of 100 m were classified as inferred.

Grades for the Creek Zone were estimated using the inverse distance squared method. Otherwise, all search parameters were the same as those for the Lower E Zone.

The Creek Zone is located 900 m west of the E Zone surface exposure. Diamond drilling carried out on the Creek Zone in 2006, 2007, 2008, 2010, and 2011 has shown this horizon to be continuous over 600 m down dip and 300 m along strike from the surface showing. The mineralization dips gently to the north, plunges gently to the west and is up to 12.6 m thick. The relationship of the Creek Zone to the E Zone is not yet clear and may represent a fault offset and up lift of the E Zone mineralization, or it could correspond with the mineralization encountered at the G and M Zones, which overlie the E Zone. If the Creek Zone mineralization does correspond to the G and M Zones then it represents a second sulphide horizon with a stratigraphic separation of approximately 600 m. Previous shallow drilling by Cominco Ltd. in the G and M areas was based on the presence of surface mineralization discovered by Falconbridge Nickel Mines Limited. As the structural history of

this area is not well understood the resolution of this question will require additional deep drilling in the area of the Creek Zone.

Ongoing exploration should focus on continuing to expand on the known resource with diamond drilling of the lower E Zone by underground drilling, surface drilling of the Creek, U, V, and Q Zones. Environmental data collection should continue with additional flora and fauna studies along with continuation of the water quality and meteorological data gathering. Ongoing metallurgical studies should include additional DMS testing and floatation tests to determine the optimal circuits for this ore, and further tailings studies to establish disposal parameters.

The overall budget for this work is estimated at \$5,709,750.

## 2 INTRODUCTION AND TERMS OF REFERENCE

This technical report covering the Property was commissioned by Selkirk to comply with disclosure and reporting requirements set forth in NI 43-101, Companion Policy 43-101CP, and Form 43-101F1. The purpose of this technical report is to present the results of the recently completed 43-101 compliant Resource Estimate.

The scope of this study included a review of pertinent technical reports and data relative to the general setting, infrastructure, geology, project history, exploration activities, methods and results, methodology, quality assurance, and interpretations. The authors have been directly involved on and off-site with the 2005, 2006, 2007, 2008, 2010 and 2011 exploration programs. All sources of information used in the preparation of this technical report are detailed in the Section 21.0, References.

Units of measure and conversion factors used in this report are shown in the table below.

**Table 2-1 Units of measure**

**Linear Measure**

1 inch	=	2.54 centimetres
1 foot	=	0.305 metres
1 yard	=	0.9144 metres
1 mile	=	1.6 kilometres

**Area Measure**

1 hectare	=	2.47 acres
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**Weight**

1 pound	=	0.454 kilograms		
1 ton (short)	=	2000 pounds	=	0.907 tonnes
1 long ton	=	2240 pounds	=	1.016 tonnes
1 tonne	=	1000 kilograms	=	2204.6 pounds

## 3 RELIANCE ON OTHER EXPERTS

It was not within the scope of this report to independently verify the legal status or ownership of the mineral properties or underlying option agreements and transfers of title. Information related to claim ownership (Sections 1, 4 & 6), permitting (Section 4) and environmental liabilities (Section 4) have been provided by Selkirk. Metallurgical and Geotechnical



Characterization data (Section 16) has been provided by SGS Lakefield Research Ltd., and the authors have no reason to believe this information is misleading or misrepresented.

#### **4 PROPERTY DESCRIPTION AND LOCATION**

The Property is located between the headwaters of Ruddock Creek and Oliver Creek in the Scrip Range of the Monashee Mountains in southeast British Columbia, approximately 155 km northeast of Kamloops, 100 km north northwest of Revelstoke, 28 km east of Avola and 6.5 km west of Gordon Horne Peak (Figure 4-1). The principal mineral tenures are situated on NTS map sheet 82M/15W and B.C. Geographic System map sheet 082M.076. Geographic coordinates for the center of the property are 51° 46.6' north latitude; 118° 54.1' west longitude and the UTM coordinates (NAD 83) are 5,737,900 N and 368,800 E in Zone 11.

Figure 4-1 Location Map



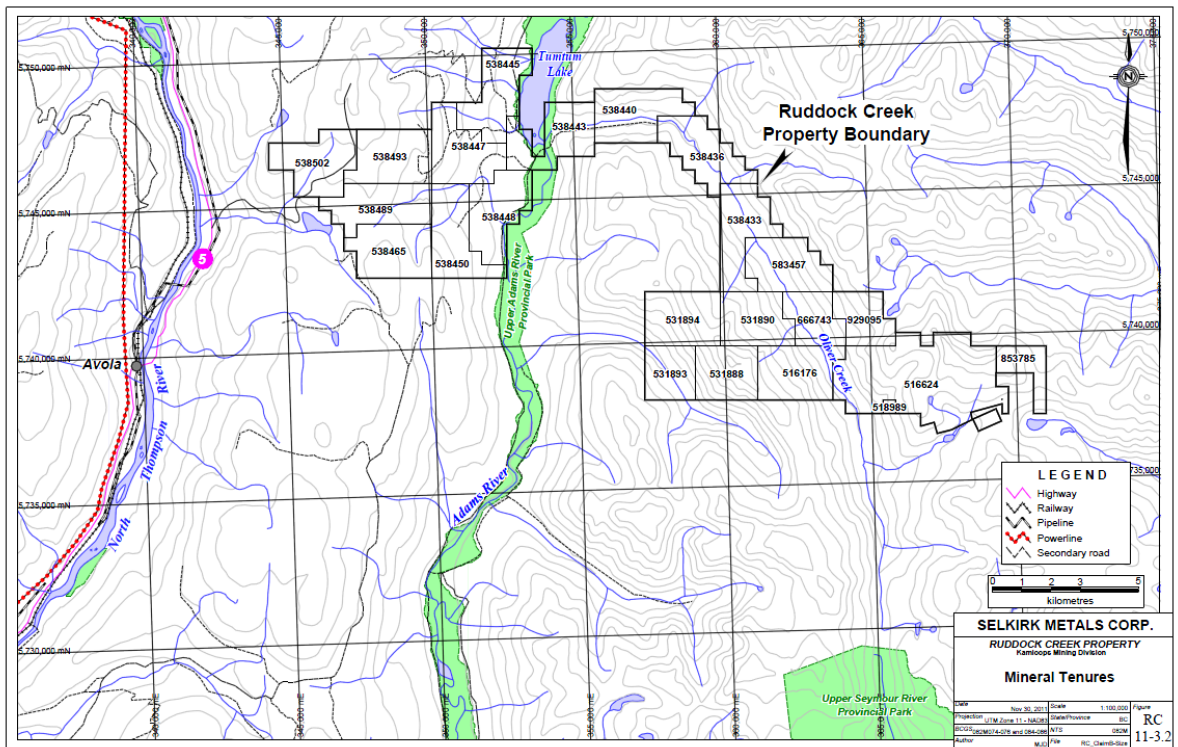
The Riddock Creek Property is comprised of 23 cell claims containing an aggregate of 554 cells and covering a gross area of 11,047.15 hectares (Figure 4-2). These claims represent the following mineral title transactions.

- a) the conversion in July 2005 of two 4 post mineral claims (15 units) and 59 two post claims into one cell claim of 79 cells;
- b) the acquisition in July and August 2005 of two cell claims containing 26 cells;

- c) the acquisition in April 2006 of four claims containing 82 cells;
- d) the acquisition in August of 12 claims containing 300 cells;
- e) the acquisition in May 2008 of one claim containing 24 cells;
- f) the acquisition in November 2009 of one claim containing 16 cells;
- g) the acquisition in May 2011 of one claims comprised of 11 cells; and
- h) the acquisition in November 2011 of one claim containing 16 cells.

The claims are located primarily in the Kamloops Mining Division although a small portion of the Property extends eastward into the Revelstoke Mining Division. The original 2 post claims were staked from October 1960 to September 1962 and the two 4 post claims in June 1977. The principal claim is Tenure No. 516624 and all the claims are registered in the names of Selkirk Metals Corp. as to a 10% interest, Mount Polley Mining Corporation as to a 55% interest, MK Mining Canada, Corporation as to a 21% interest and ICM Mining (Canada) Inc. as to a 14% interest. The claims are shown on Plan Nos. RC-08-2 to RC-08-3b contained herein. The details of the mineral claims that comprise the Property are set out in Section B of this report. The expiry dates shown are based on the Statement of Work filed on November 18, 2011 as Event #5126984 and assume that the work contained in a forthcoming assessment report will be accepted for assessment purposes by the Mineral Titles Branch.

Figure 4-2 Claim Map



The Property is subject to a 1% Net Smelter Return royalty (“NSR”) in favour of Teck Metals Ltd. (“Teck”) on all production. In addition Teck has a right of first offer to purchase all or part of the production from the Property on regular commercial terms.

Under the Mineral Tenure Act of British Columbia, a titleholder is granted the use of the surface for mineral exploration purposes only. A property is defined by the cells that make up the claim tenure, which are derived from an electronic map database maintained by the Ministry of Energy and Mines and administered by the Mineral Titles Branch. These cells legally define the boundaries of the property. There are no known environmental liabilities associated with the Ruddock Creek Property.

Claim information is summarized in Table 4-1 to Table 4-3.

**Table 4-1 Summary of Mineral Claims**

<b>RUDDOCK CREEK</b>			<b>SCHEDULE OF MINERAL CLAIMS</b>			
<b>PROVINCE:</b> British Columbia			<b>CLAIMS:</b> 23	<b>CELLS:</b> 554	<b>AREA:</b> 11,047.15 ha	
<b>MINING DIVISION:</b> Kamloops			<b>NTS:</b> 82M/14E, 15W		<b>BCGS:</b> 082M.075,076,084,085,086	
<b>LOCATION:</b> 77 km east of Clearwater, 155 km NE of Kamloops, 100 km NNW of Revelstoke and 6.5 km west of Gordon Horne Peak			<b>LATITUDE:</b> 51°46.5'		<b>LONGITUDE:</b> 118°55'	
			<b>UTM:</b> NAD 83	<b>Zone</b> 11	<b>5 738 000 N</b>	<b>368 000 E</b>
<b>MAP</b>	1:250 000	82M Seymour Arm	<b>PROPERTY INTERESTS (as at January 1, 2012):</b> Selkirk Metals Corp. – 10% Mount Polley Mining Corporation – 55% MK Mining Canada, Corporation – 21% ICM Mining (Canada) Inc. – 14% Teck Metals Ltd. – 1% Net Smelter Return and right of first offer to purchase all or part of production.			
	1:50 000	82M/14 Messiter				
	1:50 000	82M/15 Scrip Creek				
	1:20 000	82M.075 Camp Six Creek				
	1:20 000	82M.076 Gordon Horne Peak				
	1:20 000	82M.084 Sundt Creek				
	1:20 000	82M.085 Tumtum Lake				
	1:20 000	82M.086 Horne Creek				
<b>AGREEMENT SUMMARY:</b>						
Jan 10 2000: Acquisition Agreement between Falconbridge Limited and Doublestar Resources Ltd. whereby Doublestar acquired Falconbridge's 58.9% interest in the Ruddock Creek Property.						
Feb 28 2001: Sale and Purchase Agreement between Cominco Ltd. and Doublestar Resources Ltd. whereby Doublestar acquired Cominco's 41.1% interest in the Ruddock Creek Property. Cominco was granted a royalty of 1% of Net Smelter Returns (NSR) on all production from the Property and a right of first offer to purchase all or part of the products from the Property.						
Mar 23, 2004: Letter Option Agreement between Doublestar Resources Ltd. and Cross Lake Minerals Ltd.						
Jun 10, 2004: Formal Option and Joint Venture Agreement between Doublestar Resources Ltd. and Cross Lake Minerals Ltd. whereby Cross Lake acquired the right to earn a 60% interest (First Option) by cash payments of \$10,000, by issuing 900,000 shares and by incurring aggregate exploration expenditures of \$3,000,000 by Dec 2007; an additional 10% interest (Second Option) may be earned by incurring additional exploration expenditures of \$1,750,000.						
May 16, 2005: Notice from Cross Lake to Doublestar of its intention to assign interest to Selkirk Metals Holdings Corp. Amendment to paragraph 2.02(c) adjusting the outstanding number of shares remaining to be issued, 200,000 shares of Selkirk Metals Corp. instead of 500,000 shares of Cross Lake.						
Jun 16, 2005: Assignment Agreement between Cross Lake Minerals Ltd. and Selkirk Metals Holdings Corp. whereby Cross Lake assigned all its rights, interests and obligations in the Option and Joint Venture Agreement to Selkirk Holdings.						
Oct 05, 2006: Notice from Selkirk Metals Holdings Corp. to Doublestar Resources Ltd. of completion of the First Option (60%) and intention to exercise the Second Option (additional 10%).						
Nov 01, 2006: Notice from Selkirk Metals Holdings Corp. to Doublestar Resources Ltd. of completion of the Second Option (additional 10% earned) and the formation of 70:30 Joint Venture.						
Aug 31, 2007: Assignment Agreement between Doublestar Resources Ltd. and Selkirk Metals Holdings Corp. whereby Doublestar assigned all its right, title and interest in the Ruddock Creek Joint Venture and the Property to Selkirk Holdings.						

Feb 28 2009: Selkirk Metals Holdings Corp. and Selkirk Metals Corp. were amalgamated as one company under the name of Selkirk Metals Corp.
Nov 04 2009: Selkirk Metals Corp. and Bethlehem Copper Corporation, a wholly owned subsidiary of Imperial Metals Corporation, were amalgamated as one company under the name of Selkirk Metals Corp.
Dec 30 2009: Purchase and Sale Agreement between Selkirk Metals Corp. and Mount Polley Mining Corporation whereby a 90% beneficial interest in the property was assigned to Mount Polley.
Jun 11 2010: Amendment to Sale and Purchase Agreement between Teck Metals Ltd. (successor to Cominco Ltd.) and Selkirk Metals Corp. (success to Doublestar Resources Ltd.) whereby the NSR Royalty clause was amended to eliminate the waiver of the first \$350,000 of royalty revenue and the First Offer on Production clause was amended to provide greater clarity.
Jul 08 2010: Memorandum of Understanding between Selkirk Metals Corp. and Mitsui Mining and Smelting Company, Limited and Itochu Corporation whereby Selkirk granted Mitsui/Itochu an option to earn up to a 50% interest by funding \$20.0 million in exploration expenditures in three stages on or before March 31, 2013.
Oct 28 2010: Transfer of 90% ownership interest from Selkirk Metals Corp. to Mount Polley Mining Corporation.
Dec 17 2010: Joint Venture Agreement between MK Mining Canada, Corporation, ICM Mining (Canada) Inc., Selkirk Metals Corp., Mount Polley Mining Corporation and Ruddock Creek Mining Corporation whereby MKM and ICM committed to provide \$14.0 million by March 31, 2012 in order to earn an aggregate 35% interest and were granted an option to earn an additional 15% by providing an additional \$6.0 million by March 31, 2013.
Dec 30 2010: Transfer of 14% ownership interest in 21 mineral tenures from Mount Polley Mining Corporation to ICM Mining (Canada) Inc.
Dec 30 2010: Transfer of 21% ownership interest in 21 mineral tenures from Mount Polley Mining Corporation to MK Mining Canada, Corporation
Jun 13 2011: Amendment Number 1 to JVA whereby Tenure 853785 added to the Property.
Nov 28 2011: Amendment Number 2 to JVA whereby Tenure 929095 added to the Property

**Table 4-2 Claim Summary**

TENURE NUMBER	CLAIM NAME	CELLS	GROSS AREA (ha)	RECORD DATE (yyyy-mm-dd)	GOOD TO DATE (yyyy-mm-dd)	ANNUAL WORK \$	RECORDED OWNER / REMARKS
516176	OLIVER	25	499.90	2005/jul/06	2021/dec/01	\$3,999.21	See above
516624	-	79	1579.80	2005/jul/10	2021/dec/01	\$12,638.40	"
518989	RC 2	1	20.00	2005/aug/12	2021/dec/01	\$160.00	"
531888	RC 3	20	399.93	2006/apr/12	2021/dec/01	\$3,199.40	"
531890	RC 4	22	439.76	2006/apr/12	2021/dec/01	\$3,518.07	"
531893	RC 5	16	319.94	2006/apr/12	2021/dec/01	\$2,559.52	"
531894	RC 6	24	479.73	2006/apr/12	2021/dec/01	\$3,837.86	"
538433	RC 7	25	499.43	2006/aug/01	2021/dec/01	\$3,995.44	"
538436	RC 8	25	499.16	2006/aug/01	2021/dec/01	\$3,993.28	"
538440	RC 9	25	499.03	2006/aug/01	2021/dec/01	\$3,992.22	"
538443	RC 10	25	493.10	2006/aug/01	2021/dec/01	\$3,944.78	"
538445	RC 11	25	492.59	2006/aug/01	2021/dec/01	\$3,940.74	"
538447	RC 12	25	499.16	2006/aug/01	2021/dec/01	\$3,993.31	"
538448	RC 13	25	489.71	2006/aug/01	2021/dec/01	\$3,917.70	"
538450	RC 14	25	499.46	2006/aug/01	2021/dec/01	\$3,995.67	"
538465	RC 15	25	499.52	2006/aug/01	2021/dec/01	\$3,996.16	"
538489	RC 16	25	499.36	2006/aug/02	2021/dec/01	\$3,994.91	"
538493	RC 17	25	499.20	2006/aug/02	2021/dec/01	\$3,993.58	"
538502	RC 18	25	499.22	2006/aug/02	2021/dec/01	\$3,993.77	"
583457	OC 10	24	479.56	2008/may/01	2021/dec/01	\$3,836.47	"
666743	OC 11	16	319.82	2009/nov/09	2021/dec/01	\$2,558.56	"
853785	EZ 01	11	219.95	2011/may/08	2021/dec/01	\$1,759.60	"
929095	OC 12	16	319.82	2011/nov/14	2012/nov/14	\$1,279.28	"

TENURE NUMBER	CLAIM NAME	CELLS	GROSS AREA	RECORD DATE	GOOD TO DATE	ANNUAL WORK	RECORDED OWNER / REMARKS
TOTAL	23	554	11,047.15			\$87,097.95	

**Table 4-3 Assessment Work Filing Summary**

Date of Filing	Event No.	Total Value Filed	Work-C/L	PAC Debit	PAC Credit	Date of Approval	Report Number
(yyyy-mm-dd)		\$	\$	\$	\$	(yyyy-mm-dd)	
2004/oct/20	3218721	Notice to Group: 62 claims				2004/oct/20	N/A
2004/oct/20	3218722	375,412.22	77,000.00	0.00	298,412.22	2005/jul/18	27654
2006/feb/24	4071828	794,114.05	58,371.18	0.00	735,742.87	2007/jan/15	28385
2006/may/11	4083589	42,968.75	12,638.40	0.00	30,330.35	2007/mar/27	28493
2006/nov/30	4113588	2,479,302.06	153,354.03	0.00	2,325,948.03	2007/jun/27	28908
2009/jan/29	4260466	10,176,501.00	163,332.13	0.00	10,013,168.87	2010/jan/21	30756
2010/nov/05	4807737	492,621.43	337,740.79	0.00	154,880.64	2011/jun/02	32092
2011/nov/18	5126984	1,000,000.00	350,431.25	0.00	649,568.75		

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

### 5.1 Highways

The Ruddock Creek property can be accessed from provincial highway #5, the Yellowhead Highway, or highway #1, the Trans Canada Highway, via unpaved logging roads. The southernmost route leaves highway #1 at the east end of Little Shuswap Lake. The Adams Lake logging main extends north 128 km from Chase, up the Adams River to the point where it meets the Oliver Creek road. From Highway #5 it is possible to take a secondary paved road from Louis Creek to Adams Lake where it meets the Adams Lake logging road. At the community of Vavenby, the Vavenby #2 logging road crosses the summit to meet the Adams Lake/ Tumtum road, a distance of 38 km. From this point it is an additional 55kms to the intersection with the Oliver Creek road. The most northerly route is the Finn Creek logging road, located 15 km north of the community of Avola on highway #5. This route travels 24 km east over the Finn Creek pass and down to the Adams River. From this point it is an additional 19 km south to the intersection of the Oliver Creek road.

The Oliver Creek road starts at the outlet of Tumtum Lake on the Adams River and travels south for 24 km to the headwaters of Oliver Creek. Road access to the Light Lake campsite and the E Zone portal was completed in late 2007 and has been used for all subsequent programs. This consisted of 8kms of new road construction from the end of the existing logging road network at the south end of Oliver Creek.

A proposed route for shortening the access to the Oliver Creek road is near the community of Avola. Existing unused logging roads climb the western flanks of the ridge separating the Thompson River from the Adams River, and lack only 1 or 2 km to connect with similar logging roads on the eastern flank of the ridge. These existing roads would require upgrading to provide reliable all season access, however the proposed route would consist of a total of approximately 45 km.



## 5.2 Railways

The North Thompson River is the transport corridor for CN's main line from Edmonton, AB to Vancouver, BC. The rail line passes through the community of Avola on the east side of the river near the proposed access point for power and road services to the property.

## 5.3 Airports

The closest commercial airport is located at Kamloops, BC, 215 km to the south of the project. This facility is capable of handling large commercial jets.

## 5.4 Telecommunications

Currently the communications system at the camp is a high speed satellite system for voice and data. Land lines are present along the North Thompson River corridor.

## 5.5 Power Supply

The 2008 exploration program relied on diesel powered generators located in the camp and at the portal site. The underground power supply at the portal is no longer on site, however the 350 kw backup unit is still in place. Power for a mine and mill operation would require the construction of a power line from the existing BC Hydro substation at Avola or from the Mica transmission line. This Avola power line would follow the same route as the proposed new access road starting near the community of Avola. Recent communication with BC Hydro indicates that the existing transmission lines along the North Thompson River corridor do not carry sufficient power to supply the proposed mine development and upgrading of the system will be required. The Mica option would entail the construction of a 28.3km transmission line from the existing Mica grid, this transmission line has excess power that would service a mine. It is estimated that a mine mill complex to process 2000 tpd of Ruddock ore would require approximately 10 MW of power.

## 5.6 Climate

The climate in the area is temperate with generally warm summers and cool, wet winters. Substantial snow accumulations of 3 to 5 m are the norm, thus limiting the fieldwork season primarily to July through September. Permanent snow cover exists on some of the higher areas of the Property.

On September 1, 2006, a meteorological station was installed near Light Lake at an elevation of about 1770 m. This site was chosen as being centrally located with respect to the exploration at the time. The site was also selected based on relatively flat terrain and survivability of the instruments. Standard meteorological observations consisting of wind speed and direction, temperature and precipitation are being measured and recorded at the station by the following equipment:

- Campbell Scientific CR1000 data-logger;
- Campbell Scientific 107 Temperature Probe with gill radiation shield;
- RM Young 05103 Wind Monitor; and
- Texas Electronics TE525M Tipping Bucket Rain Gauge.

## 5.7 Vegetation

The vegetation is mainly in the western one third of the claims below the 1900 m level and consists primarily of subalpine Balsam Fir, Spruce, Hemlock and Western Red Cedar. Vegetation is limited to heather and stunted shrubs in the lower alpine regions above tree-line and in the upper areas the ground is either barren rock or is covered by permanent neve snow, small glaciers or glacial moraine and rock talus.

## 5.8 Hydrology

Two stream flow gauging stations were installed in early July 2006; one on Light Creek at the outlet from Light Lake, and one at km 7.7 on the Oliver Creek Forest Service Road (FSR). The Oliver Creek station will provide integrated information on runoff patterns throughout most of the property, while the Light Creek station will provide more specific information on the area proposed for most intensive development.

The gauging stations were installed by Northwest Hydraulics Ltd. and operated in accordance with standard provincial procedures (BC MoELP 1998). Each gauging station consists of a Solinst water-level sensor with built-in data logger that senses and records level (or stage) at 15 minute intervals. The Solinst Levelogger which measures hydrostatic and atmospheric pressure requires compensation with a Barologger which measures atmospheric pressure only and is installed at the Oliver Creek site. A staff gauge and series of benchmarks provide a physical reference at each station to verify the accuracy of the recorded stage data. The data collected to date represent a complete water year with the low winter flow period, freshet and increased water temperatures through summer and the lower flows during fall into winter.

Stream flows were measured six times at each gauging station in order to develop site-specific stage-discharge ratings curves. Three measurements were completed in 2006 on Light and Oliver Creek, and an additional three were completed in 2007 and 2008.

A snowpack survey was undertaken on May 15, 2007 within the project watershed. The snow course was located along the Forestry Service Access Road leading to Light Lake above the camp and consisted of ten sampling sites beginning at an initial station (UTM N 5735560, E 0366839) spaced 10 m apart.

In December 2010 Northwest Hydraulics Ltd. Re-installed the Light Lake and Oliver Creek hydrometric stations with well caps and locks to prevent tampering and vandalism. Site rating curves and hydrographs were updated at this time as well. The last download of the water flow data was on October 25, 2011 and the units can record data for 416 days so they are being downloaded regularly to ensure no data is lost.

## 5.9 Physiography

The claims are situated in extremely mountainous terrain at the height of land between the drainages of the Columbia River and Fraser River systems. The terrain is characterized by heavily timbered lower slopes and steeper alpine-glaciated upper slopes. Elevations range from 950 m above sea level at the western edge of the claims in the Oliver Creek drainage to 2854 m above sea level on an unnamed peak at the northern edge of the holdings. The terrain is extremely steep in some areas making access very difficult. A number of small



alpine lakes or tarns dot the area. Water supply from streams fed by glacial and snow melt varies according to elevation and time of year.

## 6 HISTORY

Exploration on the Ruddock Creek Property dates from the discovery of massive sulphide mineralization and the subsequent staking of the ground in 1960 by Falconbridge. The most extensive exploration programs were conducted by Falconbridge, over the period 1961-1963. During this phase of exploration, most of the property was mapped at scales ranging from 1:240 (1" = 20') to 1:4800 (1" = 400'). Core drilling was completed at the E Zone, and the F, G, M, T, Q, U, and V showings (see summary in Table 6-1). Falconbridge completed detailed 1:480 (1" = 40') geological cross sections through the E Zone area during its exploration program, as well as several property-scale sections showing stratigraphic and structural correlations of the massive sulphide interval between the different showings. They also constructed structure contour maps of the subsurface projection of the E Zone.

Cominco Ltd. optioned the property from Falconbridge in 1975 and completed two additional drill holes plus a wedged hole in 1975 and 1976 exploring for deep extensions to the E Zone. Cominco also completed additional detailed mapping at the F and G showings and calculated an "indicated potential" for the E Zone of 1.5 MT grading 10% Pb+Zn, increasing to 3.0 MT if the E Zone is projected westward to the E Zone Fault (Mawer, 1976). In 1977 Cominco carried out further drilling on the Upper and Lower G Zones as well as the F and T Zones. Cominco contracted a structural evaluation of the property in 1978 (Marshall, 1978). This study corroborated many of the general interpretations made by Falconbridge and also provided additional detail to the interpretation of lithologic sequence, structural fabrics and folding history. Cominco also conducted a small program of surface and bore hole geophysics in 1982. Cominco's interest at this time was 40% and subsequently increased to 41.1%.

Doublestar Resources Ltd. acquired Falconbridge's 58.9% interest in January 2000 and in August and September 2000 carried out a detailed structural mapping program on the Property. In February 2001, Doublestar purchased the 41.1% interest of Cominco to hold a 100% interest in the Property, subject only to a 1% Net Smelter Royalty in favour of Cominco.

In March 2004, Cross Lake acquired an option on the Property from Doublestar and in August and September 2004 completed an 11 hole NQ drill program on the E Zone totalling 1838.7 m.

Selkirk continued work on the Property in 2005. A helicopter-borne AeroTEM II Electromagnetic and Magnetic survey was flown by Aeroquest Limited in May, four deep drill holes (3245.4 m) were completed on the E Zone Extension during July, August and September and a geological mapping, geochemical sampling and UTEM-3 geophysical survey program was conducted in the Oliver Creek Valley in September and October.

In 2006 a major exploration drill program was designed to evaluate the E zone mineralized horizon. A 15 person camp was established at the forest service campsite located at the southwest side of Tumtum Lake. Drilling was awarded to Connors Drilling Ltd of Kamloops BC where 12,808.48 m of NQ2 drilling was completed in 35 drill holes from 10 drill pads located on the E Zone, 1,073.1 m in 10 holes from one drill pad located at the Creek Zone

and 857.47 m in three separate drill holes located in Oliver Creek. The drilling was completed between June 26 and October 28, 2006. All but the Oliver Creek drill holes were helicopter supported. During the 2006 field season approximately 5.2 km of access trail was established from the termination of the Oliver Creek logging haul road toward Light Lake gaining approximately 300 m in elevation. By the end of the 2006 field season, the road was within 300 m of the core logging facilities located at Light Lake.

The 2007 exploration program consisted of additional road building to complete the access route to the proposed camp site and underground portal location, along with surface diamond drilling. A permanent camp was established in September 2007, at the Light Lake site, which is capable of housing up to 50 people. This camp was utilised during the construction of the exploration decline on the E Zone between September 2007 and September 2008. Surface diamond drilling operations were carried out from the campsite at Tumtum Lake between June and September 2007. Drilling commenced at the Q Zone and consisted of 5 holes totalling 1,390 m. At the U Zone 8 holes were completed totalling 1,539 m, 12 holes (3,998 m) from 3 pads were completed on the Creek Zone and 9 holes (2,366 m) from 3 pads on the E Zone.

Procon Mining and Tunneling Ltd. mobilized their equipment and personnel to the Ruddock Creek project on September 18, 2007 and work continued through the winter of 2007, 2008 on completion of the underground decline and eastern crosscut. The decline was collared at a grade of minus 15% to undercut deep E Zone mineralization intersected by drill holes RD-05-135 and RD-06-152, and was completed to a depth of 985 m. Drifting to the east at the 900 m point of the decline extended 175 m to provide drill stations to test the deep E Zone horizon.

Atlas Drilling Ltd., of Kamloops B.C. was contracted to carry out the 2008 underground diamond drilling program. The contractor used one Atlas Copco U-6 and one HydraCore 1000 to complete 5,430 m in thirty-two NQ2 drill holes. The 2008 E Zone drill program was designed to increase the drill hole density on the mineralized horizon in areas of widely spaced drill hole intercepts. Six drill stations were excavated within the underground workings, two along the decline and four along the length of the incline. These were located to provide intercepts of the lower E Zone mineralization along 25 m sections. A fan of holes was drilled from each drill station to intersect the mineralization at 30 m intervals.

Drilling commenced on July 13, 2008 with the first drill and was completed by October 2008. The core was logged, photographed and split using a diamond rock saw or a manual splitter and the samples designated for assay were shipped by a commercial freight line to Acme Analytical Laboratories in Vancouver, B.C. for analysis. The drill core, both split and unsplit, remains stored in wooden core boxes on site. The split core is stored on metal racks, while the boxes of unsplit core were cross stacked and piled in the area around the core shack.

Acme Analytical Laboratories Ltd. of Vancouver was engaged to carry out the analytical work on the drill core samples. The analytical procedure utilized was Group 7AR 23 multi element assay by ICP-ES methods.

Enkon Environmental Ltd was retained in 2006 to initiate baseline environmental studies for the Ruddock Creek Project area. This included stream flow and water quality measurements along with baseline weather data collection.

Golder Associates was retained in 2008 to evaluate the environmental work completed to date, assess the potential mill and tailings sites and to provide a framework for further studies.

In late 2008 Selkirk filed a Project Description with the BC Environmental Assessment Office (“EAO”) and in 2009 Selkirk was notified that the project constituted a reviewable project under the EAO process. A section 11 Order was issued in June 2009 which established formal scope, procedures and methods for the project’s environmental assessment.

In 2009 Selkirk commissioned a revised Mineral Resource Estimate which was completed in July 2009 and in July and August a UREM geophysical survey (24.05 line km) was carried out over the Creek Zone.

In July 2010 Selkirk signed a Memorandum of Understanding and with Mitsui Mining and Smelting Co. Ltd. and Itochu Corporation whereby Mitsui and Itochu could earn up to an aggregate 50% interest in the Ruddock Creek Property by incurring \$20,000,000 in exploration and development expenditures by March 31, 2013. In December 2010 a Joint Venture Agreement between the parties was finalized.

The 2010 exploration program by Selkirk consisted of 2.1 km of road and drill pad construction in the Creek Zone and the subsequent drilling of 17 NQ-2 sized diamond drill holes totaling 3,583 m by Atlas Drilling Ltd. from Kamloops. In addition, the E-Zone decline was dewatered and work commenced in late 2010 on the extension to the E-Zone decline. Underground drilling was also started in late 2010 with three holes (461 m) being completed. All work was supported from the 40 person camp established at Light Lake in 2007. The drilling program was designed to increase the drill hole density from the 2006/2007 program and define the mineralized horizon more closely.

The 2011 program consisted of a continuation of the E-Zone decline extension, the underground drilling program (January to July 2011) and surface drilling on the Creek, Q and V Zones (late July to mid-October 2011). The E-Zone extension saw the decline completed to 1,291 m from surface. A further 73 underground holes (13,688 m) were drilled from seven drill stations. The Creek Zone saw the completion of 17 NQ drill holes (5,701 m) while five holes (1,893 m) were completed on the Q Zone and eight holes (3,147 m) from a single drill station at the V Zone. Both the surface and underground drilling was carried out by Atlas Drilling Ltd. of Kamloops.

Table 6-1 summarizes work and drilling completed to date on the Ruddock Creek Property. An aggregate of 375 holes totalling 72,562 m have now been drilled, with the E Zone and G, M, T, U, R, V, and Q zones represented. Drill core was stored on site but, other than the 2004-2011 drilling, is generally in poor condition.

**Table 6-1 Ruddock Creek Property: Summary of Activities**

Year	Company	Area or Zone	Type of Work	Drilling		
				Holes	Hole Numbers	Metres
1960	Falconbridge		Prospecting, staking			
1961	Falconbridge	E, M, T	Prospecting, geological mapping, drilling	37	E-1 to 19 M-1 to 15 T-1 to 3	813 104 <u>23</u> 940

Year	Company	Area or Zone	Type of Work	Drilling		
				Holes	Hole Numbers	Metres
1962	Falconbridge	E, Q, T	Drilling, hand stripping and trenching	27	E20-33, 33A-37 Q-1 to 3 T-4 to 8	1,130 84 <u>80</u> 1,294
1963	Falconbridge	E-Zone., R, Q, U, V	Drilling, hand stripping and trenching	25	ED-1 to 8 Q-4 to 13 R-1 to 3 U-1 to 3 V-1	3,229 347 67 37 8 3,688
1973	Cominco		Aeromagnetic survey of western portion	-		
1975	Cominco	E-Zone	Drilling	1	C-1-75	694
1976	Cominco	E-Zone	Drilling	2	C76-1, 76-1A	1,372
1977	Cominco	Upper G, Lower G, F, T	Drilling, geological mapping, prospecting	31	UG77-1 to 12 LG77-1 to 8 F77-1 to 5 T77-1 to 6	832 377 156 <u>189</u> 1,554
1978	Cominco		Structural study	-	-	-
1982	Cominco		Limited surface and bore hole geophysics	-	-	
2000	Doublestar		Geological mapping and structural analysis	-	-	
2004	Cross Lake	E-Zone	Drilling	11	RD-04-101 to RD-04-111	1,839
2005	Selkirk	Complete property	Airborne geophysical survey: AeroTEM II EM and Mag (232.2 line km)			
2005	Selkirk	E-Zone	Drilling	4	RD-05-112 to RD-05-115	3,245
2005	Selkirk	Oliver Cr.	Geological mapping and sampling (500 x 1800 m)			
2005	Selkirk	Oliver Cr.	Geochemical sampling			
2005	Selkirk	Oliver Cr.	Geophysical survey: UTEM-3 (18,575 line km)			
2006	Selkirk	E-Zone	Drilling	35	RC-06-116 to 143, 146 – 148, 150 - 153	12,808
2006	Selkirk	Creek Zone	Drilling	10	RC-06-144,145, 149, 154 – 160	1,074
2006	Selkirk	Oliver Cr.	Drilling	3	OL-06-01 to OL-06-03	857
2006	Selkirk	Light Lake	Light Lake Access Road: 5.2 km completed			
2006	Selkirk	General	Environmental baseline studies			
2007	Selkirk	E Zone	Drilling	9	RC-07-173 to 175, 180-185	2,366
2007	Selkirk	Creek Zone	Drilling	12	RC-07-161 to 172	3,998
2007	Selkirk	U Zone	Drilling	8	RC-07-U1 to U8	1,539
2007	Selkirk	Q Zone	Drilling	5	RC-07-Q1 to Q5	1,390
2007	Selkirk	E-Zone Decline	Underground development: Exploration decline started; 200 m completed in 2007			
2007	Selkirk	Light Lake	Camp: 40 persons			
2007	Selkirk	E-Zone	ABA test work			

Year	Company	Area or Zone	Type of Work	Drilling		
				Holes	Hole Numbers	Metres
2007	Selkirk	E-Zone	Metallurgical test work			
2007	Selkirk	General	Ongoing environmental baseline studies			
2008	Selkirk	E-Zone Decline	Underground development: Exploration decline continued; 782 m completed in 2008 to a final length of 982 m. 900E crosscut completed to 175 m.			
2008	Selkirk	E-Zone	Underground drilling	32	EUG-08-001 to EUG-08-032	5,430
2008	Selkirk	E-Zone	Ongoing ABA test work			
2008	Selkirk	E-Zone	Ongoing metallurgical test work			
2008	Selkirk	General	Ongoing environmental baseline studies			
2008	Selkirk	General	Commencement of Preliminary Assessment by Golder Associates Ltd.			
2008	Selkirk	General	Project Description – Proposed Mine Development: submitted to Environmental Assessment Office			
2009	Selkirk	E-Zone	43-101 Technical Report Mineral Resource Estimate			
2009	Selkirk	E-Zone Creek Zone	Geophysical survey: UREM, 24.050 line km			
2010	Selkirk	E-Zone	Dewatering of E-Zone decline			
2010	Selkirk	Creek Zone	Surface drilling including 2.1 km of access road	17	RD-10-186 to RD-10-202	3,584
2010	Selkirk	Lower E-Zone	Underground development: Decline extended by 55 m to 1037 m from portal			
2010	Selkirk	Lower E-Zone	Underground drilling	3	EUG-10-033 to EUG-10-035	461
2011	Selkirk	Lower E-Zone	Underground development: Decline extended by 254 m to 1291 m from portal			
2011	Selkirk	Lower E-Zone	Underground drilling	73	EUG-11-036 to EUG-11-107, 109	13,688
2011	Selkirk	Creek Zone	Surface drilling	17	RD-11-203 to 206, 206A to 217, 219	5,701
2011	Selkirk	Q Zone	Surface drilling	5	RD-11-Q6 to Q10	1,893
2011	Selkirk	V Zone	Surface drilling	8	RD-11-V9 to V16	3,147
<b>Total Pre-2004 (Falconbridge, Cominco)</b>				<b>123</b>		<b>9,542</b>
<b>Total 2004-2009 (Cross Lake / Selkirk)</b>				<b>129</b>		<b>34,546</b>
<b>Total 2010 (Selkirk / Mitsui / Itochu): Creek, Lower E-Zone</b>				<b>20</b>		<b>4,045</b>
<b>Total 2011 (Selkirk / Mitsui / Itochu): Lower E-Zone, Creek, Q &amp; U</b>				<b>103</b>		<b>24,429</b>
<b>Total Drilling: 1961-2011</b>				<b>375</b>		<b>72,562</b>

## 7 GEOLOGICAL SETTING

### 7.1 Regional Geology

The geologic and structural description outlined below is summarized from the BCDM Bulletin #57 by J.T. Fyles (1970).

The deposit lies in metasedimentary rocks of the Shuswap metamorphic complex on the northwest flank of the Frenchman Cap Gneiss Dome. The Dome is elongate with the long axis trending north-northwest, parallel to the Columbia River. In the northern area of the "Dome" the core gneisses lie beneath gently northerly dipping metasedimentary rocks which grade upward into metasedimentary rocks containing abundant pegmatite. This pegmatite rich zone covers wide areas between the Columbia River and Oliver Creek.

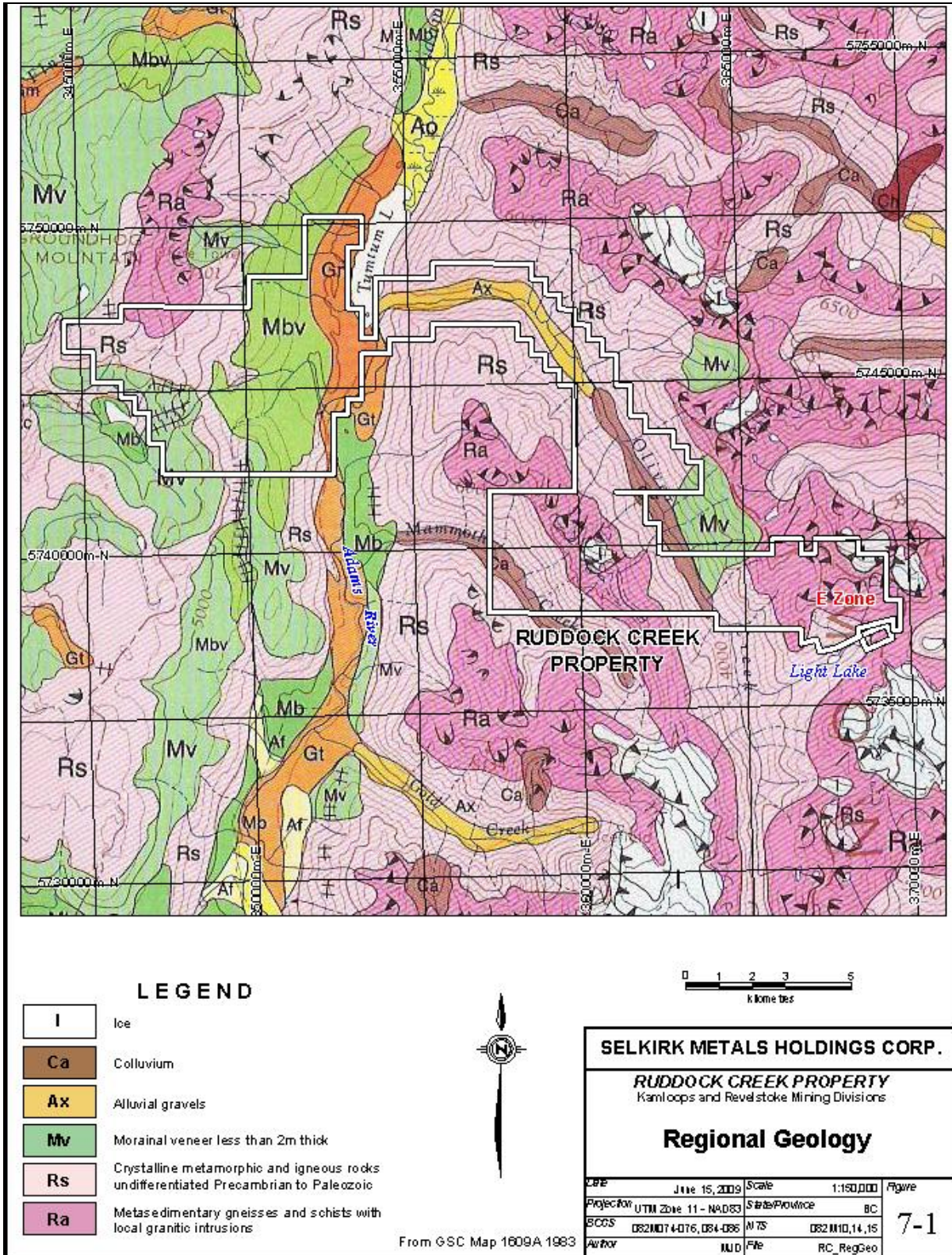
Pegmatite and medium-grained granitic rocks make up more than 50% of the outcrops. These rocks represent mainly if not entirely partial melting of the metasediments. Rock units and structures can be projected and traced among the pegmatite sheets without significant displacement. The abundance of pegmatite and very few distinctive marker beds, except for the sulphide layers in the metasedimentary rocks, translates into correlations that are largely interpretive.

The structure of the area is dominated by repetitive folding, which took place during metamorphism, and was followed by faulting. The earliest folds called Phase I are isoclinal and obscure and tend to thicken the sequences in the hinges. The later folds, called Phase II, are more open and abundant on all scales. Faults in the area are of two types, thrusts and normal. The E Zone Fault is an example of a late normal block fault, which strikes northerly and dips 58-60 degrees west. Phase I isoclinal folds, with thickened hinge Zones and sheared out limbs have large indicated strike lengths which may be measured in kilometres. These structures were refolded and tightened by Phase II folding. The formation of granite probably began late in the Phase II deformation, or after it, along with the development of pegmatites. It is likely that the development of the penetrative gneiss dome to the south contributed directly to the high degree of metamorphism and structural complexity of the area.

The regional geology is illustrated in Figure 7-1.



Figure 7-1 Regional Geology



## 7.2 Local Geology

The most recent property scale mapping was carried out in 2000 by Peter Lewis, P.Geo., who was contracted by Doublestar to work on the Ruddock Creek Project. His study focused on evaluating the structural history of the property with the objective of defining controls on the distribution of massive sulphide bodies. Lewis was also able to define and group rock units from previous geologists on the Property into mapable units that he used in creating property scale maps. Mapping was completed for the eastern portion of the property, including the E Zone, F, G, and M showings, at 1:5,000. The area surrounding the E Zone was also mapped at 1:2,500 to provide more detailed control on the lithologic successions and structural features present in the area of greatest economic interest. The T showing area was mapped at 1:5,000 and a reconnaissance visit to the U showing was completed. A description of the stratigraphy and intrusive units as defined by Lewis follows:

## 7.3 Property Geology

The Ruddock Creek Property contains a variety of amphibolite-grade metasedimentary and metavolcanic rocks, cut by granitic intrusions that range texturally from fine-grained to pegmatitic (Figure 7-2). Contacts between lithologic units of the metamorphic succession are difficult to follow in many areas due to the high proportion of granitic intrusive rocks.

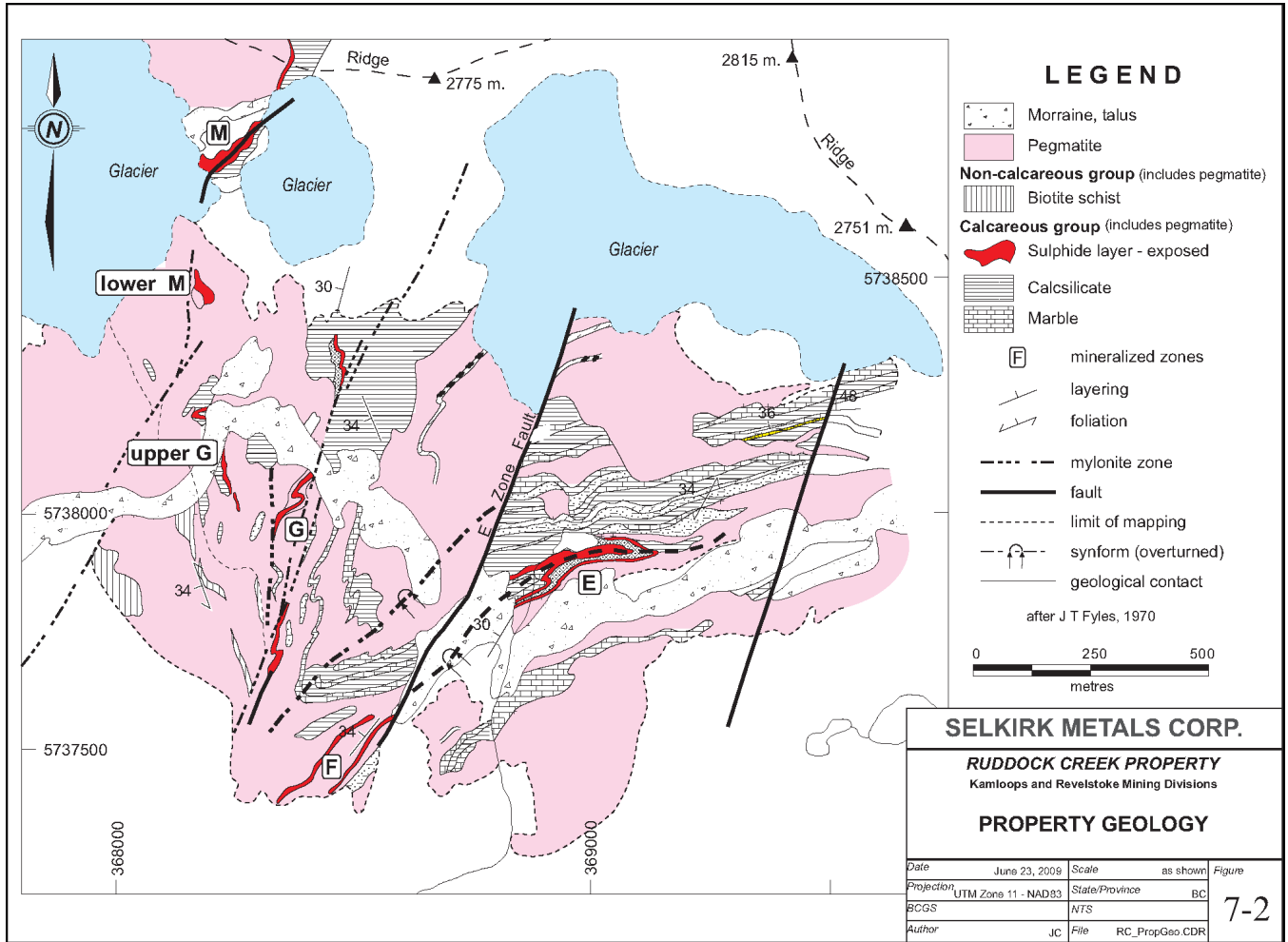
Intense deformation and metamorphism has obliterated any primary facing direction indicators in the metasedimentary and metavolcanic rocks. Structural repetition, due to both folding and thrust faulting, is documented at several locations on the property and could easily occur elsewhere where it is not yet recognized. Therefore, the metamorphic rock sequence portrayed on the property map and described below is best considered a structural sequence, composed of units with uncertain stratigraphic relationships.

The metasedimentary and metavolcanic rocks on the property comprise schists, gneisses, quartzites and marbles, which can be divided into seven compositionally distinct lithotypes (Table 7-1). Individual lithotypes can form layers as thin as a few centimetres, to as thick as several tens of metres. Most lithotypes occur at multiple levels within the section, and thus the individual lithotypes do not comprise map units in a formational sense.

Although the individual metamorphic lithotypes do not form unique map units, the thickness and distribution of each shows systematic variation across the map area. This variation defines three lithologic domains: the E Zone structural hanging wall domain, the E Zone structural footwall domain, and the T showing domain.



Figure 7-2 Property Geology



### 7.3.1 E Zone structural footwall lithologic domain

Massive sulphides at the E Zone were previously thought to occur within the hinge area of a property-scale, recumbent, tight to isoclinal synform. 1" = 40' scale mapping by Falconbridge (Morris, 1965) documented inverted lithologic successions on the two opposing limbs in the immediate hinge area. However, property-scale mapping by Lewis shows significantly different lithologic successions, on what was previously considered the two limbs, beginning 30 – 50 m from the postulated fold axial surface. Based on these lithologic differences and other structural evidence, a fault sub-parallel to layering has been interpreted, referred to as the Camp Fault, because it crosses the area near the location of the camp used in early exploration programs. Rocks structurally below the Camp Fault are assigned to the E Zone structural footwall domain, and above, the E Zone structural hanging wall domain. The relative stratigraphic position of the lithologic sequences in the two domains is uncertain.

**Table 7-1 Property Geology Correlations**

Metavolcanic / metasedimentary units present at the Ruddock Creek property and correlation with previous lithologic designations					
Primary Rock Type	Drill Legend	Map Code	Description	Assignment by Morris, 1965	Distribution
mafic gneiss	BQ	mg	Thinly-banded to massive, dark green, fine-grained pyroxene +/- amphibole gneiss; subordinate plagioclase; garnet common	Not differentiated; included in units QA and HGM amphibolitic quartzite, hornblende-biotite-garnet schist)	Occurs structurally 100-200 m above F and G showings; 30-50 m above T showings
calc-silicate gneiss, marble	CS	cs	Thinly- to thickly-banded, compositionally varied unit containing alternating bands of fine- to coarse- grained quartzite, marble, diopside-rich and amphibolitic marble and quartzite	LQ (quartzitic marble)	Widely distributed through project area, occurs both structurally above and below massive sulphides
marble	MBL	ma	Tan to light gray, medium to very coarse-grained, massive marble, with subordinate micaceous or diopside partings	Not differentiated; included in LQ (quartzitic marble)	Forms mapable unit between F and G showings, thick units on slope structurally below E Zone
amphibole gneiss	BQ	ag	Thinly- to medium-banded, amphibole + plagioclase gneiss; contains garnetiferous layers; distinguished from calc-silicate gneiss by lack of calcite and by abundance of amphibole; may represent metamorphosed chloritic alteration	QA, HGM, ALQ (amphibolitic quartzite and others)	Occurs as thin (not mapable) layers within calc-silicate gneiss; occurs as thick mapable unit only in hanging wall to E Zone, and pinches out abruptly along strike.
biotite schist	BQ	bs	Highly-schistose, coarse-grained biotite containing up to 40% by volume foliation-parallel to moderately discordant leucocratic segregations (probably both transposed veins and metamorphic segregations) consisting of fine- to medium-grained quartz	MQ (biotite quartzite schist)	Occurs structurally above massive sulphides at E Zone and F and G showings, forms thick unit structurally overlying T showings, and in several layers (with possible structural repetition) below E Zone.

Metavolcanic / metasedimentary units present at the Ruddock Creek property and correlation with previous lithologic designations					
Primary Rock Type	Drill Legend	Map Code	Description	Assignment by Morris, 1965	Distribution
			and feldspar; abundant garnet in some intervals		
quartzo-feldspathic biotite schist	MBQ	qb	Finely-banded to massive, schist to semi-schist, consisting of quartz, feldspar, and biotite in varying proportions; distinguished from biotite schist by finer grain size, less schistose texture, and lack of leucocratic segregations.	Not differentiated; included in either QM (quartzite, slightly micaceous) or MQ (biotite quartzite schist)	Abundant immediately above massive sulphide interval at E Zone and T showings.
quartzite, quartzose schist	QZ	qz	Thinly- to thickly-bedded, fine- to medium-grained recrystallized quartz grains with variable percentage of fine biotite or amphibole grains; commonly includes decimetre to metre thick schistose, marble, and calc-silicate layers not mapable at property scale; gradational into quartzo-feldspathic biotite schist	QZ (thin, mineralized quartzite) or QM (quartzite, slightly micaceous)	Usually spatially associated with massive or disseminated sulphide mineralization; thickest at E Zone

The E Zone structural footwall lithologic domain is well exposed on the steep, southeast-facing slopes below the E Zone. It consists primarily of biotite schist, marble, and calc-silicates interlayered on the scale of several metres to several tens of metres. Minor structures, such as asymmetric secondary folds, suggest that this interlayering may be in part structural, and Figure 7-2 illustrates the synformal axial trace that has in the past been inferred from this evidence. Both of the postulated lower and upper limbs of this fold consist of a carbonate package sandwiched within biotite schists. In the lower sequence this carbonate package is a pure light gray marble in the east, which grades westerly along strike into a two-part succession with a lower, calc-silicate gneiss division and an upper marble division. The carbonate package in the upper sequence is dominated by calc-silicate gneiss, with subordinate lenses of gray to tan marble. The biotite schist that overlies the calc-silicate gneiss in the upper sequence is in turn overlain by quartzo-feldspathic mica schist containing lenses of quartzite and minor calc-silicate.

### 7.3.2 E Zone structural hanging wall lithologic domain

The E Zone structural hanging wall lithologic domain is well exposed on the slopes above the E Zone and to the west of the E Zone Fault. Quartzites, micaceous quartzites, and subordinate marble, calc-silicate, and biotite schist containing massive sulphide layers form the lowest rocks within the succession. Falconbridge's mapping of the E Zone (Morris, 1965) shows this lower sequence in detail. Biotite schists with minor calc-silicate and quartzo-feldspathic schist structurally overlie the quartzite + massive sulphide interval. These are in turn overlain by amphibolitic gneiss at the E Zone, which grades eastward into a sequence dominated by interlayered calc-silicate gneiss and quartzo-feldspathic schist. The highest exposed rocks in the E Zone area are calc-silicate gneisses with subordinate interlayered quartzo-feldspathic schist and marble.

West of the E Zone Fault, a similar lithologic sequence is exposed in the structural hanging wall to the F showing, although the large volume of pegmatite here precludes defining the sequence to the same level of detail. Displacement along the E Zone Fault has exposed higher levels here: mafic pyroxene gneisses overlie calc-silicate rocks correlated with those forming highest exposed levels to the east of the fault.

### 7.3.3 Creek Zone showing lithologic domain

Diamond drilling within the Creek Zone has shown that the rock package containing biotite quartz gneiss dominate up to a depth of 160m, calc silicate gneiss hosting the mineralization with subordinate quartzite, biotite quartz gneiss again, and marble. All units are intruded by pegmatite with more than 50% in the upper section. Almost all drill holes intersected a footwall pyrrhotite horizon, similar to the E Zone lower pyrrhotite horizon, containing no base metals.

Mineralization consists of conformable bedded sulphides, though locally disturbed by pegmatite. Two types of zinc mineralization were intersected: (1) very fine grained red-brown sphalerite with pyrrhotite, trace galena and rounded quartz eyes and (2) re-crystallized dark brown medium grained sphalerite with interstitial quartz and scattered quartz augen.

### 7.3.4 T showing lithologic domain

Three main lithologic units are exposed at the T showing area. Structurally lowest rocks, which contain the massive sulphide lenses, consist of quartzo-feldspathic schists with lesser quartzite, biotite schist, and calc-silicate gneiss. This package is overlain by mafic gneisses that are lithologically similar to those in the uppermost part of the E Zone structural hanging wall domain. Highest rocks in the T showing lithologic domain are biotite schists, which are exposed over large areas and form a monotonous unit a least several hundred metres thick north of the T showings.

### 7.3.5 Correlation between lithologic domains

The Camp Fault, which separates the E Zone structural footwall domain and the other two lithologic domains, has an uncertain offset history. The inferred fault trace is sub-parallel to lithologic contacts, consistent with formation as a thrust fault, possibly during regional folding. If so, the footwall domain may represent a higher stratigraphic level than the

hanging wall domain (because it lies in the lower plate of the thrust fault), and the thick biotite schist sequences may be roughly equivalent to those in the upper part of the T showing lithologic domain. This correlation implies that the massive sulphide interval may be present at depth in the footwall domain. Because fault geometry is poorly constrained and is certainly modified by subsequent deformation, it is not possible to estimate displacement direction or magnitude.

The massive sulphide interval provides a stratigraphic tie between the E Zone hanging wall lithologic domain and the T showing lithologic domain. In both domains, massive sulphides occur within a lithologically varied interval containing quartzite, calc silicate, quartzo-feldspathic schist, and biotite schist. If the mafic gneiss interval present in both is laterally equivalent, this lithologically varied interval is significantly thicker at the E Zone than at the T showing. This might indicate that the E Zone area occupied a subbasin during massive sulphide deposition.

Amphibolite gneiss, though present as thin layers within the calc-silicate gneiss, only forms a mapable lithologic unit in the E Zone hanging wall domain. The localization of this rock type adjacent to the thickest known massive sulphide layers suggests that it may be a metamorphosed alteration zone, possibly originally chloritic in composition. This has two important implications: first, the occurrence of similar rocks elsewhere on the property may be a useful exploration guide; second, the E Zone hanging wall lithologic domain, and by inference, the T showing lithologic domain, represent the original stratigraphic footwall to the massive sulphide interval.

Intrusive rocks on the property include small, tabular, massive tremolite + actinolite bodies, and voluminous dykes, sills, stocks, and plutons of granitic composition (Table 7-1). The latter comprise roughly 50% of the rock present on the property (Mawer, 1976; Fyles, 1970), and are highly variable texturally and structurally. They range from planar dykes that cut shallowly or sharply across compositional layering, to large, irregular bodies containing abundant xenoliths of country rock. Grain size ranges from fine to pegmatitic, although previous workers refer to all as “pegmatites”. Some of the granitic rocks possess a grain orientation fabric parallel to foliation in the adjacent country rock, and intrusive contacts are often deformed. In some areas, pegmatite occurs in lenticular boudins around which foliation wraps. Elsewhere, granitic rocks of similar composition and grain size lack any visible grain fabric, and contacts cut across folds and structural fabrics in the adjacent country rock. Together, these relationships suggest that formation of the granitic rocks was in part synchronous with, and in part outlasted deformation.

The origin of these granitic rocks has been the subject of debate among previous workers: some suggest magma emplacement within dilational fractures (Marshall, 1978), while others favour in-situ replacement of the metamorphic package (Fyles, 1970). Contact relations of the granitic rocks support both processes. Dykes can have sharp, planar contacts that cut across lithologic contacts in the metamorphic rock sequence, implying infilling of dilational fractures. However, several features indicate in-situ melting and/or replacement of the country rock:

1. Many of the xenoliths have diffuse, irregular contacts with the enclosing pegmatite.
2. Layering within adjacent xenoliths is consistently oriented.
3. Distinctive compositional layers or lithologic contacts within xenoliths can be traced through adjacent xenoliths with no apparent offset.

Massive tremolite/actinolite bodies occur on the property near the T showing and E Zone. They have tabular forms with contacts concordant to or cutting shallowly across foliation, and occur at several structural levels. Although they are very coarse-grained and lack grain orientation fabrics, they are boudinaged and their contacts are deformed. They most likely originated as ultramafic dykes, which have been transposed into their present semi-concordant geometry during subsequent deformation.

### 7.3.6 Mineralization

Mineralization at Ruddock Creek consists of a conformable planar massive sulphide horizon, exposed intermittently for over 5 kilometres along strike. The Ruddock Creek Sulphide Horizon consists dominantly of calc-silicate rocks, pegmatites and lesser biotite schist. Lenses of massive sulphide, composed of sphalerite, pyrrhotite and galena in order of abundance are hosted by the calc-silicate portions of the package. The Ruddock Creek Sulphide Horizon varies from less than 5 m to over 50 m in true thickness. Massive sulphide lenses consist of sphalerite, pyrrhotite, galena, pyrite and minor chalcopyrite, and are generally medium grained. The coarser grain size is thought to be a result of recrystallization during the metamorphic event. They are often complexly folded within themselves on axes that plunge to the west. The folds within the sulphide layers are usually irregular in form. Galena and sphalerite also occur as scattered grains in marble and calcareous quartzite occasionally associated with fluorite.

Multiple individual massive sulphide lenses are present within the horizon, ranging from less than 1m to greater than 5m in true thickness, separated by variable thicknesses of non mineralized pegmatite, calc-silicate or biotite schist. Locally these stacked lenses of massive sulphide and host rock, attain true thicknesses of over 30 m of ore grade material.

There have been nine zones of mineralization identified on the Property to date: E, F, G (including the Upper and Lower G), M, T (including the Upper and Lower T and Creek Zone) in the eastern half, and the U, V, R, and Q which occur as contorted layers and lenses forming the western half. The mineralization at the E Zone has been the main focus of most previous exploration programs as it is the best exposed and contains the most continuous ore horizons known to date.

## 8 DEPOSIT TYPE

The Ruddock Creek property hosts “SEDEX” style mineralization that has been compared to the Broken Hill (BHP) deposit type. SEDEX deposits result from seafloor deposition of sulphides within a third order basin, usually associated with a regional fault system, which acts as a conduit for the mineral bearing fluids. Local depressions in the basin can result in thickening of the sulphide horizon. Clastic and/or chemical sediment accumulation needs to be low during the deposition of the sulphides in order to produce economic grades of base or precious metal mineralization. In the Broken Hill model, this sulphide horizon is then subjected to folding and metamorphism, which results in local attenuation and thickening of the sulphides along the limbs and in the hinges of the folds.

At Ruddock Creek, the mineralization is hosted by a sequence of high grade metasedimentary rocks of Paleo-Proterozoic age. The mineralization is associated with a calc-silicate sequence thought to be the metamorphosed equivalent of the original host sediments and peripheral alteration zones. For a detailed discussion of the similarities

between the Ruddock Creek deposit and the Broken Hill deposits the reader is referred to Hoy T., 2000.

Structurally the deposit is continuous with the exception of the west dipping E Fault, which cuts the massive sulphides at approximately the mid point of the currently drilled area, or about 600 m west of the surface outcrop. In the immediate area of the E Fault, the massive sulphide horizon shows evidence of possible thinning due to movement along the fault plane and a small offset due to rotation of the units, however there are insufficient drill intercepts in this area to confirm if this is a local phenomena or consistent along the trace of the structure.

## 9 EXPLORATION

Selkirk has conducted exploration programs on the Ruddock Creek property in 2004 (Cross Lake), 2005, 2006, 2007, 2008, 2010, and 2011. These programs involved ground and airborne geophysical surveys, soil and rock sampling surveys along with mapping, prospecting, diamond drilling and the development of 1,157m of underground decline and cross cut. The majority of this work was carried out on the E Zone as it had the greatest amount of historical information, outcrops at surface and at present is the largest defined orebody. Smaller programs have also been conducted on the Creek Zone, the T Zones, the U Zone and the Q Zone, all of which included some diamond drilling. A brief summary of each years program is included here as background to the resource estimate.

In 2004 Cross Lake completed 11 holes on the eastern portion of the E Zone totaling 1,839m. These holes all targeted the near surface portion of the deposit, and were helicopter supported with a field camp located on the E Zone. All holes intersected the sulphide bearing horizon.

The 2005 program consisted of an airborne Aero-Tem and Magnetic survey of the entire property, carried out by Aerodat Ltd. This work identified a number of anomalies some of which are co-incident with known showings of the mineralized horizon. Additional anomalies were defined which fit the assumed trend of sulphide horizon. A 4 hole diamond drill program was carried out again based from a helicopter supported camp on the E Zone. This consisted of 3,245m to test for the presence of the postulated deep E Zone mineralization to the west of the E Fault. Hole RD-05-113 successfully intersected this mineralization at a depth of 696m. Prospecting, mapping soil geochemical sampling and a grid based UTEM survey were carried out in the Oliver Creek valley downslope of the Q, R and V showings, in an area of airborne anomalies. Numerous massive sulphide boulders were uncovered and a strong geochemical anomaly defined by the soil sampling. Subsequent trenching and mapping showed this to be transported material in the glacial till filling the valley bottom.

As a result of the success of hole RD-05-113 an expanded drilling program was initiated in 2006. Connors Drilling Ltd., of Kamloops B.C. was contracted to carry out the 2006 diamond drilling program. The contractor used one Boyles Bros 25A, one 37A, and one 30HH drill to complete the forty-eight holes. A total of 12,808.48 m of NQ-2 sized core were drilled in 35 holes within the E Zone, 1,073.71 m in 10 holes at the Creek Zone and 857.47 m in 3 holes in Oliver Creek. A drill hole collar survey was initiated on September 15, 2006 locating both recent drill hole collar locations from the 2004, 2005 and a portion of the 2006

drill programs as well as many drill hole collar locations from the Falconbridge, Cominco vintage drill programs covering the period from 1961 to 1977.

Foraco Drilling Ltd., of Kamloops B.C. was contracted to carry out the 2007 diamond drilling program. The contractor used one Boyles Bros 25A, one 37A, and one 30HH drill to complete 9,294.1m in thirty four NQ2 drill holes. Four areas were evaluated during the 2007 drill program.

With the completion of the mine site access road to the Light Lake camp site and beyond to the proposed decline collar site, Procon Mining and Tunneling Ltd. mobilized their equipment and personnel to the Ruddock Creek project and on September 18, 2007. The decline was collared at a grade of minus 15% to undercut deep E Zone mineralization intersected by drill holes RD-05-113 and RC-06-152, and was driven to a final length of 982m. Drifting to the east at the end of the decline enabled the drilling of closed spaced intercepts on the deep E Zone horizon. On September 15, 2007 all of the remaining drill hole collars that could be located and identified covering the remainder of the 2006 and 2007 drill programs were surveyed in. In addition to the drill hole collar surveys, control points and Hubs were established across the survey area including three Hub locations near the 2007 underground portal entrance. The 2006 and 2007 survey programs were completed by Azimuth Forestry and Mapping of Revelstoke, BC.

Drilling commenced on July 16, 2007 with the mobilization of the first drill to the Q Zone area followed by the mobilization of two remaining drills as they became available for the Creek Zone and E Zone drill programs. The 2007 drill program was completed by mid September, 2007. Due to the steep terrain, drill core was transported from the drill sites to the core logging facility at Light Lake by helicopter. The core was logged, photographed and split using a diamond rock saw or a manual splitter and the samples designated for assay were flown out by helicopter to the staging area on Highway 23, transported to Revelstoke and then shipped by a commercial freight line to Acme Analytical Laboratories in Vancouver, B.C. for analysis. The drill core, both split and unsplit, remains stored in wooden core boxes on site. The split core is stored on metal racks, while the boxes of unsplit core were cross stacked and piled in the area around the core shack.

The 2008 program consisted of 1,157 m of underground development to provide access to drill the deep E Zone at a density sufficient to calculate a mineral resource. Between July and October 2008 32 holes totalling 5,430 m were completed from 5 drill stations. This program was supported from the 40 man camp located at Light Lake, which was completed in the fall of 2007. Thirty one of the holes intersected the mineralized horizon, with one hole abandoned due to drilling problems. A cross section through the E Zone is illustrated in Figure 9-4.

In 2010, a surface drilling program was conducted and saw the completion of 17 NQ-2 sized diamond drill holes totaling 3,583 m. Furthermore, 309m of underground development to provide further access to drill the E zone was completed. During this time, a total of 14,148.47 m from 76 holes were drilled from 7 underground set-ups which was completed in July 2011. The lower E Zone mineralization was intercepted at 25 m to 50 m pierce points using a systematic drill fan approach. The 2010/2011 drilling program was followed by a surface drilling program on the Creek, Q and V Zones (late July to mid-October 2011). The Creek Zone saw the completion of 17 NQ drill holes (5,701 m) while five holes (1,893 m) were completed on the Q Zone and eight holes (3,147 m) from a single drill station at the V



Zone. The locations of all of the E, Creek, Q, and V Zone drill holes are illustrated in Figure 9-1 to Figure 9-3

Figure 9-1 E Zone Drill Hole Plan - West Half

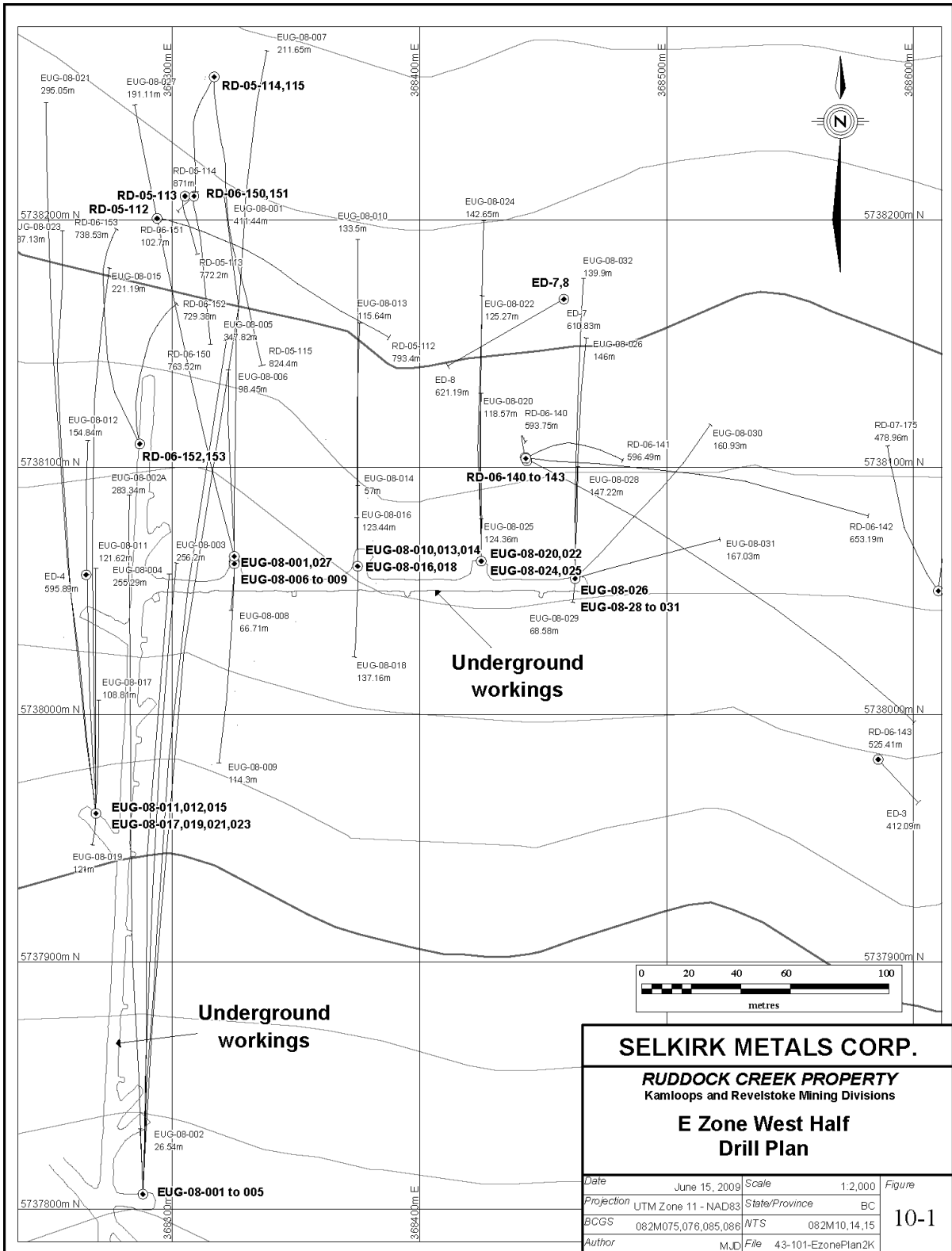




Figure 9-3 Drill Plan Overview

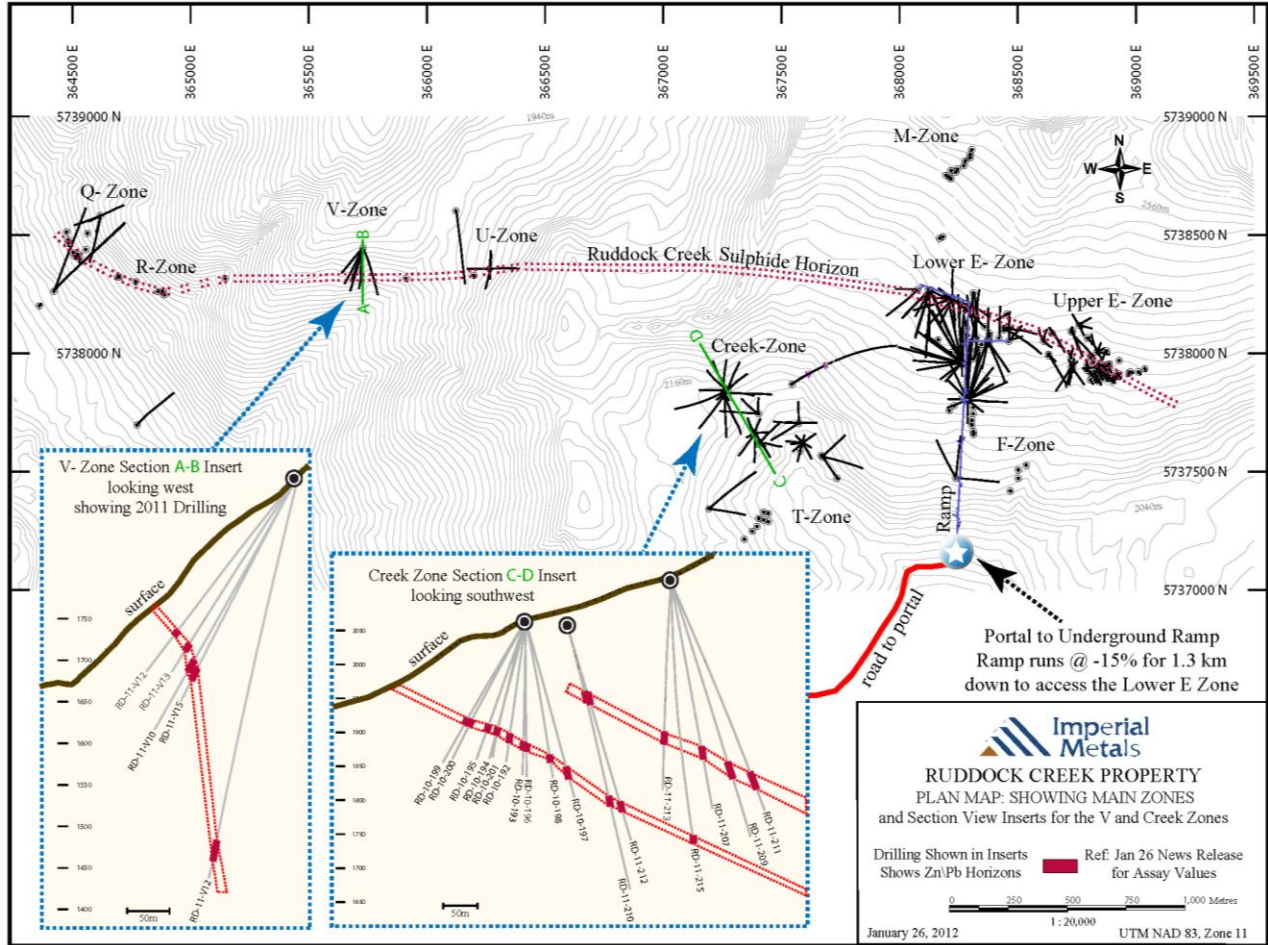
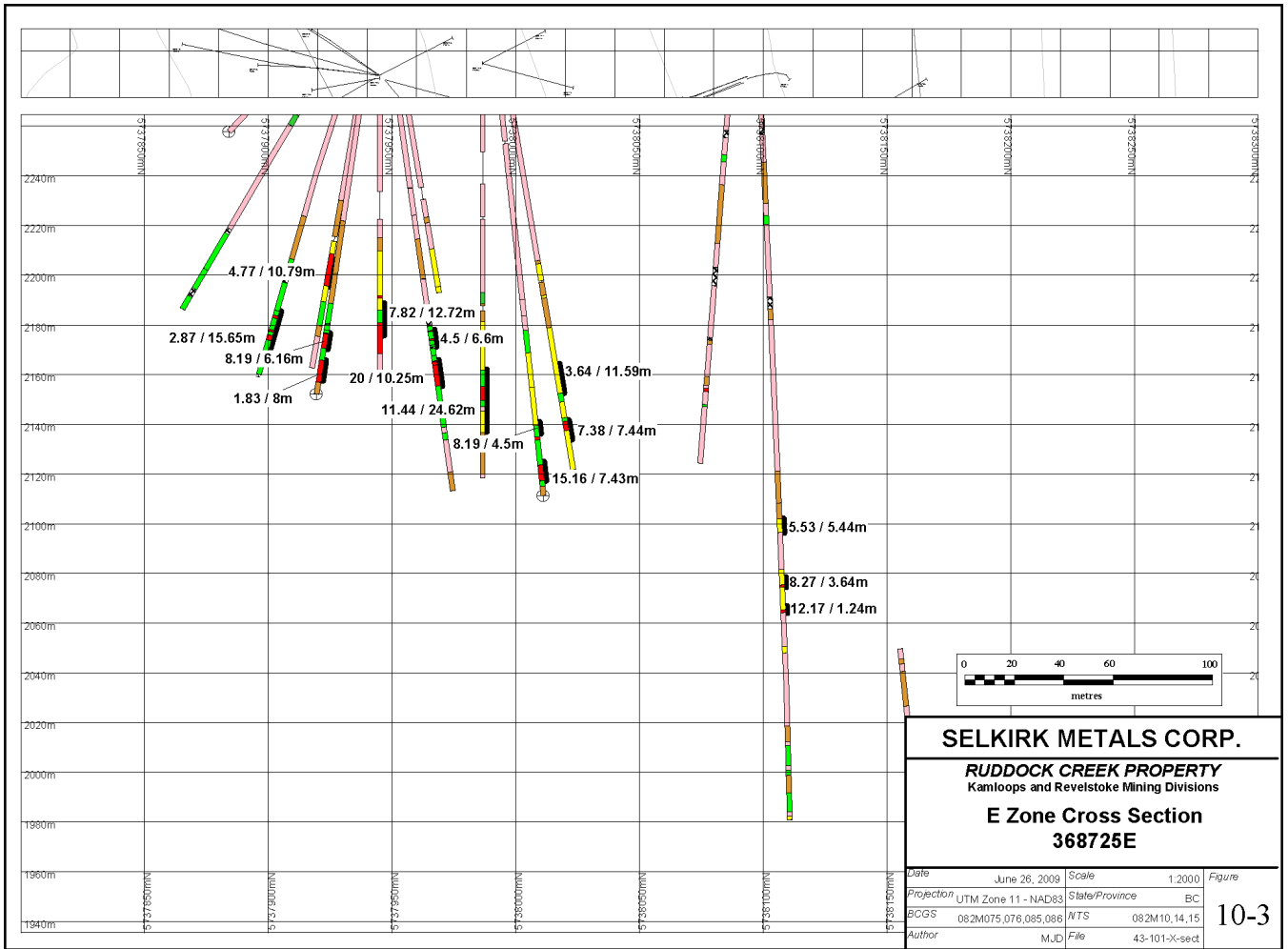


Figure 9-4 E Zone Cross Section 368725 E



## 10 DRILLING

Within the E, Q, V, and creek zone, surface and underground drilling was designed to provide a 25-50m grid of intercepts of the mineralized horizon. These were designed to prove the continuity of the mineralization between the known near surface mineralization as well as and the deeper mineralization intersected by all historic drilling.

A complete list of drill holes attitudes and collar locations for all Zones are shown in **Table 10-1**

A summary of significant intercepts of zinc-lead mineralization for the All Zones are shown in Table 10-2.

**Table 10-1 Drill Hole Locations**

Hole_Id	East	North	Elev	TD	Azim	Inclin	Year	Company
E-1	368902.82	5737898.64	2317.08	24.26	165.00	-60.00	1961	Falconbridge
E-2	368888.34	5737896.71	2314.56	28.35	165.00	-60.00	1961	Falconbridge
E-3	368884.29	5737913.00	2316.51	38.10	165.00	-60.00	1961	Falconbridge
E-4	368906.14	5737884.44	2317.83	21.34	165.00	-60.00	1961	Falconbridge
E-5	368870.23	5737907.06	2314.17	44.20	165.00	-70.00	1961	Falconbridge
E-6	368918.07	5737901.05	2319.74	18.29	165.00	-58.00	1961	Falconbridge
E-7	368873.74	5737895.19	2310.85	32.00	150.00	-60.00	1961	Falconbridge
E-8	368933.24	5737902.55	2320.30	21.34	165.00	-55.00	1961	Falconbridge
E-9	368844.97	5737881.49	2303.90	42.67	150.00	-65.00	1961	Falconbridge
E-10	369037.10	5737935.48	2314.49	23.77	150.00	-60.00	1961	Falconbridge
E-11	368836.73	5737894.94	2303.30	50.60	150.00	-70.00	1961	Falconbridge
E-12	368810.31	5737886.13	2299.07	56.69	150.00	-70.00	1961	Falconbridge
E-13	368853.90	5737900.70	2309.56	49.38	150.00	-70.00	1961	Falconbridge
E-14	368842.05	5737922.53	2314.51	62.18	150.00	-70.00	1961	Falconbridge
E-15	368829.21	5737913.79	2304.97	55.47	150.00	-70.00	1961	Falconbridge
E-16	368826.58	5737889.17	2299.22	47.55	150.00	-70.00	1961	Falconbridge
E-17	368857.13	5737925.63	2318.29	60.96	150.00	-70.00	1961	Falconbridge
E-18	368870.31	5737937.09	2321.71	71.63	150.00	-70.00	1961	Falconbridge
E-19	368888.14	5737935.13	2321.52	64.01	150.00	-70.00	1961	Falconbridge
E-20	368861.32	5737948.19	2324.01	106.38	0.00	-90.00	1962	Falconbridge
E-21	368835.31	5737934.55	2316.79	96.32	0.00	-90.00	1962	Falconbridge
E-22	368820.50	5737960.91	2316.82	122.53	0.00	-90.00	1962	Falconbridge
E-23	368808.08	5737984.31	2313.63	146.79	0.00	-90.00	1962	Falconbridge
E-24	368793.28	5737950.42	2303.08	119.03	0.00	-90.00	1962	Falconbridge
E-25	368806.57	5737924.92	2299.22	83.82	0.00	-90.00	1962	Falconbridge
E-26	368813.67	5737911.26	2301.04	62.18	70.00	-71.00	1962	Falconbridge
E-27	368980.90	5737921.87	2317.23	24.26	110.00	-62.00	1962	Falconbridge
E-28	368779.16	5737980.61	2306.03	25.60	0.00	-90.00	1962	Falconbridge
E-29	368892.46	5737956.55	2326.97	37.80	0.00	-90.00	1962	Falconbridge
E-30	368925.68	5737916.10	2317.79	26.52	150.00	-70.00	1962	Falconbridge
E-31	368877.39	5737951.67	2326.68	107.90	70.00	-81.00	1962	Falconbridge
E-32	368968.18	5737912.63	2317.05	19.29	150.00	-65.00	1962	Falconbridge
E-33	369011.28	5737924.53	2324.86	3.05	150.00	-65.00	1962	Falconbridge
E-33A	369012.65	5737925.39	2324.96	5.30	150.00	-70.00	1962	Falconbridge
E-34	368928.27	5737967.28	2317.71	95.56	0.00	-90.00	1962	Falconbridge
E-35	369014.26	5737921.94	2326.55	25.27	150.00	-55.00	1962	Falconbridge
E-36	368999.94	5737916.89	2322.50	4.27	150.00	-65.00	1962	Falconbridge
E-37	368994.55	5737958.68	2324.30	18.29	0.00	-90.00	1962	Falconbridge
C76-1	368313.00	5738257.00	2444.83	455.76	0.00	-90.00	1976	Cominco
C76-1A	368313.40	5738257.87	2444.83	916.24	0.00	-90.00	1976	Cominco
ED-1	368680.47	5738030.55	2354.56	285.30	0.00	-90.00	1963	Falconbridge
ED-2	368661.69	5737967.21	2329.14	291.70	0.00	-90.00	1963	Falconbridge
ED-3	368585.67	5737981.83	2349.16	412.09	0.00	-90.00	1963	Falconbridge
ED-4	368265.07	5738056.52	2354.29	595.89	0.00	-90.00	1963	Falconbridge
ED-5	368872.86	5738010.43	2354.22	226.47	0.00	-90.00	1963	Falconbridge
ED-6	368872.86	5738010.43	2354.22	185.02	201.00	-78.00	1963	Falconbridge
ED-7	368458.41	5738168.05	2408.24	610.83	0.00	-90.00	1963	Falconbridge
ED-8	368458.41	5738168.05	2408.24	621.19	240.00	-85.00	1963	Falconbridge
C-75-1	368361.98	5738111.13	2381.90	694.04	0.00	-90.00	1975	Cominco
RD-04-101	368845.91	5737947.51	2320.46	120.70	338.00	-85.00	2004	Cross Lake

Hole_Id	East	North	Elev	TD	Azim	Inclin	Year	Company
RD-04-102	368844.51	5737944.87	2320.12	132.89	260.00	-70.00	2004	Cross Lake
RD-04-103	368792.09	5737932.34	2301.37	135.93	2.00	-73.00	2004	Cross Lake
RD-04-104	368793.32	5737934.60	2301.31	114.90	274.00	-80.00	2004	Cross Lake
RD-04-105	368730.98	5737945.12	2320.59	163.32	0.00	-90.00	2004	Cross Lake
RD-04-106	368730.98	5737945.12	2320.59	160.32	170.00	-80.00	2004	Cross Lake
RD-04-107	368731.70	5737947.35	2320.06	178.60	15.00	-80.00	2004	Cross Lake
RD-04-108	368731.89	5737947.25	2320.05	162.15	50.00	-80.00	2004	Cross Lake
RD-04-109	368725.06	5737986.59	2336.73	218.23	0.00	-90.00	2004	Cross Lake
RD-04-110	368725.06	5737986.59	2336.73	218.23	15.00	-80.00	2004	Cross Lake
RD-04-111	368725.06	5737986.59	2336.73	233.47	333.00	-83.00	2004	Cross Lake
RD-05-112	368293.75	5738200.66	2416.82	777.86	96.78	-84.10	2005	Selkirk Metals
RD-05-113	368305.01	5738209.65	2420.08	772.20	254.90	-89.30	2005	Selkirk Metals
RD-05-114	368316.86	5738257.97	2437.11	871.00	214.90	-87.00	2005	Selkirk Metals
RD-05-115	368316.86	5738257.97	2437.11	824.40	180.00	-83.00	2005	Selkirk Metals
RD-06-116	368837.88	5738007.03	2341.88	168.85	150.00	-75.00	2006	Selkirk Metals
RD-06-117	368837.88	5738007.03	2341.88	189.57	160.00	-85.00	2006	Selkirk Metals
RD-06-118	368837.88	5738007.03	2341.88	171.29	104.00	-72.00	2006	Selkirk Metals
RD-06-119	368837.88	5738007.03	2341.88	238.05	330.00	-84.00	2006	Selkirk Metals
RD-06-120	368837.88	5738007.03	2341.88	186.23	60.00	-79.00	2006	Selkirk Metals
RD-06-121	368731.07	5737943.09	2319.58	157.27	150.00	-55.00	2006	Selkirk Metals
RD-06-122	368729.96	5737945.08	2320.66	183.74	220.00	-79.00	2006	Selkirk Metals
RD-06-123	368729.75	5737945.28	2320.70	210.01	333.00	-81.00	2006	Selkirk Metals
RD-06-124	368633.33	5737994.18	2339.26	387.10	150.00	-85.00	2006	Selkirk Metals
RD-06-125	368838.05	5738005.96	2342.06	259.39	17.60	-79.90	2006	Selkirk Metals
RD-06-126	368837.63	5738006.32	2342.01	339.72	330.00	-76.00	2006	Selkirk Metals
RD-06-127	368634.06	5737992.94	2338.65	335.28	157.20	-64.90	2006	Selkirk Metals
RD-06-128	368635.50	5737990.43	2337.80	124.39	150.00	-45.00	2006	Selkirk Metals
RD-06-129	368757.95	5738119.88	2382.86	342.29	105.00	-80.00	2006	Selkirk Metals
RD-06-130	368757.95	5738119.88	2382.86	439.94	60.00	-82.00	2006	Selkirk Metals
RD-06-131	368757.95	5738119.88	2382.86	299.31	150.00	-80.00	2006	Selkirk Metals
RD-06-132	368757.95	5738119.88	2382.86	365.76	150.00	-88.00	2006	Selkirk Metals
RD-06-133	368757.95	5738119.88	2382.86	436.89	330.00	-83.00	2006	Selkirk Metals
RD-06-134	368732.62	5738090.91	2371.22	260.06	158.00	-64.00	2006	Selkirk Metals
RD-06-135	368730.63	5738093.09	2372.03	275.23	160.00	-73.00	2006	Selkirk Metals
RD-06-136	368648.70	5738088.83	2381.33	390.45	145.00	-75.00	2006	Selkirk Metals
RD-06-137	368648.70	5738088.83	2381.33	427.30	149.00	-80.20	2006	Selkirk Metals
RD-06-138	368648.70	5738088.83	2381.33	431.90	143.48	-86.70	2006	Selkirk Metals
RD-06-139	368648.70	5738088.83	2381.33	443.18	325.58	-85.10	2006	Selkirk Metals
RD-06-140	368443.49	5738102.58	2382.76	593.75	338.28	-87.50	2006	Selkirk Metals
RD-06-141	368442.79	5738104.00	2382.58	596.49	76.00	-85.00	2006	Selkirk Metals
RD-06-142	368442.79	5738104.00	2382.58	653.19	98.00	-77.00	2006	Selkirk Metals
RD-06-143	368443.07	5738103.58	2382.77	525.41	117.58	-68.60	2006	Selkirk Metals
RD-06-146	368730.37	5738093.57	2372.02	328.88	161.48	-85.30	2006	Selkirk Metals
RD-06-147	368731.34	5738093.56	2371.84	391.36	342.48	-86.40	2006	Selkirk Metals
RD-06-148	368732.86	5738092.13	2371.37	302.06	158.98	-60.50	2006	Selkirk Metals
RD-06-150	368308.67	5738209.69	2417.24	763.52	185.18	-87.30	2006	Selkirk Metals
RD-06-151	368308.67	5738209.69	2417.24	102.70	227.00	-85.00	2006	Selkirk Metals
RD-06-152	368286.78	5738109.41	2369.26	729.38	348.48	-83.70	2006	Selkirk Metals
RD-06-153	368286.78	5738109.41	2369.26	738.53	334.08	-80.50	2006	Selkirk Metals
RD-07-173	368610.00	5738050.00	2363.00	347.26	130.78	-82.60	2007	Selkirk Metals
RD-07-174	368610.00	5738050.00	2363.00	418.60	7.20	-82.00	2007	Selkirk Metals
RD-07-175	368610.00	5738050.00	2363.00	478.96	327.00	-80.00	2007	Selkirk Metals
RD-07-180	368729.96	5737945.08	2320.66	156.67	187.00	-59.00	2007	Selkirk Metals



Hole_Id	East	North	Elev	TD	Azim	Inclin	Year	Company
RD-07-181	368729.96	5737945.08	2320.66	129.24	195.00	-45.00	2007	Selkirk Metals
RD-07-182	368729.96	5737945.08	2320.66	176.47	213.00	-44.00	2007	Selkirk Metals
RD-07-183	368729.96	5737945.08	2320.66	168.90	186.78	-72.00	2007	Selkirk Metals
RD-07-184	368798.00	5738066.00	2347.00	266.46	146.00	-82.00	2007	Selkirk Metals
RD-07-185	368798.00	5738066.00	2347.00	223.78	76.00	-88.00	2007	Selkirk Metals
EUG-08-001	368288.00	5737806.00	1770.00	411.44	3.00	-8.50	2008	Selkirk Metals
EUG-08-002	368288.00	5737806.00	1770.00	26.54	358.00	-4.50	2008	Selkirk Metals
EUG-08-002A	368288.00	5737806.00	1770.00	283.34	358.00	-4.00	2008	Selkirk Metals
EUG-08-003	368288.00	5737806.00	1770.00	256.20	2.00	2.50	2008	Selkirk Metals
EUG-08-004	368288.00	5737806.00	1770.00	255.29	2.00	10.00	2008	Selkirk Metals
EUG-08-005	368288.00	5737806.00	1770.00	347.82	3.00	-4.50	2008	Selkirk Metals
EUG-08-006	368325.00	5738064.00	1737.00	98.45	0.00	41.00	2008	Selkirk Metals
EUG-08-007	368325.00	5738064.00	1737.00	211.65	0.00	-16.00	2008	Selkirk Metals
EUG-08-008	368325.00	5738062.00	1737.00	66.71	180.00	73.00	2008	Selkirk Metals
EUG-08-009	368325.00	5738061.00	1737.00	114.30	180.00	44.00	2008	Selkirk Metals
EUG-08-010	368375.00	5738060.00	1741.00	133.50	0.00	8.00	2008	Selkirk Metals
EUG-08-011	368269.00	5737960.00	1750.00	121.62	0.00	35.50	2008	Selkirk Metals
EUG-08-012	368269.00	5737960.00	1750.00	154.84	0.00	10.00	2008	Selkirk Metals
EUG-08-013	368375.00	5738060.00	1741.00	115.64	0.00	30.00	2008	Selkirk Metals
EUG-08-014	368375.00	5738060.00	1741.00	57.00	0.00	55.00	2008	Selkirk Metals
EUG-08-015	368269.00	5737960.00	1750.00	221.19	0.00	-4.00	2008	Selkirk Metals
EUG-08-016	368375.00	5738060.00	1741.00	123.44	0.00	82.00	2008	Selkirk Metals
EUG-08-017	368269.00	5737960.00	1750.00	108.81	0.00	66.00	2008	Selkirk Metals
EUG-08-018	368375.00	5738060.00	1741.00	137.16	180.00	75.00	2008	Selkirk Metals
EUG-08-019	368269.00	5737960.00	1750.00	121.00	180.00	84.00	2008	Selkirk Metals
EUG-08-020	368425.00	5738062.00	1746.00	118.57	0.00	55.00	2008	Selkirk Metals
EUG-08-021	368269.00	5737960.00	1750.00	295.05	353.00	-14.00	2008	Selkirk Metals
EUG-08-022	368425.00	5738062.00	1746.00	125.27	0.00	30.00	2008	Selkirk Metals
EUG-08-023	368269.00	5737960.00	1750.00	237.13	353.00	-4.00	2008	Selkirk Metals
EUG-08-024	368425.00	5738062.00	1746.00	142.65	0.00	13.00	2008	Selkirk Metals
EUG-08-025	368425.00	5738062.00	1746.00	124.36	0.00	82.00	2008	Selkirk Metals
EUG-08-026	368463.00	5738055.00	1748.00	146.00	0.00	48.00	2008	Selkirk Metals
EUG-08-027	368325.00	5738064.00	1737.00	191.11	346.00	-15.00	2008	Selkirk Metals
EUG-08-028	368463.00	5738055.00	1748.00	147.22	0.00	73.00	2008	Selkirk Metals
EUG-08-029	368463.00	5738055.00	1748.00	68.58	180.00	81.00	2008	Selkirk Metals
EUG-08-030	368463.00	5738055.00	1748.00	160.93	46.00	57.00	2008	Selkirk Metals
EUG-08-031	368463.00	5738055.00	1748.00	167.03	77.00	68.00	2008	Selkirk Metals
EUG-08-032	368463.00	5738055.00	1748.00	139.90	0.00	28.00	2008	Selkirk Metals
RD-10-186	367575.00	5737707.00	2000.00	233.80	0.00	-90.00	2010	Selkirk Metals
RD-10-187	367575.00	5737707.00	2000.00	198.70	0.00	-63.00	2010	Selkirk Metals
RD-10-188	367575.00	5737707.00	2000.00	185.00	270.00	-54.00	2010	Selkirk Metals
RD-10-189	367575.00	5737707.00	2000.00	151.50	270.00	-69.00	2010	Selkirk Metals
RD-10-190	367575.00	5737707.00	2000.00	205.70	234.00	-47.00	2010	Selkirk Metals
RD-10-191	367575.00	5737707.00	2000.00	136.00	90.00	-55.00	2010	Selkirk Metals
RD-10-192	367387.00	5737663.00	2065.00	218.50	84.00	-73.00	2010	Selkirk Metals
RD-10-193	367387.00	5737663.00	2065.00	227.70	0.00	-90.00	2010	Selkirk Metals
RD-10-194	367387.00	5737663.00	2065.00	212.50	180.00	-74.00	2010	Selkirk Metals
RD-10-195	367387.00	5737663.00	2065.00	218.00	128.00	-71.00	2010	Selkirk Metals
RD-10-196	367387.00	5737663.00	2065.00	233.80	232.00	-79.00	2010	Selkirk Metals
RD-10-197	367387.00	5737663.00	2065.00	270.40	324.00	-75.00	2010	Selkirk Metals
RD-10-198	367387.00	5737663.00	2065.00	241.70	17.00	-74.00	2010	Selkirk Metals
RD-10-199	367387.00	5737663.00	2065.00	243.00	140.00	-59.00	2010	Selkirk Metals
RD-10-200	367387.00	5737663.00	2065.00	240.00	180.00	-58.00	2010	Selkirk Metals



Hole_Id	East	North	Elev	TD	Azim	Inclin	Year	Company
RD-10-201	367387.00	5737663.00	2065.00	234.00	210.00	-59.00	2010	Selkirk Metals
RD-10-202	367669.00	5737571.00	2000.00	133.20	0.00	-90.00	2010	Selkirk Metals
EUG-10-033	368288.70	5737806.60	1773.00	177.38	0.00	38.00	2010	Selkirk Metals
EUG-10-034	368288.60	5737805.50	1774.30	134.41	357.70	60.80	2010	Selkirk Metals
EUG-10-035	368288.90	5737803.00	1774.30	148.74	324.20	88.10	2010	Selkirk Metals
EUG-10-036	368288.70	5737801.20	1774.20	180.14	180.60	59.30	2010	Selkirk Metals
EUG-10-037	368265.20	5737963.30	1749.20	291.69	344.80	-10.70	2010	Selkirk Metals
EUG-11-038	368265.10	5737963.00	1749.50	306.93	336.20	0.60	2011	Selkirk Metals
EUG-11-039	368265.00	5737960.00	1750.00	8.23	306.00	-16.00	2011	Selkirk Metals
EUG-11-040	368264.90	5737962.90	1749.50	303.89	327.00	0.00	2011	Selkirk Metals
EUG-11-041	368287.70	5737806.50	1772.20	199.02	330.00	25.00	2011	Selkirk Metals
EUG-11-042	368264.90	5737962.90	1749.10	258.17	327.00	-11.00	2011	Selkirk Metals
EUG-11-043	368287.00	5737806.20	1773.60	174.03	310.00	47.00	2011	Selkirk Metals
EUG-11-044	368264.80	5737963.00	1750.00	151.49	327.00	11.00	2011	Selkirk Metals
EUG-11-045	368287.10	5737804.90	1774.20	175.86	270.00	62.00	2011	Selkirk Metals
EUG-11-046	368263.70	5737962.30	1751.80	132.89	306.00	38.00	2011	Selkirk Metals
EUG-11-047	368287.90	5737804.20	1774.40	199.94	247.00	61.00	2011	Selkirk Metals
EUG-11-048	368261.90	5737959.60	1752.50	132.89	269.00	51.00	2011	Selkirk Metals
EUG-11-049	368288.90	5737806.50	1772.30	231.03	359.30	19.10	2011	Selkirk Metals
EUG-11-050	368261.90	5737959.40	1750.40	200.25	260.70	17.10	2011	Selkirk Metals
EUG-11-051	368289.70	5737802.50	1774.10	202.99	93.70	66.60	2011	Selkirk Metals
EUG-11-052	368262.60	5737958.50	1752.00	178.92	232.80	51.20	2011	Selkirk Metals
EUG-11-053	368262.90	5737958.30	1752.10	166.42	221.60	51.90	2011	Selkirk Metals
EUG-11-054	368263.80	5737958.50	1752.70	137.46	178.50	65.40	2011	Selkirk Metals
EUG-11-055	368291.50	5737806.10	1774.30	214.57	42.30	53.50	2011	Selkirk Metals
EUG-11-056	368261.80	5737959.70	1750.50	160.93	270.00	19.00	2011	Selkirk Metals
EUG-11-057	368292.10	5737806.80	1773.70	218.22	37.00	38.20	2011	Selkirk Metals
EUG-11-058	368261.70	5737959.70	1750.00	209.70	270.00	10.00	2011	Selkirk Metals
EUG-11-059	368291.10	5737806.60	1773.00	205.73	23.30	38.40	2011	Selkirk Metals
EUG-11-060	368261.80	5737960.30	1750.20	178.92	280.90	11.60	2011	Selkirk Metals
EUG-11-061	368290.40	5737806.50	1772.80	236.51	14.70	27.40	2011	Selkirk Metals
EUG-11-062	368262.00	5737960.40	1749.80	225.55	286.50	2.10	2011	Selkirk Metals
EUG-11-063	368290.00	5737801.90	1774.20	204.30	127.20	66.40	2011	Selkirk Metals
EUG-11-064	368262.30	5737961.30	1749.50	224.94	303.30	-2.00	2011	Selkirk Metals
EUG-11-065	368224.20	5738228.30	1699.10	126.49	180.00	-45.00	2011	Selkirk Metals
EUG-11-066	368269.20	5737962.60	1750.00	197.51	302.00	6.00	2011	Selkirk Metals
EUG-11-067	368224.20	5738228.30	1700.10	100.18	180.00	-13.00	2011	Selkirk Metals
EUG-11-068	368239.00	5737473.00	1825.00	218.84	0.00	90.00	2011	Selkirk Metals
EUG-11-069	368224.20	5738228.30	1700.10	144.17	180.00	0.00	2011	Selkirk Metals
EUG-11-070	368239.00	5737473.00	1825.00	326.73	90.00	56.00	2011	Selkirk Metals
EUG-11-071	368224.10	5738231.30	1698.10	120.40	0.00	-90.00	2011	Selkirk Metals
EUG-11-072	368239.00	5737473.00	1825.00	252.66	0.00	46.00	2011	Selkirk Metals
EUG-11-073	368224.40	5738233.30	1698.00	125.88	0.00	-62.00	2011	Selkirk Metals
EUG-11-074	368239.00	5737473.00	1825.00	230.73	333.00	38.00	2011	Selkirk Metals
EUG-11-075	368224.40	5738233.30	1698.00	187.15	359.00	-48.90	2011	Selkirk Metals
EUG-11-076	368126.80	5738264.00	1682.70	192.63	180.00	-65.00	2011	Selkirk Metals
EUG-11-077	368224.80	5738228.30	1699.10	95.40	138.00	-27.00	2011	Selkirk Metals
EUG-11-078	368126.50	5738266.20	1682.70	130.15	53.40	-88.50	2011	Selkirk Metals
EUG-11-079	368223.10	5738228.70	1699.60	129.84	117.00	-16.00	2011	Selkirk Metals
EUG-11-080	368127.60	5738266.80	1682.70	131.06	110.00	-50.00	2011	Selkirk Metals
EUG-11-081	368223.50	5738228.40	1700.10	124.35	206.00	-16.00	2011	Selkirk Metals
EUG-11-082	368127.80	5738263.70	1682.70	270.97	180.00	-43.00	2011	Selkirk Metals
EUG-11-083	368226.20	5738230.10	1699.80	173.12	135.00	0.00	2011	Selkirk Metals

Hole_Id	East	North	Elev	TD	Azim	Inclin	Year	Company
EUG-11-084	368127.76	5738263.67	1684.20	160.93	180.00	-5.00	2011	Selkirk Metals
EUG-11-085	368222.80	5738228.90	1699.10	100.28	222.00	-40.00	2011	Selkirk Metals
EUG-11-086	368127.74	5738263.66	1684.70	288.95	182.30	12.70	2011	Selkirk Metals
EUG-11-087	368221.40	5738230.00	1698.10	84.73	250.00	-57.00	2011	Selkirk Metals
EUG-11-088	368128.30	5738264.50	1684.40	206.00	155.40	2.30	2011	Selkirk Metals
EUG-11-089	368221.40	5738230.00	1699.60	188.98	252.30	-25.20	2011	Selkirk Metals
EUG-11-090	368125.40	5738264.50	1683.80	150.88	225.70	-22.00	2011	Selkirk Metals
EUG-11-091	368221.70	5738232.00	1698.10	138.82	294.50	-73.30	2011	Selkirk Metals
EUG-11-092	368125.40	5738264.50	1684.20	168.98	224.80	-1.00	2011	Selkirk Metals
EUG-11-093	368221.70	5738232.00	1698.10	187.44	269.40	-72.70	2011	Selkirk Metals
EUG-11-094	368125.90	5738264.30	1684.20	130.14	208.00	-17.30	2011	Selkirk Metals
EUG-11-095	368221.80	5738232.60	1698.00	131.67	306.70	-57.20	2011	Selkirk Metals
EUG-11-096	368125.90	5738264.30	1684.20	218.54	194.80	16.70	2011	Selkirk Metals
EUG-11-097	368222.80	5738228.90	1699.60	163.97	222.10	-21.40	2011	Selkirk Metals
EUG-11-098	368125.90	5738264.30	1684.70	200.25	195.50	0.20	2011	Selkirk Metals
EUG-11-099	368077.80	5738270.20	1678.30	195.99	224.70	-27.90	2011	Selkirk Metals
EUG-11-100	368293.20	5737803.40	1772.60	267.31	94.50	51.10	2011	Selkirk Metals
EUG-11-101	368077.30	5738271.30	1679.50	133.81	270.00	45.00	2011	Selkirk Metals
EUG-11-102	368291.80	5737806.20	1772.60	275.54	66.00	49.00	2011	Selkirk Metals
EUG-11-103	368128.50	5738267.50	1687.80	105.79	224.10	84.40	2011	Selkirk Metals
EUG-11-104	368291.80	5737806.20	1771.60	300.84	16.00	15.40	2011	Selkirk Metals
EUG-11-105	368375.10	5738050.30	1741.80	195.07	192.90	51.90	2011	Selkirk Metals
EUG-11-106	368291.80	5737806.20	1772.60	160.63	59.00	39.00	2011	Selkirk Metals
EUG-11-107	368375.10	5738050.30	1741.80	263.03	146.10	52.50	2011	Selkirk Metals
EUG-11-109	368375.10	5738050.30	1741.80	279.50	158.41	45.90	2011	Selkirk Metals
RD-11-203	367674.00	5737564.00	2000.00	237.74	47.00	-56.00	2011	Selkirk Metals
RD-11-204	367674.00	5737564.00	2000.00	266.99	109.00	-47.00	2011	Selkirk Metals
RD-11-205	367738.00	5737472.00	2010.00	200.55	0.00	-90.00	2011	Selkirk Metals
RD-11-206	367738.00	5737472.00	2010.00	19.20	320.00	-53.00	2011	Selkirk Metals
RD-11-206A	367738.00	5737472.00	2010.00	177.97	320.00	-53.00	2011	Selkirk Metals
RD-11-207	367273.00	5737845.00	2122.00	355.99	270.00	-70.00	2011	Selkirk Metals
RD-11-208	367402.00	5737745.00	2050.00	328.56	360.00	-77.00	2011	Selkirk Metals
RD-11-209	367273.00	5737845.00	2122.00	395.63	304.00	-71.00	2011	Selkirk Metals
RD-11-210	367402.00	5737745.00	2050.00	392.65	305.00	-73.00	2011	Selkirk Metals
RD-11-211	367273.00	5737845.00	2122.00	365.13	324.00	-67.00	2011	Selkirk Metals
RD-11-212	367402.00	5737745.00	2050.00	349.87	274.00	-62.00	2011	Selkirk Metals
RD-11-213	367273.00	5737845.00	2122.00	313.32	227.00	-70.00	2011	Selkirk Metals
RD-11-214	367547.00	5737871.00	2100.00	773.27	50.00	-50.00	2011	Selkirk Metals
RD-11-215	367273.00	5737845.00	2122.00	508.41	240.00	-61.00	2011	Selkirk Metals
RD-11-216	367547.00	5737871.00	2100.00	295.04	50.00	-65.00	2011	Selkirk Metals
RD-11-217	367273.00	5737845.00	2122.00	407.50	210.00	-59.00	2011	Selkirk Metals
RD-11-219	367273.00	5737845.00	2122.00	313.32	20.00	-65.00	2011	Selkirk Metals
RD-11-Q6	364422.00	5738264.00	1068.00	424.89	25.00	30.00	2011	Selkirk Metals
RD-11-Q7	364422.00	5738264.00	1068.00	470.00	37.00	30.00	2011	Selkirk Metals
RD-11-Q8	364422.00	5738264.00	1068.00	454.15	37.00	23.50	2011	Selkirk Metals
RD-11-Q9	363946.00	5739097.00	1028.00	468.78	65.00	-70.00	2011	Selkirk Metals
RD-11-Q10	363946.00	5739097.00	1028.00	75.29	65.00	-45.00	2011	Selkirk Metals
RD-11-V09	365729.00	5738447.00	1956.00	413.61	0.00	-90.00	2011	Selkirk Metals
RD-11-V10	365729.00	5738447.00	1956.00	353.20	180.00	-60.00	2011	Selkirk Metals
RD-11-V11	365729.00	5738447.00	1956.00	441.96	180.00	-75.00	2011	Selkirk Metals
RD-11-V12	365729.00	5738447.00	1956.00	304.80	196.00	-50.00	2011	Selkirk Metals
RD-11-V13	365729.00	5738447.00	1956.00	292.61	210.00	-55.00	2011	Selkirk Metals
RD-11-V14	365729.00	5738447.00	1956.00	505.05	224.00	-71.00	2011	Selkirk Metals

Hole_Id	East	North	Elev	TD	Azim	Inclin	Year	Company
RD-11-V15	365729.00	5738447.00	1956.00	311.51	196.00	-61.00	2011	Selkirk Metals
RD-11-V16	365729.00	5738447.00	1956.00	524.26	145.00	-65.00	2011	Selkirk Metals

**Table 10-2 Significant Mineralized Intervals**

Hole ID	From (m)	To (m)	Width (m)	Zn %	Pb %	Zn + Pb %
E-1	6.43	22.01	15.58	9.34	2.24	11.58
E-2	6.25	25.98	19.73	8.84	1.89	10.73
E-3	11.74	36.59	24.85	6.34	1.25	7.59
E-4	1.43	17.87	16.44	5.82	1.17	6.99
E-5	14.63	40.85	26.22	5.11	0.74	5.85
E-6	0.95	16.65	15.7	8.37	1.64	10.01
E-7	0	30.12	30.12	4.85	0.98	5.83
E-8	0.12	18.9	18.78	7.27	1.19	8.46
E-9	24.91	35.52	10.61	5.53	0.76	6.29
E-10	0.7	2.5	1.8	12.45	2.66	15.11
E-12	12.96	22.87	9.91	5.59	1.28	6.87
	40.37	56.34	15.97	5.87	1.23	7.1
E-13	10.85	27.16	16.31	6.96	1.26	8.22
E-14	33.78	60.3	26.52	7.63	1.66	9.29
E-15	28.05	53.08	25.03	5.82	1.13	6.95
E-16	9.18	12.93	3.75	12.47	2.86	15.33
	31.52	42.1	10.58	5.14	0.88	6.02
E-17	33.08	58.9	25.82	9.66	2.17	11.83
E-18	38.08	67.9	29.82	7.05	1.7	8.75
E-19	36.8	61.59	24.79	6.59	1.59	8.18
E-20	76.92	101.55	24.63	5.83	1.12	6.95
E-21	49.18	92.38	43.2	9.79	2.03	11.82
E-22	87.65	117.32	29.67	3.94	0.77	4.71
E-23	112.2	132.01	19.81	6.49	1.29	7.78
E-24	64.94	68.32	3.38	4.68	0.84	5.52
	78.02	108.78	30.76	9	1.91	10.91
E-25	41.49	76.43	34.94	8.6	1.44	10.04
E-26	28.2	45.82	17.62	3.52	0.72	4.24
	55.85	57.93	2.08	9.53	1.03	10.56
E-27	0	16.77	16.77	6.34	1.29	7.63
E-30	0	24.88	24.88	9.11	2.19	11.3
E-31	67.9	88.9	21	7.19	1.35	8.54
	94.97	104.36	9.39	4.45	0.9	5.35
E-32	0	16.4	16.4	4.53	0.94	5.47
E-33A	1.01	5.3	4.29	4.34	1.94	6.28
E-34	37.77	38.29	0.52	17.74	3.61	21.35
	64.36	86.65	22.29	8.77	2.32	11.09
E-35	0	25.27	25.27	2.42	0.45	2.87
ED-4	90.83	107.9	17.07	6.12	0.79	6.91
	573.95	582.48	8.53	2.38	0.5	2.88
ED-6	141.16	161.59	20.43	6.44	1.31	7.75

Hole ID	From (m)	To (m)	Width (m)	Zn %	Pb %	Zn + Pb %
ED-8	594.82	596.32	1.5	37.13	5.84	42.97
C75-1	609.3	614.79	5.49	7.67	1.53	9.2
RD-101	86	101.5	15.5	9.98	2.17	12.15
RD-102	69	70.9	1.9	10.1	1.75	11.85
	79.6	125.5	45.9	10.44	2.26	12.70
RD-103	83	117.79	34.74	5.49	1.12	6.61
RD-104	62.1	84.43	22.33	7.43	1.59	9.02
RD-105	132	144.72	12.72	6.47	1.35	7.82
RD-106	116	126.79	10.79	4.18	0.59	4.77
RD-107	142.25	159.32	17.07	15.02	3.37	18.39
RD-108	130.5	145.74	14.79	10.02	1.9	11.92
RD-109	174.88	199.5	24.62	9.14	2.3	11.44
RD-110	175.4	206	30.6	2.7	0.6	3.30
RD-111	197.5	221.03	23.53	5.3	1.5	6.80
RD-112	680.8	685.3	4.5	6.21	1.16	7.37
RD-113	705.5	725.55	20.05	11.13	2.35	13.48
RD-116	125.85	131.95	6.1	9.81	1.92	11.73
RD-117	130.2	136.1	5.81	12.79	2.33	15.12
	141.07	145.1	4.03	9.47	1.44	10.91
	155.91	162.55	6.64	4.98	0.73	5.71
RD-118	115.85	116.58	0.73	12.39	0.23	12.62
RD-119	157	161.07	4.07	7.2	0.99	8.19
	167	174.39	7.39	14.78	3.16	17.94
	178.38	183.36	4.98	4.22	0.76	4.98
	192.5	212	19.5	3.55	0.76	4.31
RD-121	91.08	100.84	9.76	5.8	1.32	7.12
	115.8	118.49	2.69	7.67	2.76	10.43
	124.05	129.79	5.74	6.78	1.53	8.31
RD-122	146.35	152.51	6.16	6.93	1.26	8.19
	157.46	165.46	8	1.51	0.32	1.83
RD-123	144.75	151.35	6.6	3.79	0.71	4.50
	157.1	167.35	10.25	16.35	3.65	20.00
RD-125	216.35	217.18	0.83	7.45	0.87	8.32
RD-127	244.84	252.1	7.26	4.92	0.92	5.84
RD-129	283.4	288.78	5.38	3.09	0.81	3.90
RD-131	240.71	243.41	2.7	2.77	0.16	2.93
	259.03	263.21	4.18	6.72	0.86	7.58
RD-132	294.4	299.51	5.11	4.21	0.98	5.19
RD-134	221.1	235.61	14.51	2.83	0.54	3.37
RD-135	219.37	222.23	2.86	5.38	0.78	6.16
	236.29	248.73	12.44	9.39	1.87	11.26
RD-137	299.3	304.4	5.1	2.05	0.55	2.60
RD-138	328.3	337.1	8.8	4.76	0.76	5.52
RD-139	369.18	374.07	4.89	4.7	0.87	5.57
RD-140	566.63	570.69	4.06	9.22	2.13	11.35
RD-141	558.45	571.38	12.93	7.48	1.49	8.97
RD-143	471.8	475.65	3.85	4.3	0.83	5.13

Hole ID	From (m)	To (m)	Width (m)	Zn %	Pb %	Zn + Pb %
RD-146	277.71	286.92	9.21	4.32	0.81	5.13
RD-147	270.29	275.73	5.44	5.04	0.49	5.53
	293.98	308.02	14.04	3.81	0.53	4.34
RD-148	214.46	239.26	24.8	5.77	1.03	6.80
RD-149	47.62	58.26	10.64	13.26	2.87	16.13
RD-150	685.31	703.5	18.19	6.5	1.03	7.53
	711.56	714.92	3.36	8.46	1.4	9.86
RD-152	648.84	652	3.16	14.13	2.62	16.75
	655.43	671.4	22.56	11.7	2.27	13.97
RD-153	681.22	685.93	4.71	6.43	0.98	7.41
RD-173	323.14	326.66	3.52	1.25	0.22	1.47
RD-174	375.95	381.3	5.35	7.52	1.57	9.09
RD-175	432.65	436.17	3.52	2.7	0.55	3.25
RD-183	141.25	156.9	15.65	2.5	0.37	2.87
RD-184	214.58	228.86	14.28	5.73	0.94	6.67
RD-185	187.35	197.43	10.08	4.25	0.22	4.47
	212.38	218.18	5.8	1.76	0.09	1.85
EUG-08-001	325.38	327.83	2.45	2.98	0.01	2.99
	343.16	344.06	0.90	8.45	0.93	9.38
	350.6	364.11	13.51	3.1	1.05	4.15
	386.49	391.63	5.14	12.77	1.86	14.63
	397.1	398.29	1.19	9.02	2.64	11.66
EUG-08-002	204.66	206.2	1.54	4.56	0.9	5.46
	232	236.24	4.24	4.39	0.92	5.31
EUG-08-003	158.04	160.88	2.84	4	1.01	5.01
	222.3	224.3	2.00	3.98	1.65	5.63
	230.2	231.2	1.00	16.32	3.36	19.68
EUG-08-004	58.3	59.05	0.75	23.07	4.9	27.97
	142.15	144.81	2.66	13.72	3.12	16.84
	198.48	201.82	3.34	2.92	0.79	3.71
	240.11	244.68	4.57	3.26	0.64	3.90
EUG-08-005	251.37	262.79	11.42	7.51	0.86	8.37
	307.22	309.24	2.02	2.19	0.62	2.81
	313.1	331.97	18.87	8.38	1.52	9.90
EUG-08-006	17.38	19.97	2.59	3.26	0.51	3.77
EUG-08-007	77.11	79.45	2.34	2.16	0.03	2.19
	129.57	134.2	4.63	12.71	2.87	15.58
	139.4	142.02	2.62	6.77	0.62	7.39
EUG-08-008	32.61	40.15	7.54	3.27	0.58	3.85
EUG-08-009	61.44	71.15	9.71	4.65	0.96	5.61
EUG-08-010	47.3	51.93	4.63	3.5	0.79	4.29
	70.79	73.96	3.17	4.81	2.08	6.89
	107	108.6	1.60	11.37	2.55	13.92
EUG-08-011	90.64	94.18	3.54	7.59	1.61	9.20
EUG-08-012	39.26	40.55	1.29	22.64	4.89	27.53
	51.44	55.02	3.58	10.42	2.39	12.81
	81.76	84.55	2.79	2.15	0.74	2.89

Hole ID	From (m)	To (m)	Width (m)	Zn %	Pb %	Zn + Pb %
	126.11	128.6	2.49	7.72	1.62	9.34
EUG-08-013	45.23	48.91	3.68	3.9	0.45	4.35
	56.85	58.75	1.90	16.71	3.58	20.29
	76.74	78.2	1.46	17.27	2.81	20.08
	87.96	92.39	4.43	3.15	0.27	3.42
EUG-08-014	28.92	32.59	3.67	2.12	0.32	2.44
	37.99	40.76	2.77	12.27	2.3	14.57
EUG-08-015	69.29	98.51	29.22	3.18	0.77	3.95
or	78.65	82.19	3.54	11.54	2.25	13.79
	142.09	150.27	8.18	4.68	1.99	6.67
	182.63	189.43	6.80	2.93	0.6	3.53
EUG-08-016	28.53	32.32	3.79	6.56	1.41	7.97
	64.38	70.1	5.72	6.05	0.91	6.96
EUG-08-017	20.21	26.85	6.64	8.03	1.74	9.77
	63.36	66.07	2.71	3.54	1.48	5.02
	73.47	78.25	4.78	4.48	1.22	5.70
EUG-08-018	52	54.64	2.64	9.24	2.14	11.38
	69.89	73.63	3.74	1.73	0.3	2.03
EUG-08-019	26.96	33.09	6.13	12.7	2.84	15.54
	84.1	88.71	4.61	9.31	1.73	11.04
EUG-08-020	70.28	75.73	5.45	11.72	2.4	14.12
	94.3	97.56	3.26	6.4	1.18	7.58
EUG-08-021	179.01	194.3	15.29	12.19	2.18	14.37
	227.58	238.41	10.83	10.23	1.96	12.19
EUG-08-022	83.34	85.58	2.24	4.99	1.05	6.04
EUG-08-023	58	61.21	3.21	6.67	1.15	7.82
	94.69	96.06	1.37	7.18	2.84	10.02
	147.32	151.37	4.05	3.93	1.81	5.74
	175.65	183.52	7.87	7.3	1.2	8.50
EUG-08-024	88.18	89.88	1.70	6.96	1.54	8.50
EUG-08-025	73.7	77.45	3.75	5.1	0.97	6.07
EUG-08-026	92.52	96.85	4.33	9.39	1.49	10.88
EUG-08-027	58.41	60.05	1.64	8.65	1.37	10.02
	82.21	86.88	4.67	9.94	1.85	11.79
	102.72	110.82	8.10	10.58	1.64	12.22
	116.83	130.95	14.12	9.39	1.34	10.73
EUG-08-028	85.25	90.78	5.53	3.09	0.46	3.55
EUG-08-030	99.64	106.69	7.05	6.24	1.05	7.29
EUG-08-031	112	122.67	10.67	2.97	0.55	3.52
	131.82	140.18	8.36	7.29	1.43	8.72
	160.34	160.67	0.33	15.68	3.48	19.16
EUG-08-032	107.74	108.07	0.33	13.13	2.57	15.70
RD-11-203	148.50	148.90	0.40	2.76	13.4	16.16
RD-11-207	202.13	203.92	1.79	0.6	4.15	4.75
	210.47	211.61	1.14	0.83	9.21	10.04
	257.70	258.73	1.03	0.44	8.66	9.1
	262.85	263.36	0.51	1.97	10.01	11.98

Hole ID	From (m)	To (m)	Width (m)	Zn %	Pb %	Zn + Pb %
	273.91	274.30	0.39	0.17	2.41	2.58
RD-11-208	34.34	35.14	0.80	0.66	3.85	4.51
	35.87	36.58	0.71	0.17	3.52	3.69
	47.20	48.00	0.80	0.44	8.54	8.98
	50.19	51.25	1.06	0.68	3.37	4.05
	84.47	85.94	1.47	1.37	7.29	8.66
	234.77	235.21	0.44	3.89	19.37	23.26
	235.21	236.32	1.11	0.39	2.03	2.42
RD-11-209	128.49	129.71	1.22	1.18	2.1	3.28
	281.04	282.19	1.15	4.49	20.15	24.64
	288.20	288.82	0.62	3.53	9	12.53
	302.63	304.48	1.85	0.06	10.98	11.04
RD-11-210	27.13	28.63	1.50	0.04	3.44	3.48
	28.63	30.18	1.55	0.07	7.57	7.64
	30.18	31.62	1.44	0.02	1.64	1.66
	37.06	38.62	1.56	0.13	1.62	1.75
	38.62	40.13	1.51	0.02	1.54	1.56
	44.32	44.85	0.53	4.76	21.48	26.24
	49.50	51.00	1.50	0.78	4	4.78
	51.00	52.50	1.50	0.4	1.33	1.73
	52.50	54.00	1.50	0.27	1.03	1.3
	55.50	57.00	1.50	0.38	2.57	2.95
	57.00	58.50	1.50	0.07	1.5	1.57
	85.15	85.46	0.31	0.65	4.84	5.49
	94.10	95.50	1.40	0.72	3.35	4.07
	98.50	101.20	2.70	0.98	1.56	2.54
	101.20	102.48	1.28	2.19	3.55	5.74
	253.28	254.90	1.62	1.51	7.6	9.11
	255.81	258.11	2.30	0.8	3.85	4.65
RD-11-211	120.14	121.00	0.86	0.08	2.92	3
	125.43	126.15	0.72	1.54	9.55	11.09
	127.34	128.85	1.51	0.13	1.32	1.45
	305.02	306.00	0.98	1.26	9.97	11.23
	306.00	307.00	1.00	0.37	3.08	3.45
	317.58	319.00	1.42	4.81	22.18	26.99
	319.00	320.50	1.50	4.32	1.42	5.74
	325.13	326.62	1.49	0.42	1.68	2.1
	326.62	328.23	1.61	0.16	4.6	4.76
RD-11-212	41.71	43.21	1.50	0.09	1.01	1.1
	46.36	47.35	0.99	0.09	1.76	1.85
	59.43	61.03	1.60	0.32	1.77	2.09
	67.00	68.50	1.50	0.65	7.51	8.16
	118.90	120.62	1.72	0.59	1.62	2.21
	120.62	121.64	1.02	7.92	2.35	10.27
	288.78	290.30	1.52	3.34	15.14	18.48
	290.30	291.30	1.00	0.54	1.37	1.91
	291.30	292.54	1.24	0.83	5.66	6.49



Hole ID	From (m)	To (m)	Width (m)	Zn %	Pb %	Zn + Pb %
	299.83	301.91	2.08	0.2	2.42	2.62
RD-11-213	145.87	146.20	0.33	0.38	4.94	5.32
	150.50	152.09	1.59	0.18	1.5	1.68
	161.25	162.25	1.00	0.58	7.36	7.94
	176.00	177.50	1.50	0.43	2.05	2.48
	179.00	180.50	1.50	0.16	1.01	1.17
	228.61	230.04	1.43	0.06	1.09	1.15
	232.02	233.92	1.90	0.02	1.04	1.06
	233.92	234.70	0.78	0.78	4.33	5.11
	234.70	235.70	1.00	2.07	15.08	17.15
	235.70	236.78	1.08	2.66	16.3	18.96
	236.78	237.66	0.88	1.88	10.47	12.35
	240.32	241.29	0.97	0.61	6.24	6.85
	241.29	242.39	1.10	1.31	9.48	10.79
RD-11-214	255.60	256.63	1.03	0.28	1.39	1.67
	257.36	259.09	1.73	2.04	10.2	12.24
	259.09	260.58	1.49	0.27	1.36	1.63
	269.43	270.98	1.55	3.12	14.03	17.15
	270.98	272.00	1.02	0.78	2.14	2.92
	272.00	272.79	0.79	2.94	13.32	16.26
	276.00	277.50	1.50	0.35	1.92	2.27
RD-11-215	176.84	178.22	1.38	0.14	4.83	4.97
	424.33	425.76	1.43	0.09	4.99	5.08
	426.94	428.40	1.46	3.3	15.65	18.95
	428.40	429.86	1.46	2.95	13.7	16.65
	429.86	431.35	1.49	0.41	2.49	2.9
	431.35	432.82	1.47	0.77	5.6	6.37
	432.82	434.29	1.47	0.28	1.3	1.58
	437.30	438.80	1.50	0.27	1.91	2.18
RD-11-216	185.34	185.87	0.53	1.54	6.38	7.92
	187.08	188.06	0.98	0.15	1.08	1.23
	194.00	194.33	0.33	1.34	7.19	8.53
	195.20	195.93	0.73	2.02	2.27	4.29
	213.56	214.30	0.74	1.79	7.84	9.63
RD-11-217	355.91	357.52	1.61	3.59	15.73	19.32
	359.00	360.50	1.50	1.15	5.9	7.05
RD-11-219	101.25	102.76	1.51	0.38	1.12	1.5
	102.76	103.77	1.01	1.16	3.38	4.54
	103.77	105.04	1.27	1.93	8.1	10.03
	106.61	108.21	1.60	0.48	2.68	3.16
	283.25	284.75	1.50	0.12	1.42	1.54
	288.31	289.36	1.05	0.73	3.73	4.46
	289.36	290.28	0.92	2.89	15.06	17.95
	294.77	295.77	1.00	0.39	1.02	1.41
RD-11-Q6	350.00	350.60	0.60	0.04	1.65	1.69
RD-11-Q7	384.87	386.27	1.40	2	17.39	19.39
	386.27	388.12	1.85	0.35	1.81	2.16

Hole ID	From (m)	To (m)	Width (m)	Zn %	Pb %	Zn + Pb %
	388.12	388.85	0.73	0.31	1.02	1.33
	388.85	389.47	0.62	0.32	2.41	2.73
	392.20	393.51	1.31	3.77	19.21	22.98
RD-11-Q8	411.52	412.86	1.34	0.005	6	6.005
	415.87	417.31	1.44	3.73	20.93	24.66
	417.31	418.17	0.86	4.25	20.80	25.05
	418.17	419.23	1.06	4.72	29.33	34.05
	419.23	420.64	1.41	0.11	1.99	2.1
	421.75	422.75	1.00	0.23	3.53	3.76
	425.33	426.86	1.53	0.08	2.24	2.32
RD-11-V10	255.78	257.27	1.49	3.67	17.57	21.24
	257.27	258.75	1.48	3.71	21.33	25.04
	258.75	259.58	0.83	2.72	23.57	26.29
	259.58	261.23	1.65	0.07	1.23	1.3
	261.23	262.74	1.51	2.33	12.72	15.05
	262.74	264.21	1.47	0.38	2.03	2.41
	264.21	265.45	1.24	0.97	6.45	7.42
	268.50	270.00	1.50	0.37	1.69	2.06
	270.00	270.93	0.93	0.75	3.51	4.26
	270.93	272.30	1.37	4.43	31.37	35.8
RD-11-V12	241.76	242.07	0.31	3.4	26.59	29.99
	245.00	246.50	1.50	0.32	1.75	2.07
	246.50	248.00	1.50	0.13	1.14	1.27
RD-11-V13	250.99	251.81	0.82	3.91	16.64	20.55
	251.81	253.15	1.34	0.55	1.68	2.23
	254.04	255.54	1.50	0.92	6.25	7.17
	257.37	258.75	1.38	2.15	12.32	14.47
	260.77	261.41	0.64	3.61	26.85	30.46
RD-11-V14	458.26	459.65	1.39	0.12	4.64	4.76
	459.65	461.31	1.66	3.36	20.51	23.87
	461.31	462.55	1.24	1.94	14.57	16.51
	471.44	473.00	1.56	0.65	3.27	3.92
	479.00	480.75	1.75	0.02	8.96	8.98
	481.40	482.50	1.10	0.005	5.58	5.585
	482.50	483.35	0.85	0.03	10.48	10.51
RD-11-V15	265.88	267.32	1.44	0.85	5.02	5.87
	267.32	268.83	1.51	0.82	5.65	6.47
	268.83	270.30	1.47	0.38	2.16	2.54
	270.30	271.88	1.58	0.5	3.17	3.67
	271.88	273.57	1.69	0.48	2.89	3.37
	273.57	274.87	1.30	2.12	10.06	12.18
	276.55	277.57	1.02	0.96	4.88	5.84
	277.57	278.85	1.28	2.17	13.83	16
	278.85	280.35	1.50	0.19	1.17	1.36
	281.60	282.37	0.77	4.39	16.54	20.93
EUG-10-033	69.8	78.3	8.5	10.75	2.08	12.83
	136.2	142.6	6.4	10.83	2.26	13.09

Hole ID	From (m)	To (m)	Width (m)	Zn %	Pb %	Zn + Pb %
EUG-10-034	21.4	23	1.6	5.56	0.87	6.43
	107.4	113.3	5.9	8.4	1.19	9.59
EUG-10-035	108	111.5	3.5	11.71	2.21	13.92
EUG-10-036	174.2	175.5	1.3	11.51	1.66	13.17
EUG-10-037	128.1	133.9	5.8	9.39	2.47	11.86
	210.6	214	3.4	5.98	1.35	7.33
EUG-11-038	55	61.1	6.1	16.75	3.82	20.57
	144.9	148.7	3.8	9.25	1.8	11.05
EUG-11-040	54.1	57.1	3	9.47	2.36	11.83
	145.7	150	4.3	8.01	1.77	9.78
EUG-11-041	73.9	77.8	3.9	14.29	3.05	17.34
	143.9	147.2	3.3	11.53	2.62	14.15
EUG-11-042	95.3	98.5	3.2	18.3	4.04	22.34
	120.6	123.6	3	7.81	1.52	9.33
EUG-11-043	109	112.7	3.7	10.29	2.22	12.51
	116.1	117.3	1.2	6.86	1.7	8.56
EUG-11-044	26.5	27.5	1	15.3	2.89	18.19
	38	40.6	2.6	12.36	2.6	14.96
	112.5	113.6	1.1	11.56	2.92	14.48
EUG-11-045	106.1	109	2.9	11.08	1.88	12.96
EUG-11-046	16	18.4	2.4	5.7	1.35	7.05
EUG-11-047	106.6	109.1	2.5	11.01	1.71	12.72
EUG-11-048	20.6	23.8	3.2	11.06	2.81	13.87
	70.7	74.7	4	8.06	2.02	10.08
EUG-11-049	103.5	109.5	6	11.17	2.31	13.48
	147.4	149.1	1.7	10.61	2.58	13.19
	166.2	169.4	3.2	6.24	1.29	7.53
EUG-11-050	39.2	41.6	2.4	10.64	2.21	12.85
	46.8	48.6	1.8	6.57	1.42	7.99
EUG-11-051	164.1	167.5	3.4	18.77	3.3	22.07
EUG-11-052	107.2	107.5	0.3	24.05	2.72	26.77
EUG-11-053	30.4	32.9	2.5	8.47	1.65	10.12
	101.5	104.6	3.1	12.45	2.09	14.54
EUG-11-054	31.9	36.4	4.5	13.27	3.15	16.42
	99.1	101.9	2.8	13.06	3.31	16.37
	103.6	104.9	1.3	7.8	2.74	10.54
EUG-11-055	77.4	80.6	3.2	20.05	3.92	23.97
	148.6	150.3	1.7	18.01	4.05	22.06
EUG-11-056	29.8	30.3	0.5	19.21	4.56	23.77
	36.2	39.2	3	13.49	3.03	16.52
	119.7	123	3.3	6.4	1.48	7.88
	125.5	126.2	0.7	17.75	3.87	21.62
EUG-11-057	121.8	132.5	10.7	12.48	2	14.48
	134.5	135.5	1	14.03	3.35	17.38
	195.5	197.5	2	10.07	2.05	12.12
EUG-11-058	40.3	48.4	8.1	15.2	3.31	18.51
	54.5	55.2	0.7	19.31	4.56	23.87

Hole ID	From (m)	To (m)	Width (m)	Zn %	Pb %	Zn + Pb %
	163	165.2	2.2	10.5	3.98	14.48
EUG-11-059	93.7	100.5	6.8	16.13	3.34	19.47
	140	142.6	2.6	6.8	2.21	9.01
	160.8	163.5	2.7	14.11	2.96	17.07
EUG-11-060	42.9	44.3	1.4	22.65	5.21	27.86
	131.5	135.5	4	12.86	2.11	14.97
	141.2	141.6	0.4	21.7	4	25.7
EUG-11-061	109.9	117.3	7.4	13	2.47	15.47
	153.2	154.3	1.1	7.05	2.87	9.92
	180	181.2	1.2	11.32	1.69	13.01
EUG-11-062	38	39.5	1.5	7.01	2.01	9.02
	44	45.2	1.2	13.32	3.69	17.01
	175.6	180	4.4	17.14	2.87	20.01
	194.2	195.4	1.2	13.88	1.76	15.64
	199.5	201.3	1.8	10.07	2.84	12.91
EUG-11-063	33.3	34.7	1.4	13.91	1.69	15.6
	154.1	155.5	1.4	14.74	3.86	18.6
	186.5	187.5	1	25.92	0.06	25.98
EUG-11-064	40	40.7	0.7	12.18	4.41	16.59
	57.4	59.2	1.8	8.26	1.49	9.75
	183	184.5	1.5	12.75	3.05	15.8
EUG-11-065	32.4	39.8	7.4	15.09	3	18.09
EUG-11-066	44.5	45.5	1	10.32	1.88	12.2
EUG-11-067	29.5	30.5	1	11.96	2.57	14.53
	45.5	49.2	3.7	14.95	3.04	17.99
	65	66.7	1.7	19.22	3.96	23.18
EUG-11-068	24.8	28	3.2	13.61	2.82	16.43
EUG-11-069	60.2	63.5	3.3	10.1	1.42	11.52
	69.5	71.2	1.7	13.95	2.64	16.59
EUG-11-070	35.8	36.4	0.6	24.04	4.24	28.28
EUG-11-071	42	46	4	10.82	2.36	13.18
	48	49.6	1.6	13.72	3.51	17.23
	54.5	56.5	2	18.31	5.29	23.6
EUG-11-072	17.5	21	3.5	9.22	1.68	10.9
	22.7	24.6	1.9	16.86	3.12	19.98
	213.3	214.1	0.8	19.51	3.98	23.49
EUG-11-074	22.8	25.9	3.1	8.94	1.69	10.63
EUG-11-077	40.5	44.1	3.6	9.17	1.82	10.99
EUG-11-079	61.7	64.5	2.8	8.36	1.38	9.74
	80.6	82	1.4	8.2	2.15	10.35
EUG-11-080	65	65.5	0.5	11.87	2.2	14.07
	68	68.7	0.7	16.21	3.48	19.69
	79.5	80.1	0.6	22.15	6.91	29.06
EUG-11-081	48.8	50.6	1.8	14.26	2.44	16.7
	65.2	69.5	4.3	9.53	2.03	11.56
EUG-11-082	38.5	41.6	3.1	6.36	1.12	7.48
EUG-11-083	55.1	66.6	11.5	11.64	2.34	13.98

Hole ID	From (m)	To (m)	Width (m)	Zn %	Pb %	Zn + Pb %
	84.2	100.8	16.6	14.43	2.27	16.7
EUG-11-084	69	77.7	8.7	12.91	3.1	16.01
	102.6	103.6	1	18.35	2.33	20.68
EUG-11-085	37	38.2	1.2	12.6	2.78	15.38
	45.4	46.6	1.2	17.69	4.05	21.74
	50	54.5	4.5	7.36	1.36	8.72
EUG-11-086	119.2	120.7	1.5	15.39	2.88	18.27
	123.1	125.6	2.5	6.57	1.33	7.9
EUG-11-087	42.9	44.9	2	14.11	2.83	16.94
EUG-11-088	83.9	86.4	2.5	16.48	3.73	20.21
	143	144.3	1.3	10.08	1.09	11.17
	159.9	162.6	2.7	10.95	2.22	13.17
EUG-11-089	48.8	50.3	1.5	10.34	1.69	12.03
	78.9	86.6	7.7	11.87	2.17	14.04
EUG-11-090	33.5	36.5	3	8.69	1.7	10.39
EUG-11-092	50.9	53.8	2.9	15.42	3.63	19.05
EUG-11-093	51.4	53.1	1.7	14.72	3.49	18.21
	70.8	72.3	1.5	9.81	2.06	11.87
	74.3	77.6	3.3	16.74	3.45	20.19
EUG-11-094	33.1	37.3	4.2	8.46	1.89	10.35
EUG-11-095	84.8	87.4	2.6	2.17	0.86	3.03
EUG-11-097	51.5	54.8	3.3	8.05	1.55	9.6
	72.8	81	8.2	11.81	2.43	14.24
EUG-11-098	74	74.5	0.5	16.01	4.36	20.37
EUG-11-099	6.1	8.5	2.4	14.45	3.12	17.57
EUG-11-100	220.7	226	5.3	19.41	2.99	22.4
EUG-11-102	108.1	108.6	0.5	25.22	7.85	33.07
	198	202	4	14.06	2.78	16.84
EUG-11-104	145.6	150.9	5.3	12.07	2.74	14.81
	221.3	224.1	2.8	9.58	2.17	11.75
	246.2	247.1	0.9	15.25	1.11	16.36
EUG-11-105	66.5	68.8	2.3	12.18	3.01	15.19
	86.5	89.3	2.8	15.56	3.33	18.89
	136.4	137.4	1	15.99	3.52	19.51
	157.4	162.4	5	7.86	1.51	9.37
EUG-11-106	49.4	50.2	0.8	17.07	0.02	17.09
EUG-11-107	116.4	119.5	3.1	13	2.31	15.31
	136.5	139.5	3	12.24	2.6	14.84
	186	189	3	15.74	2.44	18.18
EUG-11-109	119.5	126.9	7.4	10.25	2.28	12.53
	139	140.1	1.1	8.76	2.07	10.83
	212	213.1	1.1	18.46	3.79	22.25
	248.8	258	9.2	11.8	1.93	13.73
	262	262.5	0.5	13.23	2.57	15.8

## 10.1 SAMPLING METHOD AND APPROACH

Drill core sampling during the 2005 to 2011 exploration programs followed the same procedures. Core was placed by the drillers in wooden core boxes and the lids secured with screws before transporting to the logging facility. A helicopter, zip line or truck was used to move core boxes from the drills to the logging station where the core was logged, measured for rock quality and photographed by the geologists. Mineralized sections were sawn and one half retained on site for future reference or follow up analysis. The sampled intervals were recorded, put in labeled plastic bags with tags. The samples were then consolidated into rice bags for transport to the lab. Sampling of the drill core was generally in 1 m to 1.5 m intervals unless discrete geologic features such as veins, massive sulphide lenses or faults were encountered.

The samples are representative of both the mineralization and wall rocks encountered in the drilling. The authors are not aware of any factors related to the sampling that would materially impact the reliability or accuracy of these results.

The drill core, both split and unsplit, remains stored in wooden core boxes on site. The split core is stored on metal racks, while the boxes of unsplit core were cross stacked and piled in a core storage area.

## 11 SAMPLE PREPARATION, ANALYSES AND SECURITY

### 11.1 Sample Preparation

For the 2004, 2005, 2006, 2007, 2008, 2010, and 2011 programs a sample handling procedure and chain of custody was maintained and all of the sample shipments tracked. Core and rock samples were placed into uniquely numbered sample bags with a tag placed in the bag in the event the writing on the bag is obscured. A record of the sample interval and other specific details was documented in the sample book. A representative example of any rock samples collected was stored for reference at a later date.

Drill core samples were generally 1 to 1.5 m in length, or less, depending on geological features present. The maximum sample length for the program was 3m. The sample intervals were determined and marked by the geologist responsible for logging the hole. Samples were cut using a diamond saw or a manual splitter, with 50% of the sample bagged and sent for analyses and the remaining 50% returned to the core box and stored on site.

Acme Analytical of Vancouver, BC was retained to carry out all sample analyses, however in 2007 a group of 30 sample pulps were chosen and sent to ALS Chemex for check assays. These samples were then renumbered and sent back to Acme as a further check.

Quality control involved the insertion of check samples consisting of standards, blanks and duplicates into the sample stream. Standard, blank and duplicate samples were randomly inserted into the sample stream within every 20 consecutive samples. These check samples are in addition to the re-analyses conducted by the laboratory as part of their own quality control measures.

At all times access to the samples was limited to authorized personnel. Results from the laboratory are reported directly to the Qualified Person who disseminates the information as

required. It is the author's opinion that the sampling methodology, sample preparation, security, analytical procedures and quality assurance practices used by Selkirk Metals Corp. and the laboratory were both adequate and conducted in compliance with standard industry practices.

At Acme, core samples are crushed to -10 mesh (2mm) and rifle split to obtain a 250 gram representative sample which is then pulverized to -150 mesh (100µm) in a mild-steel ring and puck mill. Samples are then routinely analyzed by ICP-AES using a nitric acid-aqua regia digestion for the determination of 36 elements, including Zn, Cu, Pb, and Au. Samples returning high values of base metals by the ICP method are routinely assayed (Acme Group 7AR). The analysis utilizes concentrated nitric and hydrochloric acid digestion prior to analysis. The lab routinely uses sample blanks, pulp duplicate analysis and in house standard reference materials as part of the quality control and data verification program.

## **11.2 QA/QC**

A quality assurance and quality control ('QA/QC') program was initiated in 2005. Standard reference samples, blanks and duplicates were randomly inserted into the sample stream within approximately every 20 consecutive samples. The results are discussed in section 14.1.

A number of pulps from the 2005 drill program were re-analyzed at a secondary laboratory.

## **12 DATA VERIFICATION**

The Ruddock Creek project has a long history with a significant database of historical data. The majority of past work programs were completed by Cominco and Falconbridge and are well documented with respect to methodology, personnel and analytical procedures. More recent work programs carried out by Cross Lake and Selkirk have returned results that show a very good correlation with the historical values. Although the authors have not independently verified all of the historical data it is believed to be reliable.

The authors examined the original assay certificates and drill logs as well as the digital database. The site visit included examination of drill core, drill sites and underground workings. Assay data for the Falconbridge era drilling on the E Zone (holes E-1 to E-36) was collected from original drill logs showing interval, sample number, and Pb, Zn and Ag assays. The 1976 and 1977 drilling by Cominco has both the original assay certificates from Bondar-Clegg and Company, and original drill logs with sample number, interval and assay values.



### 12.1 Standard Reference Material

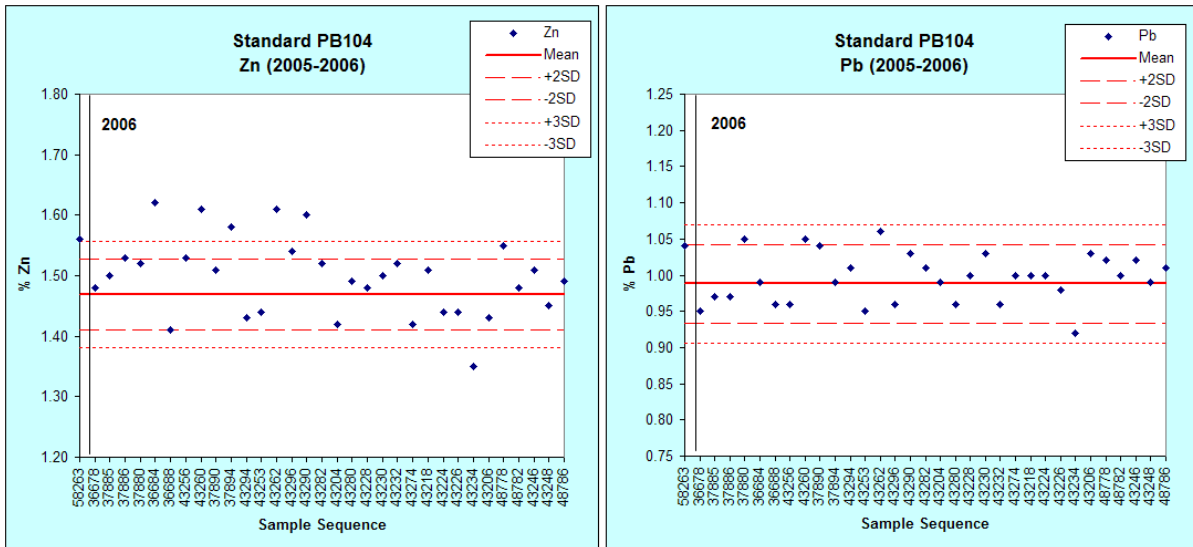
The standard reference material used for the 2005 to 2011 drilling programs was purchased from WCM Minerals of Burnaby B.C. The statistics for these are shown in Table 14-1.

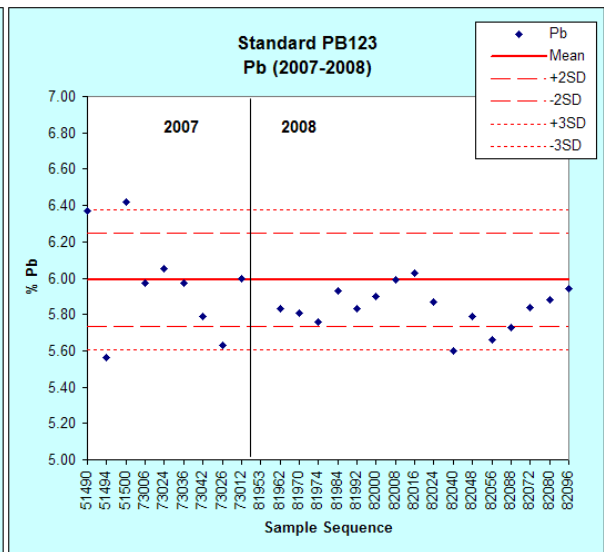
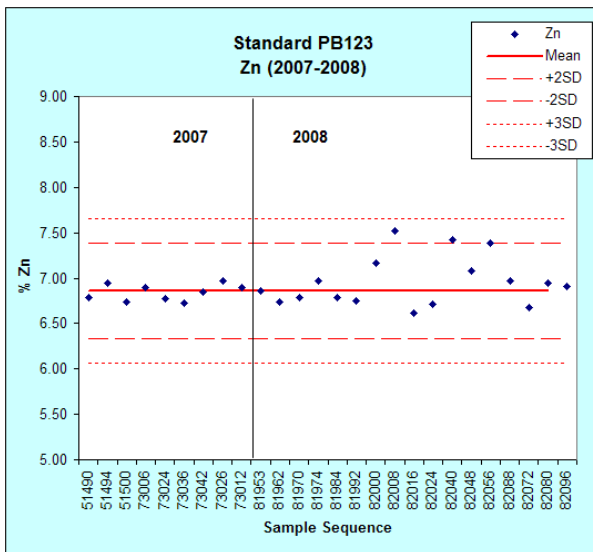
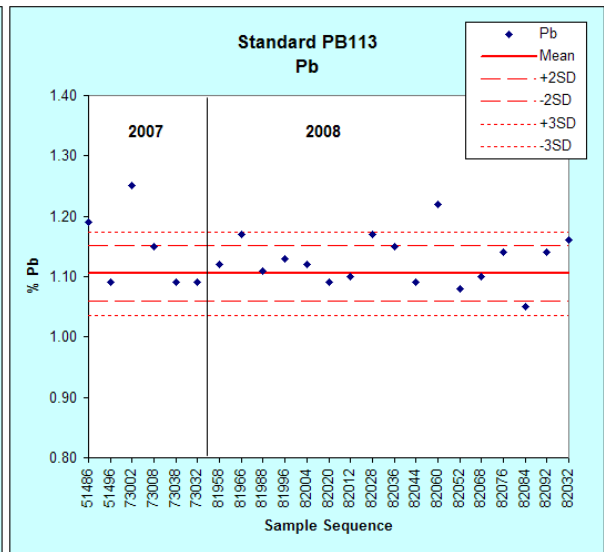
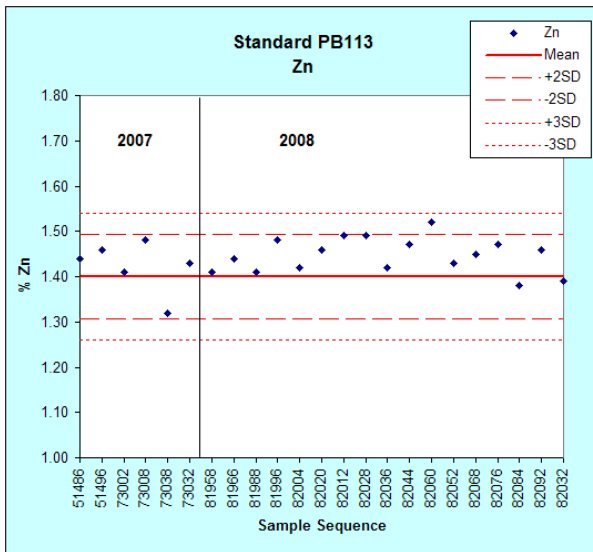
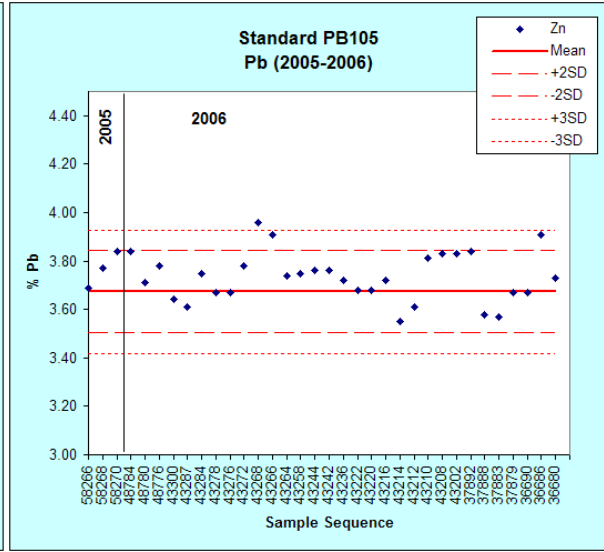
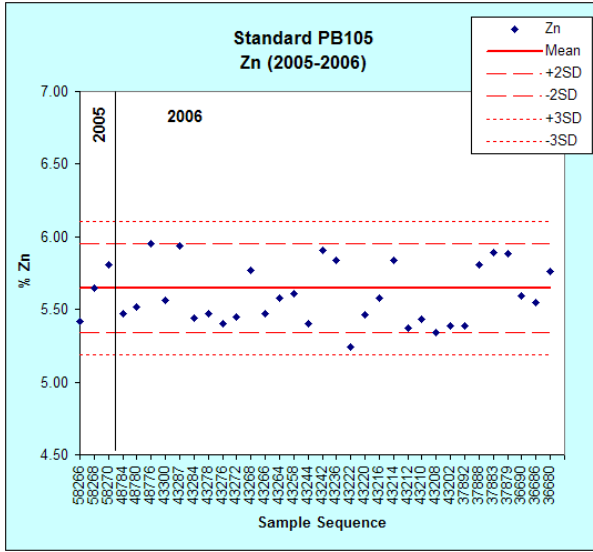
**Table 12-1 Reference Standards**

Ref ID	Type	Drill Program	Zn		Pb	
			Mean	Std Dev	Mean	Std Dev
BL 105	Blank	2005-08	-	-	-	-
PB 104	Std	2005-06	1.469	0.0294	0.988	0.0274
PB 105	Std	2005-06	5.648	0.1531	3.673	0.0845
PB 113	Std	2007-08	1.400	0.0465	1.105	0.0231
PB 123	Std	2007-08	6.99	0.2535	6.035	0.149
PB-129	Std	2010-11	2.004	0.062	1.237	0.017
PB-139	Std	2010-11	4.140	0.067	1.940	0.079
PB-140	Std	2010-11	3.728	0.073	4.408	0.084

Sample sequence charts for the standards used between 2005 and 2008 are shown in Figure 12-1. Two failed batches were re-analyzed at ACME in 2009 at the request of the author.

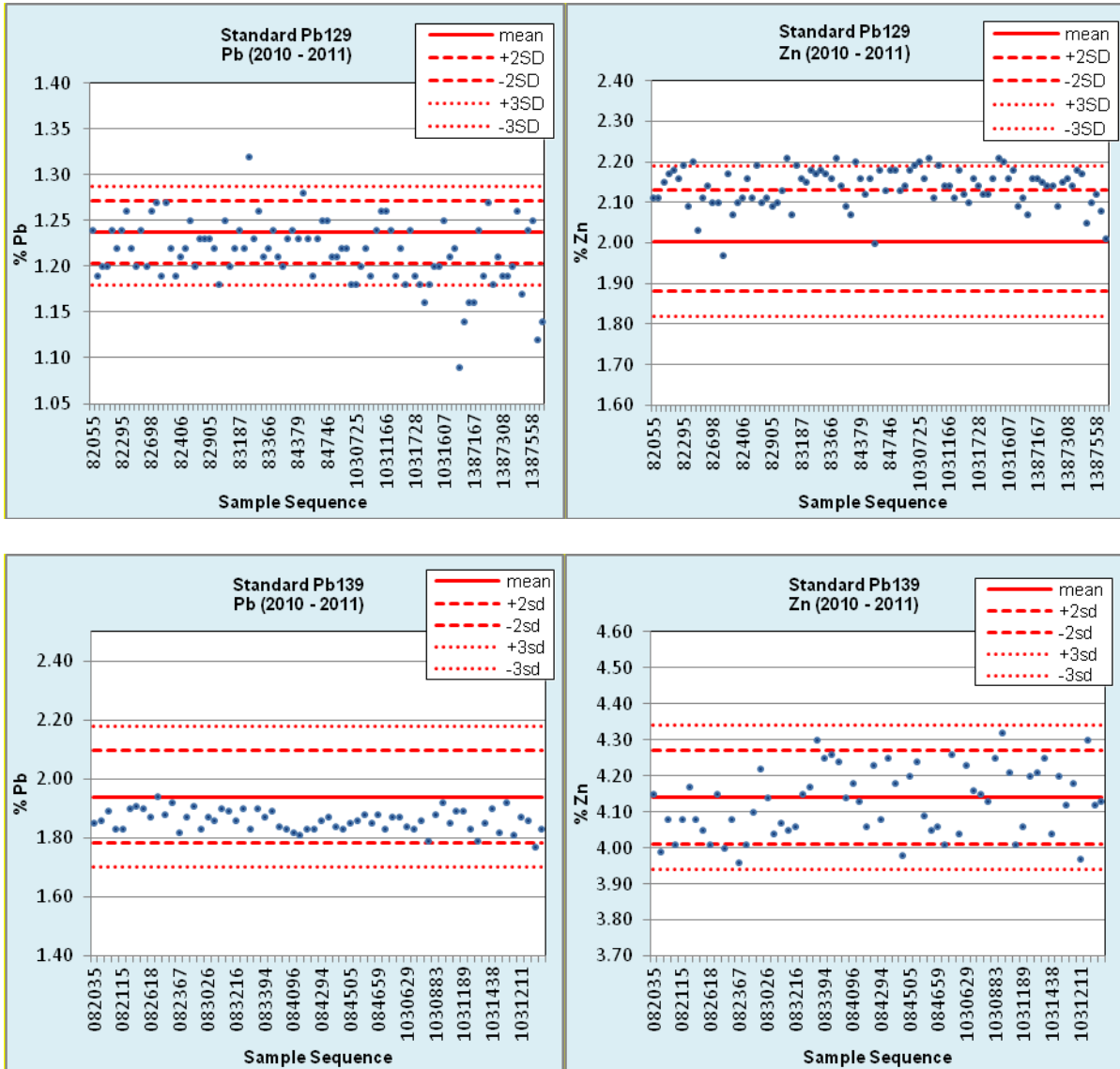
**Figure 12-1 Reference Standards - Sample sequence charts (2005 – 2008)**

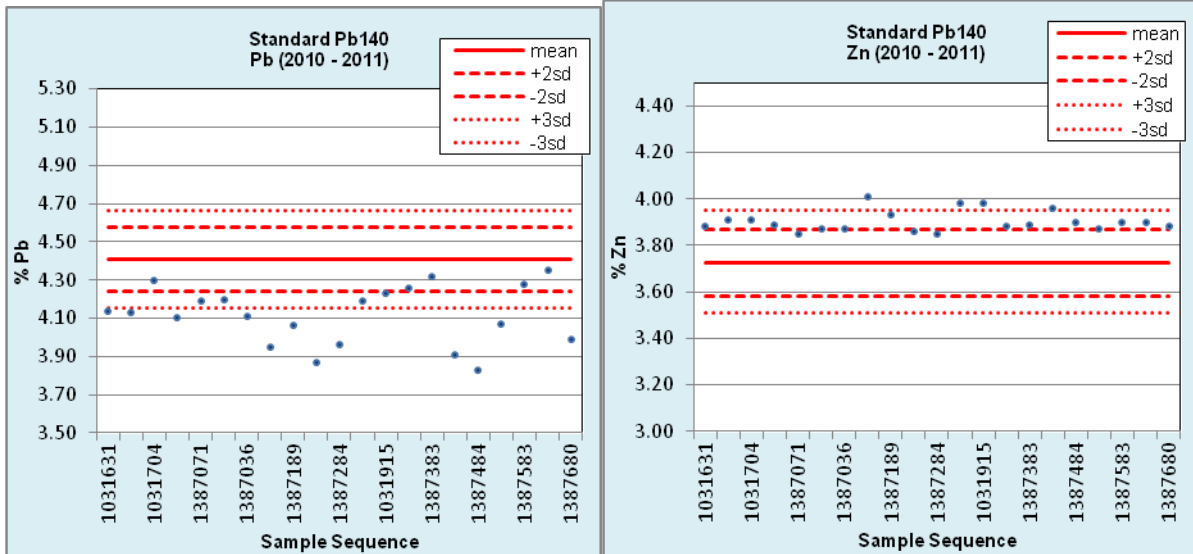




Sample sequence charts for the standards used for the 2010 and 2011 drilling programs are shown in Figure 12-2.

Figure 12-2 Reference Standards – Sample sequence charts (2010 – 2011)





The reference standards were regularly monitored during the 2010 and 2011 drilling programs. Standards met QA/QC requirements if the assayed values were within 3 standard deviations of the mean calculated standard value. All standards failing to meet these requirements were investigated and re-assayed if necessary, along with at least five sequential samples above and below the failed standard.

**12.2 Blanks**

Blank material used during the 2005-2008 drill programs was purchased from WCM Minerals of Burnaby, B.C. A total of 52 blanks were inserted into the sample stream. No evidence of contamination was found. The 2010 and 2011 drill programs utilized blank material consisting of crushed rock from a highways gravel pit located along the Likely highway in the central interior of B.C. This material was bagged in poly ore bags in one kilogram samples and randomly inserted into the sample stream within every 20 consecutive samples. A total of 162 blank samples were inserted into the sample stream. Assay results of the blank samples were at or below the detection limit, indicating that no contamination occurred during sample preparation.

**12.3 Pulp re-checks**

A total of 25 pulps from the 2005 drill program were re-analyzed at ALS Chemex in February 2006. Zn had the best correlation with no evident bias (Figure 12-3). Pb values tended to be marginally higher in the original ACME assays than in the ALS Chemex results (Figure 12-2). One sample was a clear outlier and was attributed to a sample mix-up as both Pb and Zn assays were significantly different.

Figure 12-2 2005 Check assays - Pb

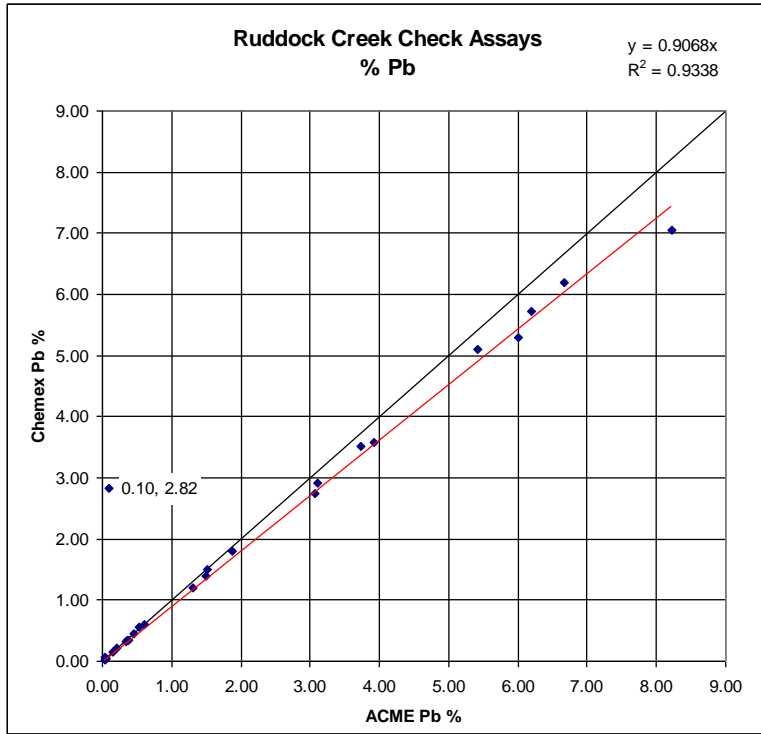
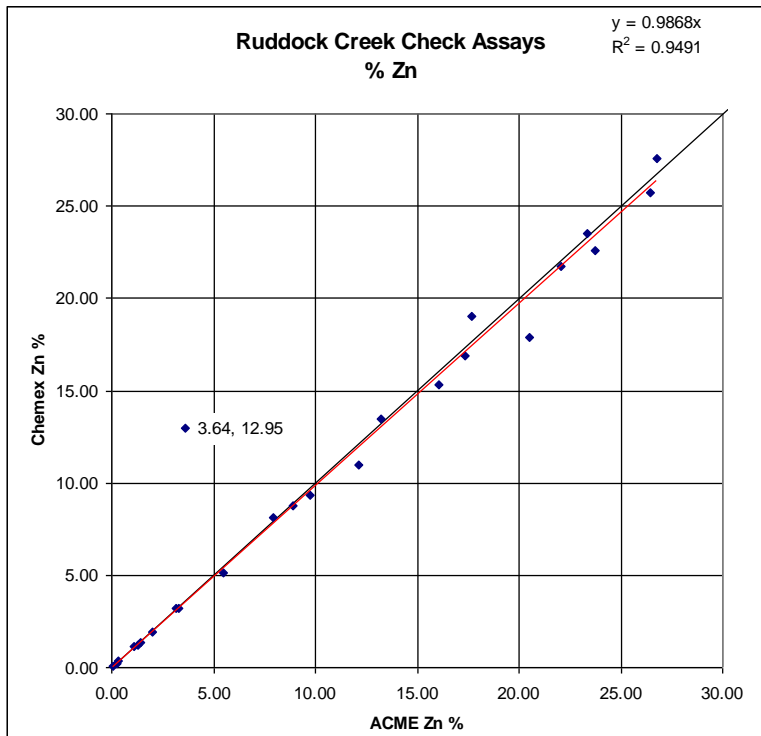


Figure 12-3 2005 Check assays - Zn



## 12.4 Conclusion

The authors are of the opinion that the data collection methods and database are of sufficient precision and accuracy to support resource estimation. However, the inclusion of historic drill data which has limited verification precludes the inclusion of a measured classification for the Upper E Zone.

## 13 MINERAL PROCESSING AND METALLURGICAL TESTING

SGS Mineral Services, a division of Lakefield Research was contracted by Selkirk to conduct Mineral Processing, Metallurgical Testing and Tailings Classification tests on ore from the Ruddock Creek deposit. This work commenced in 2006 and the final report was received in April of 2009. The following discussion is excerpted from the Lakefield reports detailed in Section 19, References.

### 13.1 Ore Sample

A blended shipment of 44 kg of Ruddock Creek Drill core was used for metallurgical testing, mineral processing and acid base accounting by SGS-Lakefield. The ore was derived from drill core from the near surface portion of the E Zone, the deep E Zone and from the Creek Zone. Prior to blending the ore was subjected to Wax Immersion testing to determine the Specific Gravity of the various rock types present. The intervals were blended to form a composite of each zone, followed by stage crushing and sample splitting for Head Assay and Bond Work Index determination. The head assays are presented in Table 13-1.

**Table 13-1 Head assay or zone composites**

Sample ID	Head Assay					
	Pb %	Zn %	Fe %	Ag g/t	C(g)	S %
E-Zone	1.37	6.4	6.38	4.5	0.13	5.76
Deep E-Zone	1.11	5.65	6.01	1.4	0.02	4.37
Creek Zone	1.48	5.76	5.55	1.3	0.07	5.32

The remaining sample in each composite was partly crushed to -3/8” for heavy liquid testing, and 10 mesh for flotation testing.

The BWI value for the E-Zone was 14.1 kWh/t where as for both Deep East and Creek Zones it was 13.7kWh/t. These values fall into the medium range of hardness within the SGS database. Heavy liquid (HL) testing was conducted on the E-Zone sample to assess the possibility of preconcentration prior to flotation. This has the potential for significant savings to mining, hauling and waste disposal costs. In the best test it was shown that 34% of the mass could be removed with only 1% and 0.3% loss of lead and zinc metal respectively.

### 13.2 Mineralogical Characterization

The sample of E-Zone material was submitted for Rapid Mineral Scan (RMS) as an initial determination of mineralogy. This technique uses a combination of optical mineralogy and XRD to provide a fast, semi-quantitative evaluation of mineralogy prior to starting a flotation program.

The RMS indicated that the ore was mainly silicates (non-opaques) with sphalerite being the most abundant sulphide mineral. Pyrite, pyrhotite and galena abundance were each quantified as minor, suggesting 1-5%. Sphalerite grain size was found to be in the 40-80 micron category, where-as galena grain size was found to be 20-40 microns. This is typical for Pb:Zn ores. The XRD results showed that quartz and plagioclase were the major silicate species with lesser amounts of feldspar. Later in the program, a sample of E-Zone was submitted for analysis by QEMSCAN. This is an acronym for Quantitative Evaluation of Materials by Scanning Electron Microscopy and is an advanced system capable of measuring mineralogical variability at the micron scale.

Initially the sample was analyzed using the Bulk Modal Analysis (BMA) method, in order to obtain a complete mineral modal balance. The BMA data confirms that quartz and feldspar are the two dominant minerals in the ore, with sphalerite being the most abundant sulphide. Interestingly, pyrhotite is the next most abundant sulphide at 7.7%, with pyrite being relatively minor at 1.3%. Mica was also noticeably significant, which may have consequences for flotation as it is readily entrained in froth due to its plate-like structure. In order to assess the liberation characteristics of both the galena and sphalerite in the sample, a plot of liberation vs. size was constructed (known as a release curve), and benchmarked against the SGS global database for both galena and sphalerite. The Ruddock Creek E-Zone galena can be ranked as moderately fine grained. For sphalerite on the other hand, Ruddock Creek E-Zone ranks as one of the better samples in the database with a high degree of sphalerite liberation at relatively coarse sizes. It is likely that the galena liberation may drive the primary grind size, and fairly fine regrinding of lead rougher concentrates will almost certainly be required. Overall, zinc metallurgy is likely to be very strong although significant zinc is likely to report to the lead circuit via the lead cleaner tailings stream.

### 13.3 Heavy Liquid Separation

In order to investigate the potential for pre-concentration of sulphide bearing rocks away from barren gangue rocks, heavy liquid testing was conducted on the E-Zone sample at crush sizes of - 3/8" and -5/8". At both crush sizes sub 14 mesh fines were screened out and the oversize tested sequentially at three specific gravity (SG) values, with methylene iodide being the heavy liquid and SG modification made by addition of acetone.

It can be seen in Table 13-2 that the finer crush size (-3/8") performed marginally better than the coarser crush size (-5/8") as would be expected. The best result was at the finer crush size and at an SG of 2.7 at which 34% of the mass was removed to HL floats, with metal losses of only 1% of the Pb and 0.3% of the Zn. At the higher SG of 2.95 the mass removal increases to 55% and metal losses increase to 3.7% of the Pb and 2.8% of the zinc.

**Table 13-2 Detailed Assay of Sink and Float Fractions**

Product	Pb %	Zn %	Fe %	Ag (g/t)	C(g) %	STOT%	S2 %
Sink Fraction	1.92	12.7	9.7	4.63	0.03	12.3	11.6
Float Fraction	0.052	0.19	0.86	< 0.5	0.07	0.34	0.11
HLS Head (Calc.)	1.29	8.47	6.71	3.23	0.066	8.37	7.75

The base metals distribution from the test is shown in Table 13-3.



**Table 13-3 Distribution of Base Metals in HLS Products**

Product	Weight		Grade Distribution					
	(g)	%	Pb	Zn	Fe	Pb	Zn	Fe
Sink Fraction	24280	66.2	1.92	12.7	9.7	98.6	99.2	95.7
Float Fraction	12390	33.8	0.052	0.19	0.86	1.36	0.76	4.33
HLS Head (Calc.)	36670	100	1.29	8.47	6.71	100	100	100

The gangue ‘float’ fraction comprised 34% of the HLS feed. After HLS, a ‘pre-concentrated’ flotation feed was produced by combining the sink fraction and the -20 mesh fraction (from initial sample preparation of ore composite). The pre-concentrated flotation feed was crushed to -10 mesh and rotary split into 2kg flotation charges. The float fraction was also crushed to -10 mesh and freezer stored for environmental testing.

### 13.4 Flotation

Flotation testing, supported by automated mineralogy, was conducted on the E-Zone and Deep E-Zone samples. A total of 13 batch tests were conducted on the E-Zone sample, followed by a locked cycle test. In addition a locked cycle test was also conducted on the Deep E-Zone composite. The batch tests were designed to optimize the primary grind and reagent suites. It was found that generally the main challenge of the ore was depressing the zinc in the lead circuit. The amount of zinc reporting to final tails was extremely low in all tests, so the focus was more on lead circuit optimization. Use of Cyttec 3418A as a lead collector proved superior to AF242, and the use of lime as a pH modifier in the lead cleaners proved superior to soda ash. Results were generally superior at a finer grind, which does correspond to the mineralogy as galena is fairly fine grained. A primary grind of 65 microns and a rougher concentrate regrind of ~20 microns gave the best results, but the potential to make the primary grind slightly coarser may exist with further testing.

The lead circuit conditions used in both F11 and F13 were then used with locked cycle tests. The middlings from any given cycle are added to the appropriate place in the next cycle, effectively simulating a continuous process. The results of the first locked cycle test (LCT1) gave an improvement of several percent recovery points over the batch testing, and gave a final lead recovery of 91.4% to a concentrate grade of 63.2% Pb. It should be noted that this included a heavy liquid pre-concentration step. A locked cycle test was then conducted on Deep E-Zone material and gave far superior results. A lead recovery of 94% was achieved to a concentrate grade of 68.8% Pb.

The amount of zinc reporting to the lead rougher concentrate was high throughout all the early testwork, and although the majority reported to cleaner tailings, the overall loss had a negative impact the zinc recovery. Tests F11 and F13 were able to minimize the zinc reporting to lead rougher concentrates down to approximately 5% using higher depressant dosages. This ensured less zinc reported to the final lead concentrates which had a positive impact on zinc recovery. In LCT1, the total zinc lost to lead concentrate was 1.5%, which is considered a good result. It should be noted that in LCT2 (Deep E-Zone) the amount of zinc lost to the lead concentrate is even less at 1.3% despite the increase in lead recovery.

The lead results are good, and are as predicted from the batch testing where as the zinc results are not quite as good as what the batch tests and mineralogy suggest. The main source of zinc loss is in the cleaner scavenger tail. This may be the result of i) inadequate flotation time in the cleaners, ii) over-grinding of the rougher concentrates resulting in the loss of ultra fine zinc (which is common in cleaner circuits), or iii) the lack of copper sulphate in the regrind. It is likely that further testing will reduce this loss and hence increase the zinc recovery.

The results of LCT2 conducted on the Deep E-Zone material, were superior to LCT1, particularly for lead. The zinc recovery was high at 94.1% but the zinc concentrate grade was low at 46.1%. It is likely that by moving along the grade vs. recovery curve, a recovery of ~90% would be achieved to a concentrate grade of ~50% Zn. It should be noted that again the cleaner scavenger tail is the main source of zinc loss. Commenting further on the locked cycle tests, the improved metallurgy of LCT2 could be attributable to i) the Zn circuit being pulled harder than in LCT1 (thus the higher Zn recovery in LCT2), and ii) better operator judgment in performing the test, having experienced froth behavior from LCT1. The latter assertion is further reinforced by noting that the circuit stability plot for LCT2 was smoother than LCT1.

### 13.5 Batch Cleaner Testing

Two batch cleaner tests, F1 and F2, were performed to confirm the metallurgy of the flotation circuit. The final lead concentrate in F1 graded 54% Pb at only 7.3% recovery. The Pb 2nd cleaner concentrate graded 58% at 59% recovery, indicating the later cleaning stages performed poorly. The zinc concentrate graded 55% Zn at 32% recovery. The recoveries were very poor and it was observed that froth bubble structure during this test was very poor. The results in test F2 were significantly improved over test F1. The lead final concentrate (Pb 5<sup>th</sup> cleaner concentrate) graded 74% Pb at 60% recovery. The Pb 4th cleaner concentrate in test F2 graded 70% Pb at almost 90% recovery. The zinc concentrate graded 52% Zn with 72% recovery.

### 13.6 Environmental Characterization

SGS completed environmental and geotechnical characterization of ore, tailings and heavy liquid separation (HLS) waste from the Ruddock Creek project. Additional environmental tests were also completed on selected waste rock samples from the deposit. The purpose of the environmental test program was to assess the geochemical, acid rock drainage (ARD), contaminant release potential and geotechnical properties associated with the ore, tailings, HLS waste and waste rock materials.

Semi-quantitative XRD analyses determined that the ore (*RD-06-116*) sample tested was predominantly comprised of sulphides and silicates. Pyrrhotite and sphalerite were the dominant sulphide minerals followed by galena and pentlandite. Quartz was the dominant silicate mineral, followed by orthoclase and albite. XRD examination of the tailings (*Comb Zn Ro Tails*) and HLS waste (*Float Fraction*) samples reported increased silicates and significantly lesser sulphide.

Whole rock and inductively coupled plasma-optical emission spectroscopy/mass spectroscopy (ICPOES/ MS) elemental analyses completed on the tailings and HLS waste confirmed the primarily silicate composition of the waste samples while indicating that Zn

was available in the tailings at at ~1.6%. The considerable loss on ignition (LOI) determined for the *Comb Zn Ro Tails* sample suggests the presence of appreciable amounts of oxidizable/volatile species (e.g. hydroxides and carbonates). The *Float Fraction* waste reported a lesser LOI suggesting little in the way of oxidizable/volatile species. ICP-OES/MS elemental analysis of the ore sample (*RD-06-116*) reported significant amounts of silicate and metallic elements including Pb and Zn as would be expected. Due to the metallic nature of the ore sample (*RD-06-116*); whole rock analyses could not be completed.

ICP-OES/MS elemental analysis of the waste rock samples (*730151 PG*, *730152 CS*, *730153 CS* and *730154 PG*) similarly reported significant amounts of silicate and metallic elements. The *730153 CS* sample was the only waste rock sample to report significant amounts of Ca. Only trace levels of Ca were observed in the other waste rock samples. Modified acid base accounting (ABA) test results for the ore (*RD-06-116*), tailings (*Comb Zn Ro Tails*) and *RC 730152 CS* waste rock samples indicated that the NP of these samples is insufficient to counteract the potential acidity determined based on the sulphide concentrations present. The acidic final pH values determined for these samples during net acid generation (NAG) testing confirmed the acid generation potentials indicated by the ABA test results and suggested that metal acidity may be a factor which will also contribute to the overall acidity generated by these samples. Modified ABA testing of the *Float Fraction* and *RC 730151 PG* samples indicated significant amounts of fast reacting carbonate mineralization which, coupled with the low sulphide concentrations, suggest that these samples are highly unlikely to generate acidity. The near neutral to slightly alkaline final pH values reported after aggressive oxidation of the *Float Fraction* and *RC 730151 PG* samples during NAG testing confirmed the unlikely acid generation potential of these samples. Although the *RC 730154 PG* sample similarly reported a very low sulphide content; carbonate assay indicated that almost all of this samples total NP is from less reactive mineral sources. These results suggest significant uncertainty with regards to the availability and reactivity of this total NP. NAG testing was not completed on the *RC 730154 PG* sample. ABA testing indicated that the *RC 730153 CS* and *RC Blend* samples clearly have the potential for acid consumption. The alkaline final pH reported for the *RC Blend* sample during NAG testing confirms the acid consumption potential of this sample.

Analysis of the ore, tailings and HLS waste shake flask extraction leachates reported all controlled parameters, with the exception of Zn (*Float Fraction*), at concentrations well within the World Bank limits. ICP-OES/MS analyses of the fresh and aged *Comb Zn Ro Tails* decant solutions similarly reported all MMER controlled parameters, with the exception of Zn, at levels well within the specified limits.

Results of the toxicity tests completed on the *Comb Zn Ro Tails Day 61* decant solution indicated that the aged tailings solution was significantly more toxic to the *Daphnia magna* (planktonic crustaceans) than to the rainbow trout fry.

Particle size distribution analyses indicated that both the ore (*RD-06-116*) and the HLS waste (*Float Fraction*) samples were comprised primarily of sand sized grains. Only minor fractions of the samples were classified as fines. In comparison, the *Comb Zn Ro Tails* showed a much finer particle size distribution with the majority of the sample being classified as fines. Atterberg limits testing completed on the minus 0.425 (-40 mesh) fraction of the tailings (*Comb Zn Ro Tails*) resulted in a non-plastic (NP) classification for this sample. Results of the standard Proctor tests completed on the *Comb Zn Ro Tails* sample reported compaction characteristics that would typically be expected from a silt or rock flour type

material. Consolidation testing conducted on the material showed only a modest reduction in the volume of the voids present in the tailings sample. Direct shear test results for the tailings sample reported that the sample was non cohesive (c=0) and an internal angle of friction of  $\sim 40^\circ$  ( $\phi=40.43^\circ$ ). Results of the settling tests indicated that the *Comb Zn Ro Tails* will settle quite quickly in a tailings pond setting; however, the addition of drainage to the settling test resulted in only a minor difference in the final settled density of the samples. Hydraulic conductivity testing conducted on the drained settling test sample reported semi-pervious hydraulic conductivities corresponding to that which would be expected from silt type soils.

## 14 MINERAL RESOURCE ESTIMATE

### 14.1 Exploratory Data Analysis

The updated resource estimate for the Lower E Zone utilized analytical data from underground core drilling programs carried out between 2008 and 2011. Several surface holes completed in 2005 and 2006 also intersected this zone but due to the depth of drilling (+700m) the location of the zone intercepts were judged to be of low accuracy when compared to nearby underground hole intercepts. A few historic drill holes penetrated the Lower E Zone but downhole surveys were not taken so the locations of the intercepts were not judged to be of sufficient accuracy for use in resource estimation. The following table summarizes the underground drilling completed to date on the Lower E Zone.

**Table 14-1 E-Zone underground drilling**

Company	Year	Series	Number	Metres	Assayed Intervals	Assayed metres
Selkirk Metals	2008	EUG-1 to 32	33	5,429.74	1,355	1,456.96
Selkirk Metals	2010	EUG-33 to 37	5	186.47	229	250.64
Selkirk Metals	2011	EUG-38 to 109	71	13,216.11	3,436	4,237.82
		<b>Total</b>	<b>109</b>	<b>18,832.32</b>	<b>5,020</b>	<b>5,945.42</b>

A total of 980 composites from 101 drill holes (2430 m) were used for block grade estimation in the Lower E Zone resource model.

The initial mineral resource estimate for the Creek Zone utilized data from surface core drilling programs carried out between 2006 and 2011 (Table 14-2). A total of 91 composites from 33 drill holes (224 m) were used for block grade estimation in the Creek Zone resource model.

**Table 14-2 Creek Zone surface drilling**

Company	Year	Series	Number	Metres	Assayed Intervals	Assayed metres
Selkirk Metals	2006	RD-06-144 to 160	10	1,083.26	174	238.12
Selkirk Metals	2007	RD-07-161 to 172	12	4011.15	187	202.01
Selkirk Metals	2010	RD-10-186 to 202	17	3,583.50	390	478.70
Selkirk Metals	2011	RD-11-203 to 219	17	5,701.16	436	606.57
		<b>Total</b>	<b>56</b>	<b>14,379.07</b>	<b>1,187</b>	<b>1,525.40</b>

Statistical analysis was performed on samples within the mineral zones and the results are shown in Table 14-3 to Table 14-5. The Zn:Pb ratio ranges between zones from 4.5:1 to

5.7:1 and averages 4.9:1 overall. The scatterplot illustrated in Figure 14-1 shows the strong correlation between Pb and Zn.

**Table 14-3 Sample statistics for Zn within mineral domains**

	EL-101	EL-102	EL-103	EL-104	EL-105	COMB
<b>n</b>	593	415	927	67	119	2121
<b>Min</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>Max</b>	27.92	27.17	30.41	25.80	24.13	30.41
<b>Median</b>	2.14	1.62	0.52	1.71	0.05	1.03
<b>Mean</b>	5.39	4.69	4.13	5.72	3.39	4.60
<b>Wt Avg</b>	4.88	4.06	3.29	5.16	2.44	3.87
<b>Variance</b>	46.15	42.36	42.49	49.37	39.80	43.87
<b>Std Dev</b>	6.79	6.51	6.52	7.03	6.31	6.62
<b>COV</b>	1.26	1.39	1.58	1.23	1.86	1.44

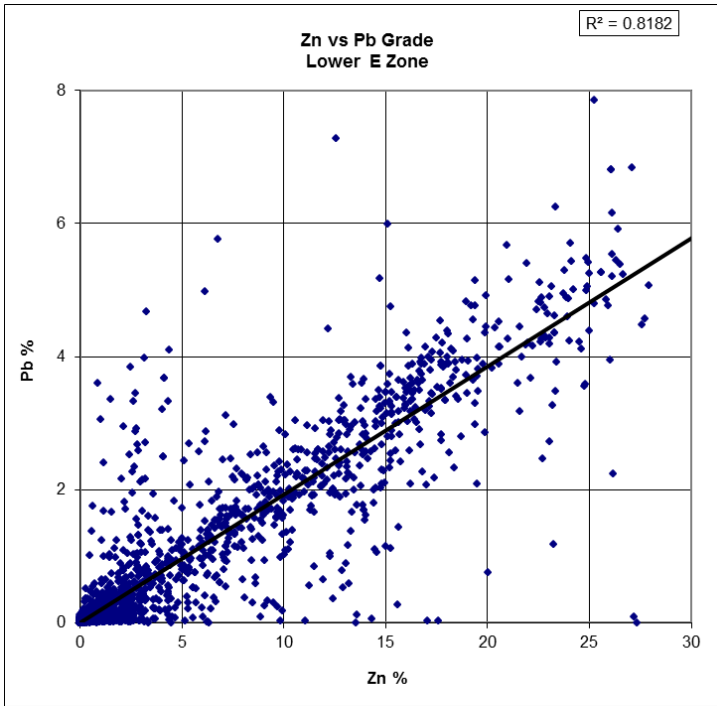
**Table 14-4 Sample statistics for Pb within mineral domains**

	EL-101	EL-102	EL-103	EL-104	EL-105	COMB
<b>n</b>	593	415	927	67	119	2121
<b>Min</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>Max</b>	6.25	5.99	7.85	4.86	5.43	7.85
<b>Median</b>	0.29	0.19	0.07	0.20	0.01	0.12
<b>Mean</b>	1.06	1.00	0.82	0.99	0.59	0.92
<b>Wt Avg</b>	0.96	0.91	0.67	0.91	0.43	0.79
<b>Variance</b>	1.93	1.95	1.97	1.68	1.39	1.93
<b>Std Dev</b>	1.39	1.39	1.40	1.29	1.18	1.39
<b>COV</b>	1.31	1.39	1.71	1.30	2.01	1.52

**Table 14-5 Sample statistics - Creek Zone**

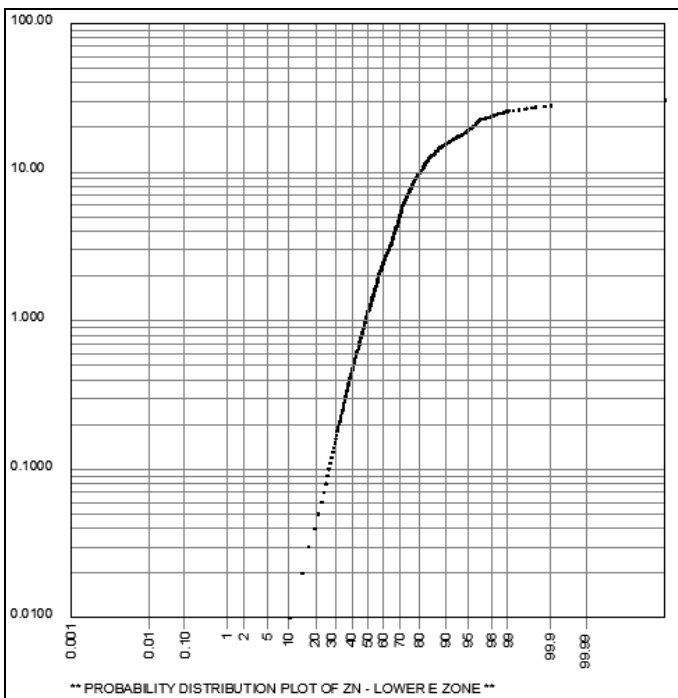
	Zn	Pb
<b>n</b>	198	198
<b>Min</b>	0.00	0.01
<b>Max</b>	30.70	7.81
<b>Median</b>	3.88	0.91
<b>Mean</b>	7.66	1.64
<b>Wt Avg</b>	7.00	1.51
<b>Variance</b>	69.01	3.27
<b>Std Dev</b>	8.31	1.81
<b>COV</b>	1.08	1.10

**Figure 14-1 Scatterplot of Zn vs Pb**

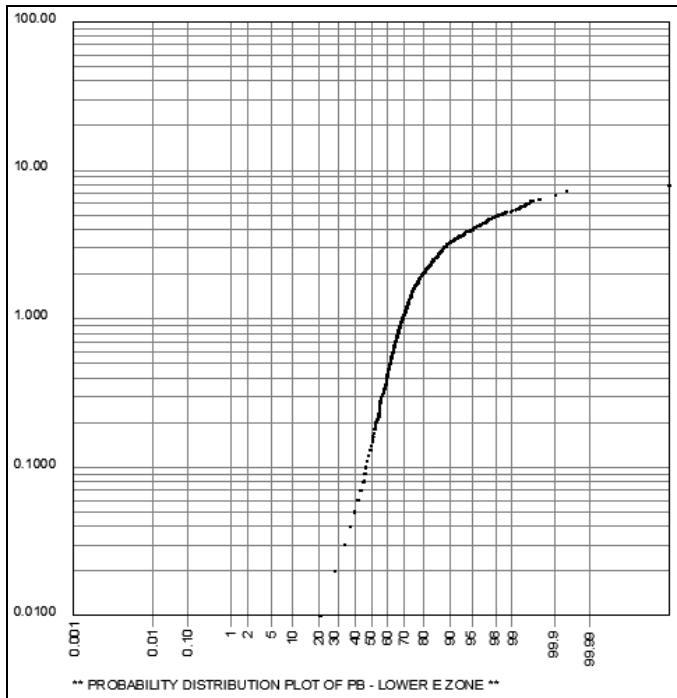


Outliers were evaluated by analyzing decile distribution and probability plots. No significant outlier population was identified and it was deemed that cutting or capping of high grade samples was not warranted.

**Figure 14-2 Cumulative probability for Zn**



**Figure 14-3 Cumulative probability for Pb**



## 14.2 Deposit Modeling

Five continuous mineralized horizons have been defined by underground core drilling that make up the Lower E Zone. Hanging-wall and footwall points of the mineralized intercepts were extracted and used to create vein-type solid models with a minimum width of 2.5 m using Leapfrog3d software. The resulting wireframes were imported to Gemcom:Surpac Vision software and further modified for use as mineral domains for constraining grade estimation. The zones were assigned integer codes from 101 to 105. Figure 14-4 illustrates the final models in plan, section and perspective views.

The same methodology was used to create a model of the Creek Zone mineralized zone as illustrated in Figure 14-5.



Figure 14-4 Lower E Zone solid models

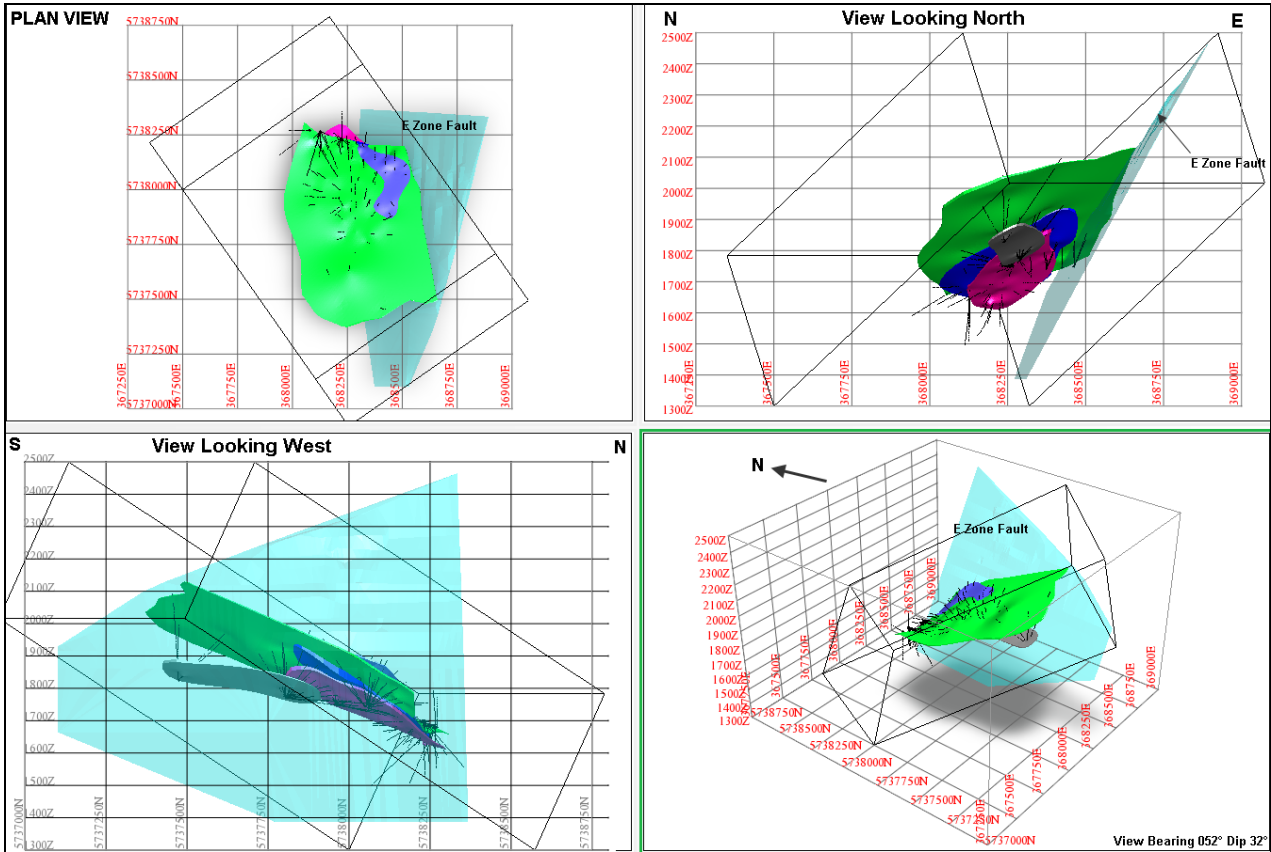
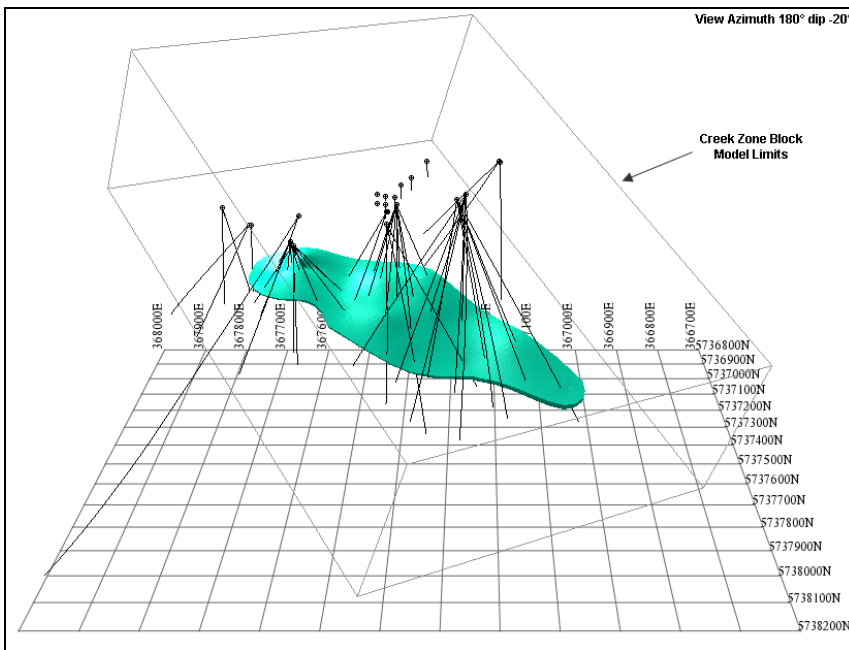


Figure 14-5 Creek Zone solid model



### 14.3 Compositing

Downhole composites were created within the 3D solid models using the ‘best fit’ method. This procedure produces samples of variable length, but of equal length within a contiguous drill hole zone, ensuring the composite length is as close as possible to the nominated composite length. In this case, the nominated length was set at 2.5m. Statistics for the individual domains are shown in Table 14-6.

**Table 14-6 Composite statistics for Zn by zone**

	EL-101	EL-102	EL-103	EL-104	EL-105	Comb
<b>n</b>	261	204	428	24	62	979
<b>Min</b>	0.00	0.00	0.00	0.01	0.00	0.00
<b>Max</b>	25.35	22.31	22.69	12.28	13.69	25.35
<b>Median</b>	3.02	1.70	0.86	4.44	0.38	1.65
<b>Mean</b>	4.49	3.84	3.25	4.90	1.89	3.66
<b>Variance</b>	22.42	21.79	20.74	13.97	9.92	20.99
<b>Std Dev</b>	4.73	4.67	4.55	3.74	3.15	4.58
<b>COV</b>	1.05	1.22	1.40	0.76	1.67	1.25

**Table 14-7 Composite statistics for Pb by zone**

	EL-101	EL-102	EL-103	EL-104	EL-105	Comb
<b>n</b>	261	204	428	24	62	979
<b>Min</b>	0.00	0.00	0.00	0.01	0.00	0.00
<b>Max</b>	4.46	5.08	4.45	2.16	2.84	5.08
<b>Median</b>	0.62	0.39	0.14	0.90	0.02	0.26
<b>Mean</b>	0.89	0.86	0.66	0.86	0.33	0.75
<b>Variance</b>	0.92	1.07	0.93	0.41	0.36	0.92
<b>Std Dev</b>	0.96	1.03	0.96	0.64	0.60	0.96
<b>COV</b>	1.08	1.20	1.47	0.75	1.80	1.29

**Table 14-8 Composite statistics for the Creek Zone**

	Zn	Pb
<b>n</b>	91	91
<b>Min</b>	0.01	0.01
<b>Max</b>	22.19	4.67
<b>Median</b>	5.79	1.19
<b>Mean</b>	7.02	1.51
<b>Variance</b>	33.60	1.60
<b>Std Dev</b>	5.80	1.26
<b>COV</b>	0.83	0.84

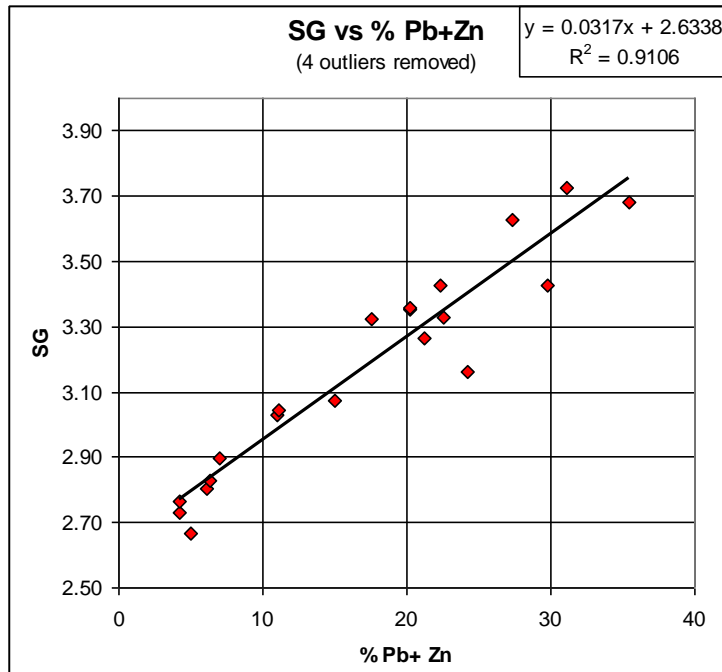
### 14.4 Density

A total of 30 SG measurements were made from drill core using the water immersion method after sealing the core with wax. Most of the samples (24) were from the massive sulfide zones grading over 4% combined Pb:Zn. After removing 3 outliers, the results for the

massive sulfide samples were plotted against the Pb/Zn content as shown in Figure 14-6. Results showed a good correlation between increasing grade and SG ( $R^2=0.91$ ) and a linear regression formula was applied to blocks based on their estimated Pb:Zn content with a lower cap of 2.6 (the median value of unmineralized samples). The formula applied was

$$SG = 0.0317 * (\%Pb + \%Zn) + 2.63$$

Figure 14-6 Scatterplot of SG vs % Pb+Zn



### 14.5 Variogram Analysis

Normal semi-variograms for Zn and Pb were modeled for the Lower E Zone using composites falling within the domain constraints in order to determine kriging parameters, search parameters and anisotropy. Single spherical structures were modeled in the plane of the zones with maximum ranges of approximately 50m plunging  $9^\circ$  towards an azimuth of  $37^\circ$ . The semi-major axis extended 33m, plunging  $-25^\circ$  towards  $303^\circ$ . The minor axes perpendicular to the zone geometry were estimated at 16.7m. The model parameters are listed in Table 14-9.

Table 14-9 Variogram models

Item	Axis	Azim	Plunge	co	c1	a1	c2	a2
Zn	Major	37.3	-9.4	9.8	3.48	19	7.81	50
	Semi-Major	302.7	-25.6	9.8	3.48	15	7.81	33
	Minor	325.8	62.5	9.8	3.48	5	7.81	16.7
Pb	Major	37.3	-9.4	0.46	0.296	19	0.202	50
	Semi-Major	302.7	-25.6	0.46	0.296	15	0.202	33.3
	Minor	325.8	62.5	0.46	0.296	5	0.202	16.7

Directional variograms for the Creek Zone did not have enough sample pairs available to provide discernible structures for modeling.

**14.6 Block Model and Grade Estimation Procedures**

Separate block models were created in Gemcom-Surpac Vision© software for the Lower E and Creek Zones using a parent block size 5 x 5 x 2.5 m with no sub-blocking in order to honor the minimum mining width of 2.5m. The model was rotated to match the average trend of the mineralized zones (Table 14-10).

**Table 14-10 Block model parameters – Lower E Zone**

	X	Y	Z
Origin	367500	5738000	1300
Extent	1500	1000	550
Block Size	5	5	2.5
Rotation	0°	28.5°	55.0°

**Figure 14-7 Block model parameters - Creek Zone**

	X	Y	Z
Origin	366790	5737620	1475
Extent	1100	800	350
Block Size	5	5	2.5
Rotation	0°	28.5°	55.0°

Zn and Pb grades within the Lower E Zone domains were estimated in two passes using both the ordinary kriging and inverse distance squared method. The first pass used a maximum anisotropic search equivalent to the maximum anisotropic variogram range and the second pass extended a maximum distance of 150 m. A maximum of 2 composites were permitted for a single hole in an attempt to limit smearing of grades along the minor axis.

Grades for the Creek Zone were only estimated using the inverse distance squared method.

Search parameters are summarized in Table 14-11. Block model statistics are shown in Table 14-12. The block model grade distribution is illustrated in Figure 14-8 to Figure 14-12.

**Table 14-11 Search parameters for Pb and Zn**

Pass	Search Distance (m)			Min # Composites	Max # Composites	Max/Hole
	9.4->37.3	-25.6->302.7	62.5->325.8			
1	50	33.3	16.7	3	12	2
2	150	100	50	2	12	2

**Table 14-12 Lower E Zone block model statistics by cut-off grade**

Cutoff Grade % Pb+Zn	KRIGED MODEL STATISTICS				ID2 MODEL STATISTICS			
	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn
0.0	11,411	4.11	0.80	4.91	11,411	3.97	0.77	4.74

Cutoff Grade % Pb+Zn	KRIGED MODEL STATISTICS				ID2 MODEL STATISTICS			
	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn
1.0	9,705	4.76	0.93	5.69	9,360	4.74	0.92	5.66
2.0	8,353	5.32	1.05	6.37	7,899	5.38	1.05	6.43
3.0	7,331	5.76	1.14	6.90	6,730	5.96	1.16	7.12
4.0	6,043	6.38	1.24	7.62	5,554	6.61	1.28	7.89
5.0	4,902	7.00	1.34	8.34	4,410	7.36	1.40	8.76
6.0	3,828	7.69	1.46	9.15	3,467	8.13	1.53	9.66
7.0	2,922	8.40	1.58	9.98	2,658	8.95	1.68	10.63
8.0	2,036	9.33	1.74	11.07	2,015	9.81	1.82	11.63
9.0	1,410	10.33	1.91	12.24	1,476	10.81	1.98	12.79
10.0	1,062	11.14	2.02	13.16	1,156	11.62	2.09	13.71

**Table 14-13 Creek Zone block model statistics by cut-off grade**

Cutoff Grade % Pb+Zn	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn
0.0	1,907	6.34	1.33	7.67
1.0	1,870	6.46	1.35	7.81
2.0	1,832	6.56	1.38	7.94
3.0	1,778	6.70	1.40	8.10
<b>4.0</b>	<b>1,679</b>	<b>6.92</b>	<b>1.45</b>	<b>8.37</b>
5.0	1,472	7.37	1.55	8.92
6.0	1,198	8.01	1.70	9.71
7.0	893	8.91	1.91	10.82
8.0	714	9.59	2.05	11.64
9.0	568	10.26	2.18	12.44
10.0	448	10.93	2.32	13.25

Figure 14-8 Block model grade distribution – Lower E Zone 101

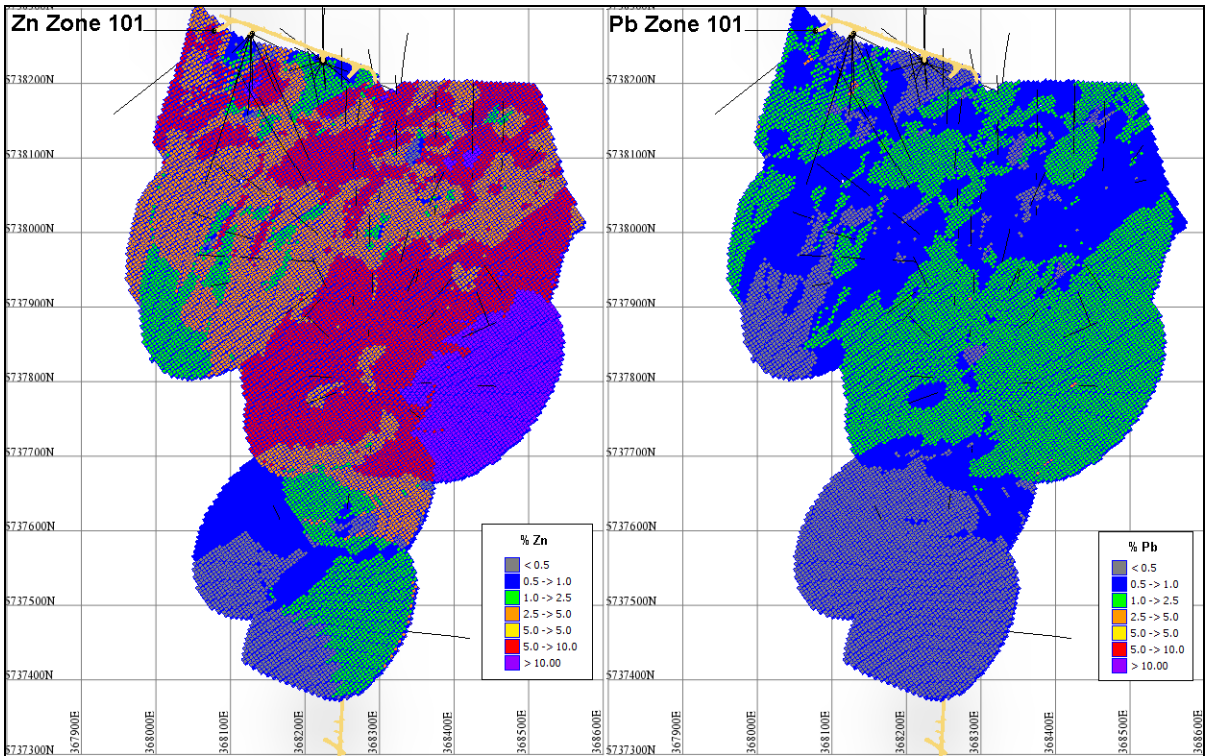


Figure 14-9 Block model grade distribution – Lower E Zone 102

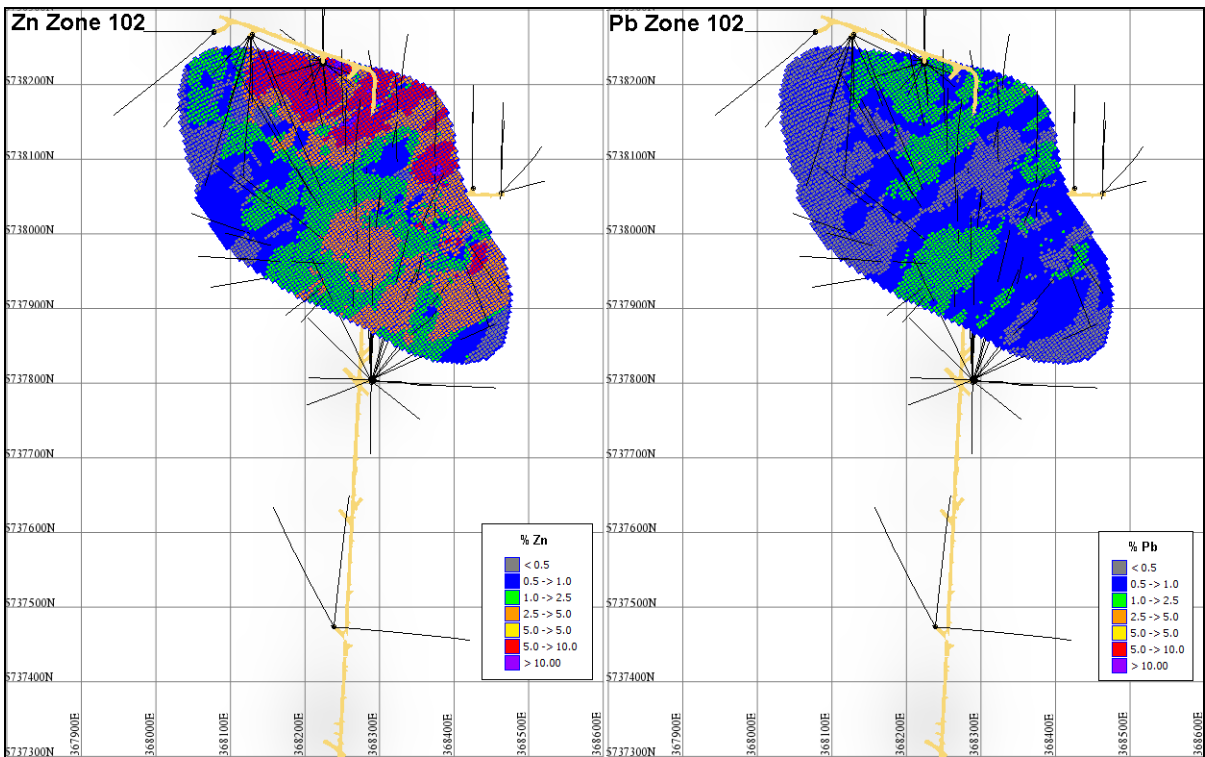


Figure 14-10 Block model grade distribution – Lower E Zone 103

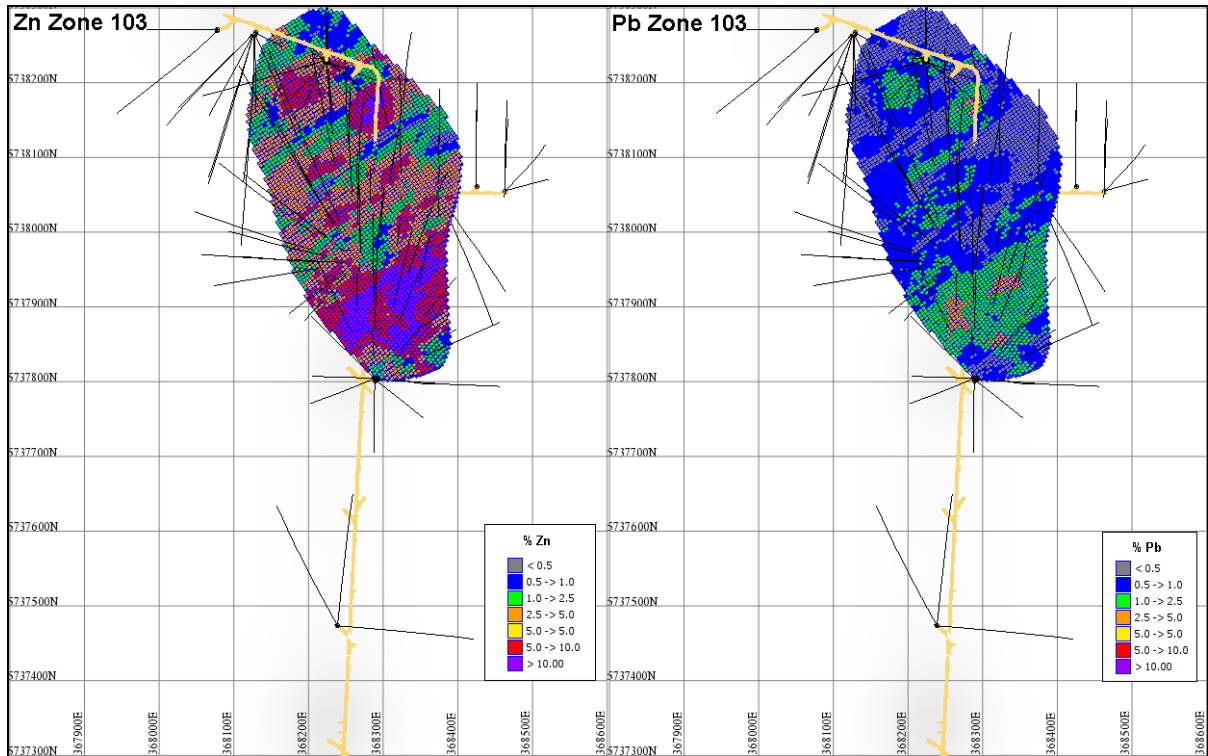


Figure 14-11 Block model grade distribution – Loer E Zone 104

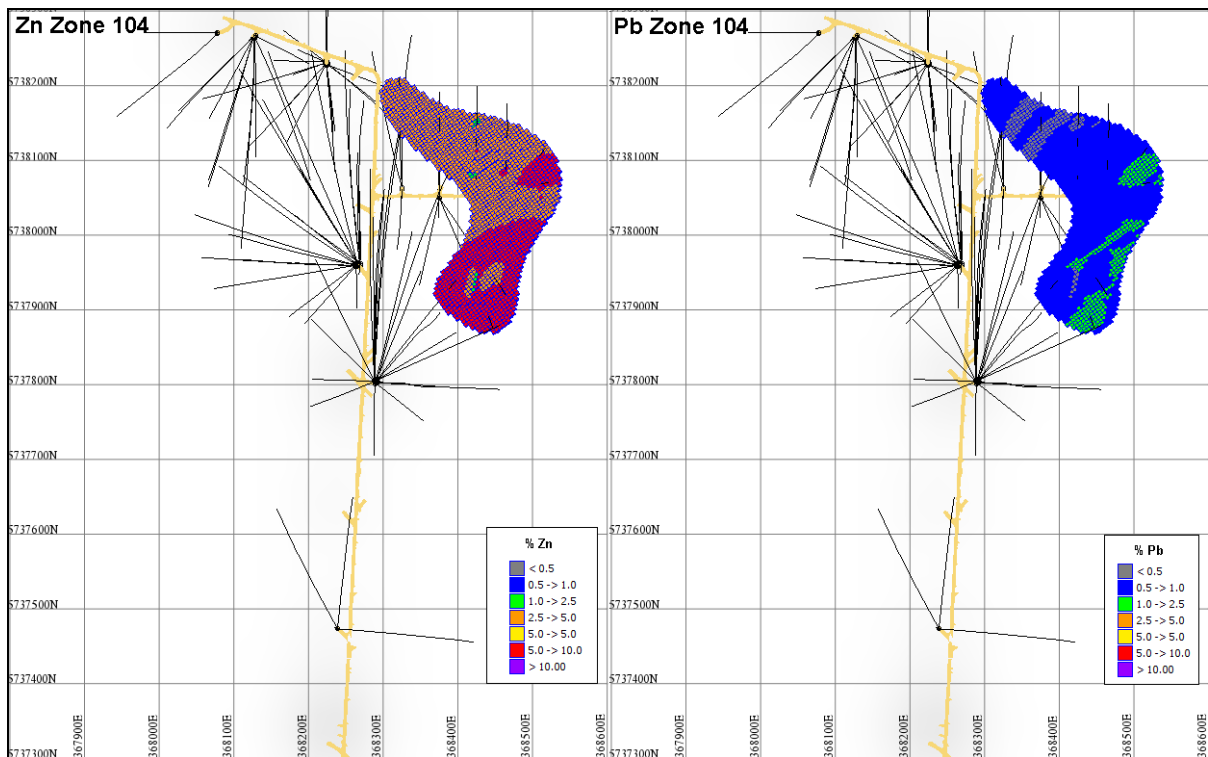




Figure 14-12 Block model grade distribution – Lower E Zone 105

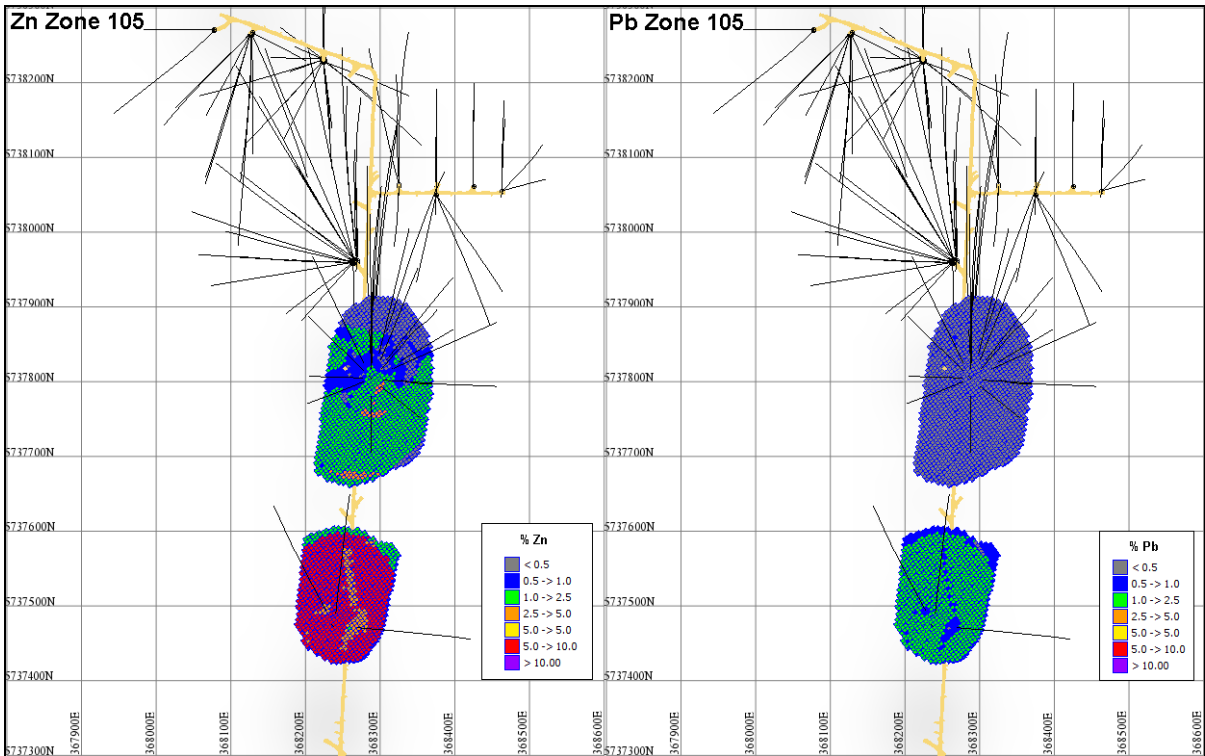


Figure 14-13 Block model Zn grade distribution - Creek Zone

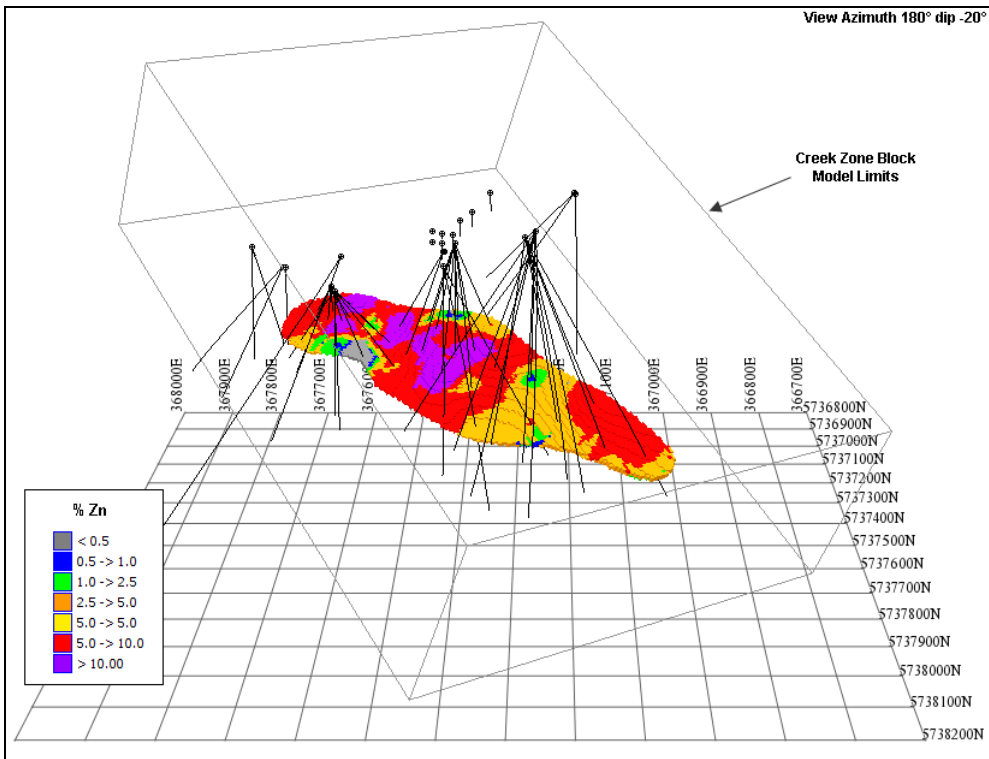
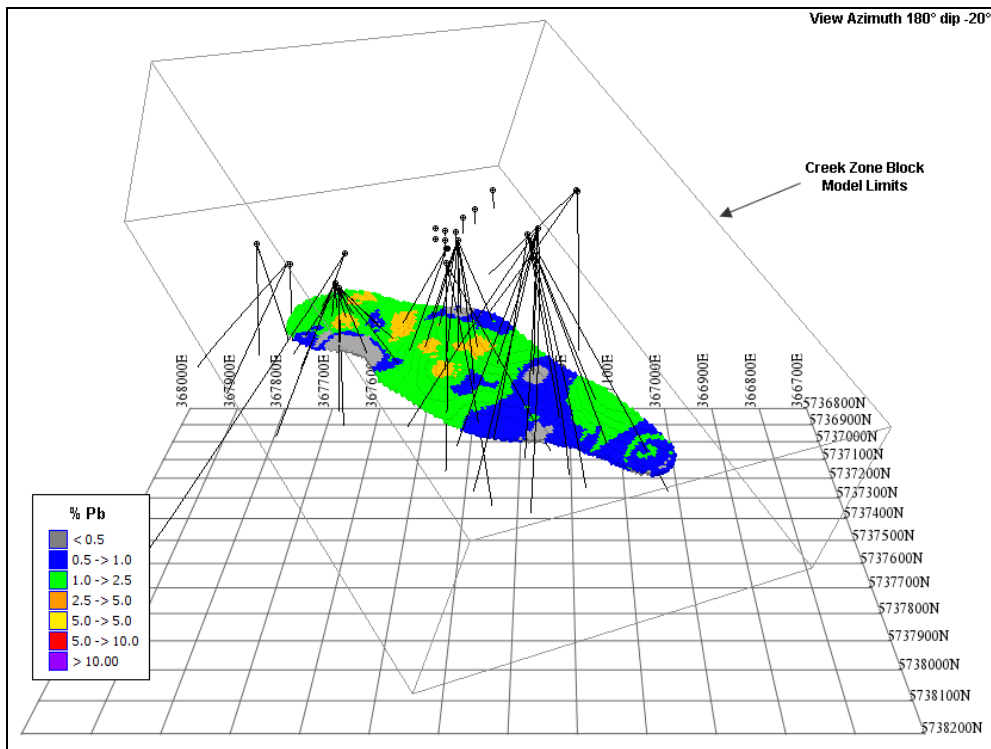




Figure 14-14 Block model Pb grade distribution - Creek Zone



## 14.7 Mineral Resource Classification

Resource classifications used in this study conform to the following definition from National Instrument 43-101:

### **Measured Mineral Resource**

*A 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.*

### **Indicated Mineral Resource**

*An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.*

**Inferred Mineral Resource**

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

No part of the resource model was classified as ‘measured’, largely due to the irregularity of the massive sulphide beds and the intruding pegmatites.

Estimated blocks in the Lower E Zone were initially classified as ‘indicated’ if they met the following conditions:

- Estimated in the 1<sup>st</sup> pass using a 50m anisotropic search or
- Estimated in the 2<sup>nd</sup> pass with the closest composite within 25m of the block centroid

All other estimated blocks were initially assigned to the ‘inferred’ category.

The areas of indicated blocks were then smoothed to eliminate spots of inferred blocks within indicated areas. This was done by digitizing regions in plan view surrounding these areas and upgrading block classification in areas of reasonable drill density.

The block classification for the Lower E Zone is illustrated in Figure 14-15 to Figure 14-17.

**Figure 14-15 Block model classification – Lower E Zones 101 and 102**

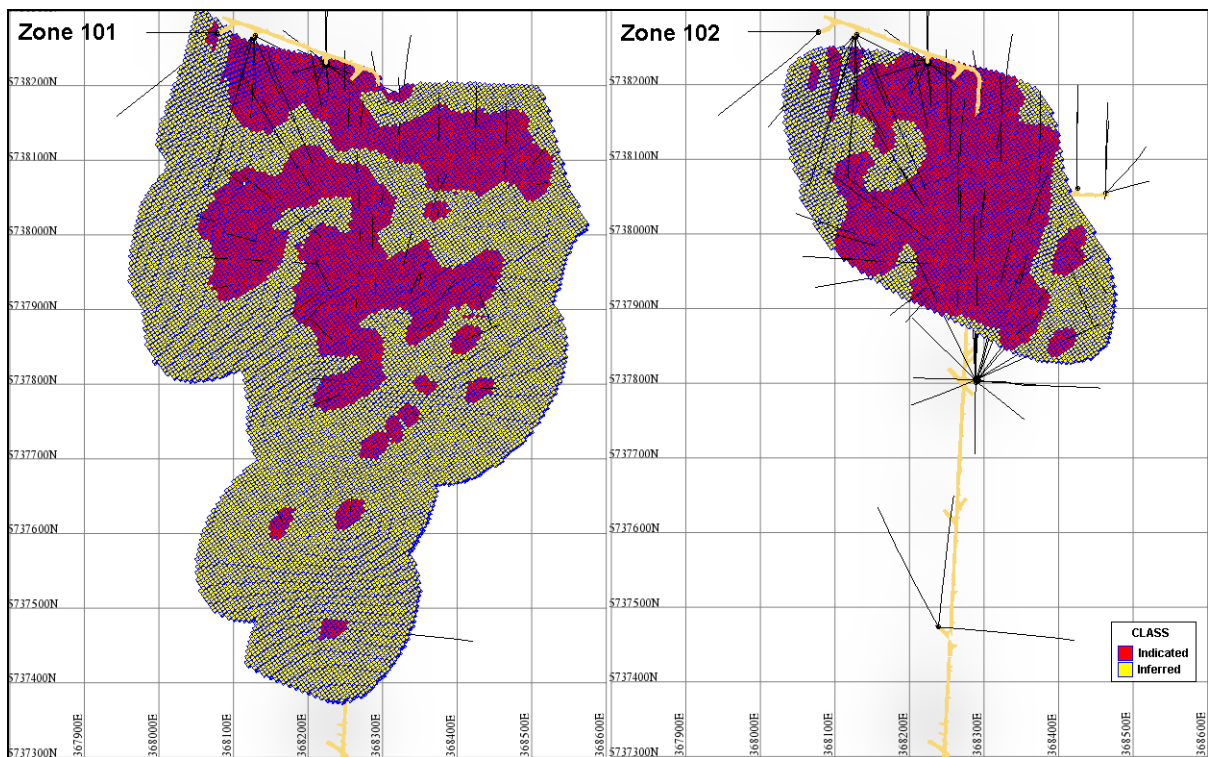


Figure 14-16 Block model classification – Lower E Zones 103 and 104

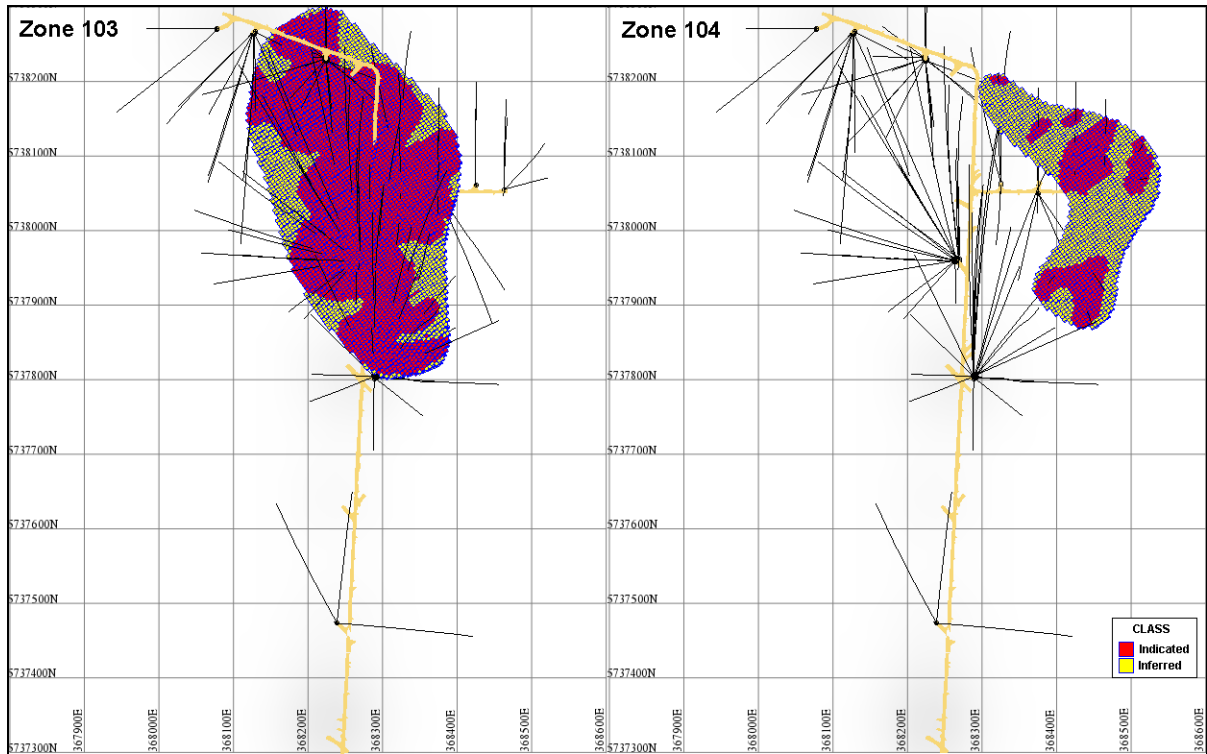
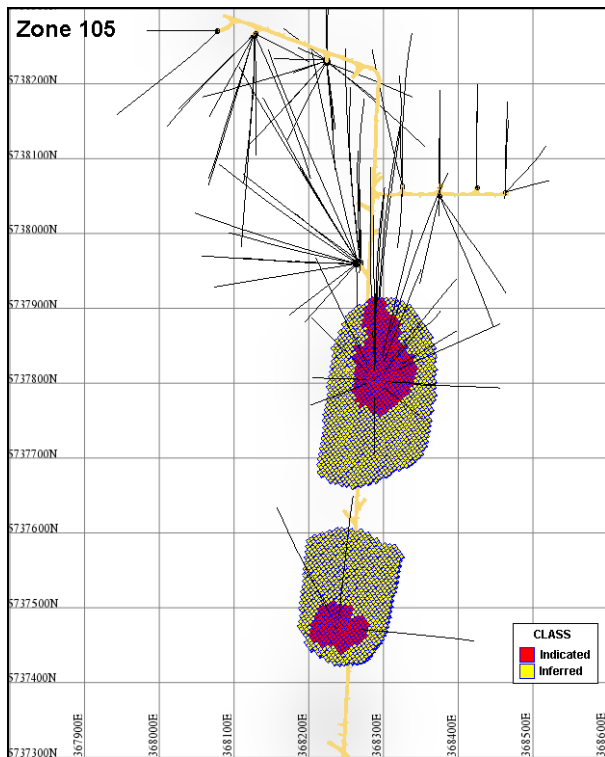


Figure 14-17 Block model classification – Lower E Zone 105



The Creek Zone mineral resource is classified as inferred as final collar surveys and pad elevations have not been completed for the 2010 and 2011 drilling and the TRIM topography is not of sufficient resolution to model the surface intersection of the zone.

#### 14.8 Model Validation

Model verification was carried out by visual comparison of blocks and sample grades in plan and section views. The estimated block grades showed reasonable correlation with adjacent composite grades.

A nearest neighbour estimate was also carried out using the same parameters as the other model runs for the Lower E Zone. The global mean grade comparisons between samples, composites and block model estimates show reasonable correlation (Table 14-14 and Table 14-15).

**Table 14-14 Global mean grade comparison – Lower E Zone**

Source	Zn %	Pb %
Samples (Diluted)	3.87	0.79
Composites	3.66	0.75
Kriged Model - Global	3.96	0.77
ID <sup>2</sup> Model - Global	3.92	0.76
NN Model - Global	4.03	0.76

**Table 14-15 Global mean grade comparison - Creek Zone**

Source	Zn %	Pb %
Samples (Diluted)	7.00	1.51
Composites	7.02	1.51
ID <sup>2</sup> Model	6.92	1.45

The kriged model was selected for resource reporting in the Lower E Zone as it is believed to represent a reasonable degree of smoothing and is the same method used for the Upper E Zone mineral resource.

#### 14.9 Cut-off Determination

A base case cut-off grade for combined Pb:Zn was determined by using the following cost/price assumptions.

**Table 14-16 Cut-off grade determination**

Mining cost US\$/t	\$35.00
Processing cost US\$/t	\$13.00
G&A US\$/t	\$5.20
Offsite Charges US\$/t	\$26.00
<b>Total Op Cost</b>	<b>\$79.20</b>
Recovery %	90%
Zinc Price US\$/lb	\$1.00
Lead Price US\$/lb	\$1.00
Pb+Zn cut-off %	4.0%

## 14.10 Mineral Resource Summary

The updated mineral resource for Ruddock Creek Lower E Zone is presented in the table below using a range of cut-offs with a base case of 4% combined Zn-Pb.

**Table 14-17 Ruddock Creek Mineral Resource Update - Lower E Zone (1 Mar 2012)**

Cutoff Grade % Pb+Zn	INDICATED				INFERRED			
	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn
3.0	3,311	5.51	1.13	6.64	4,020	5.98	1.14	7.12
<b>4.0</b>	<b>2,739</b>	<b>6.07</b>	<b>1.22</b>	<b>7.29</b>	<b>3,305</b>	<b>6.64</b>	<b>1.25</b>	<b>7.89</b>
5.0	2,143	6.73	1.34	8.07	2,758	7.22	1.35	8.57

The existing mineral resource for the Upper E Zone and the updated combined E Zone resource are presented in the following tables:

**Table 14-18 Ruddock Creek Mineral Resource - Upper E Zone (15 July 2009)**

Cutoff Grade % Pb+Zn	INDICATED				INFERRED			
	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn
3.0	2,139	7.27	1.51	8.78	455	5.74	1.13	6.87
<b>4.0</b>	<b>1,915</b>	<b>7.78</b>	<b>1.62</b>	<b>9.40</b>	<b>398</b>	<b>6.15</b>	<b>1.18</b>	<b>7.33</b>
5.0	1,630	8.47	1.78	10.25	332	6.61	1.27	7.88

**Table 14-19 Ruddock Creek Mineral Resource – E Zone Combined**

Cutoff Grade % Pb+Zn	INDICATED				INFERRED			
	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn
3.0	5,450	6.20	1.28	7.48	4,475	5.96	1.14	7.09
<b>4.0</b>	<b>4,654</b>	<b>6.77</b>	<b>1.38</b>	<b>8.16</b>	<b>3,703</b>	<b>6.59</b>	<b>1.24</b>	<b>7.83</b>
5.0	3,773	7.48	1.53	9.01	3,090	7.15	1.34	8.50

The initial inferred mineral resource for Ruddock Creek Creek Zone is presented in the table below using a range of cut-offs with a base case of 4% combined Zn-Pb.

**Table 14-20 Ruddock Creek Mineral Resource - Creek Zone (1 Mar 2012)**

Cutoff Grade % Pb+Zn	INFERRED			
	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn
3.0	1,778	6.70	1.40	8.10
<b>4.0</b>	<b>1,679</b>	<b>6.92</b>	<b>1.45</b>	<b>8.37</b>
5.0	1,472	7.37	1.55	8.92

The combined Ruddock Creek mineral resources tabulated below are from the Upper E, Lower E and the Creek Zone. No other zones on the property have enough recent drilling information to define a mineral resource.

**Table 14-21 Ruddock Creek Total Mineral Resource**

Cutoff Grade % Pb+Zn	INDICATED				INFERRED			
	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn
3.0	5,450	6.20	1.28	7.48	6,253	6.17	1.21	7.38
<b>4.0</b>	<b>4,654</b>	<b>6.77</b>	<b>1.38</b>	<b>8.16</b>	<b>5,382</b>	<b>6.69</b>	<b>1.31</b>	<b>8.00</b>
5.0	3,773	7.48	1.53	9.01	4,562	7.22	1.41	8.64

## 15 OTHER RELEVANT DATA AND INFORMATION

The authors are of the opinion that all known relevant technical data and information with regard to the Ruddock Creek Property has been reviewed and addressed in this Technical Report.

### 15.1 Adjacent Properties

The only property in the area is Jasper Mining Corporations Irony Property. They have completed airbourne geophysics and two campaigns of diamond drilling, the most recent in 2011. They have reported that no significant mineralization had been intersected by diamond drilling. There are no other known mineralized occurrences in the vicinity of the Ruddock Creek Property that the authors are aware of.

## 16 CONCLUSIONS

A stratabound massive sulphide horizon exists on the Ruddock Creek Property which is exposed at surface, from east to west, in the E, F, G, M, Creek, T, U, V, R and Q Zone outcrops. This horizon has been shown by drilling, underground development and geological mapping to be a continuous tabular sheet of mineralization, in excess of 5000 m along strike and 900 m down dip. The mineralization at Ruddock Creek has been subjected to multiple episodes of folding and metamorphism which has resulted in multiple mineralized horizons varying from less than 5 m to over 35 m in thickness. The zinc to lead ratio is relatively constant at approximately 5:1.

Underground development and drilling has defined a combined mineral resource at the E Zone and Lower E on the Ruddock Creek property. At a 4% Pb:Zn cutoff the current Mineral Resource contains an Indicated 4,654,000T of 6.77% Zn and 1.38% Pb and an Inferred 3,703,000T of 6.59% Zn and 1.24% Pb. This mineral resource remains open to the west, the down dip portion of the mineralized horizon. Surface drilling has defined an inferred resource of the Creek Zone of 1,679,000T of 6.92% Zn and 1.45% Pb at a 4% combined Zn:Pb cutoff. This mineral resource is open to the north, west and south. It is the authors' opinion that there is excellent potential to expand the base metal deposit on the Ruddock Creek Property.

The combined Ruddock Creek mineral resources presented in the table below are from the Upper E, Lower E and the Creek Zone. No other zones on the property have enough recent drilling information to define a mineral resource.

**Table 16-1 Ruddock Creek Total Mineral Resource**

Cutoff Grade % Pb+Zn	INDICATED				INFERRED			
	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn	Tonnes 000's	% Zn	% Pb	% comb Pb+Zn
3.0	5,450	6.20	1.28	7.48	6,253	6.17	1.21	7.38
<b>4.0</b>	<b>4,654</b>	<b>6.77</b>	<b>1.38</b>	<b>8.16</b>	<b>5,382</b>	<b>6.69</b>	<b>1.31</b>	<b>8.00</b>
5.0	3,773	7.48	1.53	9.01	4,562	7.22	1.41	8.64

The Creek Zone contains a mineralized horizon very similar in mineralogy and orientation to the Lower E Zone mineralization except it appears at a slightly higher elevation possibly due to faulting and the west side up-lifted. Drilling by Selkirk has shown this mineralization to be continuous for at least 300 m in a SE-NW direction by 600 m in an SE-NW direction, and to exhibit grades and thicknesses consistent with those observed at the E Zone. This mineralization dips northwest at 25 degrees and remains open both along strike and down dip. Extrapolating the geometry of the Creek Zone horizon it appears that it is a continuation of the T Zone located 600 m to the west, and may be continuous with the U Zone an additional 500m further west.

The relationship of the Creek Zone to the E Zone is not yet clear, and may represent a fault offset and up lift of the E Zone mineralization, or it could correspond with the mineralization encountered at the G and M Zones. If the Creek Zone mineralization does correspond to the G and M Zones then it represents a second sulphide horizon with a stratigraphic separation of approximately 600 m. Previous shallow drilling by Cominco in the G and M areas was based on the presence of surface mineralization discovered by Falconbridge. As the structural history of this area is not well understood the resolution of this question will require additional deep drilling in the area of the Creek Zone.

The V Zone was drilled supported by helicopter and a separate heli-camp from one drill pad. The drilling here was successful in intersecting the mineralization to a 400m depth below the pad. The drilling confirmed the same type of mineralization as in all other zones on the property but a different orientation of an east-west strike and a dip of -65 degrees north.

The Q Zone drilling was completed using a B-20 skid mounted drill which was modified to drill up holes. Up holes were used as steep terrain and rocky outcrop prevented access being built to above the mineralization. The drilling was successful in intersecting the targeted mineralization and confirmed a dip of approximately 30 degrees northeast and a northwest strike.

Metallurgical Testing and Mineral Processing studies completed by SGS-Lakefield Research of E Zone material has resulted in a process flowsheet involving heavy liquid separation and flotation leading to a lead recovery of 90.4% to a concentrate grade of 63.2% Pb, and zinc recovery of 86.1% to a concentrate grade of 52.9%. Further upside may be possible with further testing, as the majority of zinc loss was in the cleaner scavenger tailings. The silver content of the lead concentrate was 362 g/t.



## 17 RECOMMENDATIONS

Additional exploration work is recommended to extend the significant high grade massive sulphide bodies being explored on the Ruddock Creek Property. The zones that require additional infill drilling are the E and Lower E. The Lower E needs additional delineation drilling from underground to expand the resource.

The Creek and T Zones are probably the same mineralized sheet but confirmation of this requires a panel of holes in the Clear Lake area. The area between the Creek and U Zones has never been drilled but this area should be later in the future once the orientation of the Creek and U Zones are more understood.

A high priority area is the steeply dipping V Zone that requires delineation drilling for two reasons. Firstly, drilling in this area could significantly increase the resource of a more easily mined mineralized block due to the topography and steep dip with good mining widths. Secondly, if the V Zone proves to contain significant tonnage and grade then a concentrator/mill located in Oliver Creek area should be included in a Preliminary Economic Assessment (PEA). The PEA should be completed after the next phase of diamond drilling.

Environmental data collection should continue with additional flora and fauna studies along with continuation of the water quality and meteorological data gathering. Metallurgical studies should include additional HLS testing and floatation tests to determine the optimal circuits for this ore. An additional weather monitoring station should be installed in Oliver Creek in the Q-V Zone area.

The budget estimate provided in Table 17-1 provides a breakdown of the estimated costs involved with the work programs described above.



**Table 17-1 Budget Estimate**

<b>Ruddock Creek Project 2012 Budget Estimate</b>		
<b>Item</b>	<b>Description</b>	<b>Cost Estimate</b>
Access	Plow access road and site, Start April.	\$40,000
Road Construction	Access roads to the V Zone, Pass and Creek Zone drill pads (2km total).	\$150,000
De-watering	De-watering of underground workings to the 600m distance mark.	\$50,000
Underground Drilling	7,000m of underground diamond drilling from 450 and 600m drill bays.	\$805,000
V Zone Surface Drilling	Heli supported, 2 diamond drills, 5,000m total.	\$600,000
Creek Zone Surface Drilling	Skid mounted surface drilling, 4,000m total.	\$440,000
Mining	50m 3.5m x 3.5m heading and slashing into ore.	\$250,000
Fuel	UG/Camp gensets, vehicles, drills, equipment for 5 months.	\$410,000
Mining Pump/Vent	2 months extra cost of ventilation and pumping equipment.	\$220,000
Helicopter Support	Weekly helicopter support. 4 months.	\$200,000
Geological Support	Manager, senior geo., 2 junior geo., 4 tech. 5 months.	\$390,000
Camp Support	Camp manager, mech/elec, cooks and helpers. 5 Months.	\$315,000
Camp and Field Costs		\$150,000
Analytical Cost	All assays from diamond drilling.	\$75,000
Communications	Camp and heli-camp satellite system incl. Phones, 5 Months.	\$20,000
Environmental Sampling	Weather station, water flow meters, water sampling.	\$150,000
First Nations Consultation		\$200,000
Consultants		\$30,000
Metallurgy		\$200,000
Surveying		\$20,000
Reports		\$50,000
Scoping Study		\$150,000
Miscellaneous travel/accom.		<u>\$50,000</u>
<b>Sub Total</b>		<b>\$4,965,000</b>
15% Contingency		\$744,750
<b>Total</b>		<b><u>\$5,709,750</u></b>

## 18 REFERENCES

**Chapman, J. (2006)**, Diamond Drilling Report on the Ruddock Creek Property, Kamloops Mining Division, Revelstoke, BC. BC Assessment Report 28908, February 2007.

**Chapman, J. (2007)**, NATIONAL INSTRUMENT 43-101 TECHNICAL REPORT on the RUDDOCK CREEK PROPERTY for Selkirk Metals Corp. and Doublestar Resources Ltd., June 12, 2007

**Chapman, J., Kemp R (2007)**,: 2007 Diamond Drilling Report on the Ruddock Creek Property, Kamloops Mining Division, Revelstoke, BC, internal company report, May 2008

**Chapman, J. (2009)**, **2008** Diamond Drilling Report on the Ruddock Creek Property, Kamloops Mining Division, Revelstoke, BC. BC Assessment Report 30756, April 2009

**Church, C. (2005)**, Technical Report on the Ruddock Creek Property, Kamloops Mining Division, Revelstoke, BC. For Selkirk Metals Corp., April 15, 2005

**Church, C. (2006)**, 43-101 Technical Report on the Ruddock Creek Property, Kamloops Mining Division, Revelstoke, BC. For Selkirk Metals Corp., March 17, 2006

**Brown, D.H., Fraser, D. (1973)**: Report on Airborne Geophysical Survey – Top, In and Light Groups; by authors for Wesfrob Mines Ltd., B.C. Assessment Report 04567.

**Enkon Environmental Ltd. (2008)**: Ruddock Creek Environmental Study Program prepared for Selkirk Metals Corp., October 2008.

**Fyles, J.T., (1970)**: The Jordan River Area near Revelstoke British Columbia; A preliminary study of lead zinc deposits in the Shuswap Metamorphic Complex; B.C. Department of Mines and Petroleum Resources, Bulletin 57.

**Gowans, B.,(2006)**: Environmental Monitoring Report – Ruddock Creek Property, by Enkon Environmental for Selkirk Metals Holding Corp., November 30, 2006.

**Gray, P.D., Lewis, P.D. (2001)**: Geological Assessment Report on the Ruddock Creek; by authors for Doublestar Resources Ltd., B.C. Assessment Report 26487.

**Hodgson, G.D. (1976)**: Diamond Drilling Report on the IT 27 Claim (Ruddock Creek Area); by author for Cominco Ltd., B.C. Assessment Report 05990.

**Hoy, T. (2000)**: Sedex and Broken Hill-Type Deposits, Northern Monashee Mountains, Southern British Columbia. In BCGS, Geological Fieldwork 2000, Paper 2001-1.

**Lajoie, J.J. (1982)**: Geophysical Report on the Borehole Pulse EM, UTEM and VLF Electromagnetic Surveys and Magnetometer Survey on the Ruddock Creek Property; by author for Cominco Ltd., B.C. Assessment Report 10710.

**Lewis, P.D. (2000):** Structural Analysis of the Ruddock Creek Zn + Pb Property; consulting report prepared for Doublestar Resources Ltd., December 6, 2000.

**Marshall, B., (1978):** Structural Investigations of the Ruddock Creek Property. Internal consulting report prepared for Cominco Ltd., September, 1978.

**Mawer, A.B., (1976):** Ruddock Creek Termination Report 1976; Internal document prepared by Cominco Exploration Ltd., November 30, 1976.

**Miller-Tait, J., (2005):** Diamond Drilling Report on the Ruddock Creek Property, IT 2 Mineral Claim, for Cross Lake Minerals Ltd., B.C. Assessment Report 27654, February 24, 2005

**Miller-Tait, J., (2006):** Diamond Drilling Report on the Ruddock Creek Property, Tenure #516624, for Selkirk Metals Holdings Corp., B.C. Assessment Report 28385, May 12, 2006.

**Miller-Tait, J., (2006):** Airborne Geophysical Survey Report on the Ruddock Creek Property, Tenure Nos. 516176, 516624 and 518989, for Selkirk Metals Holdings Corp., B.C. Assessment Report 28493, July 31, 2006.

**Miller-Tait, J., (2010):** Diamond Drilling Report on the Creek Zone, Ruddock Creek Property, Tenure #516624, for Selkirk Metals Corp. B.C. Assessment Report 32092, February 11, 2011.

**Morris, H.R., (1965):** Report on Ruddock Creek Lead-Zinc Property, 1961 to 1963; Internal report prepared for Falconbridge Nickel Mines Ltd., March 12, 1965.

**Nichols, R. (1977):** Diamond Drilling Report on the IT Group, by author for Cominco Ltd., B.C. Assessment Report 06625.

**Paterson, D.M. (1975):** Diamond Drilling Report on the IT 4 (Ruddock Creek Group); by author for Cominco Ltd., B.C. Assessment Report 05625.

**SGS Lakefield (2007):** Report 11480-001 Oct. 24, 2007, An Investigation into THE RECOVERY OF LEAD AND ZINC FROM THE RUDDOCK CREEK DEPOSIT.

**SGS Lakefield (2009):** Report 11480-002, April 20, 2009, An Investigation into ENVIRONMENTAL AND GEOTECHNICAL CHARACTERISATION OF THE RUDDOCK CREEK ORE AND WASTE PRODUCTS.

**Simpson, R.G., Chapman, J. (2009):** Mineral Resource Estimate, Ruddock Creek Deposit. 43-101 Technical Report prepared for Selkirk Metals Corp., July 15, 2009

**Certificate of Author**

I, Ronald G. Simpson, P.Geo, residing at 1975 Stephens St., Vancouver, British Columbia, V6K 4M7, do hereby certify that:

1. I am president of GeoSim Services Inc.
2. This certificate applies to the report entitled “Technical Report, Ruddock Creek Project, British Columbia” dated March 1, 2012.
3. I graduated with an Honours Degree of Bachelor of Science in Geology from the University of British Columbia in 1975. I have practiced my profession continuously since 1975. My relevant experience includes 37 years’ experience in mining and mineral exploration and 25 years’ experience in mineral resource estimation.
4. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia (Registered Professional Geoscientist, No. 19513) I am a “qualified person” for the purposes of NI 43-101 due to my experience and current affiliation with a professional organization as defined in NI 43-101.
5. I have visited the property on 3 occasions, most recently on July 20, 2011.
6. I am independent of the issuer applying all of the tests in section 1.4 of National Instrument 43 101.
7. I have had prior involvement with the property that is the subject of the Technical Report. The nature of which involves the preparation of a Technical Report titled “Technical Report, Ruddock Creek Project, British Columbia” dated July 15, 2009.
8. I am responsible for the preparation of Section 14 of the Technical Report. All other sections are collaboration.
9. I have read National Instrument 43 101 and Form 43 101F1, and the Technical Report has been prepared in compliance with that instrument and form.
10. As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

DATED this 1st day of March 2012

“Ronald G. Simpson”

Ronald G. Simpson, P.Geo.

## Certificate of Author

I, Jim Miller-Tait P.Ge., residing at 828 Whitchurch St., North Vancouver, British Columbia V7L 2A4, do hereby certify That:

I am a Professional Geoscientist and am currently employed in the position of Exploration Manager with Imperial Metals Corporation of Suite 200 – 580 Hornby St., Vancouver, BC.

I am not independent of Imperial Metals Corporation in reference to Section 1.4 of National Instrument 43-101 as I hold the position of Exploration Manager with the Company.

I graduated from the University of British Columbia with a Bachelor of Sciences Degree in Geology (1987);

I have been practicing my profession as a geologist in mineral exploration and mining continuously since graduating in 1987;

I am a registered member in good standing as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia License #19172;

As a result of my experience and qualifications I am a Qualified Person as defined in National Policy 43-101.

I am a co-author of the report titled “Technical Report, Ruddock Creek Project, Kamloops Mining Division, BC” for Selkirk Metals Corp. dated March 1, 2012. I am not responsible for section 14 and all other sections are a collaboration with the other independent author. The information provided by the various parties is to the best of my knowledge and experience correct.

The observations, conclusions and recommendations contained in the report are based on supervision of the described program, field examinations and the evaluation of results of the exploration programs completed by the operator of the property since 2004.

I am not aware of any material fact or material change with respect to the subject matter of this technical report, which is not reflected in this report, the omission to disclose which would make this report misleading.

I have read National Instrument 43-101, Form 43-101FI and this report has been prepared in compliance with NI 43-101 and Form 43-101FI.

Dated at Vancouver, British Columbia, this 1st day of March 2012.

\_\_\_\_\_”Jim Miller-Tait”\_\_\_\_\_

Jim Miller-Tait, P.Ge.