

**TECHNICAL REPORT  
ON THE  
MEL ZINC-LEAD-BARITE PROPERTY**

WATSON LAKE MINING DISTRICT  
SOUTHEAST YUKON

NTS Map 95D/6  
60°23' North Latitude; 127°20' West Longitude

PREPARED FOR:

**BENZ MINING CORP.**

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## **1.0 SUMMARY**

Benz Mining Corp. (“Benz”) retained H. Leo King & Associates Inc. and Giroux Consultants Ltd. to complete a National Instrument 43-101 (“NI 43-101”) Technical Report for the purpose of supplying updated summary information on the Mel property as well as providing a current resource estimate for the Mel Main Zone and making recommendations for further exploration.

This Technical Report was written in compliance with the disclosure and reporting requirements set forth in the Canadian Securities Administrator’s NI 43-101, Companion Policy 43-101 CP and Form 43-101 F1.

This Technical Report provides a current independent resource estimate for the Mel Main Zone, which is the most advanced of four exploration targets on the Mel property. No drilling has been completed on the Property since the issue of the 2014 NI 43-101 technical report for Silver Range (King and Giroux, 2014), and therefore this resource is still current. The zinc equivalent cut-off used for resource reporting has been adjusted to reflect current metal price forecasts.

The Mel property is located in southeast Yukon and consists of 576 mineral claims. Benz has the option to purchase 100% interest in the Property, which is subject only to two (2), 1% net smelter return royalties. One of the royalties is limited to metals only, and the other royalty can be bought out for a cash payment of \$1 million.

The mineral claims comprising the Mel property are referred to as the “Property” throughout this Technical Report. The Property encompasses an area of 11,451 hectares and is located 80 kilometers east-northeast of the town of Watson Lake. The Property extends 47 km south from the main exploration targets to the Alaska Highway, following the route of a proposed haulage road.

### **1.1 GEOLOGY AND MINERALIZATION**

The Property is underlain by a Cambrian to Ordovician-age sequence of marine sediments with minor coeval volcanic rocks, which host stratabound zinc-lead-barite mineralization. The host stratigraphy is broadly folded into a north-trending overturned syncline. This synclinal structure has been disrupted by north and northeast-trending faults having both vertical and lateral displacements.

Four zones of zinc-rich mineralization have been identified on the Property – the Mel Main, Jeri, Jeri North and Mel East Zones. All of the zones occur within the same general part of the stratigraphic section, but there are local variations. At the Mel Main Zone and in the southern parts of the Jeri and Mel East Zones, the zinc-rich mineralization is hosted within stratigraphic intervals that are underlain by crypto-grained limestone and overlain by a distinctive

phyllite/mudstone unit which grades upward into a wavy-banded argillaceous limestone. At the Jeri North Zone, the equivalent stratigraphic interval contains zinc mineralization in a massive chert horizon that is overlain by a volcanic flow and volcanoclastic sequence, then by wavy-banded argillaceous limestone. Three (3) of the 4 sediment-hosted zinc-rich zones discovered to date, the Mel Main, Jeri, and Jeri North Zones, have been tested by drilling.

At the Mel Main Zone, mineralization consists of coarse-grained sphalerite and galena disseminated throughout a mixture of mudstone, silica, carbonate and coarse crystalline barite. Minor amounts of fine-grained, sparsely disseminated pyrite occur locally, but overall, pyrite accounts for less than 2% of the sulphides. The Mel Main Zone has a strike length of about 700 meters and extends from surface to a depth of at least 500 meters. It remains open to extension at depth and has potential for a significant increase in size.

The mineralization at the Mel Main, Jeri, Jeri North and Mel East Zones is sediment-hosted, stratabound and epigenetic. It has not been reliably categorized as to its deposit type. The zones exhibit certain features that are characteristic of carbonate replacement, sedimentary exhalative and unconformity/karst-related deposits, but none of these models is an ideal fit for the mineralization on the Property.

## **1.2 HISTORY AND EXPLORATION**

The Property was first staked by prospectors J. Melynychuk and T. Flint in 1967 and it has subsequently been explored by a number of owners and operators, including Newmont Mining Corporation Ltd., Granby Mining Corp., St. Joseph Exploration Ltd., Sulpetro Ltd., Novamin Resources Ltd., Barytex Resources Ltd., Cominco Ltd., Kobex Minerals Inc., and most recently Silver Range Resources (Silver Range).

Exploration activities have included numerous soil geochemical surveys, geophysical surveys (IP, gravity, VLF and magnetics), LIDAR surveys, trenching, diamond drilling, metallurgical test work, and several resource estimations. A 1989 pre-feasibility study by Sandwell Swan Wooster Inc. concluded that the Mel Main Zone was potentially viable and provided recommendations for further exploration and development.

To date, a total of 90 diamond drill holes (16,759 m) have been completed on the Property. The Mel Main Zone has been systematically drill tested but remains open to depth. The Jeri and Jeri North Zones have received limited, reconnaissance-level drilling, and the Mel East Zone is untested by drilling.

### 1.3 HISTORICAL METALLURGICAL TESTWORK

Preliminary metallurgical testing on drill core from the Mel Main Zone by Lakefield Research in 1979 indicates that after grinding to 100 mesh, the mineralization responded well to flotation and yielded concentrates ranging from 60.9% to 64.7% zinc, 78.0% to 79.6% lead, and 90.3% to 94.4% barite with recoveries of 90.3% to 96.2% for zinc, 97.7% to 98.0% for lead, and 88.0% to 90.0% for barite. A later, larger scale test was done for barite concentrate market evaluation. A concentrate grading 95.1% barite, with a recovery of 92.6%, was produced from 12 kilograms of feed grading 53.5% barite.

### 1.4 MINERAL RESOURCE ESTIMATES

The Inferred Mineral Resource for the Mel Main Zone comprises 5,280,000 tonnes grading 6.51% zinc (Zn), 1.86% lead (Pb) and 45.05% barite (BaSO<sub>4</sub>). This resource is stated above a 5.0% zinc-equivalent (ZnEQ%) cut-off grade. A summary of Inferred Mineral Resources at various zinc-equivalent cut-off grades is provided in Table 1.1.

The Mel Main Zone mineral resource estimate was completed by Gary Giroux, P. Eng., MASc. of Giroux Consulting Ltd. Mr. Giroux is a qualified person and independent of Benz, based on the guidelines provided by NI 43-101.

Cut-Off (ZnEQ%)	Tonnes > Cut-off (Tonnes)	Grade > Cut-off			
		Zn(%)	Pb(%)	ZnEQ(%)	BaSO <sub>4</sub> (%)
<b>3.5</b>	5,610,000	6.31	1.82	8.15	44.24
<b>4.0</b>	5,550,000	6.35	1.83	8.19	44.33
<b>4.5</b>	5,440,000	6.42	1.84	8.28	44.70
<b>5.0</b>	<b>5,280,000</b>	<b>6.51</b>	<b>1.86</b>	<b>8.38</b>	<b>45.05</b>
<b>5.5</b>	5,100,000	6.60	1.88	8.49	45.07
<b>6.0</b>	4,840,000	6.71	1.91	8.64	44.94
<b>6.5</b>	4,460,000	6.87	1.96	8.84	44.71
<b>7.0</b>	3,970,000	7.08	2.00	9.10	44.59

Data generated during the various drill programs conducted at Mel Main Zone were independently reviewed by Giroux Consultants Ltd. In 2012, 107 pieces of drill core were selected and re-sampled by taking ¼ of the core. In general, the duplicate assays match the original assays very well and show no analytical bias.

The resource estimate for the Mel Main Zone was initiated using a wire-frame 3D solid model in “GEMS.” Three-dimensional solids were manually digitized from the available drill data and were used to constrain the interpolation of mineralization. The model was constructed based

upon mineralogical boundaries and structural controls. Two solids were created, each representing a separate mineralogical domain (“Mineralized Solid” and “Barite Shell”).

Drill holes were “passed through” these geological solids with the entry and exit points recorded. Using this information, the assays were “back-tagged” with different codes if inside or outside the solids. Of the 64 supplied drill holes, 48 intersected the Mineralized Solid.

A block model with dimensions 10 meters north-south, 5 meters east-west and 5 meters vertical was superimposed over the domain solids. For each block, the percentage below surface topography and within each mineralized solid was recorded.

The bulk density for rock within the Mel Main Zone was established from 47 specific gravity determinations. A specific gravity for each domain was calculated by using a regression equation and the estimated values for lead, zinc and barite in the two mineralized domains and the waste domain. A nominal specific gravity of 1.8 was applied to overburden.

Uniform, two meter long, down-hole composites were produced to honour the Mineralized Solids and Barite Shell. Grades for the elements of interest were interpolated into blocks within the Mineralized Solid and Barite Shell using Ordinary Kriging. The kriging exercise was completed in a series of four passes. Appropriate block model validation techniques for resource estimation at this stage of project development were applied.

## **1.5 BARITE MARKETING STUDIES**

A historical barite marketing study was carried out on the Property by MineStart Management Inc. in 1989 to evaluate potential marketability of barite products (Slim, 1989). This study concluded that the Property offers potential for production of large tonnages with an overall grade of 52% barite. Due to its location, the Property could provide a competitive advantage over barite from more distant sources. In addition to revenue from barite sales, the study also noted potential capital cost benefits due to a reduction in the size of a tailings disposal facility.

World Industrial Minerals completed a recent marketing study in September 2014 (Guilinger, 2014) for Silver Range. This study concluded, based on a review of historical test work, that the Property should be able to produce a saleable barite product. Based on current market demand, it recommended at an initial sales rate of 50,000 metric tonnes per year, at a price of \$100 USD/tonne (Free on Board (FOB) mine site) should be achievable. The study also noted potential concerns with regards to mercury, cadmium and base metal concentrations in the barite product, and recommended that follow-up test work be conducted to verify acceptable metal levels.

## **1.6 INTERPRETATION AND CONCLUSIONS**

The zinc-lead-barite zones on the Property are sediment-hosted, stratabound and epigenetic and occur at a recognizable stratigraphic interval.

The host rocks are Cambrian to Ordovician-age marine carbonate and clastic sediments with minor volcanic rocks, which are broadly folded into a north-trending, overturned syncline that is cut by a number of north and northeast-trending faults having both vertical and lateral displacements.

The Mel Main Zone consists of zinc-lead-barite mineralization that occurs on the western limb of the syncline within a lensoid body of mudstone, silica and carbonate. The mineralized body is underlain by crypto-grained limestone and overlain by a distinctive phyllite/mudstone unit that grades upward into wavy-banded argillaceous limestone.

An Inferred Resource at the Mel Main Zone is estimated at 5,280,000 tonnes of 6.51% Zn, 1.86% Pb and 45.05% barite using a 5% zinc equivalent cut-off. In-fill drilling to up-grade the resource is warranted. The deposit is open to extension down dip, with potential for a significant increase in tonnage.

The Jeri Zone, located 4 kilometers northeast of the Mel Main Zone, is situated on the eastern limb of the same syncline that hosts the zinc-lead-barite mineralization at the Mel Main Zone. At the Jeri Zone, the crypto-grained limestone unit that lies in the footwall of the Mel Main Zone has been altered to zinc-bearing hydrothermal dolomite and silicified dolomite. The zinc mineralization has been exposed by limited trenching and shallow drilling, and there is potential for additional discoveries within this thick dolomitized section of limestone. An untested geophysical anomaly at the south end of the Jeri Zone is interpreted to be located at the base of the dolomitized limestone and represents an attractive drill target.

At Jeri North Zone, located five kilometers north of the Jeri Zone on the same limb of the syncline, coarse-grained sphalerite occurs within a chert unit that is capped by a volcanic flow and tuff sequence. The mineralized chert rests on the same crypto-grained limestone that forms the base of the Mel Main Zone. The chert unit and volcanic sequence are not present at the Mel Main and Jeri Zones.

There is untested potential within a three kilometer long portion of the favorable stratigraphy, which lies between the Jeri and Jeri North Zones, and within another four kilometer long section that extends northward from the Jeri North Zone.

The Mel East Zone consists of zinc showings that are interpreted to occur along a faulted off-set or fold repeated section of the same stratigraphic sequence that hosts the Mel Main, Jeri

and Jeri North Zones. Anomalous zinc-lead soil geochemistry and a coincident IP anomaly have defined a target that has not yet been tested by drilling or trenching.

Based on the amount and nature of the mineralization discovered to date, it is concluded that the Property offers attractive potential for extension of known zones and discovery of additional zinc-rich mineralization. Exploration at the Mel Main Zone has outlined a mineral resource of potential economic interest and initial metallurgical test work has produced encouraging results. Further work within and around the Mel Main, Jeri, Jeri North and Mel East Zones is warranted.

## **1.7 RECOMMENDATIONS**

Benz should conduct additional mapping, sampling, trenching and diamond drilling to determine the potential for expansion along strike and down-dip of the Mel Main Zone. Trenching and drilling should also be done to further assess the potential of the Jeri, Jeri North and Mel East Zones. Further metallurgical test work and specific gravity studies should be undertaken using core from diamond drilling. Environmental, geotechnical and heritage baseline studies should be initiated. Road access and airstrip maintenance should be undertaken in conjunction with the exploration.

The proposed work outlined above should be completed in two phases. The Phase 1 budget is estimated to be \$149,820, and the Phase 2 budget to be \$1,831,500.

## **2.0 INTRODUCTION**

This Technical Report has been prepared at the request of the Management of Benz Mining Corp. (Benz) in order to summarize results of historic exploration on the Property and provide an updated Inferred Mineral Resource estimate for the Mel Main Zone. The mineral resource estimate was prepared using drill data compiled during 2011 and 2012 by Kobex Minerals Inc., and by Silver Range Resources (Silver Range) in 2014 and 2015, from diamond drill programs carried out on the Mel Main Zone during the period from 1973 to 1994.

This Technical Report was written in compliance with disclosure and reporting requirements set forth in the Canadian Securities Administration's current "Standards of Disclosure for Mineral Projects" under the provisions of NI 43-101, Companion Policy 43-101CP and Form 43-101F1.

Zinc-lead-barite mineralization was first discovered on the Property by prospectors in 1967. Exploration work has been carried out on the Property intermittently over a period of 45 years by a number of companies. The most recent exploration was done in 2012.

The 257 mineral claims covering the main areas of interest on the Property, the "Core Claims", were purchased by Silver Range from Kobex Minerals Inc. in June 2014. Subsequently

another 319 claims were staked along two access routes extending from the Core Claims to the Alaska Highway.

In March 2017 Benz obtained the right to purchase 100% interest in the Property from Silver Range for a total consideration of \$2,700,000. Benz is currently listed on the NEX board of the TSX Venture Exchange (TSX-V) and has completed this Technical Report in partial fulfillment of requirements to graduate to and be listed on the TSX-V. The 257 core claims are subject to a 1% Net Smelter Return (“NSR”) royalty payable to Whirlwind Capital Ltd. on metals produced from the Core Claims and a second 1% NSR royalty payable to Kobex Minerals Inc. on any minerals or metals produced from the Core Claims, which can be purchased for a sum of \$1 million.

H. Leo King, P. Geo., was retained to prepare Sections 1 to 13 inclusive and Sections 15 to 21 inclusive of this Technical Report. Giroux Consultants Ltd. was retained to prepare the mineral resource estimate as set out in Section 14. H. Leo King supervised several exploration programs on the Property during the period from 1976 to 1989 and managed exploration programs during 1993, 1994 and 1995. He last visited the Property on June 7, 2012. Subsequent to his last visit, Silver Range completed aerial photography, LIDAR topographic surveys, a heritage resource overview study, a barite marketing study and a resource estimation. These desktop studies conducted subsequent to Mr. King's last visit were based upon air photos and information collected in 2012 and earlier. Mr. King has reviewed these studies and does not consider there to be a material change to the scientific and technical information since his last visit.

### **3.0 RELIANCE ON OTHER EXPERTS**

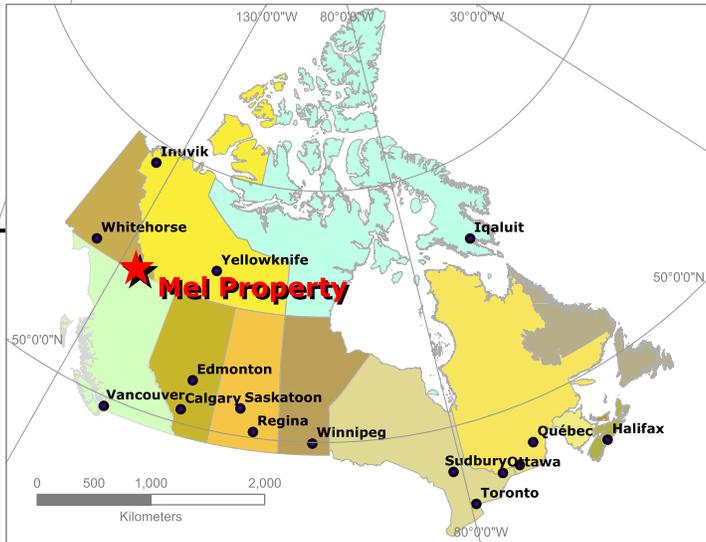
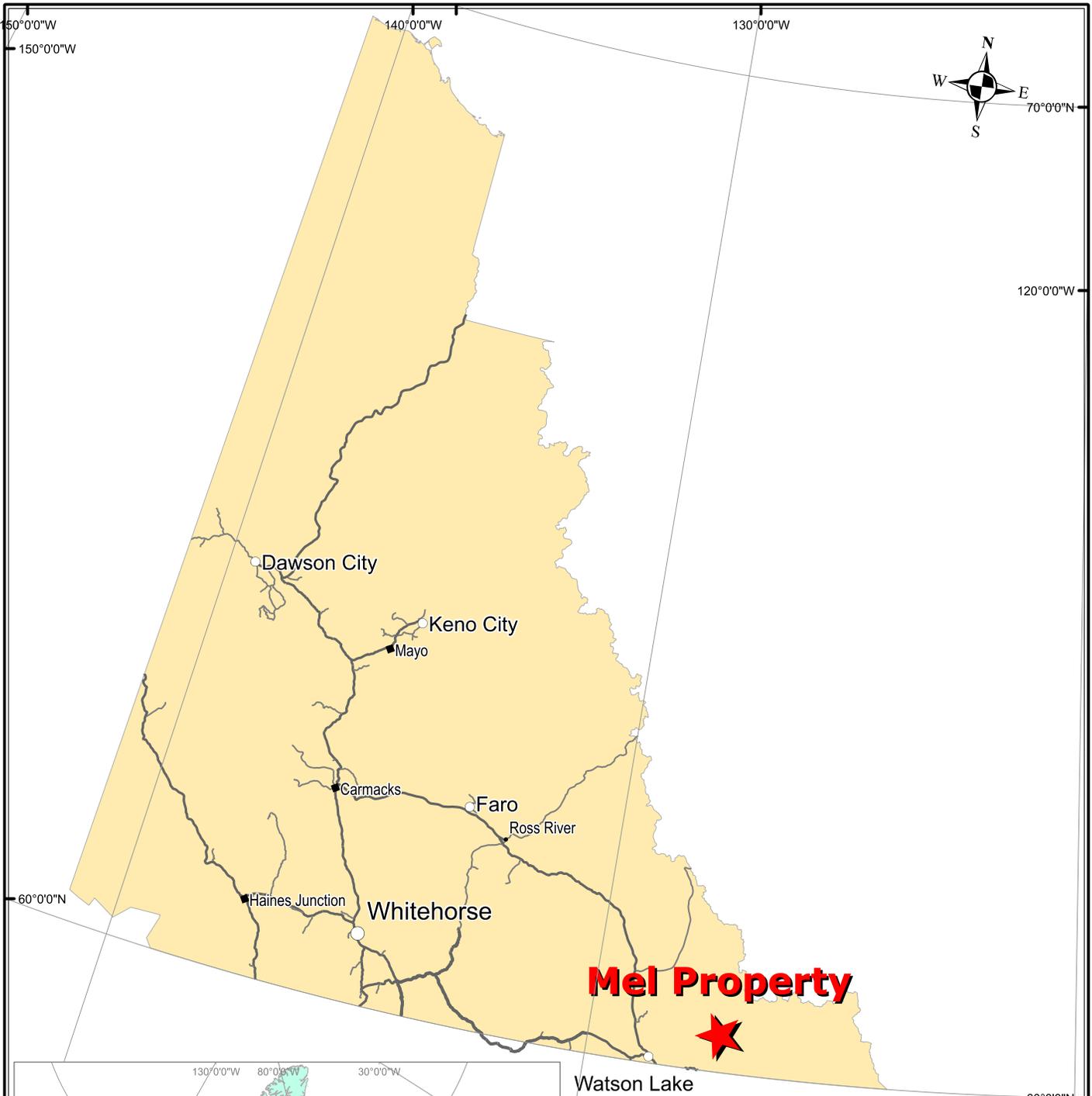
Mineral claim information was provided by the office of the Yukon Mining Recorder at Watson Lake and reviewed by Mr. King on March 20, 2017. Approximate claim locations shown on government claim maps is referred to on maps that accompany this Technical Report. A legal survey of the mineral claims has not been conducted to determine the exact claim locations.

### **4.0 PROPERTY LOCATION AND DESCRIPTION**

The Property is located 80 kilometers east-northeast of the town of Watson Lake, Yukon in the Watson Lake Mining District, as shown in Figure 4.1.

The Property is located on NTS 95D/6 map sheet (Otter Creek). The Core Claims are centered at latitude 60° 23'N and longitude 127° 20'W, and at UTM coordinates 6,694,000N and 591,000E (NAD 83 – Zone 9). The south limit to the Property is approximately latitude 60° 00'N and the north limit is approximately latitude 60° 28'N. The east limit to the Property is approximately longitude 127° 17'W and the west limit is approximately longitude 127° 46'W.

The Property consists of 576 mineral claims covering approximately 11,451 hectares. A list of the claims and information regarding them is shown in Table 4.1. The claim locations shown



<b>SILVER RANGE RESOURCES LTD.</b>		
Title: <b>LOCATION &amp; ACCESS</b> <b>MEL PROPERTY</b>		
H. LEO KING & ASSOCIATES INC.		
Scale: 1:6,500,000	Source: Natural Resources Canada	Figure: <b>4.1</b>
Date: March 2017	Drawing: Terracad Geoscience Services Ltd.	Datum: Long/Lat

on Figure 4.2 were taken from claim map 95D/6, which was produced by Natural Resources Canada, using National Topographic Data Base 2003.

In March 2017, Benz obtained the right to purchase 100% interest in the Property for total consideration of \$2,700,000, payable in increments annually over 5 years, with \$475,000 required to be paid in cash and the balance of \$2,225,000 payable in shares or cash at the Company's election. The Property is subject only to a 1% NSR royalty payable on metal production from the Core Claims to Whirlwind Capital Ltd. and a second 1% NSR royalty payable on mineral and metal production from the Core Claims to Kobex Minerals Inc., which can be purchased for a sum of 1 million dollars (\$1,000,000).

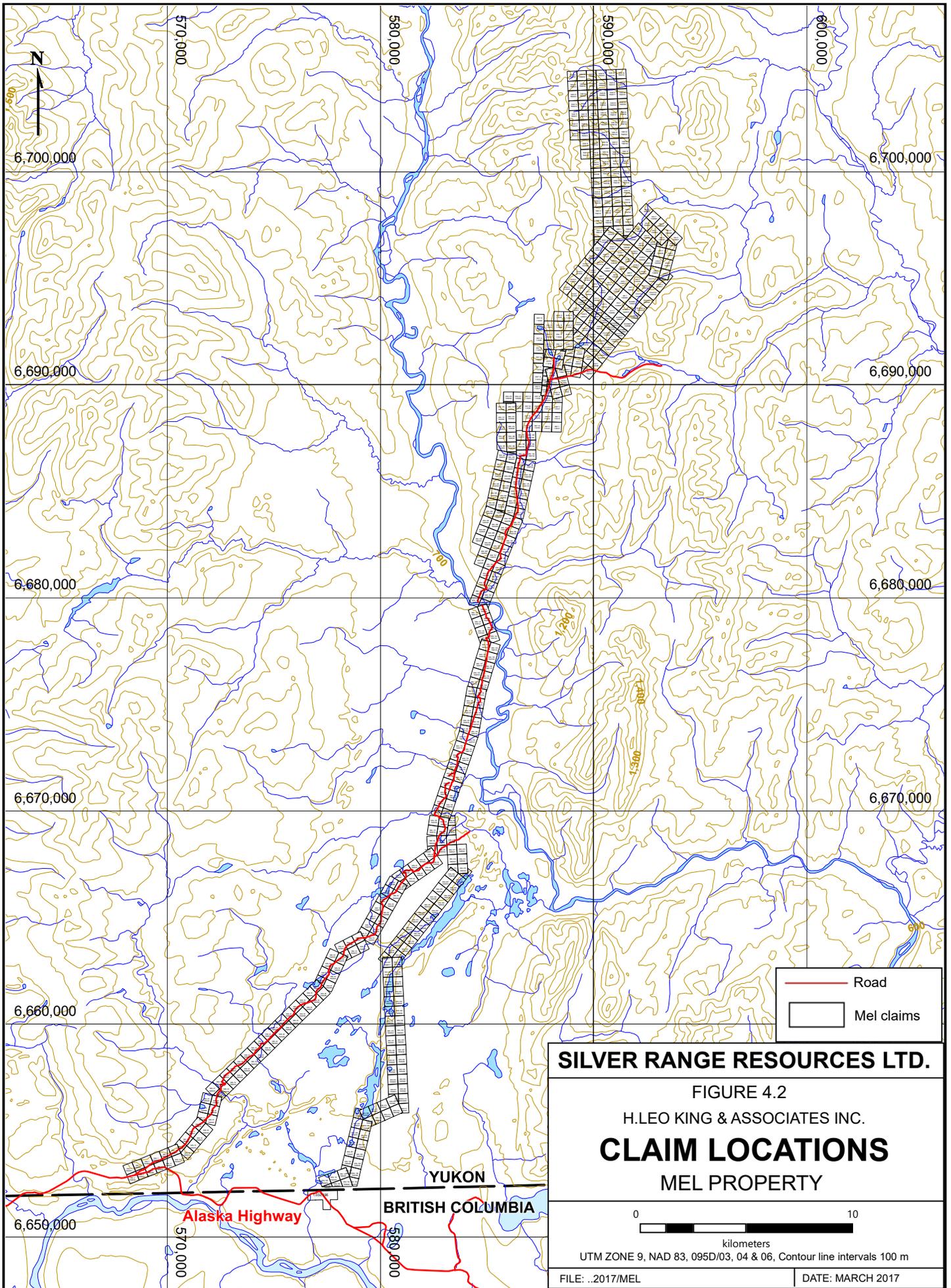
In Yukon, mineral claims can be maintained in good standing by performing approved exploration work to a dollar value of one hundred dollars (\$100) per claim per year or by payment of \$100 in lieu of work per claim per year. Exploration and development expenditures in the current anniversary year may be applied to a maximum of five (5) future anniversary years, and those anniversary years may be added to any previous surplus anniversary years. Sufficient expenditures have been filed to keep all claims within Yukon, comprising the Property in good standing until at least April 3, 2024. One claim, located in British Columbia, is set to expire on November 13, 2017.

Exploration work in the Yukon is subject to the Mining Land Use Regulations of the Yukon Quartz Mining Act and to the Yukon Environmental and Socio-Economic Act. Yukon Environmental and Socio-Economic Assessment Board recommendations must be issued and a Mining Land Use approval must be obtained, before advanced exploration may be conducted.

A Mining Land Use Approval and Approved Operating Plan (LQ00431) was issued for the Property in August 2015 allowing for exploration activities to be conducted to August 2025. Pre-season and post-season reports are required to be filed each year.

The Property is subject to regular inspections by Mining Land Use officials. There are no known environmental liabilities except to reclaim roads prior to the expiration of the current Mining Land Use approval. The author does not know of any surface rights impediments to the Property.

The Property is located within the traditional territory of the Kaska First Nation, which has not yet signed a Land Claims agreement with the governments of Yukon and Canada.



**TABLE 4.1 MEL PROPERTY – CLAIM STATUS**

<u>Claim Name</u>	<u>Grant Number</u>	<u>Mining District</u>	<u>Expiry Date</u>	<u>Owner<sup>(1)</sup></u>
Andy 1-8	YA72509-YA72516	Watson Lake	April 3, 2024	AC 81
Boz 1-4	YA66985-YA66988	Watson Lake	April 3, 2024	AC 81
Chungo 1-8	YA66946-YA66953	Watson Lake	April 3, 2024	AC 81
Dave 1-8	YA72501-YA72508	Watson Lake	April 3, 2024	AC 81
Edy 1-7	YA66962-YA66968	Watson Lake	April 3, 2024	AC 81
Hose 1-8	YA66919-YA66926	Watson Lake	April 3, 2024	AC 81
Jean 1-4	Y72731-Y72734	Watson Lake	April 3, 2024	AC 81
5-10	Y72961-Y72966	Watson Lake	April 5, 2024	AC 81
11-21	Y74418-Y74428	Watson Lake	April 3, 2024	AC 81
Jeri 1-8	YA66931-YA66938	Watson Lake	April 3, 2024	AC 81
Joe 1-2	YA45269-YA45270	Watson Lake	April 3, 2024	AC 81
Joni 1-8	YA66846-YA66853	Watson Lake	April 3, 2024	AC 81
Keli 1-4	YA66842-YA66845	Watson Lake	April 3, 2024	AC 81
5-8	YA66927-YA66930	Watson Lake	April 3, 2024	AC 81
MELBC <sup>(2)</sup>	1032196	B.C.	November 13, 2017	AC 81 <sup>1)</sup>
Mel 1-188 <sup>(2)</sup>	YE60001-YE60188	Watson Lake	April 3, 2024	AC 81
189-318 <sup>(2)</sup>	YE60459-YE60588	Watson Lake	April 3, 2024	AC 81
Mel 11-16	Y22230-Y22235	Watson Lake	April 3, 2024	AC 81
Mumbo 1-8	YA66977-YA66984	Watson Lake	April 3, 2024	AC 81
Ott 1-8	YA66954-YA66961	Watson Lake	April 3, 2024	AC 81
Ralfo 1-7	YA66939-YA66945	Watson Lake	April 3, 2024	AC 81
Sam 1-86	YB46141-YB46226	Watson Lake	April 3, 2024	AC 81
Sin 1-8	YA66989-YA66996	Watson Lake	April 3, 2024	AC 81
Sov 1-6	YA28600-YA28605	Watson Lake	April 3, 2024	AC 81
Tomi 1-8	YA66969-YA66976	Watson Lake	April 3, 2024	AC 81
Wet 1-16	Y83309-Y83324	Watson Lake	April 3, 2024	AC 81
25-32	Y83225-Y83332	Watson Lake	April 3, 2024	AC 81
Yang 1-6	YA66997-YA67002	Watson Lake	April 3, 2024	AC 81

(1) AC 81 – Archer Cathro and Associates (1981) Ltd.

(2) Claims NOT subject to any NSR

The claims are registered in the name of Archer Cathro, which holds them in trust for Benz.

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

The Property is located about 400 kilometers east of the city of Whitehorse, in southeast Yukon. Access to the Property is by helicopter or fixed wing aircraft from the town of Watson Lake, located on the Alaska Highway about 80 kilometers to the west-southwest of the Property. Seasonal access is provided by a bush trail/winter road, which is approximately 47 kilometers

long and leaves the Alaska Highway at a point 77 kilometers by road east of Watson Lake, following a northerly route through the gentle terrain to the Property. A 640 meter long airstrip, which requires minor repair, is located on the Property.

The Alaska Highway provides a link to the Port of Skagway located 670 kilometers by road to the west of the Property. Rail access is available at the town of Fort Nelson, 510 kilometers by road to the southeast. The communities of Lower Post and Watson Lake, are the nearest population centers.

The climate at the Property is characterized by long, cold winters and short, moderate summers. Precipitation is moderate and winter snow accumulation is in the order of 80 centimeters. Drilling can be carried out in all seasons, but is not recommended during the spring break-up.

With the exception of a single claim located in BC, the surface rights are held by the government of Yukon and water rights are under jurisdiction of the Territorial Water Board. Any mining operation would require regulatory approvals. There is no electrical power available at the Property. However, a large thermal coal resource is located 10 kilometers north of the Property. Water from small lakes and streams on the Property provide sufficient water for camp and diamond drilling requirements. There are ample areas suitable for potential plant sites, tailings storage and waste disposal on the Property.

The majority of supplies and services required for mineral exploration and mining are available in Whitehorse. Many supplies and services are also available in Watson Lake including hotels, restaurants, stores, a hospital, an airport, charter aircraft and heavy equipment.

The Property is situated within the Liard Plateau on the southern fringe of the Logan Mountains. The terrain is characterized by subdued topography with local elevations ranging from 900 meters at valley bottoms to 1,200 meters at hill tops. The Property is entirely below tree line, and vegetation consists of spruce, pine and balsam with willow and alder comprising much of the understory. Most of the area is in varying stages of regeneration following forest fires.

## **6.0 HISTORY**

Historical exploration was largely compiled from assessment reports submitted to the Yukon Mining Recorder and from internal company reports and memorandum. A summary of historical exploration work on the Property is provided in Table 6.1.

Extensive exploration work was carried out on the Property by several operators at various times between 1967 and 1997. The Property was dormant from 1997 to 2012. Results of previous exploration work, including location and extent of known mineralization, geochemical and geophysical anomalies, trenches and drill holes, are illustrated on Figures 6.1, 6.2, 6.3, and 6.4.

# Legend

- Diamond drill hole
- Geophysical Anomaly**
- G - Gravity anomaly
- IP - I.P. anomaly
- ┆ Bedding
- ↘ Schistosity
- ↻ Fold overturned

## Topography

- ~ Creek
- Drill road
- ☪ Lake
- ☪ Swamp

## Geology

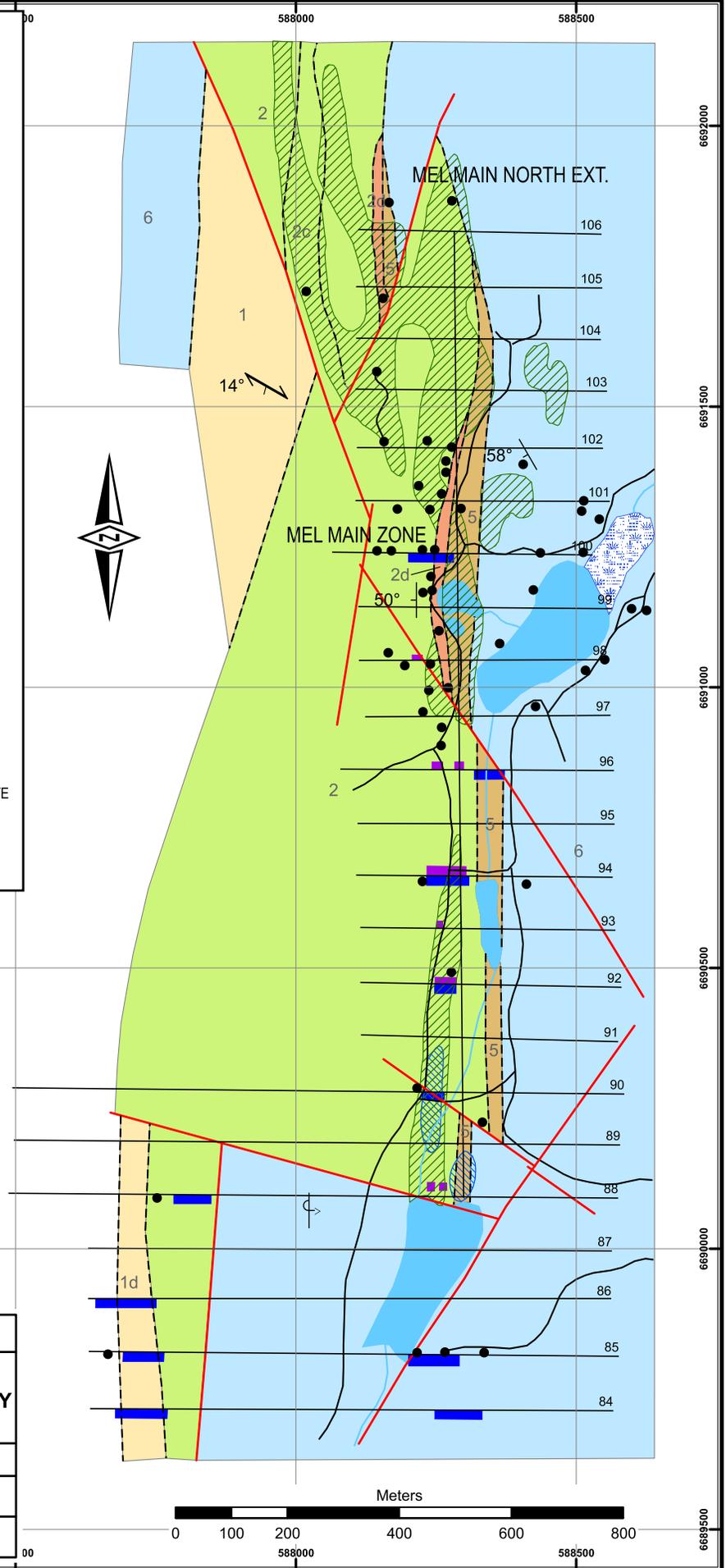
- - - Contact
- Fault

## Soil Geochemistry

- ▨ Zn > 300 ppm
- ▨ Pb > 80 ppm

## Geological Unit

- 1 - SILICEOUS SEDIMENTS AND LIMESTONE
- 1d - MUDSTONE
- 2 - CRYPTOGRAINED LIMESTONE
- 2c - SILICIFIED LIMESTONE +/- DOLOMITE
- 2d - LIMESTONE, INCLUDES 2c WITH ZINC +/- LEAD +/- BARITE
- 5 - CALCAREOUS PHYLLITE/MUDSTONE
- 6 - WAVY BANDED, SILTY LIMESTONE

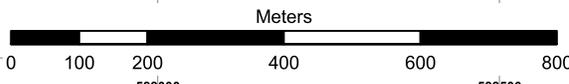


### SILVER RANGE RESOURCES LTD.

Title: **MEL MAIN ZONE COMPILATION:  
GEOLOGY, GEOPHYSICS & GEOCHEMISTRY**  
MEL PROPERTY

H. LEO KING & ASSOCIATES INC.

Scale:	Author: H.L. King	Figure: 6.1
Date: March 2017	Drawing: Terracad Geoscience Services Ltd.	Datum: NAD 83/ Z 9



### Legend

- Claim boundary
- Diamond drill hole
- Creek
- Drill road
- Lake
- Swamp

### Geophysical Anomaly

- Chargeability
- Resistivity high
- Resistivity low

### Geology

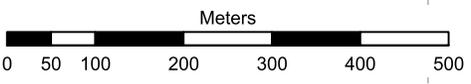
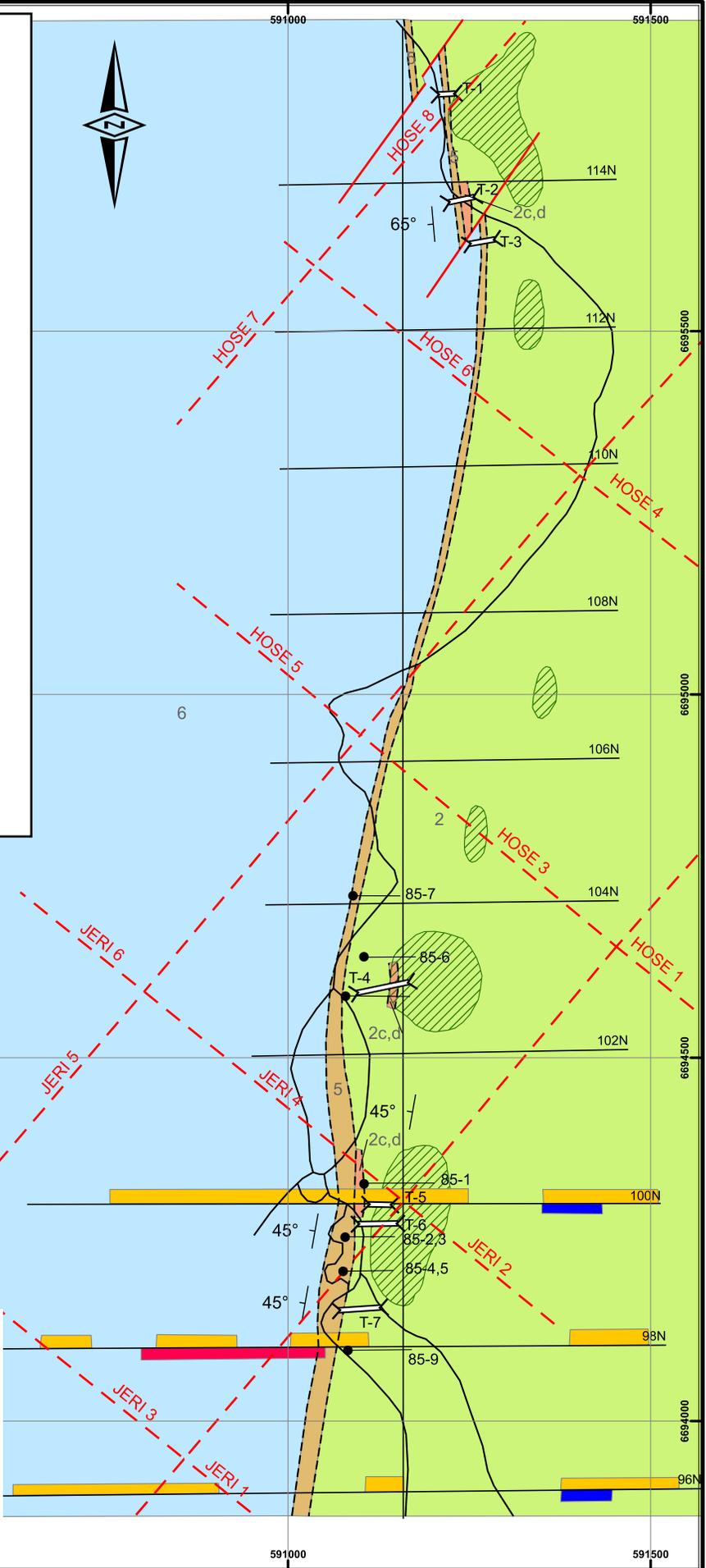
- Contact
- Fault
- Trench
- Bedding

### Soil Geochemistry

- Zn > 300 ppm
- Pb > 80 ppm

### Geological Unit

- 1d - MUDSTONE
- 2 - CRYPTOGRAINED LIMESTONE
- 2c - SILICIFIED LIMESTONE +/- DOLOMITE
- 2d - LIMESTONE, INCLUDES 2c WITH ZINC +/- LEAD +/- BARITE
- 5 - CALCAREOUS PHYLLITE/MUDSTONE
- 6 - WAVY BANDED, SILTY LIMESTONE



<b>SILVER RANGE RESOURCES LTD.</b>		
Title: <b>JERI ZONE COMPILATION: GEOLOGY, GEOPHYSICS &amp; GEOCHEMISTRY MEL PROPERTY</b>		
H. LEO KING & ASSOCIATES INC.		
Scale:	Author: <b>H.L. King</b>	Figure: <b>6.2</b>
Date: <b>March 2017</b>	Drawing: <b>Terracad Geoscience Services Ltd.</b>	Datum: <b>NAD 83/ Z 9</b>

# Legend

-  Pond
-  Swamp
-  Claim Boundary
-  Diamond drill hole

## Geophysical Anomaly

-  Chargeability
-  Resistivity high
-  Resistivity low

## Soil Geochemistry

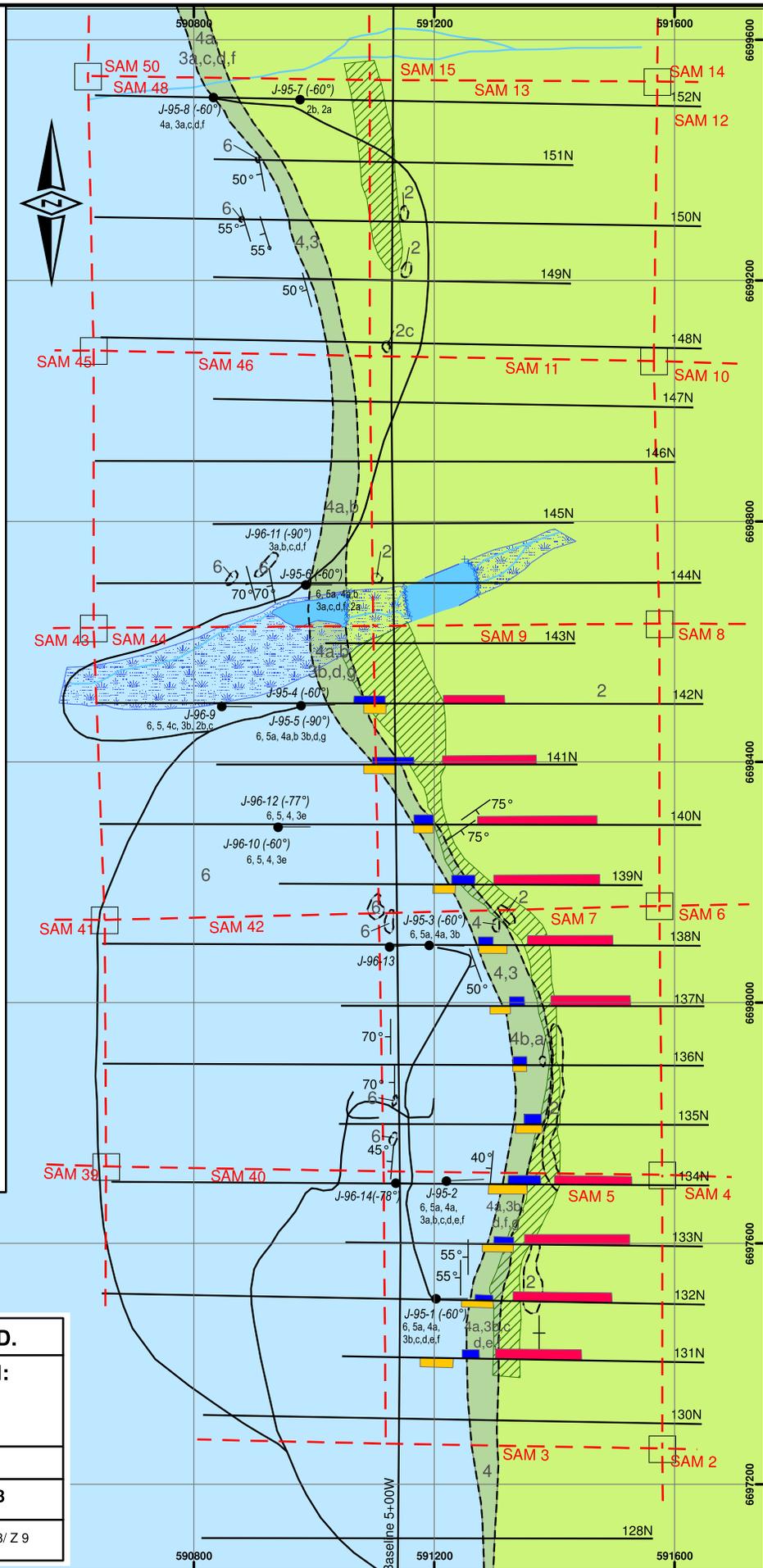
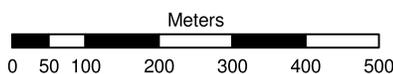
-  >Zn 300ppm

## Geology

-  Contact
-  Fault
-  Bedding
-  Bedding, vertical
-  Claim post

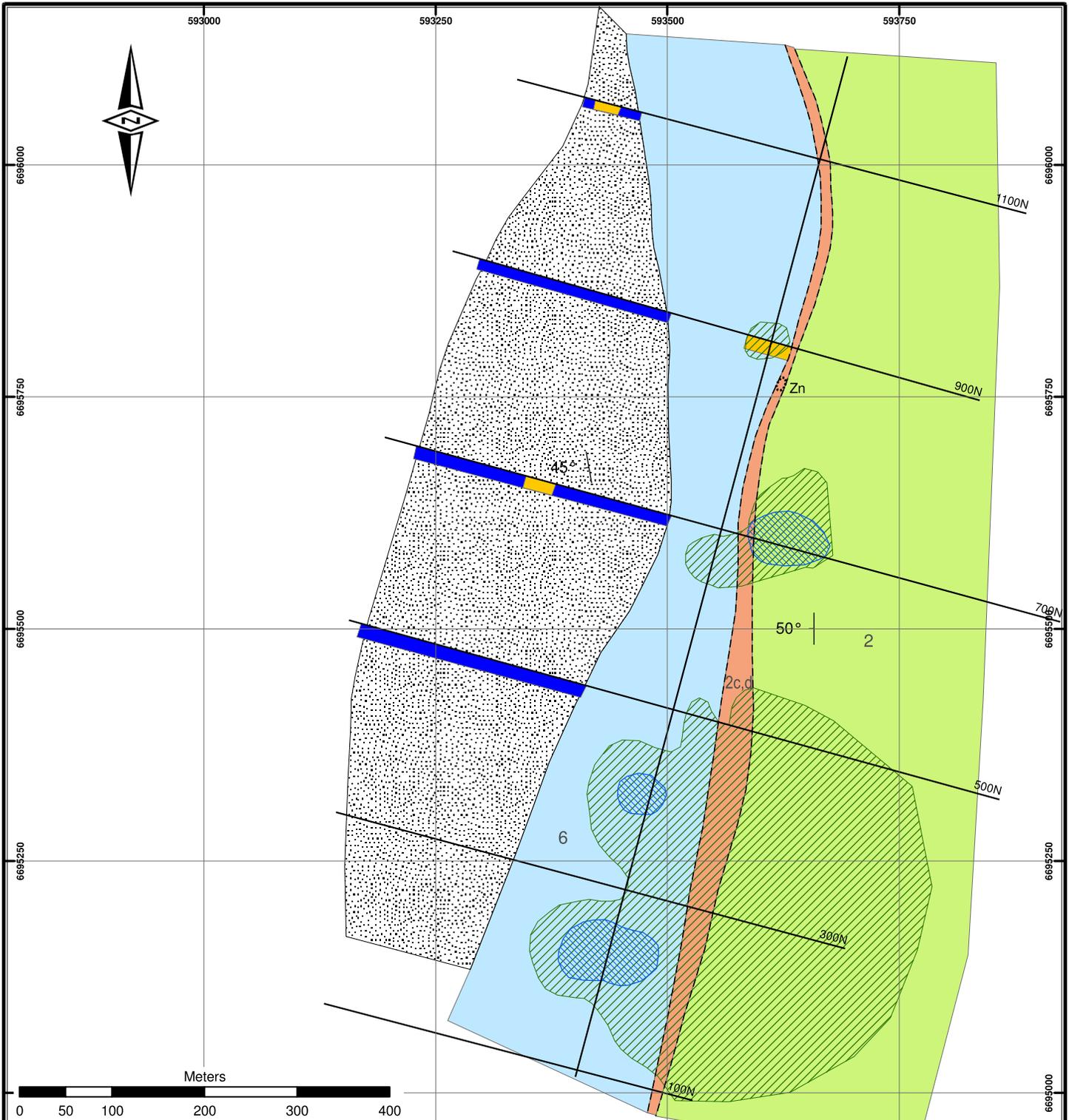
## Geological Unit

-  6 - WAVY BANDED, SILTY LIMESTONE
-  5 - CALCAREOUS PHYLLITE/MUDSTONE
  - 5a - Shale, weakly altered
-  4 - VOLCANIC ROCKS
  - 4a - Chaotic volcanic breccia partly supported by coarse dolospar, locally to moderately silicified
  - 4b - Lapilli tuff and tuff breccia - fragments of cryptocrained lst, siliceous dolomite, dolomite with hydroincite and smithsonite
  - 4c - Andesitic flows and/or flow breccia, local chlorite patches
-  3 - SEDIMENTARY ROCKS
  - 3a - Siltstone
  - 3b - Calcareous siltstone
  - 3c - Limestone
  - 3d - Dolomite, locally sparry calcite
  - 3e - Mineralized dolomite with sphalerite
  - 3f - Chert
  - 3g - Mineralized chert with sphalerite
-  2 - CRYPTOGRAINED LIMESTONE
  - 2a - Limestone, weakly altered
  - 2b - Limestone, dolomitized
  - 2c - Limestone, silicified +/- dolomite
  - 2d - Limestone, includes 2c with zinc +/- lead +/- barite



### SILVER RANGE RESOURCES LTD.

Title: <b>JERI NORTH ZONE COMPILATION: GEOLOGY, GEOPHYSICS, GEOCHEMISTRY &amp; DRILLING MEL PROPERTY</b>		
H. LEO KING & ASSOCIATES INC.		
Scale:	Author: <b>H.L. King</b>	Figure: <b>6.3</b>
Date: <b>March 2017</b>	Drawing: <b>Terracad Geoscience Services Ltd.</b>	Datum: <b>NAD 83/ Z 9</b>



<b>Geophysics</b>		<b>Soil Geochemistry</b>	
Strong I.P. anomaly	Zn > 400ppm	Pb > 50ppm	
Weak I.P. anomaly			
Anomalous trend			
<b>Geology</b>		<b>Geological Units</b>	
Zn showing	2 - CRYPTOGRAINED LIMESTONE	2c - SILICIFIED LIMESTONE +/- DOLOMITE	
Contact	2d - LIMESTONE, INCLUDES 2c WITH ZINC +/- LEAD +/- BARITE	6 - WAVY BANDED, SILTY LIMESTONE	
Bedding			

<b>SILVER RANGE RESOURCES LTD.</b>		
Title: <b>MEL EAST ZONE COMPILATION: GEOLOGY, GEOPHYSICS &amp; GEOCHEMISTRY</b> MEL PROPERTY		
H. LEO KING & ASSOCIATES INC.		
Scale:	Author: H.L. King	Figure: <b>6.4</b>
Date: March 2017	Drawing: Terracad Geoscience Services Ltd.	Datum: NAD 83/ Z 9

**TABLE 6.1 HISTORICAL EXPLORATION WORK**

<b>Year of Work Reported (Report No.)</b>	<b>Owner/Operator</b>	<b>Claim Group</b>	<b>Work Performed</b>	<b>Results</b>
<b>1967</b>	J. Melynchuk and T. Flint	Mel, Jean	Staked claims	N/A
<b>1967 - 1968</b>	Newmont Mining Corporation	Mel	Trenching, geochemical surveys	Trenching exposed Mel Main Zone zinc-lead-barite mineralization over strike length of 488 meters. The trenches averaged 5.35% combined lead-zinc over widths of 2.3 to 9 meters.
<b>1973 - 1975</b>	Granby Mining Corp.	Mel, Jean, Wet	Mapping, geochemical survey and diamond drilling - 18 holes (1,952 m)	Drilling intersected 2 mineralized zones of zinc+/-lead+/-barite. Mel Main Zone averaged 6.1 meters (true width).
<b>1976 - 1977</b>	St. Joseph Explorations Ltd.	Mel, Jean, Wet	Staked more claims, geological mapping, geochemical and geophysical surveys	Soil and geophysical anomalies were identified over a 600 meter length to the south of the Mel Main Zone.

<b>Year of Work Reported (Report No.)</b>	<b>Owner/Operator</b>	<b>Claim Group</b>	<b>Work Performed</b>	<b>Results</b>
<b>1978 - 1979</b>	St. Joseph Explorations Ltd.	Mel, Jean, Wet, Sov	Diamond drilling – 19 holes (4,054 m), metallurgical test work	Metallurgical testing yielded concentrates ranges from 60.9% to 64.7% zinc, 78.0% to 79.6% lead, and 90.3% to 94.4% barite.
<b>1981 - 1983</b>	Sulpetro Minerals Ltd.	Joni, Keli, Edy, Hose, Jeri, Sin, Ott, Tomi, Yang, Ralfo, Mumbo, Chungo and Boz	Regional exploration, geochemical surveys, IP & gravity surveys	Mel East Zone zinc mineralization discovered. Large zinc soil anomaly defined in area of Mel East Zone.
<b>1984</b>	Sulpetro Minerals Ltd.	Joni, Keli, Edy, Hose, Jeri, Sin, Ott, Tomi, Yang, Ralfo, Mumbo, Chungo and Boz	Soil and silt sampling	Smithsonite discovered at Jeri Zone
<b>1985</b>	Sulpetro Minerals Ltd.	Jeri, Sin	Diamond drilling (drilling on Jeri & Sin claims) – 10 holes (1,009.8 m)	Surface mapping and diamond drilling at the Jeri Zone showed significant zinc mineralization & alteration over a strike length of 550m and through a vertical range of at least 100m. Mineralization included 13.11% zinc over 3.37m within silicified and dolomitized limestone
<b>Year of Work Reported (Report No.)</b>	<b>Owner/Operator</b>	<b>Claim Group</b>	<b>Work Performed</b>	<b>Results</b>

<b>1985</b>	Sulpetro Inc.	Wet, Jean, Yang, Tomi, Ott, Sin, Jeri	Airstrip constructed, upgraded access road, and constructed tote road to Jeri Zone	Airstrip built and 5.5 km tote road completed to Jeri Zone
<b>1987</b>	Novamin Resources Inc.	Jean	Diamond drilling - 7 holes (2,012 m)	Drilling extended the Mel Main Zone zinc-lead-barite mineralization to depth of 490m.
<b>1989</b>	Barytex Resources Corp./ Breakwater Resources Ltd.	Jean	Diamond drilling - 4 holes (663m). Carried-out pre-feasibility study and barite marketing study.	Marketing study results encouraging
<b>1990</b>	Barytex Resources Corp./Breakwater Resources Ltd.	Jean	Diamond drilling - 11 holes (1,552 m), bulldozer stripping of Mel Main Zone. Resource estimate completed based on 48 intersections from 42 diamond drill holes by Nevin Sadlier-Brown Goodbrand Ltd.  Additional metallurgical test work by Westcoast Mineral Testing Inc.	Stripping exposed north end of Mel Main Zone.  Metallurgical test work confirmed earlier results.

<b>Year of Work Reported (Report No.)</b>	<b>Owner/Operator</b>	<b>Claim Group</b>	<b>Work Performed</b>	<b>Results</b>
<b>1993</b>	International Barytex Resources Ltd.	Jeri, Sin, Hose, Andy & Sam	11 trenches excavated on Jeri Zone, geological mapping, staked 86 Sam claims, soil sampling on Jeri North Zone	Geological mapping traced favorable contact hosting Jeri Zone zinc mineralization over 9 kilometers. Zinc mineralization was exposed over a 2.5 kilometer section of the Jeri Zone. Assay results for Trench 4 averaged 10.7% Zn over a 5m wide zone and in Trench 5, a 5m wide zone averaged 16.5% Zn.
<b>1994</b>	International Barytex Resources Ltd.	Jean	Diamond drilling - 6 holes (3,122 m) completed on Mel Main Zone. Soil sampling north of Mel Main Zone and Jeri North Zone. Geophysical survey to south of Mel Main Zone.	Updated Mineral Resource*
<b>1995</b>	International Barytex Resources Ltd.	Jean & Sam	Diamond drilling - 8 holes (847.6m) completed on Jeri North Zone. 2 holes (317.5m) drilled on Jean claims south of Mel Main Zone. Geophysical and geochemical surveys.	Jeri North Zone drilling intersected zinc mineralization. Hole J-95-5 intersected 15.6% Zn over 5.1m (core length) and Hole J-95-4 intersected 9.9% Zn over 5m (core length). IP conductors and soil geochemical anomalies (Zn + Pb) were outlined along Jeri Zone horizon.

<b>Year of Work Reported (Report No.)</b>	<b>Owner/Operator</b>	<b>Claim Group</b>	<b>Work Performed</b>	<b>Results</b>
<b>1996</b>	Cominco Ltd.	Sam, Jean	Diamond drilling - 6 holes (1,189m) on Jeri North Zone tested mineralized horizon over 1,000m strike length. 1 hole drilled to south of Mel Main Zone. Soil sampling completed over 5.6 km of favorable Zn mineralized horizon on Jeri North Zone. Soil sampling on Mel East Zone.	Hole J-96-10 drilled on the Jeri North Zone, 200m to the south of J-95-4 & J-95-5, intersected 12.38% Zn over a 3m core length. To south of Mel Main Zone a diamond drill hole tested an IP anomaly but did not intersect the favorable contact zone. Soil sampling on Mel East Zone returned anomalous zinc results in an area 1,400m long by 150m wide.
<b>1997</b>	Cominco Ltd.	Jean, Sam, Joni	IP resistivity and soil geochemical surveys in 3 areas: south of Mel Main Zone; Mel East Zone; and southern part of Jeri Zone. Magnetic & gravity surveys conducted south of Mel Main Zone.  Diamond drilling – 2 holes (360.9m) tested geophysical conductors located 1.5 km south of Mel Main Zone.	A number of geophysical and geochemical anomalies were identified in all zones surveyed.  Carbonaceous mudstones were interpreted to be the source for the geophysical anomalies.
<b>2012</b>	Kobex Minerals Inc.	Sam	Geochemical soil survey on Jeri North Zone.	Anomalous Zn in soil values were confirmed at several locations within the north trending Jeri North Zone. The soil survey results increased the resolution of the soil geochemical coverage.

<b>2014-2015</b>	Silver Range Resources	All	LIDAR survey and aerial photographs Resource estimation on Mel Main Zone and a barite marketing study	Inferred Mineral Resource was produced.
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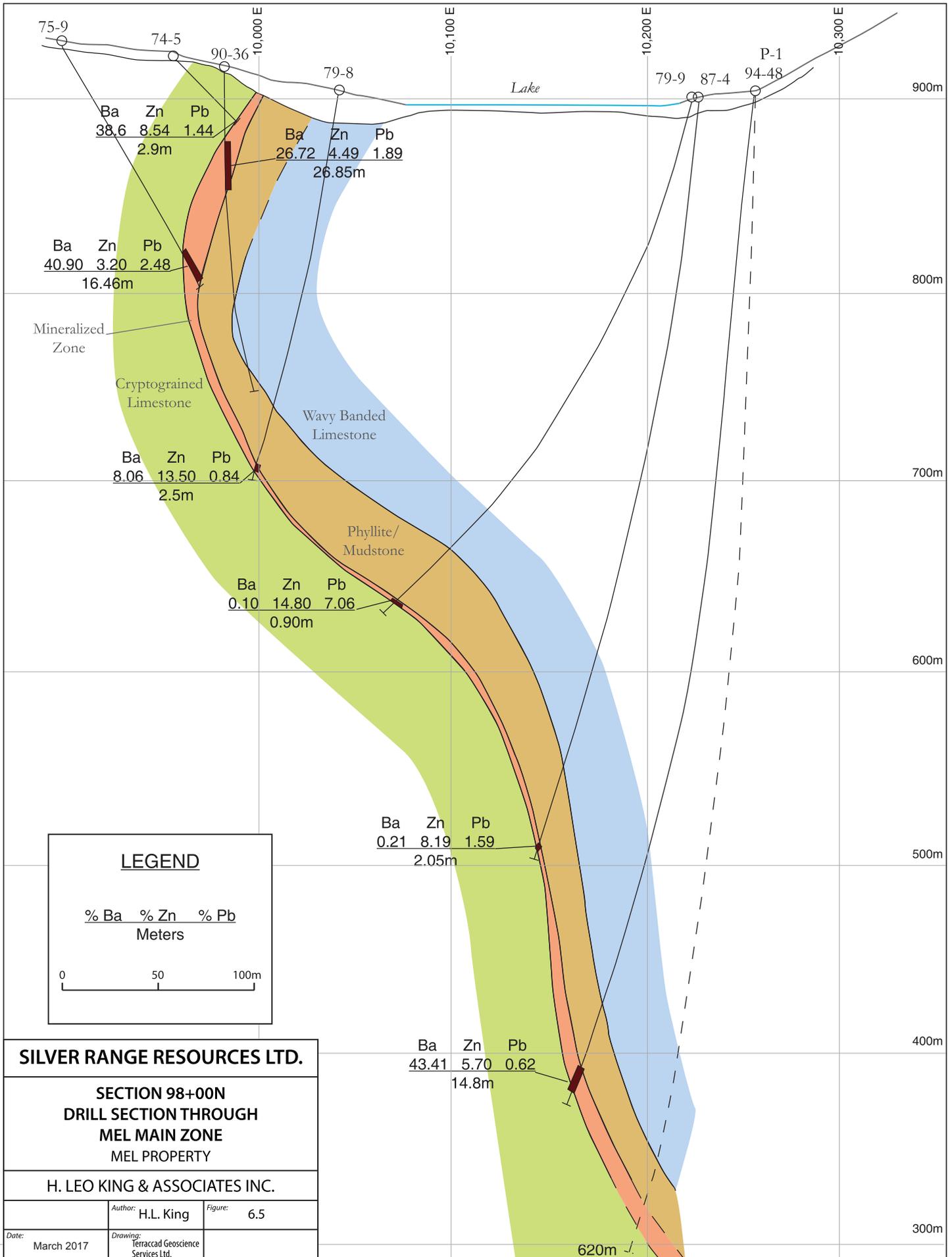
The Property was first staked by prospectors in 1967 and was subsequently acquired by Empire Metals Corporation Ltd. ("Empire"). Newmont Mining Corporation ("Newmont") optioned the Property and conducted a program of trenching and soil geochemical surveys in 1968. Five trenches dug by Newmont exposed the Mel Main Zone zinc-lead-barite mineralization over a strike length of 488 meters. Samples taken from the trenches averaged 5.3% combined lead-zinc over widths from 2.3 to 9 meters.

In September 1973, Newmont dropped its option and the Property reverted to Empire. Granby Mining Corp. ("Granby") then optioned the Property, and between 1974 and 1975, it conducted a diamond drill program of 18 holes (1,952 meters). Granby's drilling intersected two parallel, north-striking, barite-sphalerite-galena zones the, Mel Main Zone and Mel Main North Extension (Figure 6.1). Mineralized intervals in the Mel Main Zone reportedly averaged 6.1 meters true width, but only weak mineralization was intersected in the Mel Main Extension (Chisholm, 1973 and Wilkinson, 1975).

In January 1976, Empire changed its name to Sovereign Metals Corporation Ltd. ("Sovereign"). Later that year, St. Joseph Explorations Ltd. ("St. Joseph") optioned the Property from Sovereign and conducted geological mapping, geochemical and geophysical surveys. During 1978 and 1979, St. Joseph completed a 19-hole diamond drill program totaling 4,054 meters (Miller, 1977 and 1979). Preliminary metallurgical testing conducted on drill core from the Mel Main Zone by Lakefield Research in 1978 yielded concentrates ranging from 60.9% to 64.7% Zn, 78.0% to 79.6% Pb and 90.3% to 94.4% barite.

In 1981, St. Joseph sold its 51% interest in the Property to Sulpetro Ltd. Following the sale, Sulpetro Minerals Ltd. ("Sulpetro") was established to hold the Property. Regional exploration conducted by Sulpetro in 1981 led to the discovery of the Mel East Zone, a zinc showing located 7.3 kilometers northeast of the Mel Main Zone (Miller and Blanchflower, 1982). Limited geochemical surveys conducted by Sulpetro over the next two years defined a large zinc soil anomaly in the area of the Mel East Zone.

Geological mapping and geochemical soil sampling conducted in 1984 between the Mel Main Zone and the Mel East Zone recognized a zinc showing at the Jeri Zone, located 4 kilometers north-northeast of the Mel Main Zone. During 1985, Sulpetro drilled 10 holes totaling 1,009 meters to test the Jeri Zone (Miller, 1985). Nine (9) of the 10 holes drilled over a strike length of 550 meters intersected zinc mineralization. Significant zinc values were intersected in 4 of the holes: 3.37 meters of 13.11% Zn in Hole J-85-1, 4.5 meters of 7.96% Zn in Hole J-85-2, 2 meters of 14.6% Zn in Hole J-85-4 and 4.24 meters of 3.78% Zn in Hole J-85-5. Later that year, Sulpetro sold its interest to Novamin Resources Ltd. ("Novamin"), which in 1987 drill-tested the Mel Main Zone at depth with 7 holes totaling 2,012 meters. Drill results indicated that the zinc-lead-barite mineralization continued to a depth of 490 meters below surface (Miller, 1987). Breakwater Resources Ltd. purchased Novamin in 1988, thus obtaining joint ownership of the Property with Barytex Resources Corp. ("Barytex"), formerly Sovereign.



75-9

74-5

90-36

79-8

79-9

87-4

P-1

94-48

10,000 E

10,100 E

10,200 E

10,300 E

Lake

900m

800m

700m

600m

500m

400m

300m

Ba Zn Pb  
38.6 8.54 1.44  
2.9m

Ba Zn Pb  
26.72 4.49 1.89  
26.85m

Ba Zn Pb  
40.90 3.20 2.48  
16.46m

Ba Zn Pb  
8.06 13.50 0.84  
2.5m

Ba Zn Pb  
0.10 14.80 7.06  
0.90m

Ba Zn Pb  
0.21 8.19 1.59  
2.05m

Ba Zn Pb  
43.41 5.70 0.62  
14.8m

620m

Mineralized Zone

Cryptocrained Limestone

Wavy Banded Limestone

Phyllite/Mudstone

In 1989, Barytex conducted a soil geochemical survey near the Jeri Zone and completed four diamond drill holes (663 meters) on the Mel Main Zone. The drill program consisted of in-fill drilling at the north end of the Mel Main Zone and confirmed the continuity of the mineralization (Miller, 1989).

In 1990, Barytex conducted an in-fill drill program consisting of 11 diamond drill holes totaling 1,552 meters plus surface stripping. Drilling between previous, widely-spaced holes aided in the design of an open-pit (Miller, 1990).

A resource estimate, based on 48 intersections from 42 diamond drill holes, was prepared by consultants Nevin Sadlier-Brown Goodbrand Ltd. in a report dated October 9, 1990 (Croft, 1990). Additional metallurgical test work by Westcoast Mineral Testing Inc. generally confirmed earlier metallurgical results (Hawthorn, 1990).

In November 1992, Barytex was reorganized and the company's name changed to International Barytex Resources Ltd. ("IBX").

During 1993, IBX staked another 86 claims to cover the northerly strike extension of the Jeri Zone and established 66 line-kilometers of grid. Geological mapping traced the favorable contact hosting the Jeri Zone zinc mineralization for a strike length of over 9 kilometers and discovered the Jeri North Zone. Eleven (11) trenches excavated in 1993, exposed mineralization along a 2.5 kilometers section of the Jeri Zone. The most significant assay results from trench sampling were obtained from trench 5, where a 5 meter wide interval averaged 16.5% Zn and in trench 4, where a 5 meter wide interval averaged 10.7% Zn (King, 1994a). At the Jeri North Zone, on the northern extension of the Jeri Zone, reconnaissance soil sampling was carried out on lines spaced 1,000 meters apart from section 166N to 206N. Soil samples were taken at 25 meter intervals along section lines that crossed the favorable contact zone.

In 1994, IBX established grid lines spaced 100 meters apart from line 130N to 152N at the Jeri North Zone. Soil samples were collected at 25 meter intervals along lines that crossed the favorable contact zone. A total of 59 soil samples were taken. The soil sampling revealed anomalous zinc and lead values along the favorable contact (King, 1994b).

In 1994, six additional drill holes totaling 3,122 meters were drilled by IBX at the Mel Main Zone. Higher grade intersections were obtained from those holes, with some intersections grading in excess of 12% combined lead-zinc. The highest grade intersection assayed 19.72% zinc over an estimated true thickness of 5.16 meters (King, 1994b). This was the last drilling completed on the Mel Main Zone, and it remains open to extension down dip. A representative drill section through the Mel Main Zone is shown in Figure 6.5.

Geophysical surveys including magnetic, very-low-frequency ("VLF") and IP surveys were carried out by IBX in 1994 over the southerly projection of the Mel Main Zone. VLF and magnetic coverage extended from lines 82N to 96N and IP surveys were conducted on lines 82N to 84N, 88N + 50N and 89N to 91N. The IP survey outlined a chargeability and resistivity anomaly on

line 84N that is on-strike with the Mel Main Zone. The geophysical work was carried out by S.J.V. Consultants Ltd., a geophysical contractor.

Reconnaissance soil sampling was also carried out by IBX in 1994 on-strike and to the north of the Mel Main Zone from 114N to 134N. Samples were taken along grid lines spaced 200 meters apart. Sample density varied from 10 meter to 20 meter spacing along the lines. A total of 54 soil samples were collected. No anomalous zinc or lead values were returned from this soil sampling (King, 1994b).

At the Jeri North Zone, soil sampling was done across a 2 kilometer long segment of the favorable contact between crypto-grained limestone and wavy-banded limestone in 1994 by IBX. Samples were taken at 25 meter intervals along lines spaced 200 meters apart. Anomalous soil geochemical zinc and lead values were returned on most lines sampled. Two zinc soil geochemical anomalies were outlined; one extending from line 131N to 143N, and the other from line 150N to 152N (Figure 6.3). IP geophysical surveys were carried out over lines 135N and 136N within one of these zinc soil anomalies. Strong chargeability highs were outlined on both lines, coincident with the zinc anomaly that marks the favorable contact between wavy-banded limestone and the underlying crypto-grained limestone (King, 1994b)

In 1995, an IP survey was conducted by IBX on lines 85N and 86N, approximately one kilometer south of the Mel Main Zone. This survey defined coincident chargeability and resistivity anomalies that extend to the north of an anomaly first identified on line 84N during the 1994 survey (Figure 6.1). Two diamond drill holes (317.5m) were completed on Section 85N in an attempt to explain the IP anomaly outlined on lines 84N to 86N. Minor graphite was noted in the core along several shear zones, which may explain the IP anomaly. However, the targeted contact zone between the wavy-banded limestone and the crypto-grained limestone was not intersected (King, 1995).

Geochemical and geophysical surveys were conducted in 1995 by IBX at the Jeri North Zone. IP surveys were carried out on grid lines spaced 100 meters apart from lines 131N to 142N. Strong chargeability highs and corresponding resistivity lows, partially coincident with anomalous zinc soil geochemical values, were outlined over a strike length of 1,100 meters (Figure 6.3).

A program of diamond drilling was carried out in 1995 by IBX to test the coincident IP and geochemical anomalies at the Jeri North Zone. Eight (8) widely-spaced drill holes, totaling 847.6 meters, tested the anomalous zone over a strike length of 2 kilometers. This drilling intersected a sequence of intermediate volcanic flows and volcanoclastic sediments that are overlain by the relatively thin unit of calcareous phyllite/mudstone that forms the base of the wavy-banded limestone throughout much of the Property. A massive chert unit up to 5 meters thick was intersected below the volcanic-volcanoclastic sequence. In places, the chert rests directly on the basal crypto-grained limestone unit but on other sections it is separated from the crypto-grained limestone by a dolomitic horizon. Sphalerite was encountered mainly within the chert unit, with lesser amounts occurring in an overlying ash layer and in the underlying dolomitic horizon. Five (5) of the 8 holes drilled intersected zinc mineralization, with two of these holes yielding high zinc

assays: 15.6% Zn over a core length of 5.1 meters in hole J-95-5 and 9.9% Zn over a core length of 5 meters in hole J-95-4 (King, 1995).

In 1996, Cominco Ltd. ("Cominco"), under an option agreement with IBX, began exploration work on the Property. Work was carried out on the Jeri North and Mel East Zones and in an area immediately south of the Mel Main Zone.

One diamond drill hole was drilled 1.5 kilometers south of the Mel Main Zone to test an IP anomaly believed to represent the southern extension of the favorable mineralized horizon hosting the Mel Main Zone. This drill hole did not reach the favorable contact zone.

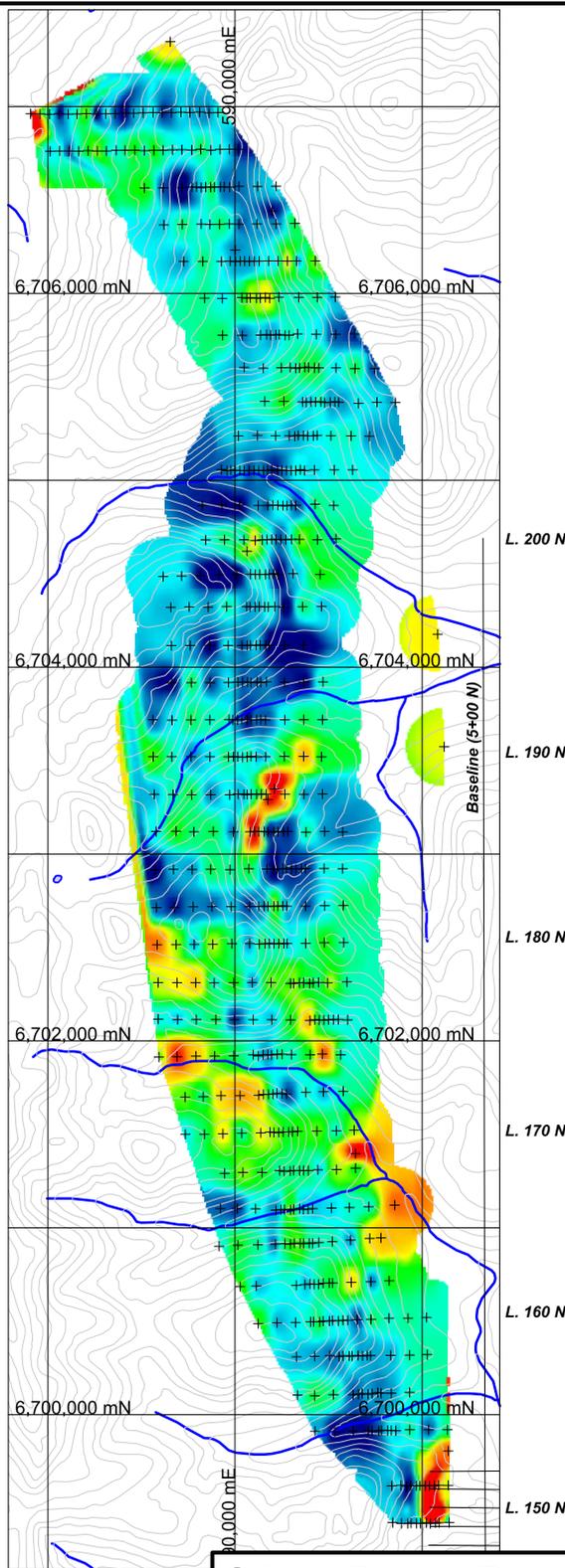
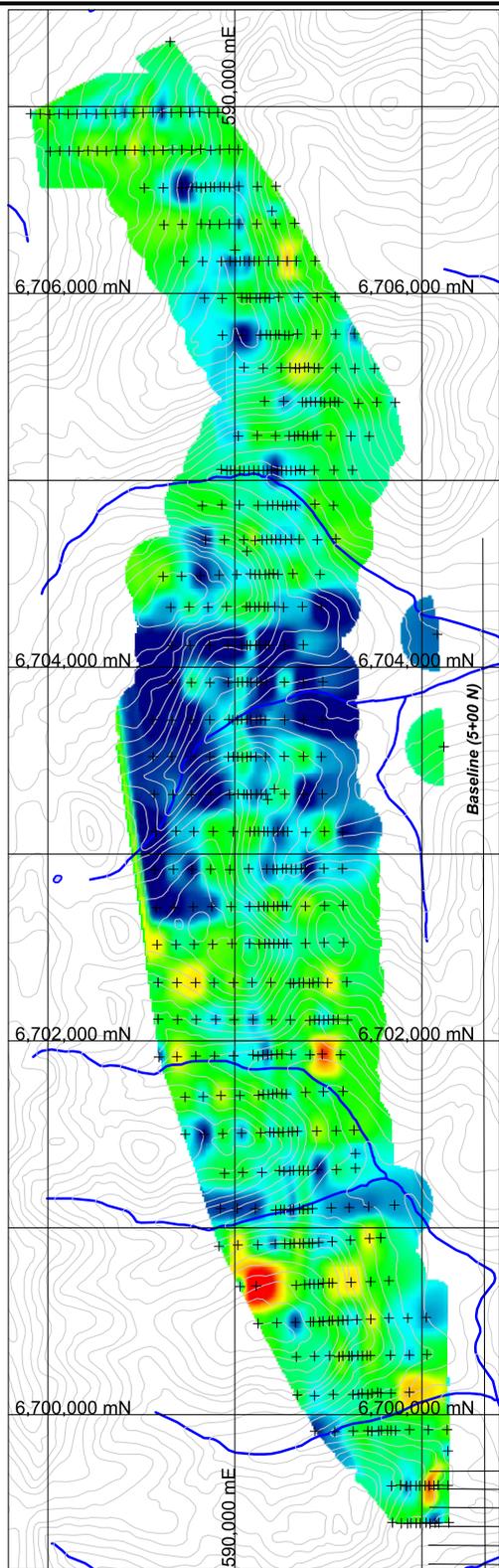
At the Jeri North Zone, exploration work included six diamond drill holes totaling 1,189 meters. These holes further tested zinc mineralization discovered in 1995. Drill hole J-96-10, located 200 meters south along strike of holes J-95-4 and J-95-5 encountered 12.38% Zn over a 3.0 meter core length. The other five holes drilled within this area intersected lower grade mineralization (Senft, 1996).

Cominco conducted additional soil sampling in 1996 to the north of the Jeri North Zone along grid lines from 149N to 224N. Several anomalous samples lie along the projected trace of the mineralized horizon.

At the Mel East Zone, Cominco conducted a soil sampling program to confirm the presence of the large zinc anomaly identified by Sulpetro during its 1983 exploration program. Strong zinc values were outlined over an area 1,400 meters long by 150 meters wide and open to the north, south and east. This anomaly is coincident with the favorable contact hosting the zinc showing referred to as the Mel East Zone and represents an attractive drill target.

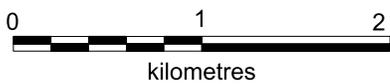
In 1997, Cominco completed soil sampling in three areas on the Property. Four lines of soil sampling were completed south of the Mel Main Zone on lines 87N to 90N. Three lines of soil sampling were also completed at the Jeri Zone at 50 meter intervals along lines spaced 200 meters apart. A total of 39 samples were collected. In the area of the Mel East Zone, a single contour line of soil sampling totaling 39 samples was completed to cover the southern extension of the mineralized horizon (Senft and Hall, 1998).

During 1997, Cominco conducted IP and resistivity surveys in three areas: south of the Mel Main Zone, the Mel East Zone area, and an area in the southern part of the Jeri Zone. In addition, a magnetic survey and a limited gravity survey were conducted south of the Mel Main Zone. The geophysical program identified anomalies in all three areas surveyed. A compilation of the geophysical surveys carried on the Mel Main, Jeri, Jeri North and Mel East Zones are shown on Figures 6.1, 6.2, 6.3, and 6.4 respectively. Two drill holes totaling 360.9 meters tested geophysical conductors located 1.5 kilometers south of the Mel Main Zone. These holes intersected carbonaceous mudstones, which are interpreted to be a source for the geophysical anomalies, but neither of these drill holes cut the favorable contact that hosts the Mel Main Zone.



**Pb (ppm)**

- 75
- 50
- 25
- 15
- 10
- 5



**Zn (ppm)**

- 200
- 150
- 100
- 75
- 50
- 25

**Silver Range Resources Ltd.**

**MEL PROPERTY  
Jerri North Zone**

**Pb and Zn in Soils**

Date	March 2017	Scale	40,000	Figure
Projection	UTM Zone 9 - NAD83	State/Province	YT	6.6
Drawn by	M. Davies	NTS	095D/06	
H. Leo King & Associates Inc.	File	MelGeochem		

In 2012, Kobex Minerals Inc. (“Kobex”) carried out a soil sampling program on a portion of the Jeri North Zone (Livingstone, 2012 and King, 2013). A total of 229 soil samples were collected and analyzed to fill in gaps in the 1996 soil sampling carried out at the Jeri North Zone by Cominco. Samples were collected from four separate grids along east-west lines spaced 100 meter apart, with soil sampling stations spaced at 50 meter intervals.

Of the 229 samples collected, 12 returned anomalous zinc values, 12 returned anomalous lead values and 12 returned anomalous barium values. Results of the 2012 soil sampling program confirm the presence of elevated zinc in soils within all 4 of the previously established grids at the Jeri North Zone and extended 2 of the areas of anomalous zinc values (Figure 6.6). Lead values are typically low.

To date a total of 90 diamond drill holes (16,759 meters) have been drilled on the Mel property. Appendix I contains data concerning locations, orientations and lengths of the drill holes. Appendix II lists the significant mineralized intervals in the holes.

In June 2014, Silver Range purchased the Property from Kobex, and in September 2014, Breakwater sold its NSR royalty to Whirlwind Capital Ltd.

In 2015, Silver Range completed LIDAR, aerial photography, a heritage resource overview assessment, a barite marketing study, and updated the mineral resource estimate (Stevens, 2015).

As of March 2017, Benz has the right to acquire 100% interest in the Property from Silver Range.

## **6.1 HISTORICAL RESOURCE ESTIMATES**

Several historical resource estimates have been made for the Mel Main Zone, based on drilling results from that zone. A summary of the historical mineral resource estimates is provided in Table 6.2.

Most of the resource estimates were completed by company personnel, listed in Table 6.2, during the course of drilling carried out from 1975 to 1994. The exception was an independent resource estimate, made by Nevin Sadlier-Brown Goodbrand Ltd. in October 1990. As all of these estimates were completed prior to the implementation of NI43-101, no technical reports are available for any of these historic resources.

Although these resource estimates were completed prior to the implementation of NI43-101, it is the Author’s opinion that they followed industry standard best practices at the time. All of the historical mineral resource estimates were calculated using a polygonal method, using available drill data.

Specific gravity determinations were applied to individual samples within mineralized intersections, which were then used to calculate a weighted average grade of the intersection.

The true width of the intersection was obtained from measurements of contact angles compared with geological cross sections.

**TABLE 6.2 HISTORICAL MINERAL RESOURCE ESTIMATES**

<b>Date</b>	<b>Status</b>	<b>Company/ Estimator</b>	<b>Category</b>	<b>Tonnes (millions)</b>	<b>Zinc (%)</b>	<b>Lead (%)</b>	<b>Barite (%)</b>
1975	Historical	Granby <sup>(1)</sup>	not specified	2.6	5.35	1.93	54.6
1979	Historical	St. Joseph Explorations <sup>(2)</sup>	not specified	4.782	5.61	2.05	52.1
1984	Historical	Novamin Resources <sup>(3)</sup>	not specified	5.581	6.63	1.92	49.64
1989	Historical	Barytex Resources <sup>(4)</sup>	not specified	5.687	6.77	1.92	51.1
1990	Historical	Barytex Resources/Nevin Sadler-Brown Goodbrand <sup>(5)</sup>	Drill Indicated	5.238	7.86	2.09	49.98
1994	Historical	Int'l Barytex Resources <sup>(6)</sup>	Indicated	6.778	7.1	2.03	54.69

(1) Wilkinson, 1975; (2) Miller, 1979; (3) Miller, 1985; (4) Miller, 1989; (5) Croft, 1990; (6) King, 1994b

The historical resource estimates reported herein are sourced from internal company memorandum and the October 1990 consultant's report by Nevin Sadler-Brown Goodbrand Ltd. The resource estimates listed herein are historical in nature and a Qualified Person has not done sufficient work to classify these historical resource estimates as current mineral resources. Benz is not treating the historical resource estimates as current mineral resources.

The terms "Drill Indicated and Indicated" are historical terms used by previous operators, and are not comparable to the CIM defined Indicated Resource, and should be compared to a potential estimate deposit requiring further exploration drilling to define an initial resource.

The author notes that the historical resource estimates reported by various previous owners of the Property cannot be relied upon, and are quoted for historical purposes only. However, these historical resource estimates do provide an indication of zinc-lead-barite mineralization potential on the Mel Main Zone.

The mineral resource reported herein (see Section 14) supersedes all historical resource estimates.

## **6.2 HISTORICAL METALLURGICAL TESTWORK**

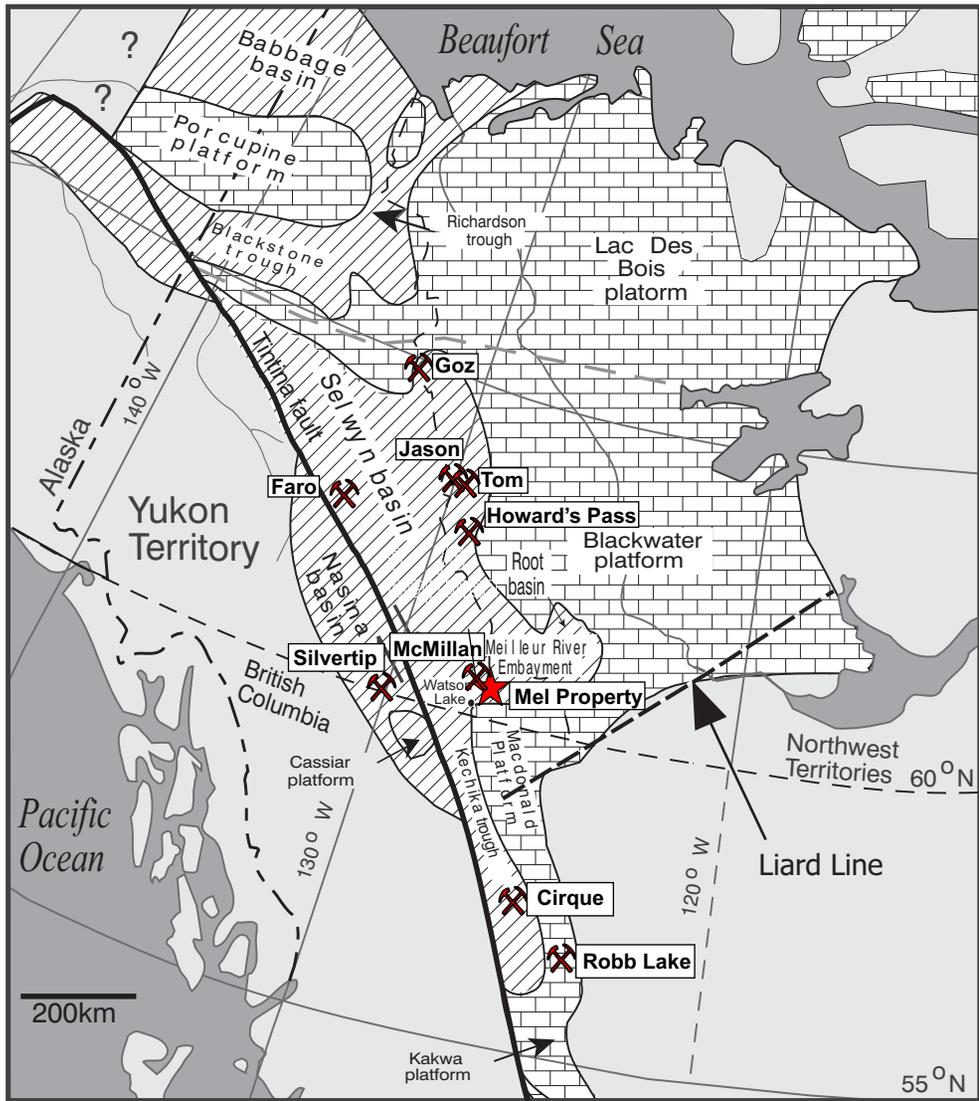
Preliminary metallurgical testing on core from the Mel Main Zone by Lakefield Research in 1976 (Wyslouzil and Bulatovic, 1976) indicated that after grinding to 100 mesh, the mineralization responded well to flotation and yielded concentrates ranging from 60.9% to 64.7% zinc, 78.0% to 79.6% lead, and 90.3% to 94.4% barite with recoveries of 90.3% to 96.2% for zinc, 97.7% to 98.0% for lead, and 88.0% to 90.0% for barite. A later, larger scale test was done for barite concentrate marketing evaluation. A concentrate grading 95.1% barite with a recovery of 92.6% was produced from 12 kilograms of feed grading 53.5% barite.

Further metallurgical testing on core from the Mel Main Zone by Westcoast Mineral Testing (WMT) in 1990 (Hawthorn, 1990) mainly duplicated the results achieved by Lakefield Research in 1976, except that a small portion of the zinc reported to the lead concentrate, resulting in a 10% zinc content in an otherwise clean lead concentrate. Optical microscopy of the lead concentrate indicated that through proper regrinding and reagent manipulation, the zinc grade of the lead concentrate could be reduced to less than 3%. WMT also measured the composite sample's specific gravity to be 3.5 and the grindability to be very low at 6.4 kWh/t.

## **6.3 BARITE MARKETING STUDIES**

A historical barite marketing study was completed in 1989 by MineStart Management Inc. (Slim, 1989) and concluded that barite from the Property demonstrated positive potential as a saleable by-product. The study noted that barite demand is highly cyclical, with the vast majority of barite consumption occurring as part of oil and gas drilling. For any development of the Property, MineStart noted that a good stockpile would be important, as barite purchasers will want demonstration of continuous supply. Considering barite as a by-product also enables stockpiling for more favorable market conditions, and separates the economics of barite sales from those of the main minerals. Sales of barite products were deemed to be particularly attractive for the Property as they would not only provide an additional revenue stream, but also reduce capital costs due to less need for tailings disposal capability.

World Industrial Minerals completed a new barite marketing study in September 2014 (Guilinger, 2014). This study examined historical data from metallurgical test work on the Property and investigated current market trends, pricing and sales opportunities throughout North America. Based on data from flotation tests conducted in the 1980s, the study found that the Property should be able to produce a barite product with sufficient grade to meet the specifications for drilling mud, chemical and construction applications (>94% BaSO<sub>4</sub>). However, while the historical test work showed that the necessary grade could be achieved, there were concerns regarding the mercury, cadmium and base metal content of the barite concentrate, which were not specified in the historical test work results. The study recommended follow-up analysis and test work to determine probable lead, zinc, cadmium and mercury contents of the barite concentration with respect to specifications and requirements for use in drilling fluids.



-  General distribution of preserved 'North American' Ordovician and Silurian platform facies
-  General distribution of preserved 'North American' Ordovician and Silurian basin facies
-  Mine or advanced deposit owned by other parties

After Pigage, L.C., (2008).

Location of Mel Project in southeast Yukon. General distribution of Ordovician-Silurian platform carbonate and basinal shale facies for Canadian Cordillera and Alaska are indicated. Modified from Cecile et al. (1997).

**SILVER RANGE RESOURCES LTD.**

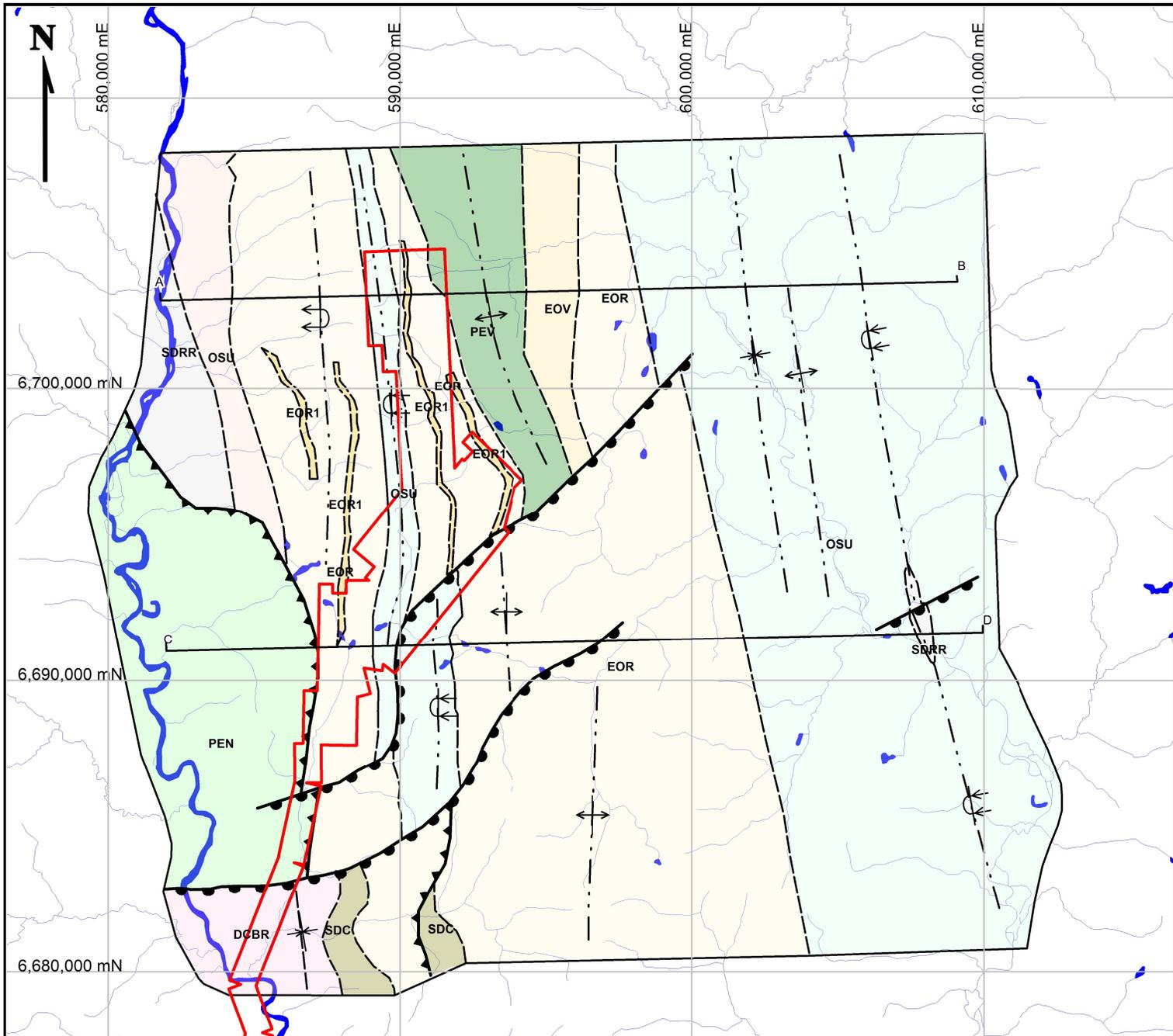
FIGURE 7.1

H.LEO KING & ASSOCIATES INC.

**TECTONIC SETTING**

MEL PROPERTY

FILE: P:/2017/MEL      DATE: MARCH 2017



DEVONIAN-CARBONIFEROUS

**DCBR** Besa River Formation

SILURIAN-DEVONIAN

**SDC** Carbonate - bedded grey to black dolostone or grey limestone; includes Muncho-McConnell, Stone and Dunedin formations; locally includes Silurian Nonda Formation

**SDRR** Road River Group (undivided)

ORDOVICIAN

**OSU** Sunblood Formation

CAMBRIAN-ORDOVICIAN

**EOV** Basalt / gabbro - vesicular and amygdaloidal, dark green basalt; medium crystalline, massive gabbro

**EOR** Rabbitkettle Formation grey to brownish grey, silty to nodular limestone with lesser interbeds of indistinctly bedded, pale grey limestone

**EOR1** Rabbitkettle Formation light grey, fine-grained, indistinctly bedded, resistant limestone

NEOPROTEROZOIC-LOWER CAMBRIAN

**PEV** Vampire Formation

**PEN** Narchilla Formation (Hyland Group)

- property boundary
- anticline (upright, overturned)
- syncline (upright, overturned)
- geological contact
- thrust fault
- normal fault

**SILVER RANGE RESOURCES LTD.**

FIGURE 7.2

H. LEO KING & ASSOCIATES INC.

**REGIONAL GEOLOGY**

MEL PROPERTY

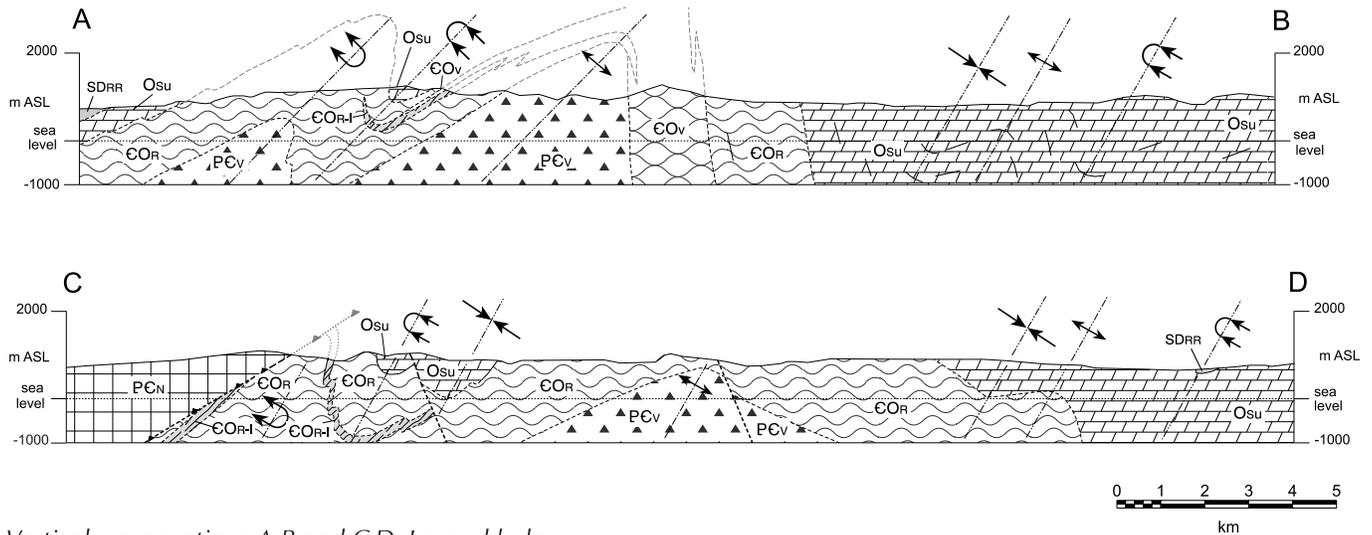
0 10 km

UTM ZONE 9, NAD 83, 095d/03, 04 & 05

After Pigage, L.C., (2008)

FILE: ..2017/MEL

DATE: MARCH 2017



Vertical cross-sections A-B and C-D. Legend below.

**LAYERED ROCKS**

**DEVONIAN-CARBONIFEROUS**

**DCBR** Besa River Formation

**SILURIAN-DEVONIAN**

**SDc** carbonate - bedded grey to black dolostone or grey limestone; includes Muncho-McConnell, Stone and Dunedin formations; locally includes Silurian Nonda Formation

**SDRR** Road River Group (undivided)

**ORDOVICIAN**

**Osu** Sunblood Formation

**CAMBRIAN-ORDOVICIAN**

**COv** basalt / gabbro - vesicular and amygdaloidal, dark green basalt; medium crystalline, massive gabbro

**COH** Rabbitkettle Formation grey to brownish grey, silty to nodular limestone with lesser interbeds of indistinctly bedded, pale grey limestone

**COH** Rabbitkettle Formation light grey, fine-grained, indistinctly bedded, resistant limestone

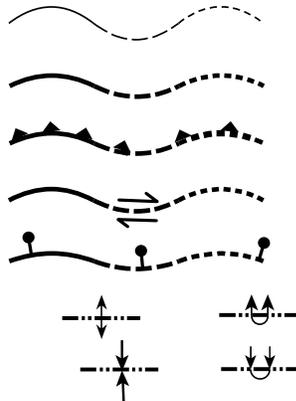
**NEOPROTEROZOIC-LOWER CAMBRIAN**

**PCv** Vampire Formation

**PCN** Narchilla Formation (Hyland Group)

**SYMBOLS**

- geologic contacts (defined, approximate, inferred).....
- fault; movement not known (defined, approximate, inferred).....
- thrust fault (defined, approximate, inferred).....
- dextral strike-slip fault (defined, approximate, inferred).....
- normal fault (defined, approximate, inferred).....
- anticline (upright, overturned).....
- syncline (upright, overturned).....



After Pigage, L.C., (2008).

**SILVER RANGE RESOURCES LTD.**

FIGURE 7.3

H.LEO KING & ASSOCIATES INC.

**REGIONAL CROSS-SECTIONS**

MEL PROPERTY

FILE: P:/2017/MEL

DATE: MARCH 2017

## **7.0 GEOLOGICAL SETTING AND MINERALIZATION**

### **7.1 GEOLOGICAL SETTING**

The Property is located within Selwyn Basin, a tectonic element comprising deep water clastic rocks and chert with minor carbonate and volcanic strata, which accumulated along the North American continental margin during Neoproterozoic and Paleozoic time. Selwyn Basin extends from Alaska through Yukon and western Northwest Territories into British Columbia (Figure 7.1). The basin is bounded to the northeast by a carbonate platform (MacDonald Platform), which comprises the near-shore facies of ancient North America (Abbott et al, 1986).

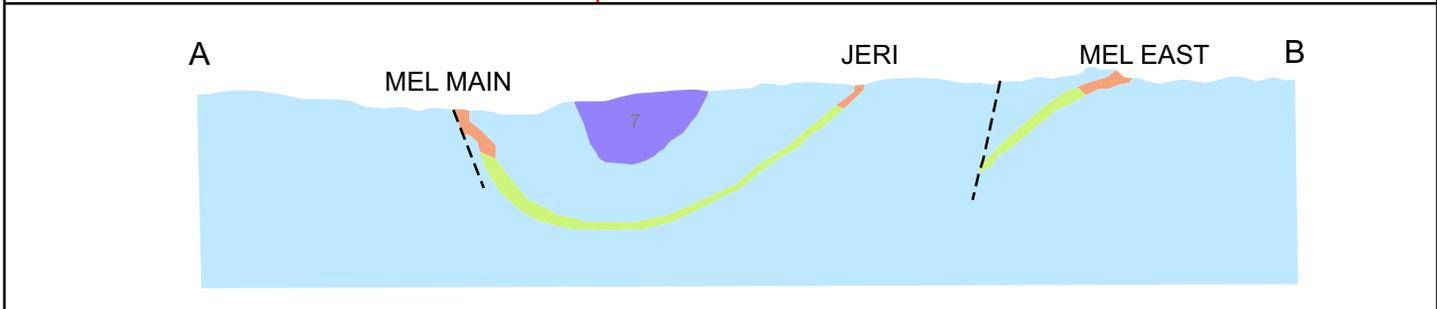
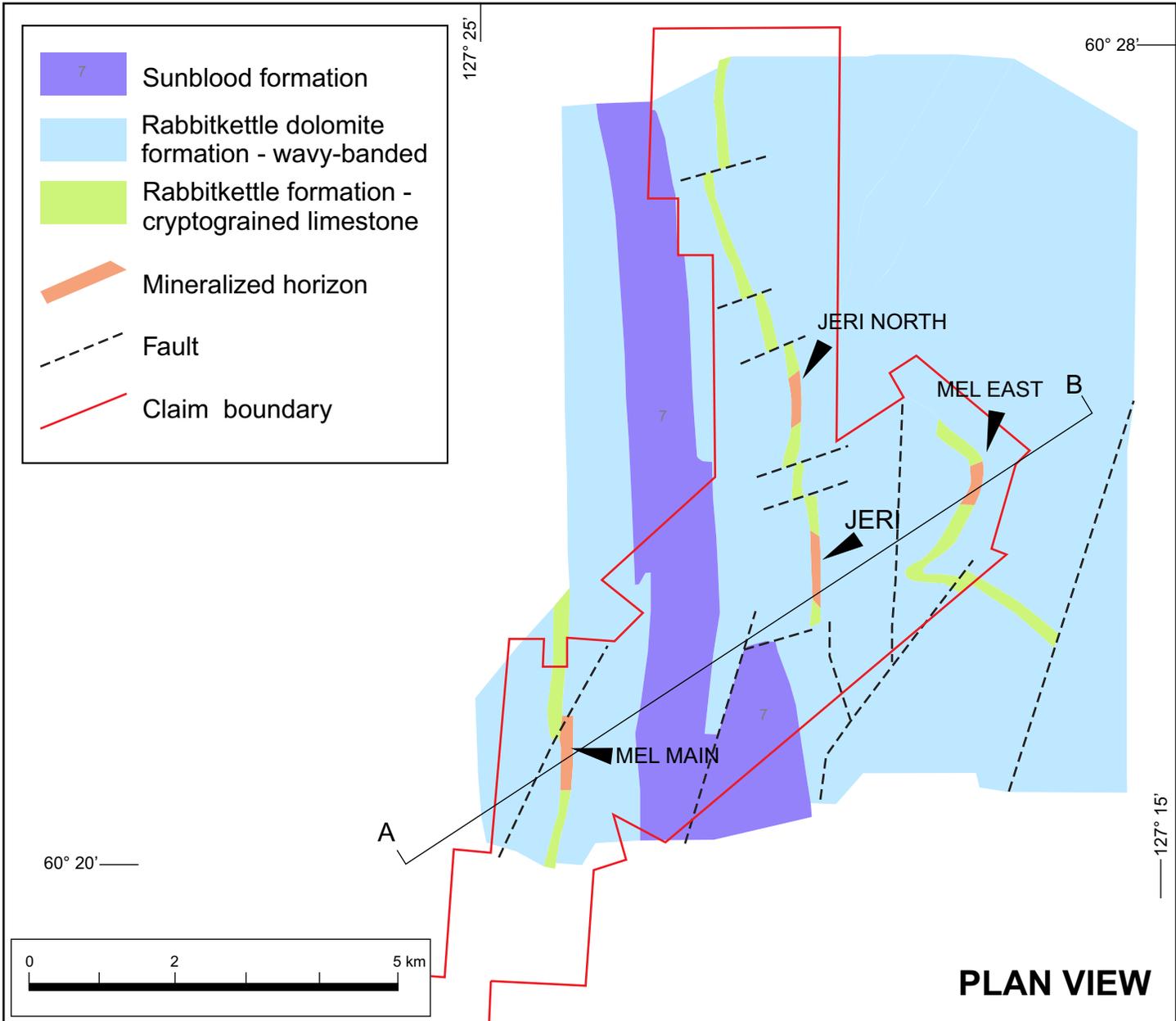
In the area of the Property, Selwyn Basin lies east of units belonging to Cassiar, Slide Mountain and Yukon-Tanana Terranes, which are pericratonic and oceanic terranes that were formed along the western margin of ancient North America in Paleozoic time. Deformation and metamorphism associated with accretion of these and other allochthonous terranes was initiated in Middle Jurassic and culminated in Tertiary time. The resulting transpressional/transextensional orogenic belt is referred to as the Cordilleran orogen (Nelson and Colpron, 2007).

Post-accretion strike-slip movement along the Tintina Fault resulted in about 450 kilometers of dextral offset, dismembering various terranes within the orogenic belt (Murphy and Mortensen, 2003). The Property is located about 40 kilometers northeast of the Tintina Fault.

The Property is situated on the Coal River map sheet (NTS 95D), which was mapped by the Geological Survey of Canada in 1967 (Gabrielse and Blusson, 1969). More detailed mapping was conducted in the immediate vicinity of the Property by the Department of Indian and Northern Affairs in the early 1970s (Carne, 1976) and the Yukon Geological Survey in 2006 and 2007 (Pigage, 2008). Pigage's maps and report incorporate many observations made by economic and academic geologists, who worked on the Property or studied rocks and minerals taken from it. The following description of the regional geological setting is primarily based upon Pigage's report.

The Property lies immediately north of the boundary between Selwyn Basin and MacDonald Platform, near the junction between the main body of Selwyn Basin and the easterly trending Meilleur River Embayment (Figure 7.1). Eight, predominantly sedimentary units, ranging from Neoproterozoic to Lower Carboniferous, have been mapped in the area. All of these units have been deformed with east-verging, asymmetric, north-trending folds related to easterly-directed thrust faults (Figures 7.2 and 7.3). Interpretation of the fold pattern indicates amplitudes of 500 to 2000 meters. Northeasterly-trending normal faults are younger than the folds and thrust faults. The period of compressional deformation started later than Early Triassic and ended before Late Eocene, based on evidence from adjacent map sheets (Pigage, 2008).

Table 7.1 shows the names, ages and general lithologies for the units that occur near the Property. All of the known mineral occurrences on the Property lie within the Rabbitkettle



**SILVER RANGE RESOURCES LTD.**

FIGURE 7.4  
H.LEO KING & ASSOCIATES INC.

**PROPERTY GEOLOGY  
AND MINERALIZATION**

MEL PROPERTY

FILE: P:/2017/MEL      DATE: MARCH 2017

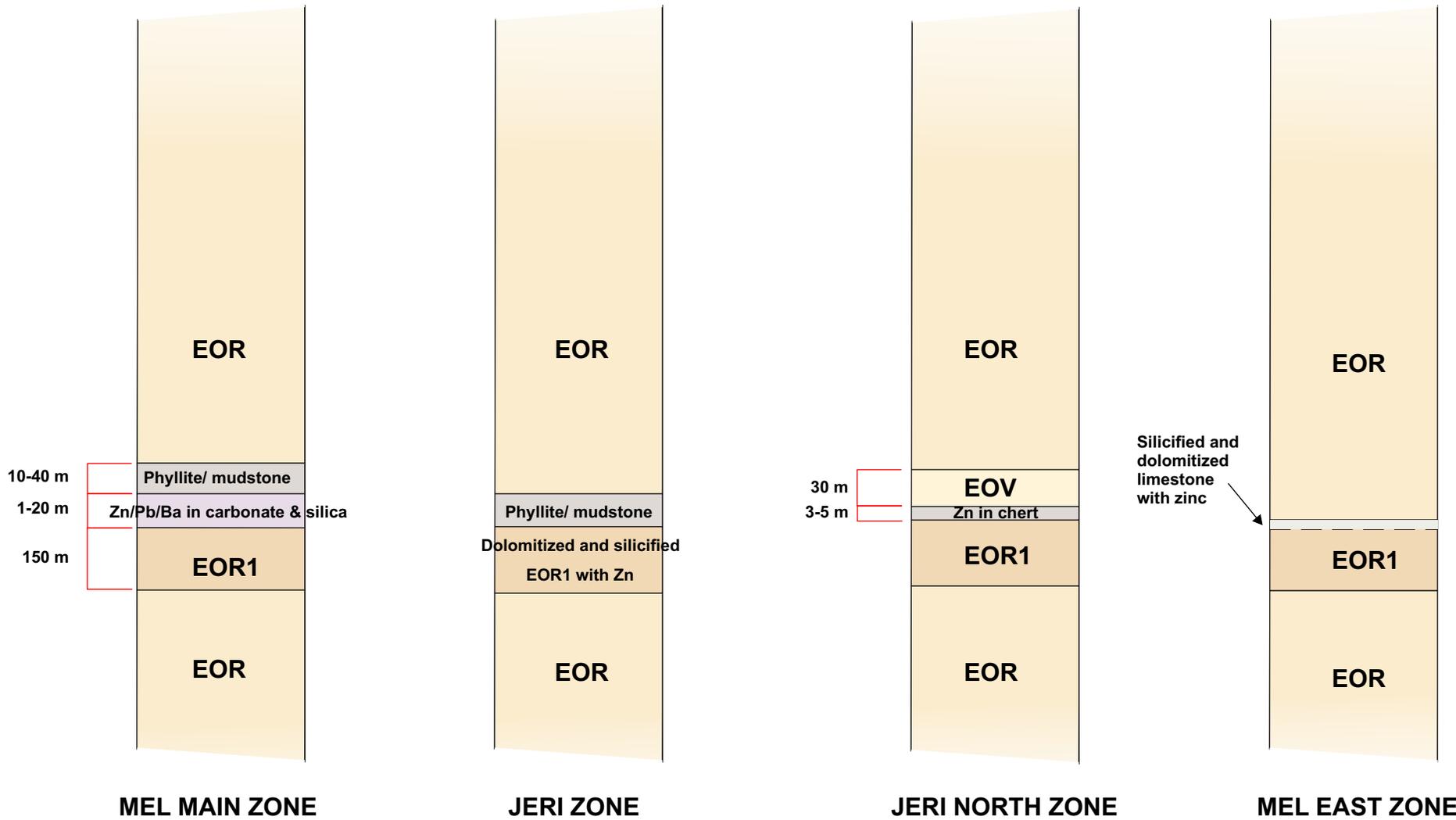
Formation. Where present, argillaceous rocks typically exhibit pervasive axial-planar slaty cleavage.

Figure 7.4 illustrates geology in and around the main areas of interest on the Property, along with the locations of the known mineral zones, all of which are located within or atop Unit €OR1, a sub-unit of the Rabbitkettle Formation. Three (3) of the 4 main areas of interest occur within a north-trending syncline that is cored by Sunblood Formation. The Mel Main Zone lies on the western, overturned limb of the syncline, while the Jeri and Jeri North Zones are on the eastern limb. The exposure of the Unit €OR1 at the Mel East Zone could represent a second limestone horizon or a folded repeat or faulted-offset of the horizon observed at the Jeri and Jeri North Zones. The faulted-offset option is favored by economic geologists who have worked on the Property.

On the Property, Unit €OR1 is up to 150 meters thick and consists of massive light grey to off-white, crypto-grained limestone that typically contains faint, white calcite and tan siderite veinlets. It is sandwiched within a thicker section of Unit €OR wavy-banded, argillaceous limestone. At the Mel Main Zone, Unit €OR1 is overlain by an up to 20 meter thick lens of mineralized rock, which is capped by a 10 to 45 meter thick layer of pale green to cream noncalcareous phyllite to mudstone. The lensy phyllite/mudstone subunit is also present in the southern part of the Jeri Zone and at the Mel East Zone. At the Jeri North Zone, Unit €OR1 is locally overlain by a mineralized chert horizon that lies at the base of a 30 meter thick section of Unit €Ov basaltic flows and tuffs.

**Table 7.1 Regional Lithological Units**

Age	Unit Name	Lithological Description
Devonian-Carboniferous	Besa River Formation (DCBR)	Tan-orange to tan-weathering, striped, greenish-grey generally noncalcareous argillaceous siltstone with some beds of dark grey siltstone and localized argillaceous sandstone and limestone conglomerate.
Silurian-Devonian	MacDonald Platform carbonates (SDc)	Thick assemblage of carbonate rocks including several locally undifferentiated formations.
Silurian-Devonian	Road River Group (SDRR)	Thick bedded, noncalcareous, graptolitic, dull black, silty shale and underlying thinly interbedded black chert and grey-weathering black silty dolostone.
Ordovician	Sunblood Formation (OSu)	Predominantly thick-bedded, pale grey, laminated to bioturbated dolostone interbedded with thick-bedded dark grey, bioturbated dolostone.
Cambrian-Ordovician	Rabbitkettle Formation (COR & COR 1)	€OR – light grey to brownish-grey weathering, silty to argillaceous, locally nodular limestone, informally called “wavy-banded limestone”, with interbeds of pale grey, fine grained massive limestone. €OR1 – local subunit of up to 150 meters thick, massive light grey to off-white, very fine grained limestone.
Neoproterozoic	Vampire Formation (p€V)	Dark grey-green, fissile, pinstriped, noncalcareous, silty phyllite and massive, cream-grey weathering, quartz sandstone with minor conglomerate.
Neoproterozoic	Narchilla Formation Hyland Group (p€N)	Medium green to silvery-tan weathering, thin-bedded, noncalcareous phyllite sometimes with interbeds of white, fine-grained, laminated quartz



- Noncalcaerous phyllite/mudstone
- EOv Basaltic volcanic flows and volcanoclastics
- EOR1 Cryptograined limestone
- EOR Wavy-banded argillaceous limestone

**SILVER RANGE RESOURCES LTD.**

FIGURE 7.5  
H. LEO KING & ASSOCIATES INC.

**COMPARATIVE STRATIGRAPHIC  
SECTIONS OF MINERALIZED ZONES**

MEL PROPERTY

FILE: P:/2017/MEL      DATE: MARCH 2017

		sandstone; occasionally green phyllite with local maroon phyllite interbeds.
--	--	--

## 7.2 MINERALIZATION

Three (3) of the 4 zones of mineralization that have been identified on the Property occur within strata deposited directly atop Unit €OR1, while the fourth zone (Jeri Zone) is hosted mainly within hydrothermally altered rocks that are thought to be equivalent to the Unit €OR1 crypto-grained limestone. The Mel Main Zone is exposed within the western limb of the main syncline on the Property, while the Jeri and Jeri North are located 3 kilometers apart on the eastern limb of the syncline. The Mel East Zone lies within a separate horizon of Unit €OR1 or a fold repeated or faulted-offset of the horizon that hosts the Jeri and Jeri North Zones. Three (3) of the zinc-rich zones, the Mel Main, Jeri and Jeri North Zones, have been tested by drilling.

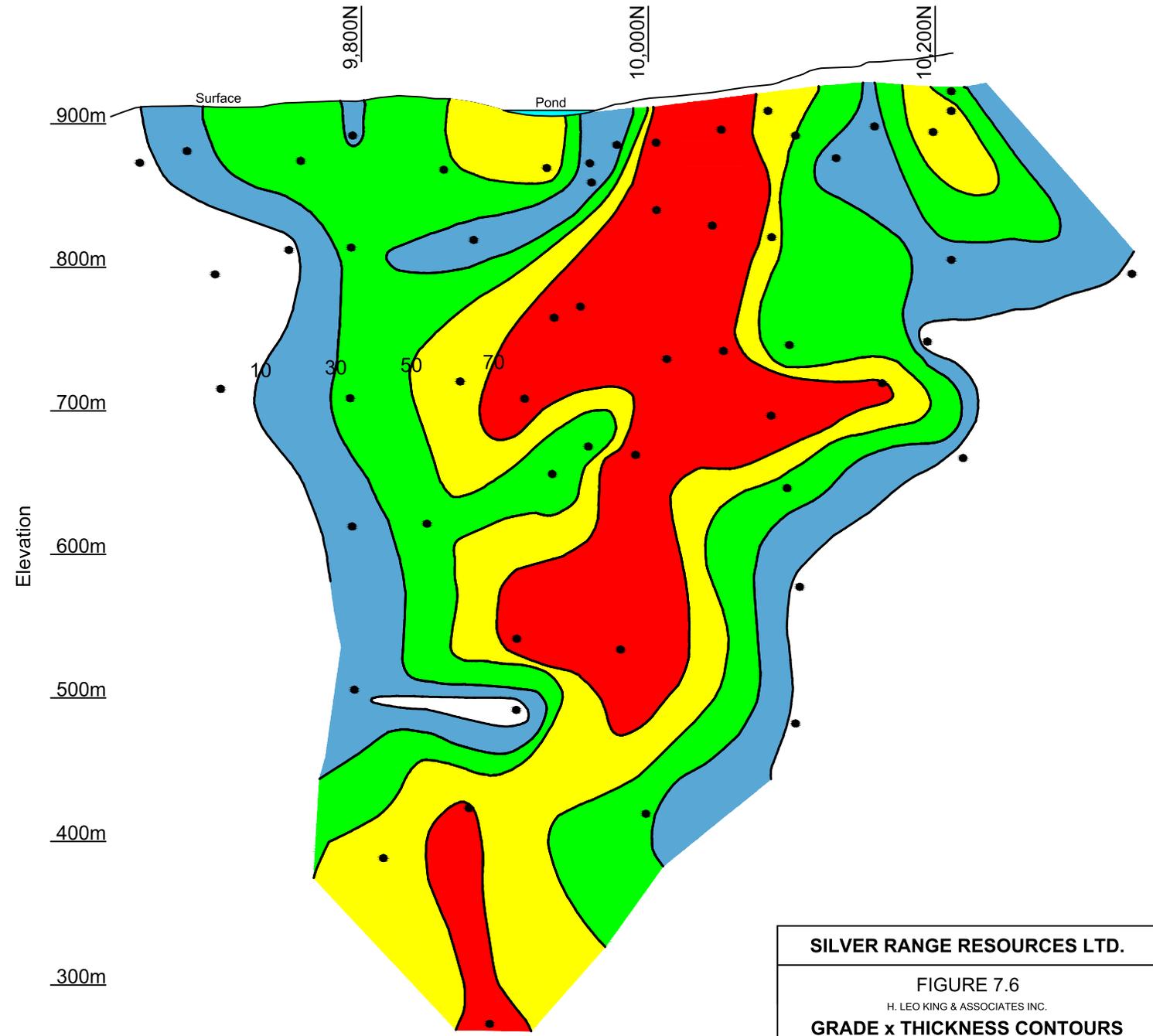
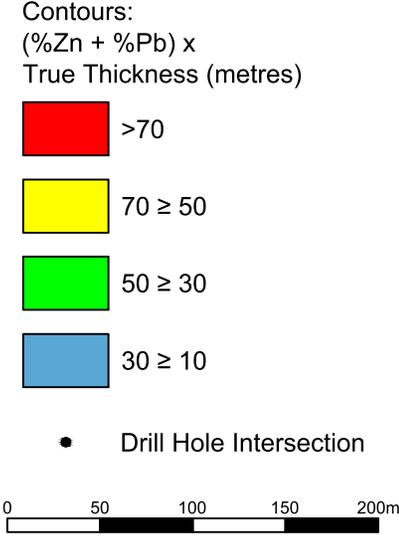
The zinc-lead-barite mineralization at the Mel Main Zone and zinc showings at the south-end of the Jeri Zone and in the Mel East Zone, all occur within a stratigraphic sequence consisting of underlying Unit €OR1 crypto-grained limestone and overlying phyllite/mudstone subunit, which grades upward into Unit €OR wavy-banded argillaceous limestone. The stratigraphic sequence hosting the Jeri North Zone is similar except that the mineralization occurs in a chert horizon, between the basal crypto-grained limestone unit and an overlying volcanic flow and volcanoclastic sequence that is capped by the wavy-banded argillaceous limestone. The stratigraphic sections at the various zones are compared on Figure 7.5, and the zones are individually described in the following sub-sections.

### 7.2.1 Mel Main Zone

At the Mel Main Zone, mineralization consists of coarse-grained sphalerite, galena and barite disseminated throughout a mixture of mudstone, silica and carbonate. Minor amounts of fine-grained, sparsely disseminated pyrite occur locally, but overall, pyrite accounts for less than 2% of the sulphides.

The Mel Main Zone is a disc-shaped and stratigraphically controlled body, which rests disconformably on unaltered crypto-grained limestone. The mineralization is located on the steeply dipping, western limb of a major syncline and is slightly deformed by a secondary fold (Figure 6.5).

Trenching and diamond drilling have delineated the mineralized zone over a strike length of about 700 meters and from surface to a depth of 500 meters down dip. The true thickness of the zone varies from less than 1 meter at each end to a maximum of 17.9 meters in the central portion.



**SILVER RANGE RESOURCES LTD.**

FIGURE 7.6  
 H. LEO KING & ASSOCIATES INC.

**GRADE x THICKNESS CONTOURS  
 LONGITUDINAL SECTION**

MEL PROPERTY

FILE: MEL/2017 | DATE: MARCH 2017

In the upper part of the zone, the central portion of the mineralized body consists of massive barite with moderate zinc and lead contents. The highest grade zinc and lead values occur at the margins of the zone where it thins and barite content decreases. The zone narrows at a depth of about 400 meters below surface and then widens again to form an hour-glass pattern. Below 500 meters, the mineralized body appears to thicken again and there is corresponding increase in barite content. The mineralized zone remains open to extension at depth (Figure 7.6).

### **7.2.2 Jeri Zone**

Mineralization at the Jeri Zone is atypical on the Property because it is hosted in altered, limestone considered to be the equivalent of the crypto-grained limestone, which underlines the Mel Main Zone. The zinc mineralization in the Jeri Zone is, in part, discordant to bedding and is hosted in hydrothermal dolomite and silicified dolomite. This type of strong footwall alteration is exposed along the eastern fold limb of the main syncline for a strike length of about 8 kilometers.

At the Jeri Zone, the footwall limestone is locally silicified, dolomitized, and brecciated at, and immediately beneath, the contact with the overlying phyllite/mudstone. The altered and brecciated limestone commonly contains zinc minerals, smithsonite and sphalerite. Geochemically elevated lead values have been reported, but no economically significant lead mineralization has been identified. Barite is present as a gangue mineral in quartz veins but does not appear to be sufficiently abundant to be economically important. The presence of the zinc carbonate mineral, smithsonite, suggests that some zinc mineralization may be secondary.

Ten (10) holes totaling 1,009 meters have tested the Jeri Zone. Nine of the holes, drilled over a strike length of 550 meters, intersected zinc mineralization. Significant intersections of smithsonite and sphalerite from the drilling include 3.37 meters of 13.11% Zn in Hole J-85-1, 4.5 meters of 7.96% Zn in Hole J-85-2 and 2 meters of 14.6% Zn in Hole J-85-4.

Eleven (11) trenches were excavated across the Jeri Zone along a 2.5 kilometer segment of the favorable horizon. Significant zinc values were obtained from: Trench No. 3, which assayed 5.3% Zn over a sample width of 7 meters; Trench No. 4, which returned 10.5% Zn over a sample width of 5 meters; and, Trench No. 5, which returned 16.5% Zn over a sample width of 5 meters. The mineralization in trenches consisted of disseminated smithsonite and minor sphalerite hosted in silicified and dolomitized limestone. The work conducted to date on the Jeri Zone is not sufficient to allow a resource estimate.

About three kilometers of favorable stratigraphy between the Jeri and Jeri North Zones remains to be tested by trenching or drilling.

### **7.2.3 Jeri North Zone**

Geological mapping has traced the altered limestone horizon hosting the Jeri Zone for 8 kilometers northward through the Jeri North Zone, where diamond drilling discovered zinc mineralization within an extensive chert horizon, which overlies cryptograined limestone and

underlies volcanic flows and tuffs. The best drill results were from: Hole J-95-4, which intersected 9.9% Zn over 5 meters (4.7 meters estimated true width); and, Hole J-95-5, which was drilled on the same section line and intersected 15.6% Zn over 5.1 meters (3.1 meters estimated true width) 70 meters down dip from the J-95-4 intersection.

Sphalerite occurs mostly within the chert horizon but also occurs in lesser amounts within an overlying ash layer and underlying dolomitized limestone. The sphalerite within the chert is very coarse grained where observed in drill core.

In 1996, additional drilling was completed in an attempt to expand the zone of zinc mineralization intersected in Holes J-95-4 and J-95-5. One of these holes, J-96-10, was drilled on-strike 656.17 feet to the south of J-95-4 and intersected two intervals containing significant sphalerite. One interval assayed 3.39% Zn over 2.1 meters of core length, and the other interval returned 12.38% Zn over 3.0 meters of core length. However, holes that tested further down dip and on-strike of the above-mentioned intersections failed to encounter significant zinc mineralization, thus limiting the potential size of the known zone to about 400 meters in strike length and 100 meters down dip.

The discovery of zinc mineralization at the Jeri North Zone indicates there is potential for discovery of additional deposits of stratigraphically controlled zinc mineralization elsewhere along the east limb of the syncline on the Property.

#### **7.2.4 Mel East Zone**

At the Mel East Zone, zinc mineralization occurs as smithsonite at the contact between crypto-grained limestone and wavy-banded limestone on a faulted-offset(?) segment of the eastern fold limb. Three grab samples taken in 1981 from three separate small outcrops averaged 9.6% Zn. Subsequent soil sampling revealed a 1,400 meter long, zinc-in-soil geochemical anomaly that coincides with the projected surface trace of the mineralized contact. No trenching or diamond drilling have been done at the Mel East Zone.

### **8.0 DEPOSIT TYPE**

The zinc-lead-barite mineralization at the Property differs somewhat from zone to zone and is difficult to definitively categorize as a specific deposit type. The zones show certain characteristics that are consistent with carbonate replacement deposit (“CRD”) model but also exhibits features common to sedimentary exhalite (“SEDEX”) and karst/unconformity in-filling, Mississippi Valley-type (“MVT”) deposits. None of the deposit models is a perfect fit for any of the mineral zones on the Property. The main characteristics of the CRD, SEDEX, and MVT models are briefly summarized in the following paragraphs.

CRD mineralization results from high-temperature alteration of limestone strata. Most of these deposits contain pyritic ores with zinc-lead-silver as ubiquitous metals. They are epigenetic and although stratabound, commonly exhibit discordant features (Titley, 1993). Silicification is the primary alteration of the carbonate minerals in the host limestone, and barite is often present

in the ore assemblage. Mines with CRD mineralization are common in the Cordillera of Mexico and southwestern USA. The Silvertip deposit in northern British Columbia and the McMillian deposit in southeastern Yukon (Figure 7.1) are local examples of CRD mineralization.

SEDEX mineralization forms stratabound, tabular to lenticular beds of predominantly sulphide minerals that are deposited on the seafloor in basins near exhalative centers occurring along deep-seated faults or fracture zones acting as conduits for mineral-rich brines (Carne and Cathro, 1982). Those deposits are mainly enriched in zinc, lead and silver and feature iron sulphides, sphalerite, galena and often barite interbedded with basinal sedimentary rocks. Most SEDEX deposits are syngenetic and are hosted in reduced facies, fine-grained sedimentary rocks that consist predominantly of carbonaceous chert and shale (Goodfellow and Lydon, 2007). There are numerous large SEDEX deposits in Selwyn Basin of Yukon and northern British Columbia including the mines of the Faro district and the Howard's Pass, Tom, Jason and Cirque deposits (Figure 7.1).

MVT deposits contain low temperature, epigenetic, lead-zinc±silver minerals that occur with dolomite, calcite and quartz gangue as open space filling within platform carbonate sequences. The mineralization is stratabound and mostly consists of galena, sphalerite, pyrite and marcasite. Barite and fluorite are often present (Alldrick et al, 2005). The Goz deposit on east-central Yukon and Robb Lake deposit in northern British Columbia are local examples of MVT mineralization (Figure 7.1).

The mineral zones at the Property are all stratabound and are hosted in a predominantly carbonate formation within a generally basinal sequence of rocks. Galena-lead ratios from mineralization collected in the Mel Main and Jeri Zones are more radiogenic than those from material that define the Canadian Cordilleran shale curve (Godwin and Sinclair, 1982 and Godwin et al, 1988). The galena-lead data for mineralization from the Property is consistent with Devonian-Mississippian deposition, which would make it an epigenetic event, because the host strata are Cambrian-Ordovician Rabbitkettle Formation. This factor favors an CRD or MVT model for mineralization at the Property (Pigage, 2008). Nelson and Colpron (2007) argue that there is a possible genetic link between SEDEX deposits formed in Selwyn Basin and MVT deposits found in adjacent carbonate platform sequences. They suggest that both types of mineralization could be deposited from metal-enriched hydrothermal brines emanating from deep-seated extensional structures located along active boundaries between basinal and platform settings.

## **9.0 EXPLORATION**

Aside from aerial photographic surveys and Light Intensity Distance and Range (LIDAR) surveys, flown in summer and fall 2014 to document historical work areas, no exploration work was conducted on the Property by Silver Range. These surveys were conducted to update the existing topographic data over the deposit area and potential access routes.

Benz has recently acquired the Property and, as of the date of this report, has not yet conducted any exploration work or other studies.

## **10.0 DRILLING**

No drilling was conducted on the Property by Silver Range, the prior owner, nor has any drilling been completed by Benz.

## **11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY**

No sampling of soil or rock has been conducted on the Property by the, the prior owner, nor has any sampling been completed by Benz.

## **12.0 DATA VERIFICATION**

Geological and geotechnical logging of drill holes was recorded as hard copy and later transcribed into a digital data base on Excel spreadsheets. The drill hole data base, includes drill collar coordinates, elevations of collars, down-hole survey data, rock types and assay data for all 90 drill holes completed on the Property.

Visual comparison of hard copy and digital data was conducted on selected holes to ensure accuracy. Any discrepancies identified were corrected.

The author, H. Leo King, a qualified person, has been directly involved in managing exploration work at the Property since 1975. The work included managing diamond drilling, trenching, geochemical soil sampling and geological mapping programs. He has reviewed all technical information in the Company's files with respect to exploration work carried out on the Property. In 2011 and 2012, he participated in compilation of digital files for all drilling carried out on the Property.

The author believes that the historical data used in the compilation is adequate for the purposes of the mineral resource estimation that forms part of this Technical Report.

## **13.0 MINERAL PROCESSING AND METALLURGICAL TESTING**

No metallurgical test processing or metallurgical testing has been carried out on samples from the Property by Silver Range, the prior owner, nor by Benz, the current owner. Historical metallurgical testing on drill core from the Mel Main Zone is described in Section 6.2 of this Technical Report.

## **14.0 MINERAL RESOURCE ESTIMATE**

### **14.1 INTRODUCTION**

At the request of Miloje Vicentijevic, President and CEO of Benz Mining Corp. ("Benz"), Giroux Consultants Ltd. was contracted to complete resource estimates on the Mel Main Deposit, located 80 kilometers east-northeast of Watson Lake and 47 kilometers north of the Alaska Highway in southeastern Yukon. The resource was estimated by Gary Giroux, P.Eng. MASc., who is a qualified person and independent of Benz, based on the tests outlined in NI 43-101.

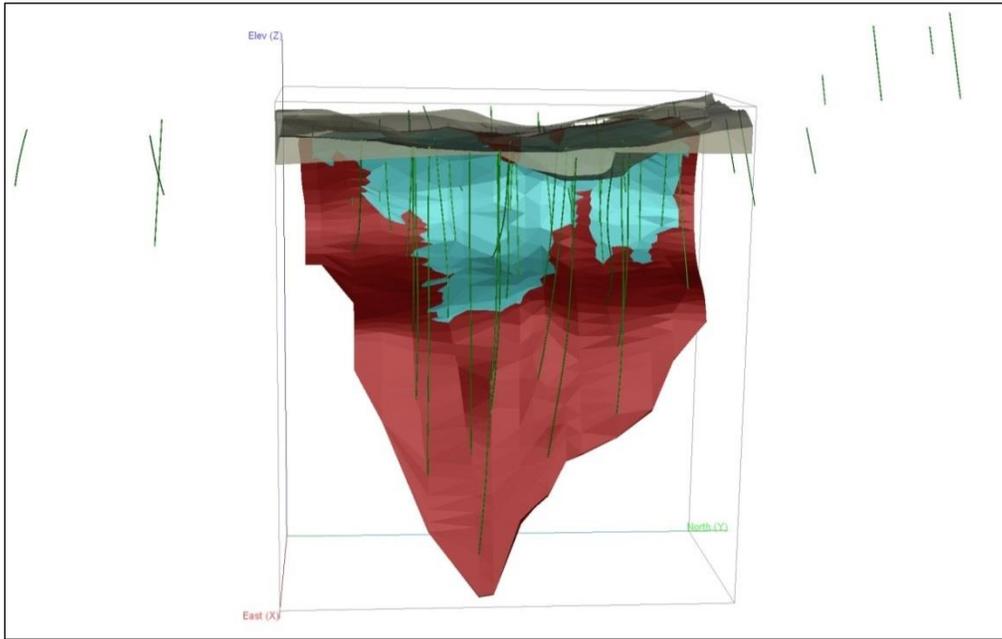
The data base supplied for this resource has an effective date of November 12, 2014 and contained information on 64 diamond drill holes. A list of the drill holes used in the resource calculation is contained in Appendix I of this Technical Report. Since the issue of the 2014 report, no drilling has been completed on the Property and therefore this resource is still current. The zinc equivalent cut-off used for resource reporting has been adjusted to reflect current metal price forecasts.

## **14.2 GEOLOGICAL SOLID**

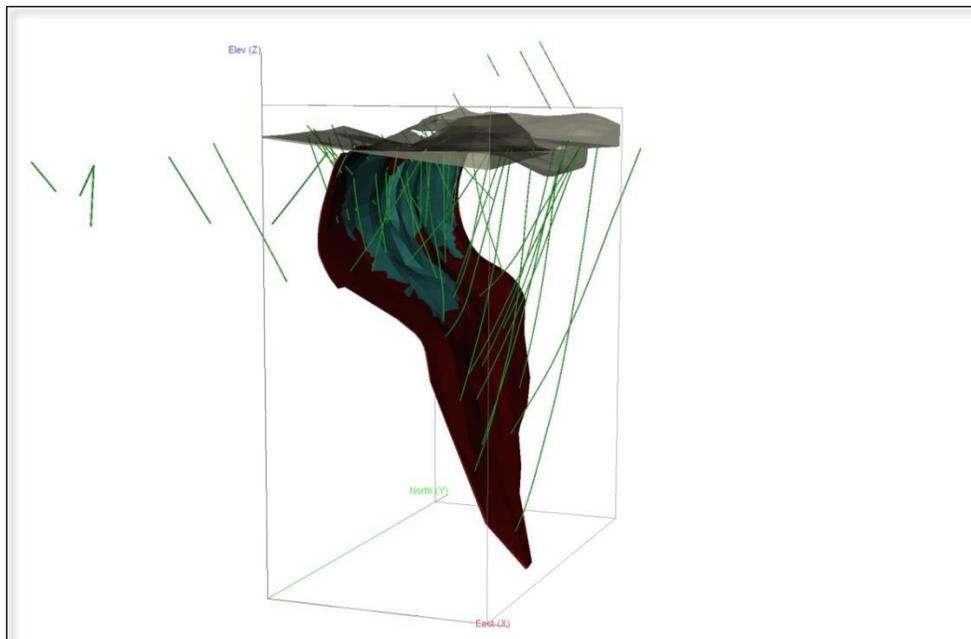
At the Property, Cambrian to Ordovician marine sediments and similar age volcanic rocks host zinc-lead-barite mineralization. The main host units are carbonate and clastic sediments that are broadly folded in a north-south trending, overturned syncline. Four (4) sediment-hosted, zinc-rich zones have been identified on the Property: the Mel Main, Jeri, Jeri North and Mel East Zones.

A geological solid for the Mel Main Zone (the “Mineralized Solid”) was provided by Matthew Dumala, P.Eng. from Archer, Cathro & Associates (1981) Limited. In addition, a Barite Shell solid that surrounds the Mineralized Solid in places, an overburden surface and a topographic surface were provided.

Figures 14.1 and 14.2 show isometric views of the Mineralized Solid and Barite Shell, surface topography, overburden surface and drill hole traces.



**Figure 14.1: Isometric view looking W showing Mineralized Solid in red, Barite Shell in blue, surface topography, overburden surface and drill hole traces.**



**Figure 14.2: Isometric view looking NW showing Mineralized Solid in red, Barite Shell in blue, surface topography, overburden surface and drill hole traces.**

### 14.3 DATA ANALYSIS

Drill hole collars, down-hole surveys and assays for 64 drill holes were supplied for the Mel Main Zone resource estimate. Two lead assays reported as <0.05% were replaced with values of 0.03%. Eight (8) lead and zinc assays reported as <0.01% were replaced with values of 0.01%. Two (2) lead assays reported at 0.00% were set to 0.01%. Barium assays reported as not sampled were set to 0.01% in 2 cases. Ten (10) barium assays reported as 0.00% were set to 0.01%. A table of significantly mineralized intercepts appears in Appendix II of this Technical Report.

There were 15 gaps within the from-to sequence that were filled with 0.01% for each variable.

Spot checks were completed on 53% of the assays by comparing original assay certificates with the digital assays reported. A total of 5 errors were found with most 2<sup>nd</sup> decimal errors. This represents a 2% error rate which is reasonable.

In 2012, 107 selected pieces of core were re-sampled by taking a ¼ core. Holes sampled ranged from 87-4 to 94-48. The results are compared in Table 14.1.

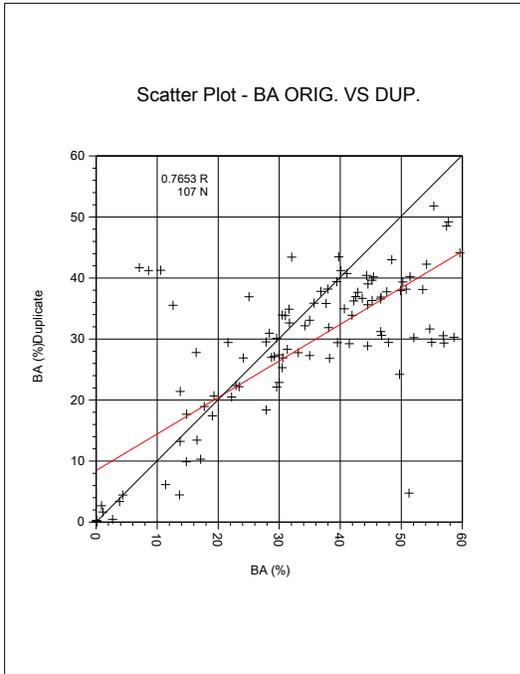
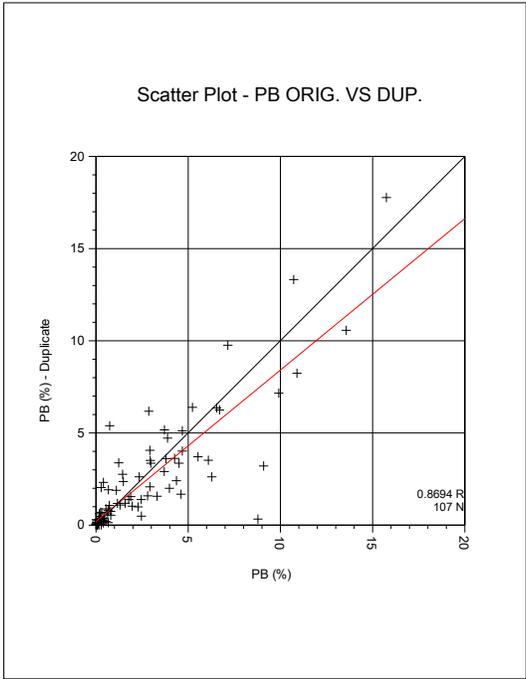
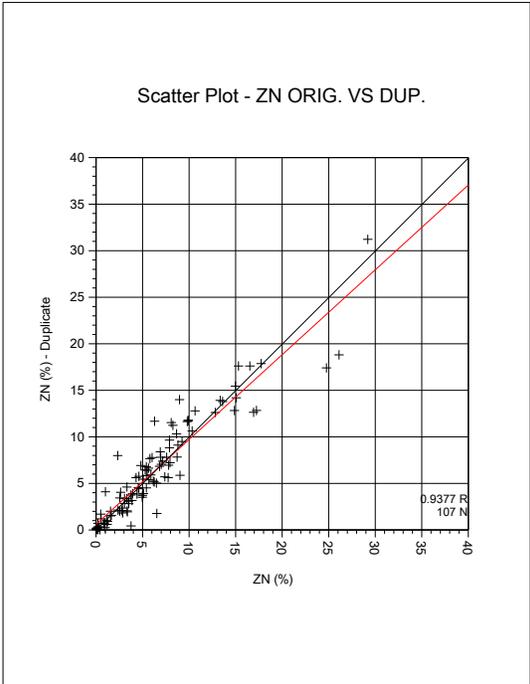
**Table 14.1: Original assays compared with Duplicate ¼ core assays**

Variable	Number	Mean Grade	S. D.	Minimum Value	Maximum Value	Coef. of Variation
Zn (%)	107	6.28	5.57	0.01	29.20	0.89
Dup. Zn (%)	107	6.32	5.42	0.02	31.22	0.86
Pb (%)	107	2.12	3.11	0.01	15.75	1.47
Dup. Pb (%)	107	1.94	2.94	0.01	17.77	1.52
Ba (%)	107	31.47	17.48	0.05	59.61	0.55
Dup. Ba (%)	107	27.29	13.67	0.03	51.81	0.50

Scatter plots are shown for all variables in Figure 14.3. In each case the best fit regression line is slightly below the equal value line. For each variable, this is due to a few outliers where the second ¼ core sample was less than the original assay. Since the duplicate sample was ½ the size of the original these few outliers are not unexpected. In general, the duplicate assays match the originals very well and show no analytical bias.

Drill holes were “passed through” the Mineralized Solid and Barite Shell with the intersections of drill holes with solids recorded. Of the 64 supplied drill holes, 48 intersected the Mineralized Solid. Data for all drill holes are shown in Appendices I and II of this Technical Report, with data for the 48 holes that intersected the Mineralized Solid at the Mel Main Zone highlighted.

The assays were then back-tagged with a code for mineralized zone (MIN), barite envelope (BA) and waste assigned. The domain interpretation was checked by comparing the domain boundaries with original assays. Assay statistics for each of the three domains are shown in Table 14.2.



**Figure 14.3: Scatter plots for Original assays versus Duplicates**

It should be noted that all coordinates are in a local mine grid and should be converted to UTM coordinates in the future.

**Table 14.2: Assay Statistics sorted by Geological Domains**

Domain	Variable	Number	Mean (%)	Standard Deviation	Minimum Value	Maximum Value	Coefficient of Variation
Mineralized	Zn (%)	285	5.59	5.18	0.01	29.40	0.93
	Pb (%)	285	1.89	3.10	0.01	22.20	1.64
	Ba (%)	285	29.66	17.80	0.01	59.61	0.60
Barite Shell	Zn (%)	67	1.18	1.25	0.01	4.98	1.06
	Pb (%)	67	0.80	1.07	0.01	5.23	1.35
	Ba (%)	67	16.45	16.96	0.01	53.52	1.03
Waste	Zn (%)	154	0.62	2.80	0.01	26.11	4.49
	Pb (%)	154	0.32	1.50	0.01	13.57	4.72
	Ba (%)	154	1.25	4.69	0.01	29.97	3.74

Zinc and lead in each of the three domains showed a strongly skewed distribution so lognormal cumulative frequency plots were used to determine if capping was necessary. Barium in all domains showed a skewed arithmetic distribution, so arithmetic cumulative frequency plots were used.

For zinc in the Mineralized Solid, a total of 6 overlapping lognormal populations were identified as shown on Figure 14.4 and tabulated in Table 14.3. Population 1 was considered erratic outliers and a cap of 2 standard deviations above the mean of population 2 was used to cap 2 samples at 27.0 % Zn.

**Table 14.3: Zinc Populations within Mineralized Solids**

Population	Mean Zn (%)	Percentage of Total	Number of Assays
1	28.44	1.10 %	3
2	24.75	0.70 %	2
3	14.83	9.44 %	27
4	6.87	38.76 %	110
5	2.59	34.31 %	98
6	0.14	15.69 %	45

A similar strategy was used to evaluate the remaining variables in all three domains. Table 14.4 shows the cap level and number of samples capped in each of the three domains.

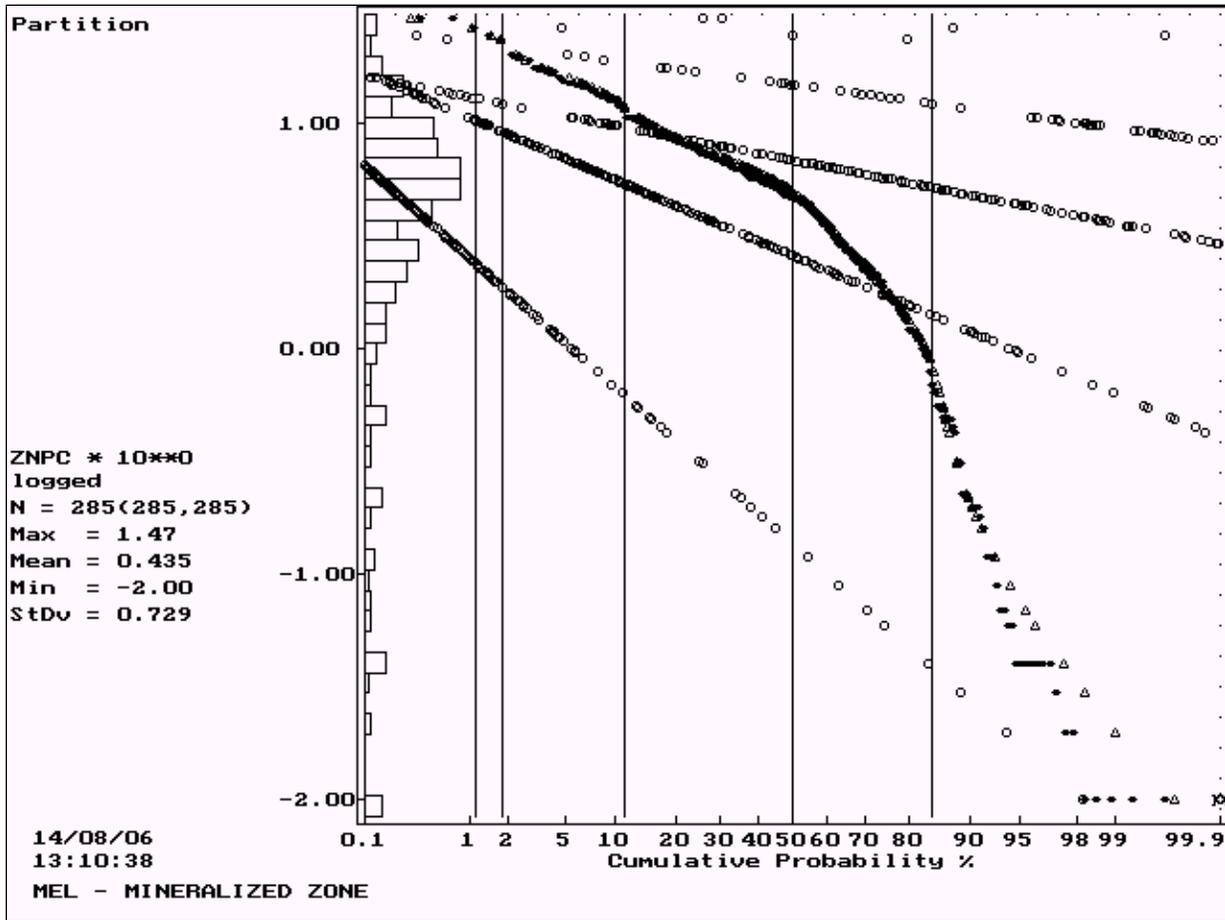


Figure 14.4: Lognormal cumulative frequency plot for Zn in Mineralized Solid

Table 14.4: Capping levels for each domain

Domain	Variable	Cap Level	Number Capped
Mineralized Solid	Zn	27.0 %	2
	Pb	16.6 %	2
	Ba	58.4 %	2
Barite Shell	Zn	4.0 %	2
	Pb	4.7 %	1
	Ba	50.0 %	1
Waste	Zn	2.5 %	8
	Pb	0.9 %	9
	Ba	9.0 %	7

The assays statistics after capping are tabulated below.

**Table 14.5: Capped Assay Statistics for all Domains**

Domain	Variable	Number	Mean (%)	Standard Deviation	Minimum Value	Maximum Value	Coefficient of Variation
Mineralized Solid	Zn (%)	285	5.57	5.11	0.01	27.00	0.92
	Pb (%)	285	1.86	2.93	0.01	16.60	1.57
	Ba (%)	285	29.65	17.80	0.01	58.40	0.58
Barite Shell	Zn (%)	67	1.15	1.18	0.01	4.00	1.02
	Pb (%)	67	0.79	1.04	0.01	4.70	1.32
	Ba (%)	67	16.40	16.84	0.01	50.00	1.03
Waste	Zn (%)	154	0.25	0.65	0.01	2.50	2.56
	Pb (%)	154	0.11	0.25	0.01	0.90	2.25
	Ba (%)	154	0.70	2.15	0.01	9.00	3.09

#### 14.4 COMPOSITES

The mineralized intervals in all drill holes ranged from a minimum of 1.3 meters to a maximum of 31.2 meter. Within the Mineralized Solid, a composite length of 2.0 meters was selected to best represent the data. Within the surrounding Barite Shell the sampled intervals ranged from a minimum of 0.15 meter to a maximum of 12.45 meter. Within the Barite Shell, a composite length of 1.0 meter was used. For external waste a composite length of 5 meter was used. For all domains, down-hole composites were formed from boundary to boundary. Samples less than ½ the composite length at the domain boundaries were combined with adjoining samples to produce a uniform support of Comp. Len. ± ½ Comp. Len.

Of note, the entire drill core from an upper Mineralized Solid interval in drill hole 78-6 from 22.75 to 44.50 and in drill hole 78-7 from 26.0 to 43.07 was shipped to Lakefield in March 1978 for metallurgical tests. These intervals were combined at Lakefield and a single assay was taken, which ran 3.87% Zn, 2.49% Pb and 30.3 % Ba. These intervals had this average grade inserted for the estimation only. As adding a constant grade for these 2 meter composites would add a level of continuity that does not exist, they were omitted from the variography.

The composite statistics for each domain are tabulated below.

**Table 14.6: Composite Statistics for all Domains**

Domain	Comp. Length	Variable	Number	Mean (%)	Standard Deviation	Minimum Value	Maximum Value	Coefficient of Variation
Mineralized Solid	2.0 m	Zn (%)	265	5.90	4.37	0.01	26.80	0.74
		Pb (%)	265	1.72	2.06	0.01	10.94	1.20
		Ba (%)	265	29.80	14.94	0.01	57.30	0.50
Barite Shell	1.0 m	Zn (%)	133	0.95	1.06	0.01	4.00	1.12
		Pb (%)	133	0.67	0.87	0.01	4.70	1.30
		Ba (%)	133	15.90	16.87	0.01	50.00	1.06
Waste	5.0 m	Zn (%)	2,119	0.02	0.07	0.01	1.74	4.44
		Pb (%)	2,119	0.01	0.04	0.01	1.10	2.95
		Ba (%)	2,119	0.03	0.30	0.01	9.00	11.18

Within the Mineralized Solid, zinc and lead had lognormal distributions while the barium distribution was arithmetic. A correlation matrix was produced for variables within the Mineralized Solid.

	Zinc	Lead	Barium
Zinc	1.0000		
Lead	0.4381	1.0000	
Barium	0.4672	0.1824	1.0000

## 14.5 VARIOGRAPHY

Pairwise relative semivariograms for zinc, lead and barium were produced within the Mineralized Solid domain. In each case anisotropy was demonstrated with the longest ranges along strike and down dip. There were not enough pairs in the across dip direction to model so a nominal range was applied. Nested spherical models were fit to each variable. The nugget-to-sill ratio for zinc and barium were a reasonable 33% and 35%, respectively. The nugget-to-sill ratio for lead was quite high at 60% indicating higher sample variability for lead.

For the Barite Shell domain, there were insufficient data points to model, so the semivariograms produced for the Mineralized Domain were applied.

Within the external Waste Domain isotropic spherical nested models were fit to each variable.

The semivariograms are attached as Appendix III of this Technical Report, and the parameters are summarized in Table 14.7.

**Table 14.7: Semivariogram Parameters for all variables in all Domains**

Domain	Variable	Az. / Dip	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>	Short Range (m)	Long Range (m)
Mineralized Solid & Barite Shell	Zn	0 / 0	0.30	0.15	0.45	30.0	80.0
		270 / -15				5.0	10.0
		90 / -75				20.0	150.0
	Pb	0 / 0	0.78	0.20	0.32	60.0	160.0
		270 / -15				5.0	10.0
		90 / -75				20.0	150.0
	Ba	0 / 0	0.30	0.10	0.45	50.0	110.0
		270 / -15				5.0	10.0
		90 / -75				40.0	110.0
Waste	Zn	Omni Directional	0.008	0.015	0.010	20.0	300.0
	Pb	Omni Directional	0.005	0.015	0.010	20.0	300.0
	Ba	Omni Directional	0.010	0.020	0.005	20.0	300.0

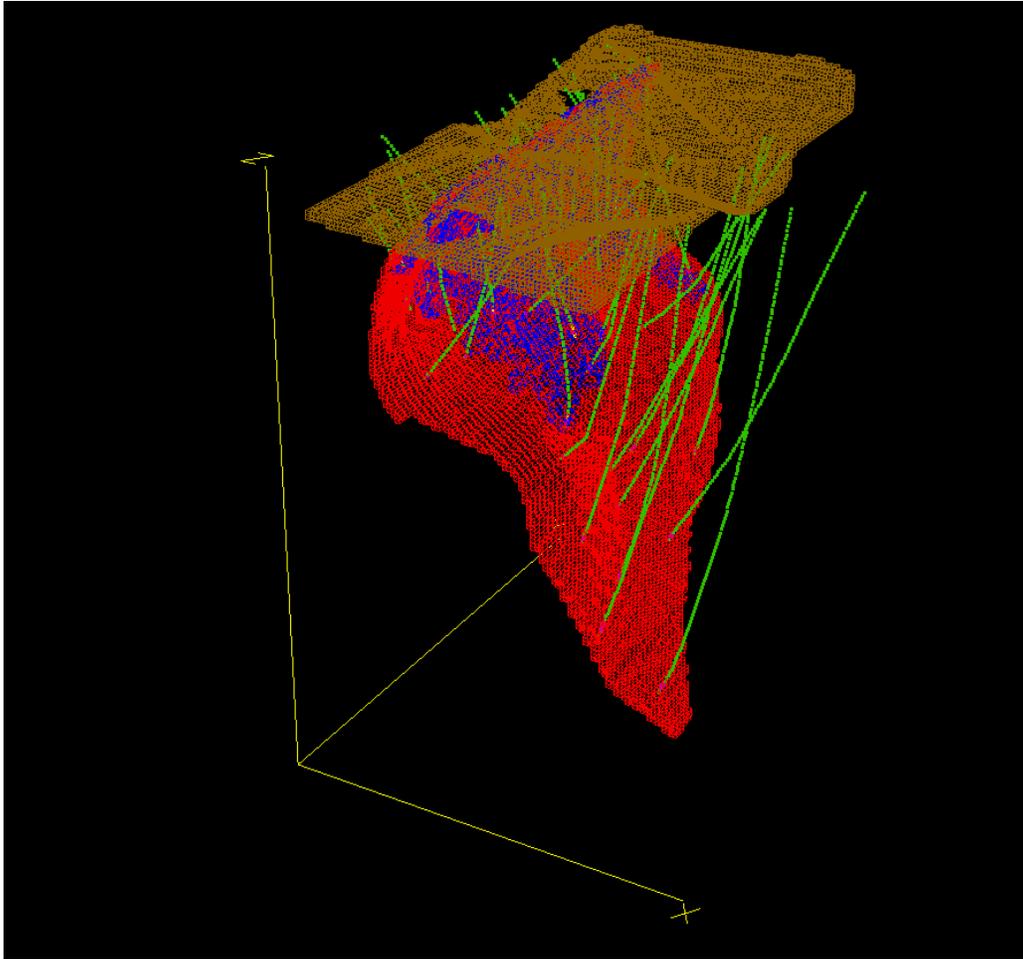
Where C<sub>0</sub> = Nugget Effect, C<sub>1</sub> = Short Range Structure and C<sub>2</sub> = Long Range Structure

## 14.6 BLOCK MODEL

A block model with dimensions 10.0 meters N-S, 5.0 meters E-W and 5.0 meters vertical was superimposed over the domain solids. For each block the percentage below surface topography, above the overburden-rock surface interface and within each of the Mineralized Solid and Barite Shell domains was recorded. Material outside of the solids was coded as waste. The block model origin was as follows.

Lower Left corner of Model

9920 East	Size of column = 5 meters	Number of columns = 67
9600 North	Size of row = 10 meters	Number of rows = 66
Top of Model		
965 Elevation	Size of level = 5 meters	Number of levels = 150
No Rotation.		



**Figure 14.5: View looking NW showing block model with overburden in brown, Mineralized Solid in red, Barite Shell in blue and drill hole traces.**

## 14.7 BULK DENSITY

A total of 47 specific gravity determinations were made by ACME Analytical Laboratories Ltd. in 1994 from drill core pulps in holes 94-44 and 94-46 to 49. The results are plotted below against the combined value of Pb + Zn + Ba% in the sample. The correlation coefficient at 0.986 is very good and a best fit polynomial regression line fits the data very well. A specific gravity for each domain was calculated by using this regression equation and the estimated values for Pb, Zn and Ba% in each of the three domains. A nominal specific gravity of 1.8 was applied to overburden. The specific gravity for a given block was then a weighted average as shown below.

$$\text{SG\_Block} = \frac{(\% \text{Min} * \text{SG Min}) + (\% \text{BS} * \text{SG BS}) + (\% \text{Was} * \text{SG Was}) + (\% \text{OB} * 1.8)}{\% \text{Below Topo}}$$

It is recommended that future drill campaigns take regular specific gravity measurements on drill core from waste, barite envelope and mineralized zone material to test the relationship between grade and density. Specific gravities from pulps measure the density of just the mineralization present and assume zero porosity.

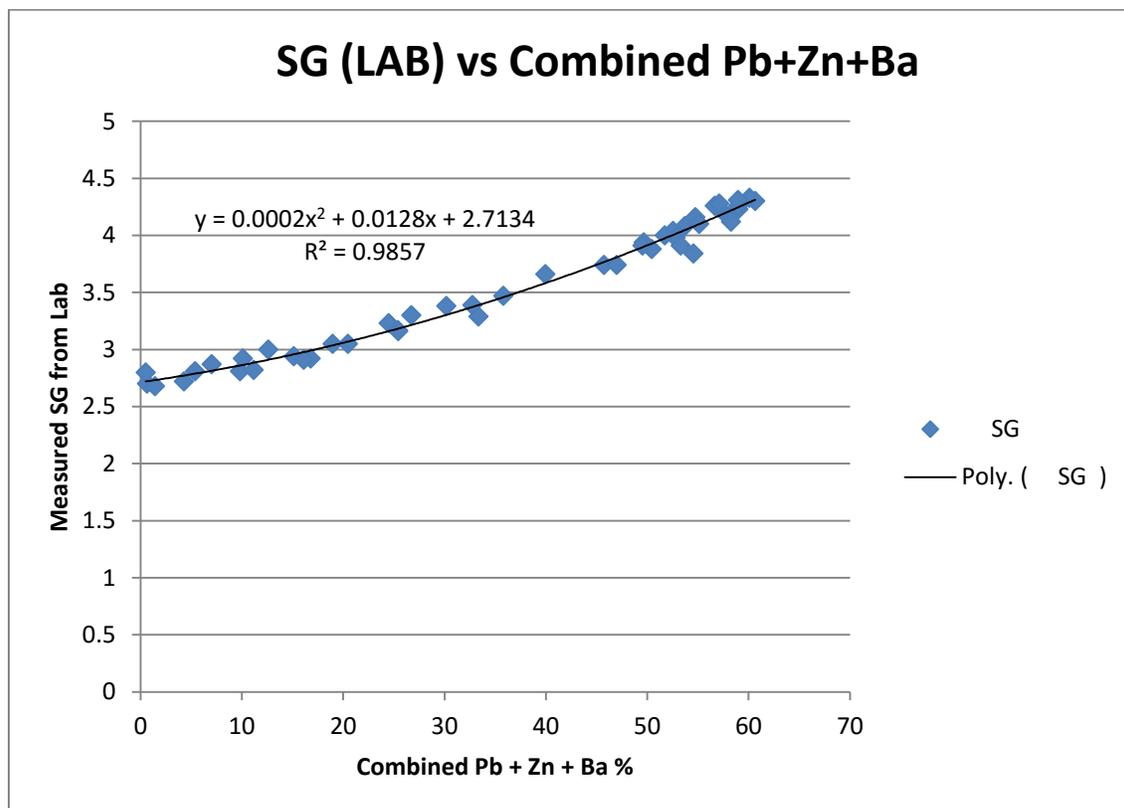


Figure 14.6: Scatter plot of Lab SG vs Combined Pb + Zn + Ba %

## 14.8 GRADE INTERPOLATION

Grades for zinc, lead and barium were interpolated into blocks using Ordinary Kriging. Kriging was completed on each domain independently using only the composites from the domain being estimated to prevent the smoothing of grades across domain contacts. For each domain kriging was completed in a series of 4 passes with the search ellipsoid used in each pass oriented in the plane of the anisotropy with dimensions tied to the semi-variogram of the variable being estimated. In the first pass the dimensions of the search ellipsoid were set to  $\frac{1}{4}$  of the semi-variogram range with a minimum of 4 composites required to estimate a block. A maximum of 3 composites were allowed from any given drill hole to ensure that a minimum of 2 drill holes were used to estimate a block. For blocks not estimated in Pass 1 a second pass using  $\frac{1}{2}$  the semi-variogram range was used. A third pass at the full range and a fourth at twice the range completed the kriging exercise. For all passes the maximum number of composites used was set at 12 and if more than 12 were found the closest 12 were used. A fifth pass for both the mineralized solid and barite shell filled in some blanks by relaxing the minimum number of composites to 2 and setting the maximum number per hole to 4.

The kriging parameters for zinc in each domain are tabulated below along with the number of blocks estimated in each pass.

**Table 14.8: Ordinary Kriging Parameters for Zinc in all Domains**

Domain	Pass	Number Estimated	Az / Dip	Dist. (m)	Az / Dip	Dist. (m)	Az / Dip	Dist. (m)
Mineralized Solid	1	78	0 / 0	20.0	270 / -15	2.5	90 / -75	37.5
	2	986	0 / 0	40.0	270 / -15	5.0	90 / -75	75.0
	3	5,959	0 / 0	80.0	270 / -15	10.0	90 / -75	150.0
	4	8,015	0 / 0	160.0	270 / -15	20.0	90 / -75	300.0
	5	1,008	0 / 0	160.0	270 / -15	20.0	90 / -75	300.0
Barite Shell	1	1	0 / 0	20.0	270 / -15	2.5	90 / -75	37.5
	2	283	0 / 0	40.0	270 / -15	5.0	90 / -75	75.0
	3	2241	0 / 0	80.0	270 / -15	10.0	90 / -75	150.0
	4	3420	0 / 0	160.0	270 / -15	20.0	90 / -75	300.0
	5	540	0 / 0	160.0	270 / -15	20.0	90 / -75	300.0
Waste	1	13,023	Omni Directional			75.0		
	2	3,064	Omni Directional			150.0		
	3	138	Omni Directional			300.0		

While only material within the Mineralized Solid is reported for zinc and lead and only material within the Mineralized Solid and Barite Shell is reported for barite the waste was also estimated to allow for reasonable levels of dilution to be added when a mining plan is applied.

## 14.9 CLASSIFICATION

Based on the study herein reported, delineated mineralization of the Mel Main Deposit is classified as a resource according to the following definitions from NI 43-101 and from CIM (2014):

*“In this Instrument, the terms "Mineral Resource", "Inferred Mineral Resource", "Indicated Mineral Resource" and "Measured Mineral Resource" have the meanings ascribed to those terms by the Canadian Institute of Mining, Metallurgy and Petroleum, as the CIM Definition Standards (May 2014) on Mineral Resources and Mineral Reserves adopted by CIM Council, as those definitions may be amended.”*

The terms Measured, Indicated and Inferred are defined by CIM (2014) as follows:

*“A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.”*

*“The term Mineral Resource covers mineralisation and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which Mineral Reserves may subsequently be defined by the consideration and application of Modifying Factors. The phrase ‘reasonable prospects for economic extraction’ implies a judgement by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. The Qualified Person should consider and clearly state the basis for determining that the material has reasonable prospects for eventual economic extraction. Assumptions should include estimates of cut-off grade and geological continuity at the selected cut-off, metallurgical recovery, smelter payments, commodity price or product value, mining and processing method and mining, processing and general and administrative costs. The Qualified Person should state if the assessment is based on any direct evidence and testing. Interpretation of the word ‘eventual’ in this context may vary depending on the commodity or mineral involved. For example, for some coal, iron, potash deposits and other bulk minerals or commodities, it may be reasonable to envisage ‘eventual economic extraction’ as covering time periods in excess of 50 years. However, for many gold deposits, application of the concept would normally be restricted to perhaps 10 to 15 years, and frequently to much shorter periods of time.”*

### **Inferred Mineral Resource**

*“An ‘Inferred Mineral Resource’ is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral*

*Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.”*

*“An ‘Inferred Mineral Resource’ is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes. Inferred Mineral Resources must not be included in the economic analysis, production schedules, or estimated mine life in publicly disclosed Pre-Feasibility or Feasibility Studies, or in the Life of Mine plans and cash flow models of developed mines. Inferred Mineral Resources can only be used in economic studies as provided under NI 43-101.”*

*“There may be circumstances, where appropriate sampling, testing, and other measurements are sufficient to demonstrate data integrity, geological and grade/quality continuity of a Measured or Indicated Mineral Resource, however, quality assurance and quality control, or other information may not meet all industry norms for the disclosure of an Indicated or Measured Mineral Resource. Under these circumstances, it may be reasonable for the Qualified Person to report an Inferred Mineral Resource if the Qualified Person has taken steps to verify the information meets the requirements of an Inferred Mineral Resource.”*

#### **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 are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.”*

*“Mineralisation may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralisation. The Qualified Person must recognise the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Preliminary Feasibility Study which can serve as the basis for major development decisions.”*

#### **Measured Mineral Resource**

*“A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence*

*is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.”*

*“Mineralisation or other natural material of economic interest may be classified as a Measured Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such that the tonnage and grade or quality of the mineralisation can be estimated to within close limits and that variation from the estimate would not significantly affect potential economic viability of the deposit. This category requires a high level of confidence in, and understanding of, the geology and controls of the mineral deposit.”*

### **Modifying Factors**

*“Modifying Factors are considerations used to convert Mineral Resources to Mineral Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.”*

Within the Mel Main Zone surface mapping and drill hole interpretation were used to establish the limits of the Mineralized Solid and hence geological continuity. Grade continuity can be quantified by semi-variogram analysis. By orienting the search ellipse in the directions of maximum continuity, as established by variography, the grade continuity can be utilized to classify the resource.

For the Mel Main Zone the drill hole density is still too coarse to classify any blocks measured or indicated. All blocks are classified as Inferred at this time.

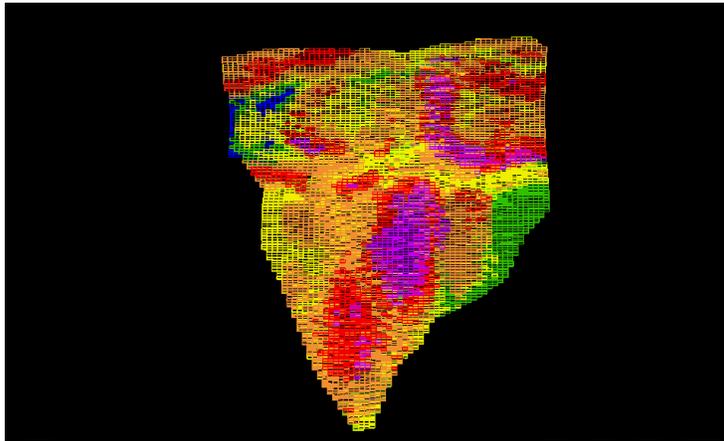
The resource is first presented using a zinc cut-off in Table 14.9.

**Table 14.9: Mel Main Zone – Inferred Resource within Mineralized Solid using a Zn Cut-off**

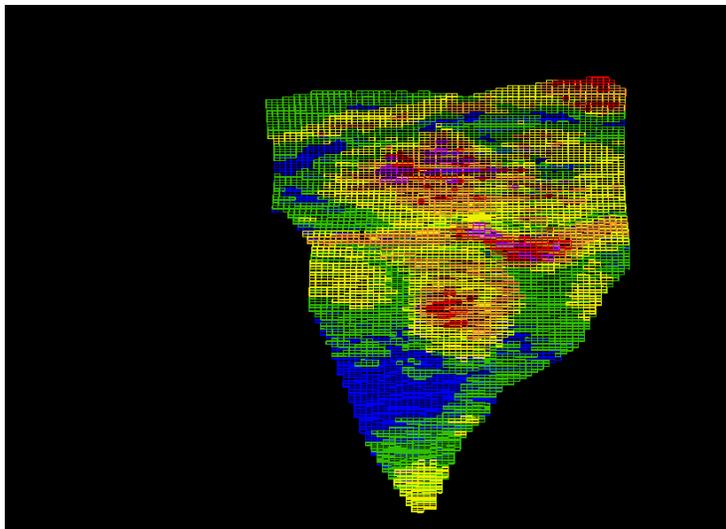
Cut-off (Zn%)	Tonnes > Cut-off (tonnes)	Grade > Cut-off			
		Zn (%)	Pb (%)	Ba (%)	Barite% (BaSO <sub>4</sub> )*
2.0	5,630,000	6.30	1.82	25.99	44.15
2.5	5,580,000	6.34	1.82	26.07	44.29
3.0	5,430,000	6.44	1.82	26.44	44.92
3.5	5,260,000	6.54	1.82	26.39	44.83
4.0	5,050,000	6.65	1.80	26.33	44.73
4.5	4,680,000	6.84	1.78	26.32	44.72
5.0	4,150,000	7.11	1.75	26.16	44.44
5.5	3,530,000	7.44	1.71	26.04	44.24
6.0	2,850,000	7.85	1.67	25.67	43.61
6.5	2,240,000	8.28	1.65	25.48	43.29
7.0	1,730,000	8.73	1.65	25.00	42.48

\* % Barite (BaSO<sub>4</sub>) = % Ba x 1.699

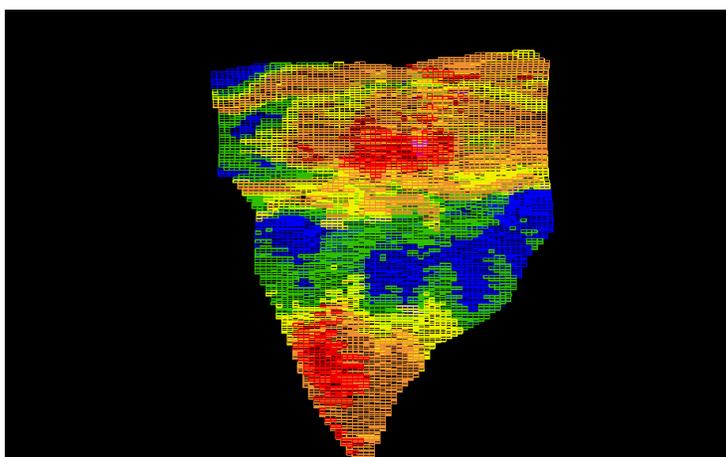
As shown by the correlation matrix in section 14.3 there is poor correlation between all three variables. This is also shown in Figure 14.7 where a long section shows zinc, lead and barium, each colour coded by estimated block grades within the Mineralized Solid. Clearly the highest zinc areas are not necessarily the highest lead or barium areas. As a result, using a zinc cut-off is not the best way to present the data.



0.0 < Zn < 2.0%  
 2.0 <= Zn < 4.0%  
 4.0 <= Zn < 6.0 %  
 6.0 <= Zn < 8.0 %  
 8.0 <= Zn < 10.0%  
 10.0 % < Zn



0.0 < Pb < 1.0%  
 1.0 <= Pb < 2.0%  
 2.0 <= Pb < 3.0 %  
 3.0 <= Pb < 4.0 %  
 4.0 <= Pb < 5.0%  
 5.0 % < Pb



0.0 < Ba < 10.0%  
 10.0 <= Ba < 20.0%  
 20.0 <= Ba < 30.0 %  
 30.0 <= Ba < 40.0 %  
 40.0 <= Ba < 50.0%  
 50.0 % < Ba

Figure 14.7: Long sections showing estimated Zn, Pb and Ba blocks colour coded by grade

The zinc-lead resource will most probably be an underground mining target while some of the barite might be accessible by open pit. As a result, the resources are presented in two ways. A zinc equivalent can be determined as follows:

	CIBC <sup>1</sup> Long term price	Recovery (Lakefield, 1978)	Factor
Zinc -	US\$1.01/lb.	90.3 %	20.11
Lead –	US\$0.94/lb.	97.7 %	20.25

Note <sup>1</sup> CIBC Global Mining Group Feb. 24, 2017 Long Term price forecast.

$$\text{ZnEQ} = \frac{(\text{Zn \%} \times 20.11) + (\text{Pb \%} \times 20.25)}{20.11}$$

Note barium is not included in the Zn Equivalent due to possible different mining scenarios. The barite resource within both the Mineralized Solid and Barite Shell is presented separately with a barite cut-off and only above the 700 meters level as it is unlikely the material below this level would be economic.

At this time, no economic studies have been completed and an economic cut-off is unknown. Assuming open pit mining costs of \$3.50/t, underground mining costs of \$65.00/t, processing costs (including G&A) of \$27.00, downstream costs (transportation and treatment) of \$44.50/t, metal prices of \$1.01 for Zn & \$0.94 for Pb and an exchange rate of 1.22 a reasonable ZnEQ cut-off might be 3.0 % for the open pit and 5.0 % for underground.

This resource will have to be evaluated in a PEA at some point to determine how much of the resource could be mineable.

**Table 14.10: Mel Main Zone – Inferred Resource within Mineralized Solid using a Zn Equivalent Cut-off**

Cut-off (ZnEQ %)	Tonnes > Cut-off (tonnes)	Grade > Cut-off			
		Zn (%)	Pb (%)	ZnEQ (%)	BaSO <sub>4</sub> (%)
2.0	5,640,000	6.29	1.82	8.12	44.12
2.5	5,640,000	6.30	1.82	8.13	44.13
3.0	5,640,000	6.30	1.82	8.13	44.14
3.5	5,610,000	6.31	1.82	8.15	44.24
4.0	5,550,000	6.35	1.83	8.19	44.33
4.5	5,440,000	6.42	1.84	8.28	44.70
<b>5.0</b>	<b>5,280,000</b>	<b>6.51</b>	<b>1.86</b>	<b>8.38</b>	<b>45.05</b>
5.5	5,100,000	6.60	1.88	8.49	45.07
6.0	4,840,000	6.71	1.91	8.64	44.94
6.5	4,460,000	6.87	1.96	8.84	44.71
7.0	3,970,000	7.08	2.00	9.10	44.59

**Table 14.11: Mel Main Zone – Inferred Barite Resource Above 700 meter Elevation**

Cut-off (BaSO <sub>4</sub> %)	Tonnes > Cut-off (tonnes)	Grade > Cut-off		
		BaSO <sub>4</sub> (%)	Zn (%)	Pb (%)
20.0	3,350,000	48.44	4.96	1.70
21.0	3,340,000	48.57	4.97	1.71
22.0	3,320,000	48.72	4.98	1.71
23.0	3,290,000	48.93	5.00	1.71
24.0	3,270,000	49.09	5.02	1.72
25.0	3,250,000	49.25	5.03	1.72
26.0	3,230,000	49.38	5.04	1.73
27.0	3,210,000	49.56	5.06	1.73
28.0	3,180,000	49.75	5.07	1.74
29.0	3,150,000	49.95	5.09	1.74
30.0	3,100,000	50.25	5.11	1.75
35.0	2,850,000	51.84	5.22	1.80
40.0	2,500,000	53.81	5.31	1.85
45.0	2,019,000	56.49	5.35	1.92
50.0	1,503,200	59.59	5.39	1.98

The zinc equivalent resource above the 700 meter level is shown in Table 14.12.

**Table 14.12: Mel Main Zone – Inferred Resource within Mineralized Solid using a Zn Equivalent Cut-off above the 700 meter level**

Cut-off (ZnEQ %)	Tonnes > Cut-off (tonnes)	Grade > Cut-off			
		Zn (%)	Pb (%)	ZnEQ (%)	BaSO <sub>4</sub> (%)
2.0	2,780,000	5.98	1.94	7.93	52.80
2.5	2,770,000	5.98	1.94	7.93	52.83
<b>3.0</b>	<b>2,770,000</b>	<b>5.98</b>	<b>1.94</b>	<b>7.94</b>	<b>52.85</b>
3.5	2,760,000	5.99	1.95	7.95	52.92
4.0	2,740,000	6.02	1.96	8.00	53.00
4.5	2,690,000	6.07	1.98	8.06	53.13
5.0	2,630,000	6.12	2.00	8.13	53.31
5.5	2,530,000	6.21	2.02	8.24	53.43
6.0	2,400,000	6.32	2.05	8.38	53.55
6.5	2,200,000	6.46	2.10	8.58	53.51
7.0	1,950,000	6.65	2.14	8.81	53.50

## 14.10 MODEL VERIFICATION

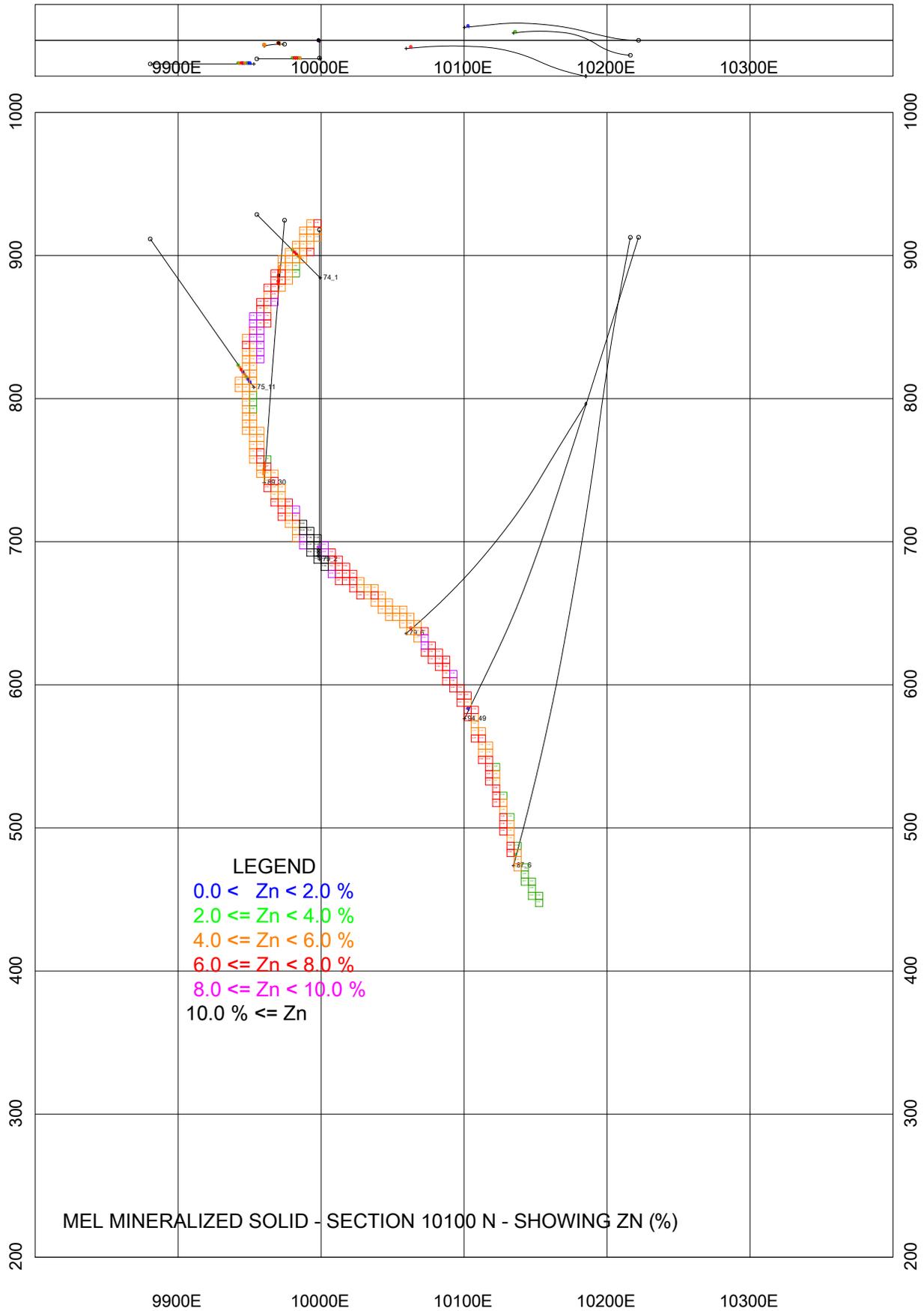
The block model was verified in a number of ways. First the composite values were statistically compared to the estimated blocks within the Mineralized Solid and Barite Shell. The results shown below in Table 14.12 are reasonable considering the amount of data available.

**Table 14.13: Comparison of composites vs estimated blocks**

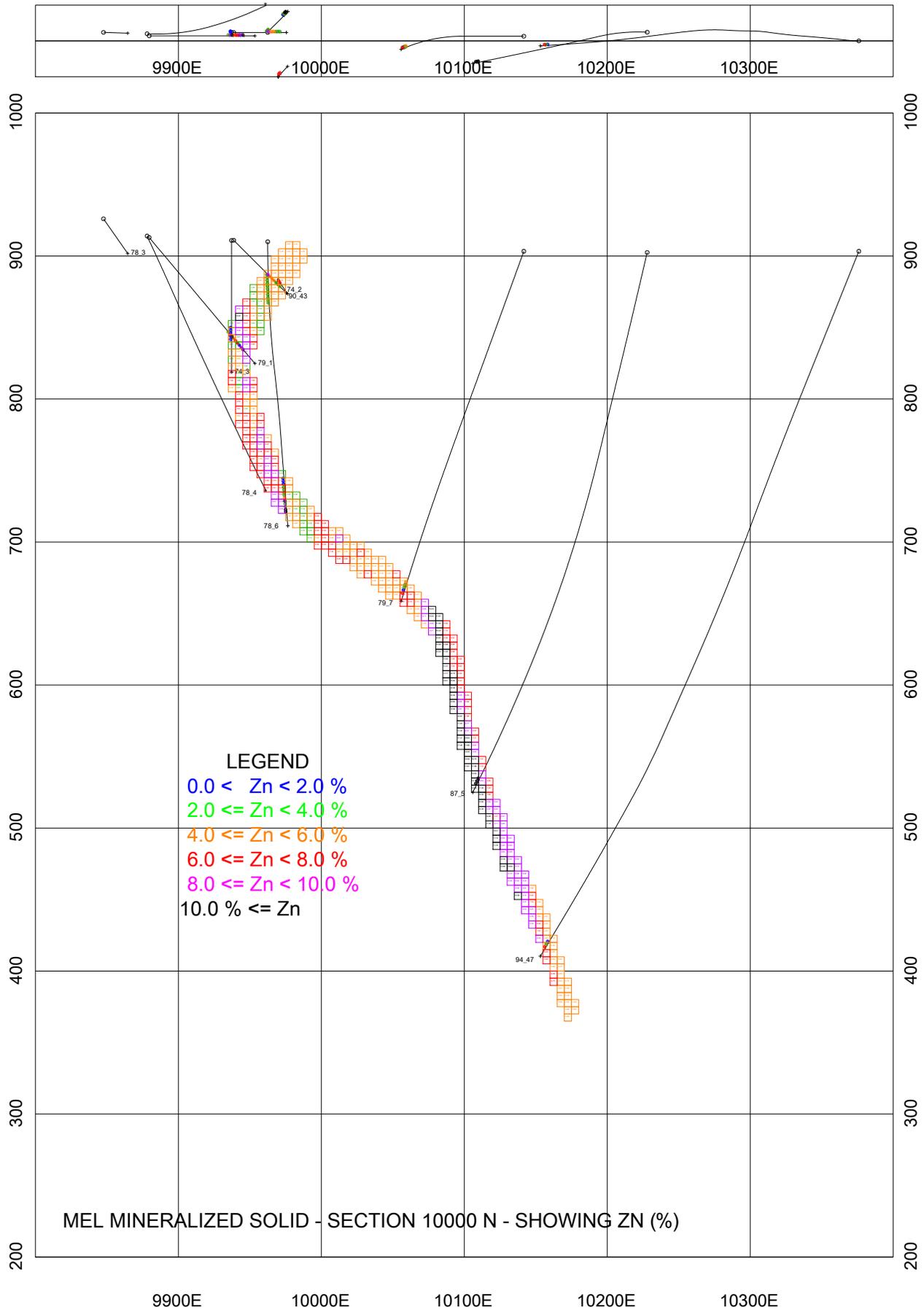
Domain	Variable	Composites			Kriged Blocks		
		Number	Mean	C.V.	Number	Mean	C.V.
Mineralized Solid	Zn (%)	265	5.90	0.74	16,050	6.14	0.35
	Pb (%)	265	1.72	1.20	16,050	1.79	0.54
	Ba (%)	265	29.80	0.50	16,050	23.32	0.52
Barite Shell	Zn (%)	133	0.95	1.12	6,394	0.90	0.59
	Pb (%)	133	0.67	1.30	6,394	0.65	0.67
	Ba (%)	133	15.90	1.06	6,394	13.78	0.63

Within the Mineralized Solid, a second test was made by re-estimating all blocks with some percentage of Mineralized Solid present using Inverse Distance Squared interpolation and a similar search strategy. The results from 16,050 blocks showed at a zero cut-off the OK model contained 0.61% less pounds of zinc, 5.42% more pounds of lead and 3.9% less pounds of barium than the ID<sup>2</sup> model.

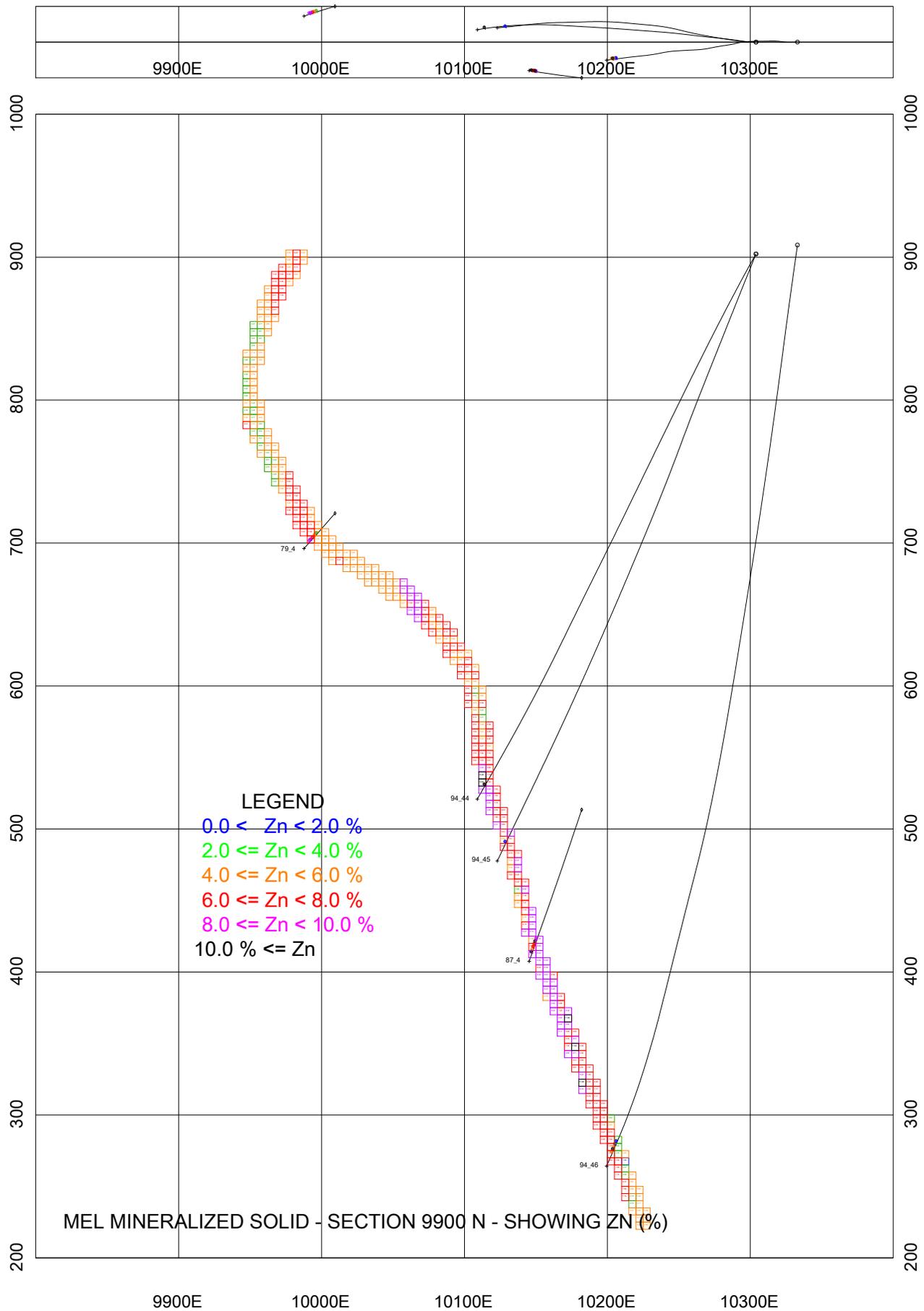
Finally, the estimated kriged grades were visually compared to composite grades on a series of east-west cross sections. Four example sections are shown below as Figures 14.8 to 14.11. The results compared well with no bias indicated.



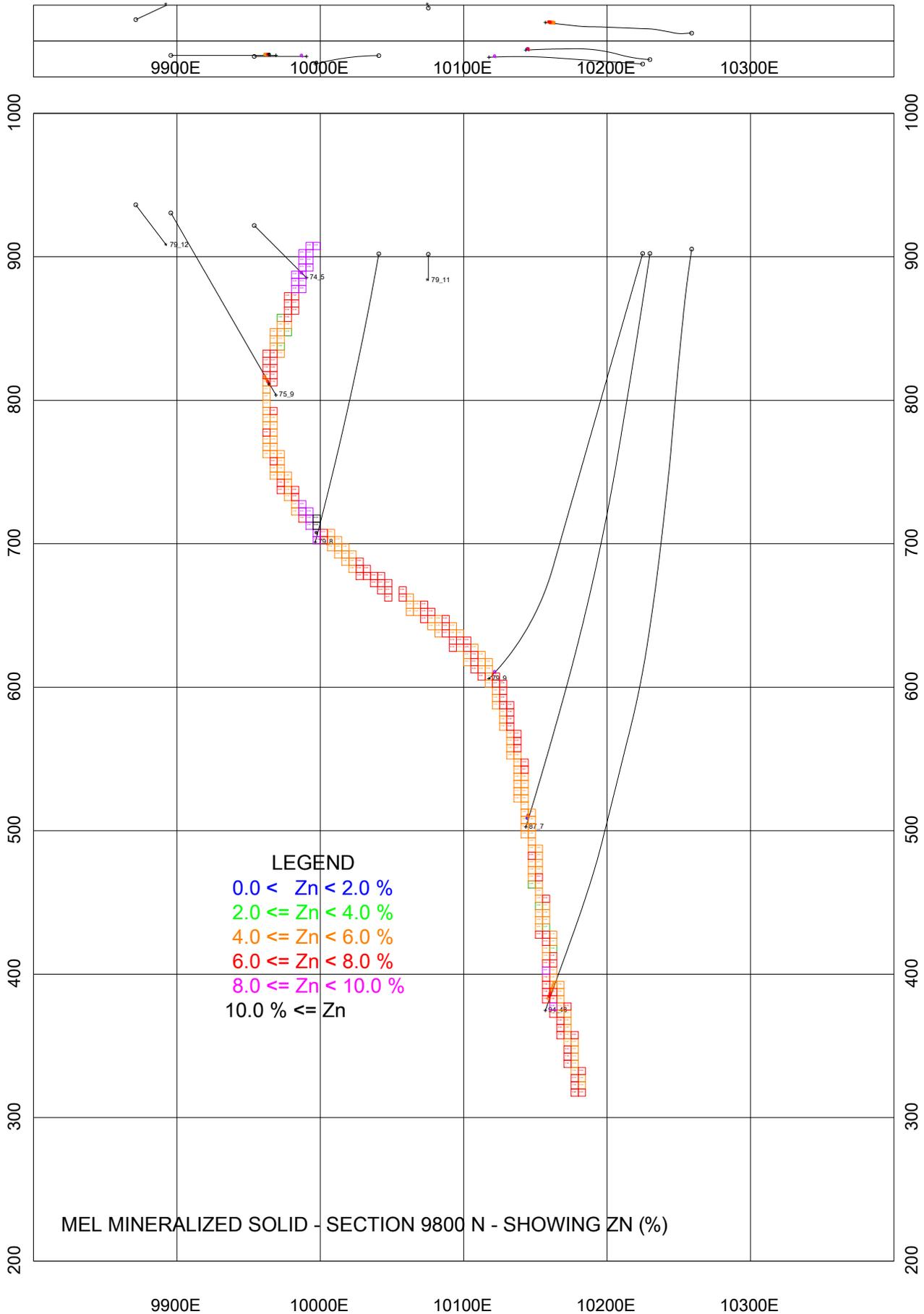
**Figure 14.8: Section 10100 N showing composites and estimated Zn blocks**



**Figure 14.9: Section 10000 N showing composites and estimated Zn blocks**



**Figure 14.10: Section 9900 N showing composites and estimated Zn blocks**



**Figure 14.11: Section 9800 N showing composites and estimated Zn blocks**

## **15.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT**

There are no known environmental, permitting, or title issues regarding the Property that may affect the mineral resource. The government of Yukon is supportive of mining, which historically has had an important economic impact on the territory.

In March 2015, Silver Range completed a Heritage Resource Overview Assessment (HROA) for the Mel claims, however, a detailed field study was not completed (Kaufmann and Heffner, 2015). It is recommended a Heritage Resources Impact Assessment (HRIA) be completed over areas identified as having elevated potential to contain heritage resources.

## **16.0 ADJACENT PROPERTIES**

There are no known mineral occurrences or deposits within the immediate vicinity of the Property that are not covered by the mineral claims comprising the Property, and no claims, except the Property claims, are shown as currently in good standing on claim map 95D/06.

Banyan Gold Corp.'s, Hyland Gold project is located 19 km west of the Mel property and comprises sediment hosted, structurally controlled gold mineralization. This mineralization is not representative of mineralization found on the Mel Property.

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

In September 2014 a barite marketing study was completed by World Industrial Minerals for Silver Range (Guilinger, 2014).

## 18.0 INTERPRETATION AND CONCLUSIONS

The Mel Main Zone is a zinc-lead-barite deposit hosted within Cambrian to Ordovician marine sediments. Mapable units of carbonate and clastic sediments are broadly folded into a north-south trending, overturned syncline. The Mel Main Zone occurs on the western limb of the syncline within a lensy stratigraphic horizon, which is underlain by crypto-grained limestone and overlain by a distinctive phyllite/mudstone unit that grades upward into wavy-banded, argillaceous limestone.

Diamond drilling at the Mel Main Zone has outlined an Inferred Mineral Resource estimated at 5,280,000 tonnes of 6.51% Zn, 1.86% Pb and 45.05% barite using a 5% Zn-Equivalent cut-off. In-fill drilling to up-grade the resource to an Indicated Mineral Resource is warranted.

The overturned and steeply dipping deposit is open to extension down dip, with potential for a significant increase in tonnage. Three other zones of zinc-rich mineralization are also present on the Property, but no mineral resource estimates have been made for them.

The Jeri Zone is located about 4 kilometers northeast of the Mel Main Zone on the eastern limb of the same syncline that hosts the zinc-lead-barite mineralization at the Mel Main Zone. At the Jeri Zone, unusually strong alteration of the footwall carbonate rocks to zinc-bearing, hydrothermal dolomite and silicified dolomite has been exposed for several kilometers along the fold limb.

The Jeri Zone has been tested by trenching and diamond drilling over a strike length of 550 meters. The drilling has intersected encouraging zinc values, including 13.11% Zn over 3.37 meters, within the larger zone of silicified and dolomitized limestone.

Trenching at the Jeri Zone has exposed smithsonite and minor sphalerite mineralization over widths of 5 meters to 7 meters. Sampling has yielded high zinc values in 3 of 10 trenches, with mineralized exposures grading from 5.3% Zn over a sample width of 7 meters to 16.5% Zn over a sample width of 5 meters.

There is potential for the discovery of additional zinc mineralization within the thick dolomitized section of limestone that hosts the Jeri Zone. An untested geophysical anomaly at the south end of the Jeri Zone, interpreted to be located at the base of the dolomitized limestone, represents a particularly attractive drill target.

The Jeri North Zone lies 3 kilometers north of the Jeri Zone on the eastern limb of the same syncline that hosts the Mel Main Zone. At the Jeri North Zone, coarse-grained sphalerite occurs within a chert unit below a volcanic flow and volcanoclastic sequence that grades upwards into wavy-banded limestone. This mineralized chert unit rests on the same crypto-grained limestone that forms the base of the Mel Main Zone. The chert and volcanic sequence seen at the Jeri North Zone is not present at the Mel Main and Jeri Zones.

Diamond drilling at the Jeri North Zone resulted in the discovery of promising zinc mineralization. One hole intersected 9.9% Zn over a core length of 5 meters and another hole, drilled deeper on the same section, intersected 15.6% Zn over a core length of 5.1 meters. Although additional drilling on the Jeri North Zone did not extend the zone of zinc mineralization beyond an estimated 400 meters of strike extent, there is significant potential within untested portions of the favorable horizon.

Geological mapping, trenching, geophysical and geochemical surveys and diamond drilling at the Jeri and Jeri North Zones have traced the favorable zinc-bearing horizon along the east limb of the syncline for a length of 8 kilometers. Additional drilling is warranted to evaluate several untested targets.

The Mel East Zone is another showing of zinc mineralization, located 3 kilometers northeast of the Jeri Zone. It is believed to be hosted in a faulted-offset of the same stratigraphic sequence that hosts the Mel Main, Jeri and Jeri North Zones. The Mel East Zone has not been trenched or drilled. Anomalous zinc-lead soil geochemistry and a coincident IP anomaly have defined a drill target.

The mineralized zones on the Property have been variously categorized as carbonate-replacement, sedimentary exhalative and unconformity or karst-related. Although the zones exhibit certain characteristics that are consistent with each of these deposit types, they also show features that are inconsistent with each deposit type. Regardless, the mineralization occurs in a predictable stratigraphic setting, which has made historical exploration successful and will help guide future work.

Exploration conducted to date at the Mel Main Zone has defined a mineral resource of potential economic interest, and historical metallurgical test work has produced encouraging results. Further work on the Mel Main, Jeri, Jeri North and Mel East Zones is warranted.

As of the effective date of this report, the Author is not aware of any risks and uncertainties that could affect the project's potential economic viability.

## 19.0 RECOMMENDATIONS

At a minimum two phases of exploration are proposed at the Mel Property. Both phases could potential be expanded with the allocation of additional expenditures depending on the results obtained during these initial programs.

### 19.1 Phase I

The objectives of the Phase I exploration work include:

- Trace the on-strike extensions of the Mel Main zone
- Trace the on-strike extension of the Jeri and Jeri North mineralization, specifically in the 3.0 km interval between these two zones
- Identify potential drill targets along the strike extensions of the Mel Main and Jeri to Jeri North mineralizes trends

The principal exploration activities required to achieve these objectives include mapping, trenching and soil and rock sampling. Mapping and soil geochemical sampling will be conducted along strike of the Mel Main and between the Jeri and Jeri North zones. In the case of the Mel strike extensions, surface conditions are more favourable for tracing this zone to the north; to the south swampy ground may make this more challenging and drilling may be the only way to trace Mel Main. Where suitable strategically placed trenches, utilizing a helicopter portable CANDIG excavator, will be undertaken for the Mel Main strike extensions. Ground conditions are favourable for a systematic trenching program between Jeri and Jeri North with initial trenching to be spaced approximately 200m apart. Trenches are expected to be between 50 to 75 m long. Rock sampling of visible mineralization and associated alteration will be undertaken where encountered in trenches and outcrop exposures for all areas.

A budget for the above-mentioned Phase I Program is estimated at \$149,820 as presented in *Table 20.1*. It is estimated that the program would take 20 days to complete.

**TABLE 19.1  
PROPOSED BUDGET FOR PHASE 1 EXPLORATION AT MEL PROPERTY**

<u>Activity</u>	<u>Cost (\$)</u>
Mechanical (CANDIG) Trenching (230 hrs. @ \$150/hr.)	34,500
Helicopter Support (\$1,500/hr. includes fuel)	6,000
Aircraft Support (3 weeks, 4 flights x \$750/trip)	3,000
Assaying (500 samples @ \$30/sample)	15,000
Room & Board (4 persons x 23 days x \$155/day)	14,260
Labour (mapping and sampling)	37,500
Fuel	1,590
Expediting, Safety & Accounting	6,500
Quad rental	4,000
Supervision and report preparation	9,500
	<hr/>
	131,850
Consultant's administration fee	4,350
	<hr/>
	Sub-total
	136,200
Contingency (10%)	13,620
	<hr/>
<b>TOTAL (excluding taxes)</b>	<b><u>149,820</u></b>

## 19.2 Phase II

### Principal Objectives:

- Mel Main Zone - test targets that have potential to increase the current Inferred Resource.
- Mel Main Zone - confirm continuity of mineralized grades and widths in the upper portion of the Inferred Resource.

### Additional Objectives:

- Jeri and Jeri North zones
  - Define in detail the lateral extent of any mineralization identified from the Phase I trenching program;
  - Explore for mineralization along the immediate 2.0 km strike direction to the north of Jeri North
  - Identify potential drill targets for future testing based on trenching results.
- Complete the Heritage Resources Impact Assessment initiated by Silver Range for the Property Holdings as part of the ongoing permitting requirements.

### Activities:

#### **Mel Main Zone**

Diamond drilling will be the main activity to test targets that could potentially increase the resource. Areas with potential to increase the resource include on-strike extensions to the north and south of the Mel Main Zone and extension of the current Inferred Resource at depth. Final diamond drill hole locations will be determined during site surveys and mapping completed during Phase I.

Drilling recommendations include:

- Step-out drilling along the northern strike projection of the Mel Main Zone. Ground conditions appear more permissive in this direction for relatively shallow holes. Approximately 600 m of drilling are recommended in four to six holes.
- Ground conditions (presence of swamps) make tracing the south strike projection of the Mel Main Zone difficult using trenching, consequently drilling appears as the only way to test this area. Two to four holes are recommended to test this southern extension for a minimum of 400 m and a maximum of 800 m of drilling. Drilling and placement of the third and fourth holes will depend on the results of the first two step-out holes.
- Two to four drill holes are recommended to test the projected depth extension of Mel Main mineralization below the current limits of the Inferred Resource. If results for the first two holes are positive, then the second two holes should be completed to help define the grade and size potential of this extension of the mineralization. The total anticipated drill meterage is approximately 2700 m.
- Complete five confirmation drill holes within the upper 200 m of the current Inferred Resource for a total of approximately 750 m of drilling. The main idea is to test the grade and width continuity of the mineralization.

Multi-element analysis of the mineralization should be undertaken on strategically selected samples. This type of information is useful for exploration, metallurgical evaluations and environmental assessments.

### **Jeri and Jeri North**

The recommended work plan for Jeri and Jeri N includes additional trenching, mapping and rock sampling, as follows.

Recommendations to follow-up mineralization identified in the 3.0 km interval between Jeri and Jeri North from the Phase I trenching program include:

- In-fill trenching spaced 100m apart to define the lateral limits of mineralization found during Phase I trenching. Rock sampling of exposed mineralization. An estimate 250 to 300 m of in-fill trenching is anticipated.
- Selection of drill targets will be based on the trench results.

Prior surface mapping and continuity of the prospective stratigraphic package suggests that the northern strike extension of the Jeri North Zone warrants additional exploration. A work proposal is recommended to explore for mineralization for approximately 2.0 km north on strike from Jeri North. Field activities would consist primarily of geological mapping, surface trenching and rock sampling. Initial trenching to be spaced approximately 200 m apart with trenches anticipated to be 50 to 75 m long; work progress is expected to be one trench per day. An estimated 300 to 500 m of trenching is anticipated for this program. Rock sampling of visible mineralization and associated alteration will be undertaken where encountered in trenches and outcrop exposures.

### **Heritage Studies**

A Heritage Resources Impact Assessment (HRIA) is required under the terms of the exploration work permit and is a follow-up on the Heritage Resource Overview Assessment (HROA) completed by Silver Range in 2015. It is recommended an HRIA be completed over areas previously identified as having elevated potential to contain heritage resources. An HRIA requires on-site field work by a qualified contractor.

### **Duration of Recommended Phase II Program**

Phase II field exploration activities are anticipated to take approximately seven weeks. Mobilization of equipment and materials will be done in advance of the Phase II field program. A report of results will be prepared after receipt of all analytical and assay data following the Phase II program. A budget for the above-mentioned Phase II Program is estimated at \$1,831,500 as presented in *Table 20.2*.

**TABLE 19.2**  
**PROPOSED BUDGET FOR PHASE 2 EXPLORATION AT MEL PROPERTY**

<u>Activity</u>	<u>Cost (\$)</u>
Diamond Drilling 4,850 m (includes fuel, core boxes, mob/demob)	565,000
Helicopter Support (includes fuel)	142,000
Fixed Wing	71,000
Excavator and Bulldozer (including fuel and operator)	84,000
Camp, Rentals and Consumables	226,000
Labour	250,000
Assaying (1,500 samples)	66,000
Logistics, and Health and Safety	88,000
Senior Supervision, Report Preparation and Accounting	59,000
Heritage Resources Impact Assessment	20,000
	<hr/>
	1,571,000
Consultant's Administration Fee	94,000
	<hr/>
	Sub-total 1,665,000
Contingency (10%)	166,500
	<hr/>
<b>TOTAL (excluding taxes)</b>	<b><u>1,831,500</u></b>

## 20.0 REFERENCES

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## 21.0 CERTIFICATES OF AUTHORS

### 21.1 Certificate and Consent of H. Leo King

I, H. Leo King, of 3633 Somerset Crescent, Surrey, British Columbia do hereby certify that:

- 1) I am consulting geologist with an office at 3633 Somerset Crescent, Surrey, British Columbia.
- 2) I graduated from University of Saskatchewan in 1961 with a B.A. (geology) and in 1966 with a M.A. (Geology).
- 3) I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia (Registration No. 18991).
- 4) I am a member in good standing of the Professional Engineers Ontario (Registration No. 23847015).
- 5) I have practiced my profession continuously since 1965. I have 50 years of experience in minerals exploration and mining geology. My past experience includes more than 16 years conducting exploration programs for base metal sedimentary exhalative deposits in Yukon.
- 6) I have read the definition of “qualified person” set out in NI 43-101 and certify that by reason of education, experience, independence and affiliation with a professional association, I meet the requirements of an independent Qualified Person as defined in NI 43-101.
- 7) I am responsible for the preparation of Sections 1.0 (excluding Section 1.4) to 13.0 inclusive and Sections 15.0 to 21.0 inclusive of this Technical Report titled “Technical Report on the Mel Zinc-Lead-Barite Property and dated March 20, 2017.
- 8) I have supervised several exploration programs on the Mel property during the period from 1976 to 1989 and more recently managed exploration programs during 1993, 1994 and 1995. My last visit to the Property was on June 7, 2012.
- 9) As of the date of this certificate, to the best of my knowledge, information and belief, the portions of this Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make that portion of this Technical Report not misleading.
- 10) I am independent of both Benz Mining Corp., and Silver Range Resources Ltd., applying all of the tests in section 1.5 of NI 43-101.
- 11) I have read NI 43-101 and Form 43-101F1, and this Technical Report has been prepared in compliance with that instrument and form.
- 12) I consent to the public filing of this Technical Report with any stock exchange and other regulatory authority and its publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public.

Dated this 19<sup>th</sup> day of April, 2017.

(signed) “H. Leo King” (sealed)  
H. Leo King, P. Geo.

## 21.2 Certificate of G. H. Giroux

I, G.H. Giroux, of North Vancouver, British Columbia do hereby certify that:

- 1) I am a consulting geological engineer with an office at 982 Broadview Dr. North Vancouver, British Columbia.
- 2) I graduated from the University of British Columbia in 1970 with a B.A. Sc. and in 1984 with a M.A. Sc., both in Geological Engineering.
- 3) I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
- 4) I have practiced my profession continuously since 1970. I have over 41 years of experience estimating mineral resources. I have previously completed resource estimations on a variety of silver-lead-zinc deposits including the Wolverine, Keno Hill and Logan Deposits in Yukon.
- 5) I have read the definition of “qualified person” set out in NI 43-101 and certify that by reason of education, experience, independence and affiliation with a professional association, I meet the requirements of an independent Qualified Person as defined in NI 43-101.
- 6) I am responsible for the preparation of Section 14 and Section 1.4 of the Technical Report titled “Technical Report on the Mel Zinc-Lead-Barite Property” and dated March 20,, 2017. I have not visited the property.
- 7) I have not previously worked on this deposit.
- 8) As of the date of this certificate, to the best of my knowledge, information and belief, the portion of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make that portion of the Technical Report not misleading.
- 9) I am independent of both Benz Mining Corp., and Silver Range Resources Ltd., applying all of the tests in section 1.5 of NI 43-101.
- 10) I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
- 11) I consent to the public filing of this Technical Report with any stock exchange and other regulatory authority and its publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public.

Dated this 19<sup>th</sup> day April, 2017.

*(signed) “G.H. Giroux”*

*(sealed)*

G.H. Giroux, P.Eng., MASc.

## **Appendix I – Listing of all Drill Holes**

### Appendix I - Listing of All Drill Holes

Holes used in Resource Estimate for the Mel Main Zone are highlighted

Zone	Hole	Northing	Easting	Hole Length (m)	Elevation (m)
Main	74_1	10087.1	9955.1	62.65	928.7
Main	74_2	10005.9	9938.7	52.13	911.0
Main	74_3	10005.9	9937.2	92.07	910.9
Main	74_4	9928.3	9938.2	48.17	906.5
Main	74_5	9789.3	9954.0	51.52	921.8
Main	74_6	9637.0	9970.4	64.33	914.7
Main	74_7	10339.7	9770.2	118.29	912.3
Main	74_8	10214.5	9944.2	74.24	950.7
Main	75_9	9790.0	9895.8	146.65	930.6
Main	75_10	9926.5	9862.0	283.84	926.7
Main	75_11	10083.5	9880.5	126.52	911.6
Main	75_12	10216.1	9866.8	157.01	913.4
Main	75_13	10341.2	9958.4	202.13	935.1
Mel North	75_14	10524.0	9986.2	130.18	1077.8
Mel North	75_15	10647.5	9985.4	151.52	1101.0
Main	75_16	10655.4	9869.7	50.30	1093.8
Main	75_17	10479.0	9863.8	53.66	1011.4
Main	75_18	10492.2	9732.5	102.44	913.8
Main	78_1	9400.0	9935.0	215.50	915.0
Main	78_2	9000.0	9925.0	46.30	900.0
Main	78_3	10006.0	9847.6	29.60	926.0
Main	78_4	10005.0	9878.1	299.00	914.0
Main	78_5	9200.0	9985.2	102.43	902.0
Main	78_6	10005.9	9962.5	200.00	887.2
Main	78_7	9928.3	9958.9	157.62	880.5
Main	79_1	10003.5	9879.6	114.90	912.9
Main	79_2	10087.6	9998.9	231.30	918.0
Main	79_3	10213.4	10002.3	306.60	942.1
Main	79_4	9931.8	10145.0	262.12	903.2
Main	79_5	9931.8	10145.0	275.23	903.2
Main	79_6	10072.6	10252.8	336.20	904.2
Main	79_7	10003.3	10141.6	260.00	903.3
Main	79_8	9789.8	10040.8	206.30	902.1
Main	79_9	9784.0	10224.8	321.80	902.3
Main	79_10	9710.8	10121.1	213.30	904.2
Main	79_11	9823.1	10075.3	289.30	901.8
Main	79_12	9814.9	9871.4	169.20	936.2
Main	87_1	9399.1	10107.1	133.20	905.4
Main	87_2	8943.0	10045.4	38.71	900.2
Main	87_3	8943.0	10045.4	66.75	900.2
Main	87_4	9861.1	10287.2	515.72	902.2
Main	87_5	10006.1	10227.9	399.59	902.5
Main	87_6	10089.6	10216.3	448.06	912.7
Main	87_7	9787.1	10229.9	409.96	902.3
Main	89_30	10097.3	9974.5	184.10	927.4
Main	89_31	10157.3	9985.4	220.06	935.0
Main	89_32	10198.6	9988.0	204.22	942.1
Main	89_33	10049.3	9973.4	54.56	919.0
Main	90_34	10039.1	9895.6	143.56	909.8

Zone	Hole	Northing	Easting	Hole Length (m)	Elevation (m)
Main	90_35	9850.2	9973.7	203.00	918.4
Main	90_36	9751.0	9981.1	167.03	910.9
Main	90_37	9698.6	9929.9	142.07	922.2
Main	90_38	9742.0	9944.3	133.23	921.2
Main	90_39	9674.9	9970.6	64.63	912.2
Main	90_40	10129.5	9943.1	134.10	935.2
Main	90_41	9959.2	9955.6	152.70	904.2
Main	90_42	9959.2	9955.8	249.02	904.2
Main	90_43	9959.5	9955.9	43.28	904.2
Main	94_44	9900.0	10304.0	428.90	902.2
Main	94_45	9900.0	10304.0	462.10	902.2
Main	94_46	9900.0	10333.0	660.30	908.5
Main	94_47	10000.0	10376.0	542.50	903.3
Main	94_48	9805.5	10259.0	542.90	905.4
Main	94_49	10100.0	10222.0	359.00	912.8
Mel South	SM 95-1	8500.0	10035.0	212.10	Unknown
Mel South	SM 95-2	8500.0	9970.0	105.40	Unknown
Mel South	SM 96-3	8500.0	-85.0	336.50	910.0
Jerri North	J-95-1	13206.0	-456.0	146.90	1120.0
Jerri North	J-95-2	13410.0	-414.0	126.80	1160.0
Jerri North	J-95-3	13800.0	-450.0	117.00	1160.0
Jerri North	J-95-4	14200.0	-650.0	104.80	975.0
Jerri North	J-95-5	14200.0	-650.0	139.00	975.0
Jerri North	J-95-6	14400.0	-650.0	87.20	1030.0
Jerri North	J-95-7	15200.0	-650.0	50.60	1020.0
Jerri North	J-95-8	15200.0	-800.0	75.30	1060.0
Jerri North	J-96-9	14200.0	-790.0	218.20	950.0
Jerri North	J-96-10	14000.0	-700.0	218.20	1030.0
Jerri North	J-96-11	14408.0	-655.0	105.50	955.0
Jerri North	J-96-12	14000.0	-700.0	244.10	1030.0
Jerri North	J-96-13	13800.0	-521.0	181.70	1140.0
Jerri North	J-96-14	13400.0	-510.0	221.30	1200.0
Jerri	J-85-1	10015.5	9953.9	98.14	1107.0
Jerri	J-85-2	9947.2	9925.9	105.77	1103.1
Jerri	J-85-3	9947.2	9925.9	148.44	1103.1
Jerri	J-85-4	9897.5	9925.3	99.69	1090.4
Jerri	J-85-5	9897.5	9925.3	90.53	1090.4
Jerri	J-85-6	10282.9	9931.2	118.87	1098.9
Jerri	J-85-7	10331.8	9954.4	89.00	1093.1
Jerri	J-85-8	10413.1	9942.6	85.95	1083.7
Jerri	J-85-9	9795.9	9924.1	105.77	1065.1
Jerri	J-85-10	9305.0	9396.0	67.66	960.0

## **Appendix II – List of Significant Intercepts**

Appendix II - List of Significant Intercepts

Hole	From (m)	To (m)	Length (m)	Pb%	Zn%	Ba%	BaSO <sub>4</sub> %
74_1	37.03	41.61	4.58	4.01	7.52	38.25	64.99
incl.	39.47	41.61	2.14	7.35	8.11	38.25	64.99
And	42.37	44.20	1.83	0.70	5.16	38.25	64.99
74_2	33.83	47.40	13.57	2.16	4.83	37.13	63.08
incl.	33.83	35.66	1.83	0.17	9.31	37.13	63.08
and	39.93	41.76	1.83	5.70	4.14	37.13	63.08
74_4	37.03	47.24	10.21	1.05	5.86	26.72	45.40
incl.	38.40	40.39	1.99	0.19	8.10	28.42	48.29
and	44.81	46.63	1.82	5.33	7.92	28.42	48.29
74_5	46.02	48.92	2.90	1.44	8.53	38.60	65.58
incl.	46.02	47.55	1.53	0.10	12.25	38.60	65.58
and	47.55	48.01	0.46	8.10	9.10	38.60	65.58
74_6	57.15	58.67	1.52	1.90	3.11	0.00	0.00
74_8	66.29	70.87	4.58	2.87	8.99	32.07	54.49
incl.	66.75	68.28	1.53	3.53	9.87	32.07	54.49
and	68.28	69.04	0.76	0.45	19.73	32.07	54.49
and	69.04	70.33	1.29	3.15	6.60	32.07	54.49
75_9	131.67	134.42	2.75	0.60	4.70	37.96	64.49
And	134.72	139.60	4.88	2.65	8.35	36.78	62.49
incl.	137.16	139.60	2.44	4.85	10.40	36.78	62.49
And	142.19	144.02	1.83	2.15	3.95	12.00	20.39
75_11	107.59	124.05	16.46	2.21	3.17	31.35	53.26
incl.	110.64	113.69	3.05	0.18	6.67	29.58	50.25
and	116.28	118.11	1.83	6.10	6.70	46.37	78.78
and	122.22	124.05	1.83	8.20	0.80	43.43	73.79
75_12	145.39	151.49	6.10	1.15	5.66	21.07	35.80
incl.	146.61	148.74	2.13	1.95	12.40	29.95	50.89
75_13	198.12	198.88	0.76	1.15	13.50	NS	NS
78_6	166.21	191.26	25.05	1.96	4.14	46.28	78.63
incl.	166.21	167.03	0.82	7.01	0.06	50.56	85.90
and	171.60	172.52	0.92	0.17	5.31	43.81	74.43
and	179.22	180.14	0.92	0.11	5.14	51.00	86.65
and	181.97	187.15	5.18	7.67	6.17	42.89	72.88
and	188.06	191.26	3.20	0.04	12.11	36.70	62.35
78_7	128.32	148.44	20.12	2.05	4.92	37.60	63.87
incl.	128.32	131.92	3.60	8.66	6.64	36.54	62.08
and	135.27	140.21	4.94	1.40	5.68	45.05	76.54
and	141.12	142.04	0.92	0.03	11.80	36.94	62.76
and	142.95	144.78	1.83	1.10	7.98	36.30	61.68
79_1	86.20	104.00	17.80	0.24	7.29	33.08	56.20
incl.	89.00	92.00	3.00	0.01	13.00	27.93	47.45
and	95.00	98.00	3.00	0.01	7.16	45.69	77.63
and	101.00	104.00	3.00	1.14	13.90	22.09	37.53
79_2	222.00	230.40	8.40	1.69	13.46	14.99	25.47

Hole	From (m)	To (m)	Length (m)	Pb%	Zn%	Ba%	BaSO <sub>4</sub> %
incl.	222.00	223.00	1.00	5.73	4.78	17.40	29.56
and	223.00	229.00	6.00	1.36	16.20	17.45	29.65
and	229.00	230.40	1.40	0.26	7.94	2.72	4.62
79_3	22.05	28.90	6.85	4.44	4.44	28.58	48.55
And	283.00	292.91	9.91	0.86	1.74	0.10	0.17
incl.	283.00	285.00	2.00	0.41	4.78	0.07	0.12
79_4	246.68	255.80	9.12	2.97	6.63	36.90	62.69
incl.	250.00	255.80	5.80	3.47	8.67	38.70	65.75
79_5	260.25	269.30	9.05	0.00	3.23	28.15	47.82
incl.	266.35	269.30	2.95	0.00	5.92	29.80	50.63
79_6	328.84	331.52	2.68	7.86	7.76	1.85	3.14
incl.	328.84	329.63	0.79	10.40	1.70	1.13	1.92
and	329.63	330.57	0.94	12.50	20.20	1.79	3.04
79_7	245.40	255.80	10.40	4.60	4.34	21.85	37.12
incl.	245.40	246.30	0.90	19.50	7.16	22.30	37.89
and	246.30	251.00	4.70	5.11	3.96	29.71	50.48
and	253.20	255.10	1.90	3.19	10.10	33.60	57.09
79_8	198.80	201.30	2.50	0.84	13.50	8.06	13.69
79_9	312.90	313.80	0.90	7.06	14.80	0.10	0.17
79_11	277.20	285.70	8.50	1.41	4.46	18.73	31.83
incl.	277.20	280.00	2.80	1.24	5.06	0.32	0.54
and	282.50	285.70	3.20	2.60	6.04	40.50	68.81
79_12	157.75	161.30	3.55	1.67	3.82	14.29	24.29
87_4	489.60	509.93	20.33	0.17	6.74	26.45	44.94
incl.	499.60	501.60	2.00	0.03	29.20	14.83	25.20
and	501.60	507.20	5.60	0.02	7.16	35.79	60.81
and	508.00	509.93	1.93	0.02	13.60	29.59	50.27
87_5	388.96	394.10	5.14	2.31	23.17	0.04	0.06
87_6	439.30	440.40	1.10	0.38	8.72	0.08	0.14
87_7	401.05	403.10	2.05	1.59	8.19	0.22	0.37
89_30	31.50	47.90	16.40	0.93	5.74	34.94	59.36
incl.	32.40	36.30	3.90	0.39	5.96	33.40	56.75
and	37.90	40.00	2.10	0.70	14.40	34.00	57.77
and	40.00	46.00	6.00	1.94	5.48	38.13	64.79
And	165.40	180.00	14.60	0.88	3.85	26.65	45.29
incl.	165.40	166.50	1.10	3.46	4.56	12.59	21.39
and	170.00	179.10	9.10	0.79	4.80	23.68	40.23
89_31	33.10	47.24	14.14	1.23	1.63	22.24	37.79
incl.	46.00	47.24	1.24	5.52	0.04	4.77	8.10
And	205.70	216.40	10.70	2.29	7.95	23.25	39.50
incl.	205.70	207.70	2.00	6.36	6.30	23.00	39.08
and	207.70	212.00	4.30	2.15	6.35	30.74	52.23
and	212.00	215.70	3.70	0.58	11.99	18.92	32.14
89_32	44.30	65.68	21.38	2.51	4.09	26.15	44.43
incl.	44.30	50.20	5.90	1.68	6.46	34.09	57.92
and	50.20	55.70	5.50	4.01	5.97	40.75	69.23
and	58.50	60.00	1.50	10.90	4.60	31.60	53.69

Hole	From (m)	To (m)	Length (m)	Pb%	Zn%	Ba%	BaSO <sub>4</sub> %
And	189.30	195.25	5.95	1.58	2.68	31.03	52.72
incl.	193.35	195.25	1.90	1.83	5.64	35.73	60.71
89_33	25.15	43.60	18.45	0.34	8.58	35.41	60.17
incl.	25.15	32.25	7.10	0.55	6.54	42.86	72.82
and	32.25	35.40	3.15	0.04	26.80	14.11	23.97
And	158.10	171.30	13.20	2.17	7.79	40.03	68.00
incl.	158.10	161.10	3.00	6.09	5.41	31.32	53.21
and	167.10	171.30	4.20	2.09	12.87	37.18	63.16
90_34	79.90	114.10	34.20	0.58	8.76	31.25	53.10
incl.	79.90	84.50	4.60	0.12	7.29	35.46	60.25
and	84.50	87.50	3.00	0.53	17.24	35.71	60.67
and	87.50	90.50	3.00	0.04	24.76	21.61	36.72
and	90.50	93.50	3.00	0.02	14.87	30.49	51.80
and	102.50	108.50	6.00	2.15	5.91	28.36	48.18
and	108.50	111.10	2.60	0.04	13.34	13.76	23.38
90_35	46.70	59.70	13.00	2.11	5.34	36.23	61.55
incl.	49.85	52.90	3.05	1.16	6.16	36.82	62.56
and	52.90	56.69	3.79	3.70	7.80	42.55	72.29
And	187.50	199.00	11.50	3.51	4.30	40.58	68.94
incl.	188.70	198.10	9.40	3.64	5.04	46.63	79.22
90_36	30.90	57.75	26.85	1.82	4.27	26.45	44.95
incl.	33.30	39.30	6.00	0.40	8.46	38.54	65.48
and	42.30	45.30	3.00	4.36	7.89	34.98	59.43
and	56.14	57.75	1.61	5.23	4.98	23.42	39.79
90_38	110.70	112.65	1.95	0.56	2.22	29.31	49.80
90_39	45.58	48.93	3.35	0.73	9.76	0.44	0.75
90_40	60.55	71.60	11.05	0.43	3.33	31.76	53.95
incl.	63.60	66.40	2.80	0.08	8.47	21.10	35.85
90_41	47.62	53.40	5.78	0.19	2.53	35.47	60.26
And	102.95	105.68	2.73	9.91	2.55	29.97	50.92
And	124.90	146.69	21.79	2.37	6.04	35.41	60.16
incl.	124.90	126.87	1.97	10.72	3.93	11.37	19.32
and	126.87	128.94	2.07	3.71	4.97	27.85	47.32
and	130.17	137.50	7.33	3.03	8.51	35.67	60.61
and	140.00	143.26	3.26	0.03	12.81	34.98	59.43
90_42	36.00	39.30	3.30	1.74	8.24	21.57	36.66
And	235.70	242.70	7.00	0.45	3.33	23.79	40.43
90_43	29.27	37.65	8.38	1.78	2.80	21.85	37.13
incl.	30.80	34.10	3.30	3.16	6.35	33.35	56.66
94_44	395.80	397.50	1.70	5.77	17.78	0.11	0.19
incl.	396.50	397.50	1.00	7.15	26.11	0.10	0.17
And	409.05	411.05	2.00	7.77	11.92	0.07	0.11
incl.	409.05	410.15	1.10	13.57	16.53	0.08	0.14
And	415.90	419.00	3.10	8.11	13.15	0.08	0.14
incl.	416.15	417.15	1.00	15.75	16.93	0.07	0.12
and	417.15	418.15	1.00	9.09	15.31	0.08	0.14
94_45	447.45	447.95	0.50	1.13	1.39	0.08	0.14

Hole	From (m)	To (m)	Length (m)	Pb%	Zn%	Ba%	BaSO <sub>4</sub> %
94_46	640.90	650.90	10.00	2.39	5.30	37.44	63.56
incl.	640.90	641.90	1.00	6.54	1.19	41.93	71.24
and	645.00	647.20	2.20	2.54	5.68	51.37	87.28
and	647.20	648.70	1.50	2.86	17.74	33.11	56.25
94_47	530.20	536.80	6.60	1.33	4.00	31.81	54.05
incl.	530.20	530.50	0.30	4.61	3.76	10.58	17.98
and	533.68	534.00	0.32	8.78	1.01	39.75	67.54
and	534.92	536.80	1.88	0.19	8.92	32.60	55.38
94_48	520.60	536.30	15.70	0.59	5.44	41.16	69.93
incl.	521.90	522.90	1.00	0.03	9.02	16.39	27.85
and	527.20	528.15	0.95	0.11	10.64	29.19	49.59
and	528.65	531.65	3.00	2.29	7.88	45.39	77.12
and	532.95	533.95	1.00	0.03	14.98	39.54	67.18
and	534.55	535.40	0.85	0.02	8.71	38.24	64.97
94_49	351.20	352.80	1.60	2.16	2.35	2.37	4.02

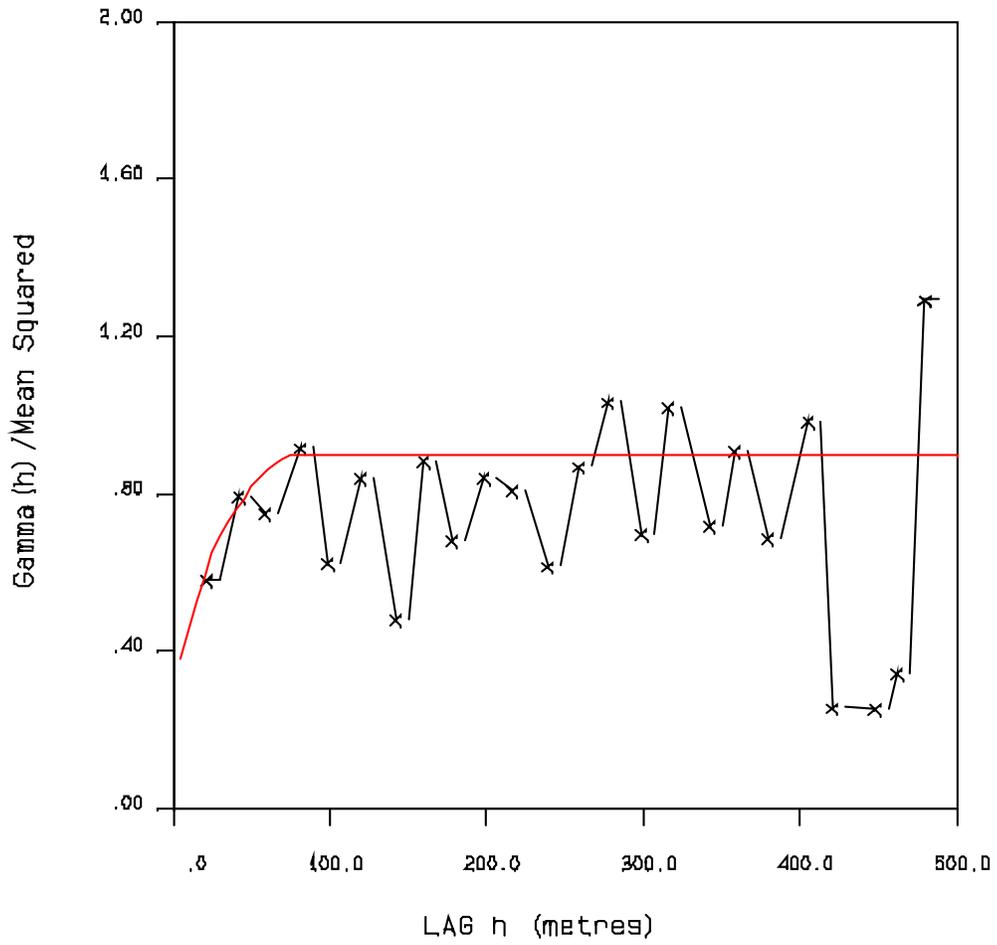
\* Intercepts were considered significant if a sample contained >1% Zn or <1% Pb or >25'

## **Appendix III – Semi-variogram Models**

C0 = .300  
 C1 = .150  
 C2 = .450  
 A1 = 30.0  
 A2 = 80.0

Number of Pairs

71 626 201 842 612 080 429 750 598 440 361 590 460 192 333 48 238 47 79 60 48 48 46 20

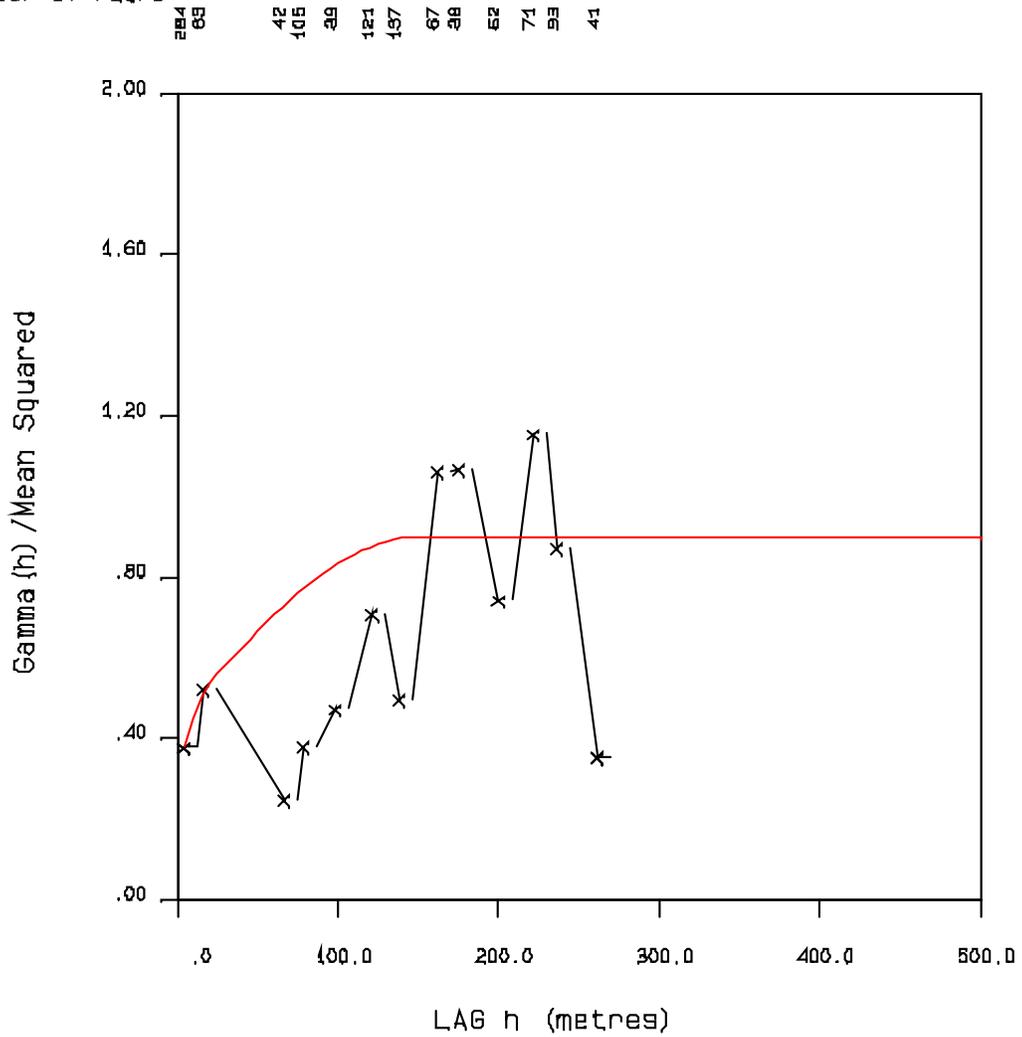


MEL MIN ZONE - ZN - AZ 0 DIP 0

**Mel Main Zone Mineralized Intervals - Zn-AZ 0 DIP 0**

C0 = .300  
 C1 = .150  
 C2 = .450  
 A1 = 20.0  
 A2 = 150.0

Number of Pairs

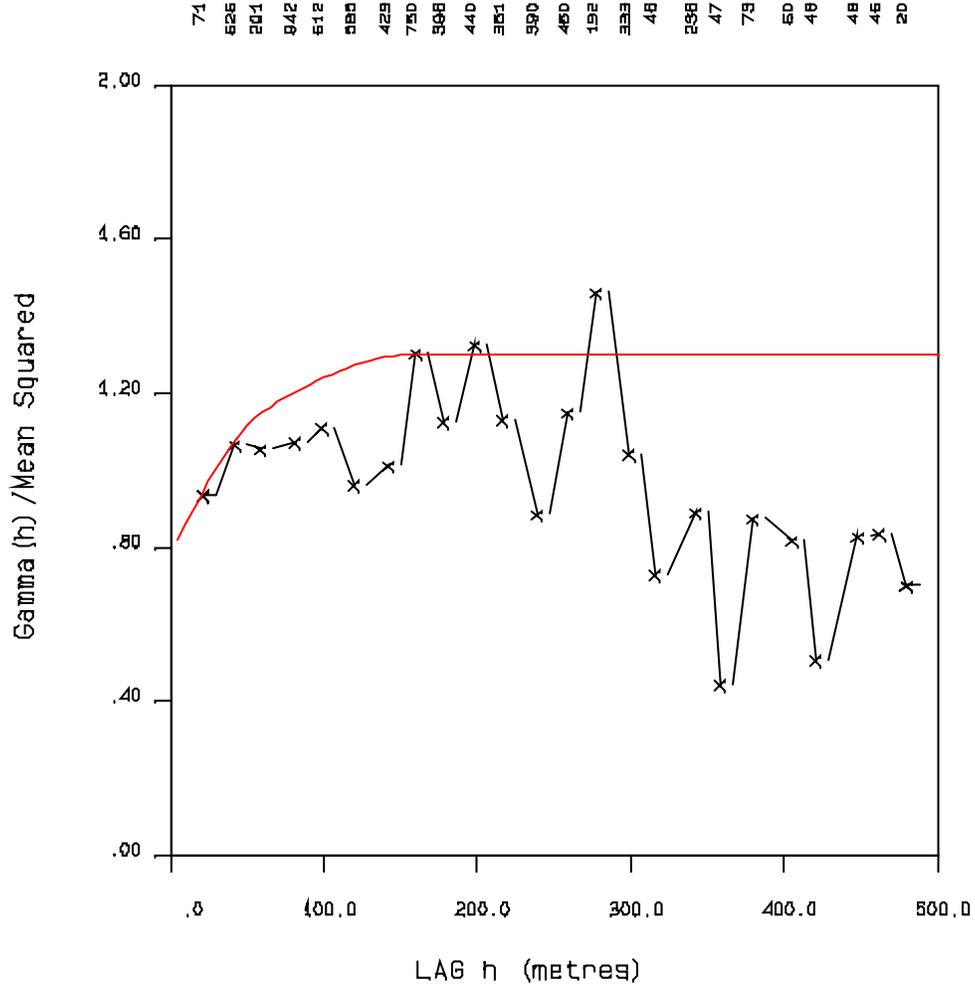


MEL MIN ZONE - ZN - AZ 90 DIP -75

**Mel Main Zone Mineralized Intervals - Zn-AZ 90 DIP -75**

C0 = .780  
 C1 = .200  
 C2 = .320  
 A1 = 60.0  
 A2 = 160.0

Number of Pairs

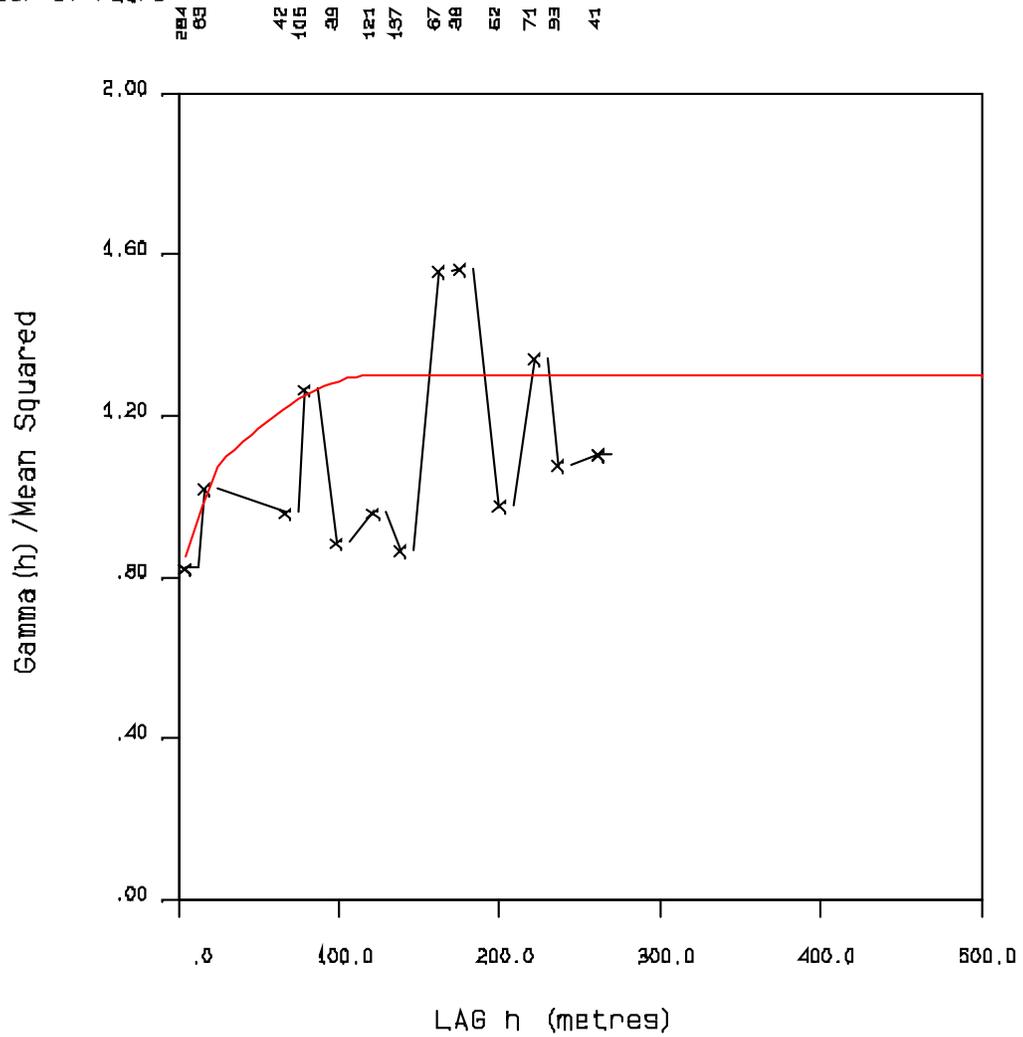


MEL MIN ZONE - PB - AZ 0 DIP 0

**Mel Main Zone Mineralized Intervals - Pb-AZ 0 DIP 0**

C0 = .780  
 C1 = .200  
 C2 = .320  
 A1 = 30.0  
 A2 = 120.0

Number of Pairs



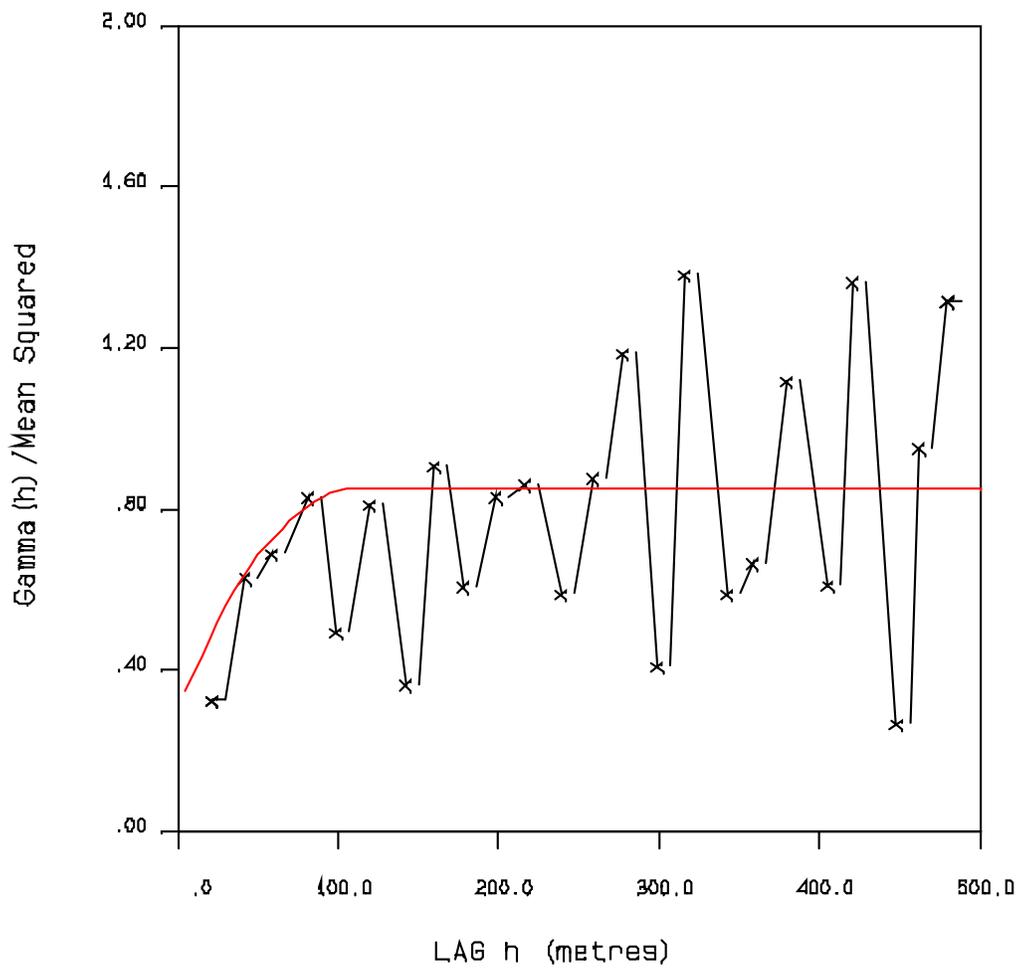
MEL MIN ZONE - PB - AZ 90 DIP -75

Mel Main Zone Mineralized Intervals - Pb-AZ 90 DIP -75

C0 = .300  
 C1 = .100  
 C2 = .450  
 A1 = 50.0  
 A2 = 110.0

Number of Pairs

71 626 201 842 612 080 429 750 968 440 361 990 480 192 333 48 288 47 79 50 48 48 45 20



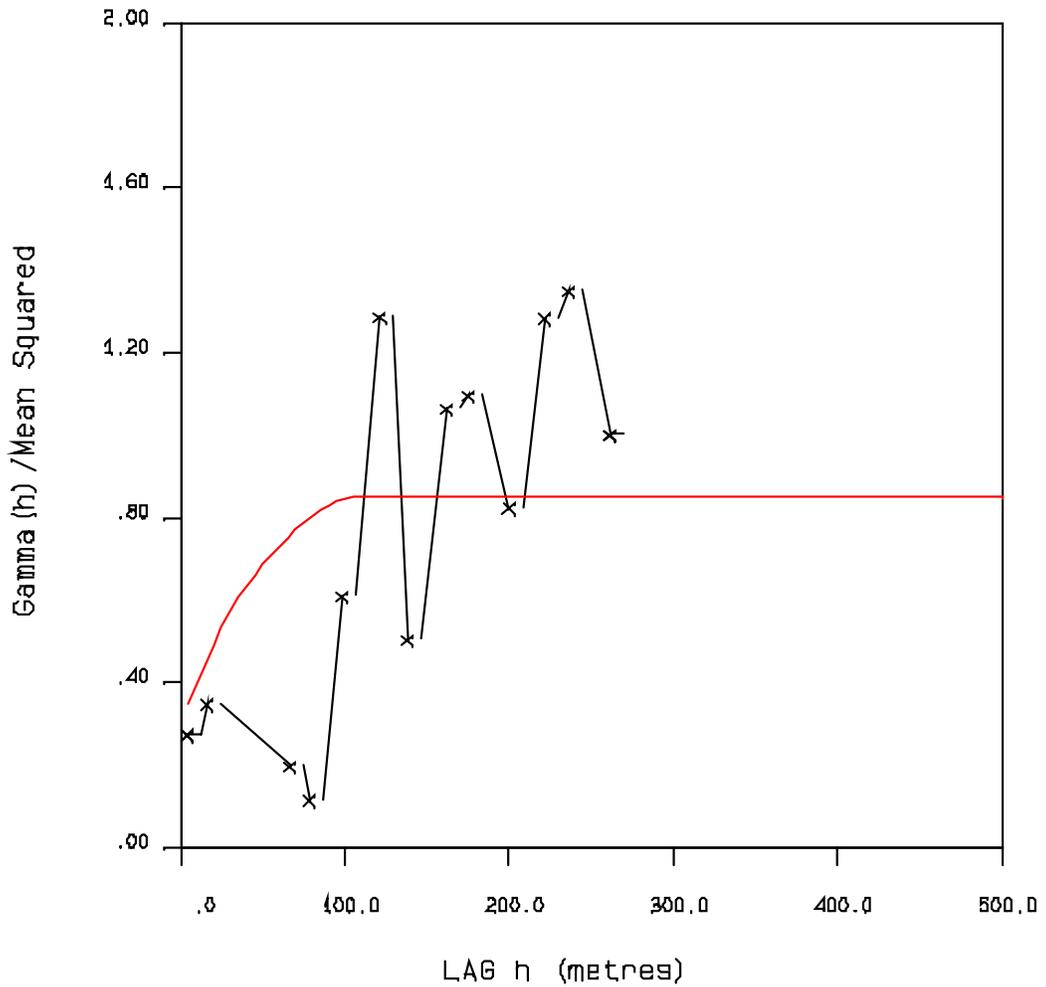
MEL MIN ZONE - BA - AZ 0 DIP 0

**Mel Main Zone Mineralized Intervals - Ba-AZ 0 DIP 0**

C0 = .300  
 C1 = .100  
 C2 = .450  
 A1 = 40.0  
 A2 = 110.0

Number of Pairs

284 89  
 42 105 39  
 121 137  
 67 38 52  
 71 93 41

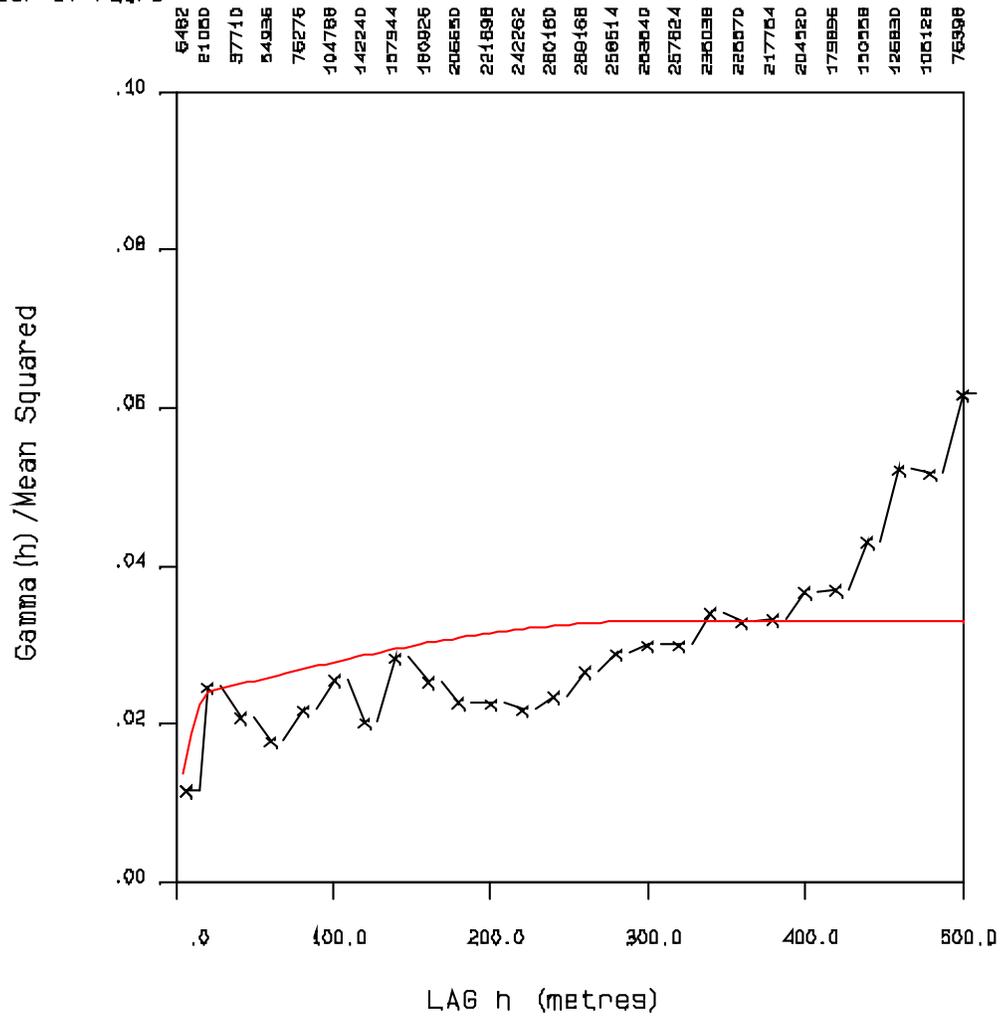


MEL MIN ZONE - BA - AZ 90 DIP -75

Mel Main Zone Mineralized Intervals - Ba-AZ 90 DIP-75

C0 = .008  
 C1 = .015  
 C2 = .010  
 A1 = 20.0  
 A2 = 300.0

Number of Pairs

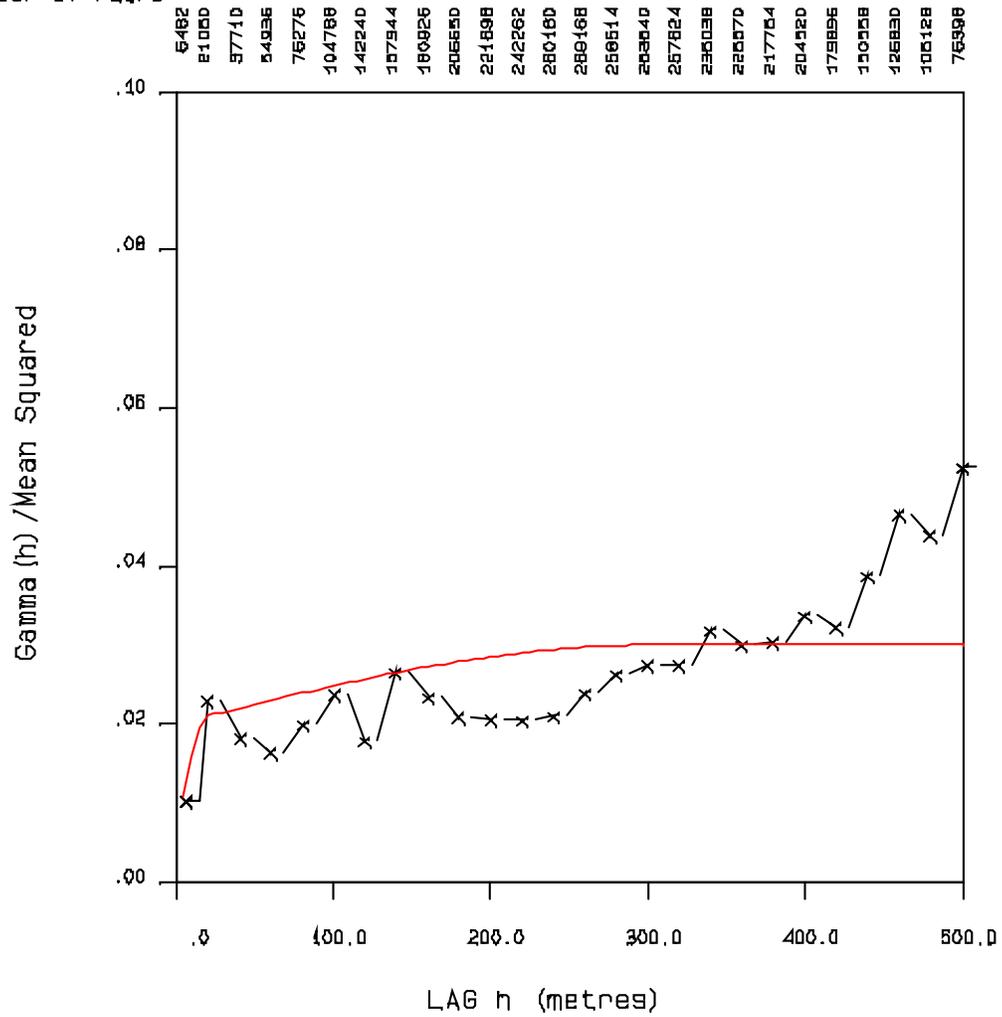


MEL WASTE - ZN - OMNI DIRECTIONAL

Mel Main Zone Waste Intervals - Zn-Omni Directional

C0 = .005  
 C1 = .015  
 C2 = .010  
 A1 = 20.0  
 A2 = 300.0

Number of Pairs

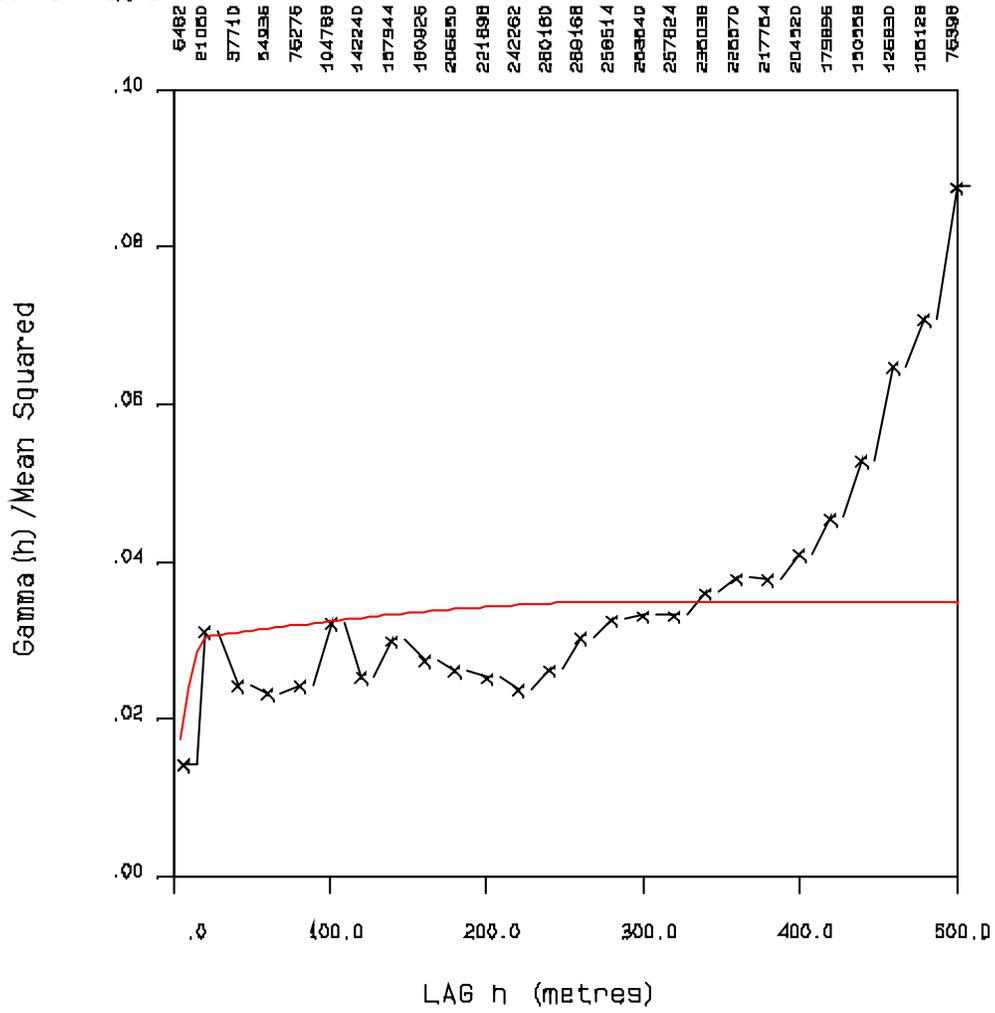


MEL WASTE - PB - OMNI DIRECTIONAL

Mel Main Zone Waste Intervals - Pb-Omni Directional

C0 = .010  
 C1 = .020  
 C2 = .005  
 A1 = 20.0  
 A2 = 300.0

Number of Pairs



MEL WASTE - BA - OMNI DIRECTIONAL

Mel Main Zone Waste Intervals - Ba-Omni Directional