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## ASSESSMENT REPORT

describing

### FIELD SURVEYING, CAMP RECLAMATION AND AIR STRIP CLEARING

Field work performed from September 2 to 13, 2015

at the

### MEL PROPERTY

Andy 1-8	YA72509-YA72516	Keli 5-8	YA66927-YA66930
Boz 1-4	YA66985-YA66988	Mel 1-188	YE60001-YE60188
Chungo 1-8	YA66946-YA66953	Mel 11-16	Y22230-Y22235
Dave 1-8	YA72501-YA72508	Mel 189-318	YE60459-YE60588
Edy 1-7	YA66962-YA66968	Mumbo 1-8	YA66977-YA66984
Hose 1-8	YA66919-YA66926	Ott 1-8	YA66954-YA66961
Jean 1-4	Y72731-Y72734	Ralfo 1-7	YA66939-YA66945
Jean 5-10	Y72961-Y72966	Sam 1-86	YB46141-YB46226
Jean 11-21	Y74418-Y74428	Sin 1-8	YA66989-YA66996
Jeri 1-8	YA66931-YA66938	Sov 1-6	YA28600-YA28605
Joe 1-2	YA45269-YA45270	Tomi 1-8	YA66969-YA66976
Joni 1-8	YA66846-YA66853	Wet 1-32	Y83309-Y83332
Keli 1-4	YA66842-YA66845	Yang 1-6	YA66997-YA67002

NTS 095D/06

Latitude 60°23'N; Longitude 127°20'W

located in the

Watson Lake Mining District  
Yukon Territory

prepared by

Archer, Cathro & Associates (1981) Limited

for

**SILVER RANGE RESOURCES LTD.**

by

H. Burrell., P.Geo.

April 2016

## **CONTENTS**

INTRODUCTION	1
PROPERTY LOCATION, CLAIM DATA AND ACCESS	1
HISTORY AND PREVIOUS WORK	2
2015 FIELD WORK	10
DISCUSSION AND CONCLUSIONS	14
REFERENCES	16

## **APPENDICES**

I STATEMENT OF QUALIFICATIONS

II STATEMENT OF EXPENDITURES

### **TABLES**

<u>No.</u>	<u>Description</u>	<u>Page</u>
Table I	Exploration History of the Mel Property	2

### **FIGURES**

<u>No.</u>	<u>Description</u>	<u>Follows Page</u>
1	Property Location	1
2	Claim Locations	In Pocket

## INTRODUCTION

The Mel property covers a zinc-lead-barite deposit and nearby zinc showings. The property is located in southeastern Yukon and is owned wholly by Silver Range Resources Ltd.

This report describes the 2015 exploration program comprised of field surveying, camp reclamation and air strip clearing, which were conducted between September 2 and 13, 2015. The work was completed by Archer, Cathro & Associates (1981) Limited, with the help of two line cutting professionals from Iyon Kechika Contracting Ltd., a member of the Daylu Dena Development Corporation. All of the work was conducted on behalf of Silver Range. The author supervised the program, and her Statement of Qualifications is presented in Appendix I. A Statement of Expenditures is provided in Appendix II.

## PROPERTY LOCATION, CLAIM DATA AND ACCESS

The property is located in southeastern Yukon at latitude 60°23' north and longitude 127°20' west on NTS map sheet 095D/06 (Figure 1). It comprises 575 contiguous mineral claims that cover an area of about 11,430 hectares (114 km<sup>2</sup>). All of the claims are registered with the Watson Lake Mining Recorder in the name of Archer Cathro, which holds them in trust for Silver Range. Specifics concerning claim registration are tabulated below, while the locations of individual claims are shown on Figure 2.

<u>Claim Name</u>	<u>Grant Number</u>	<u>Expiry Date*</u>
Andy 1-8	YA72509-YA72516	April 3, 2024
Boz 1-4	YA66985-YA66988	April 3, 2024
Chungo 1-8	YA66946-YA66953	April 3, 2024
Dave 1-8	YA72501-YA72508	April 3, 2024
Edy 1-7	YA66962-YA66968	April 3, 2024
Hose 1-8	YA66919-YA66926	April 3, 2024
Jean 1-4	Y72731-Y72734	April 3, 2024
5-10	Y72961-Y72966	April 5, 2024
11-21	Y74418-Y74428	April 3, 2024
Jeri 1-8	YA66931-YA66938	April 3, 2024
Joe 1-2	YA45269-YA45270	April 3, 2024
Joni 1-8	YA66846-YA66853	April 3, 2024
Keli 1-4	YA66842-YA66845	April 3, 2024
5-8	YA66927-YA66930	April 3, 2024
Mel 1-188	YE60001-YE60188	April 3, 2024
189-318	YE60459-YE60588	April 3, 2024
Mel 11-16	Y22230-Y22235	April 3, 2024
Mumbo 1-8	YA66977-YA66984	April 3, 2024
Ott 1-8	YA66954-YA66961	April 3, 2024
Ralfö 1-7	YA66939-YA66945	April 3, 2024
Sam 1-86	YB46141-YB46210	April 3, 2024
Sin 1-8	YA66989-YA66996	April 3, 2024
Sov 1-6	YA28600-YA28605	April 3, 2024

# SILVER RANGE RESOURCES LTD.

FIGURE 1




ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

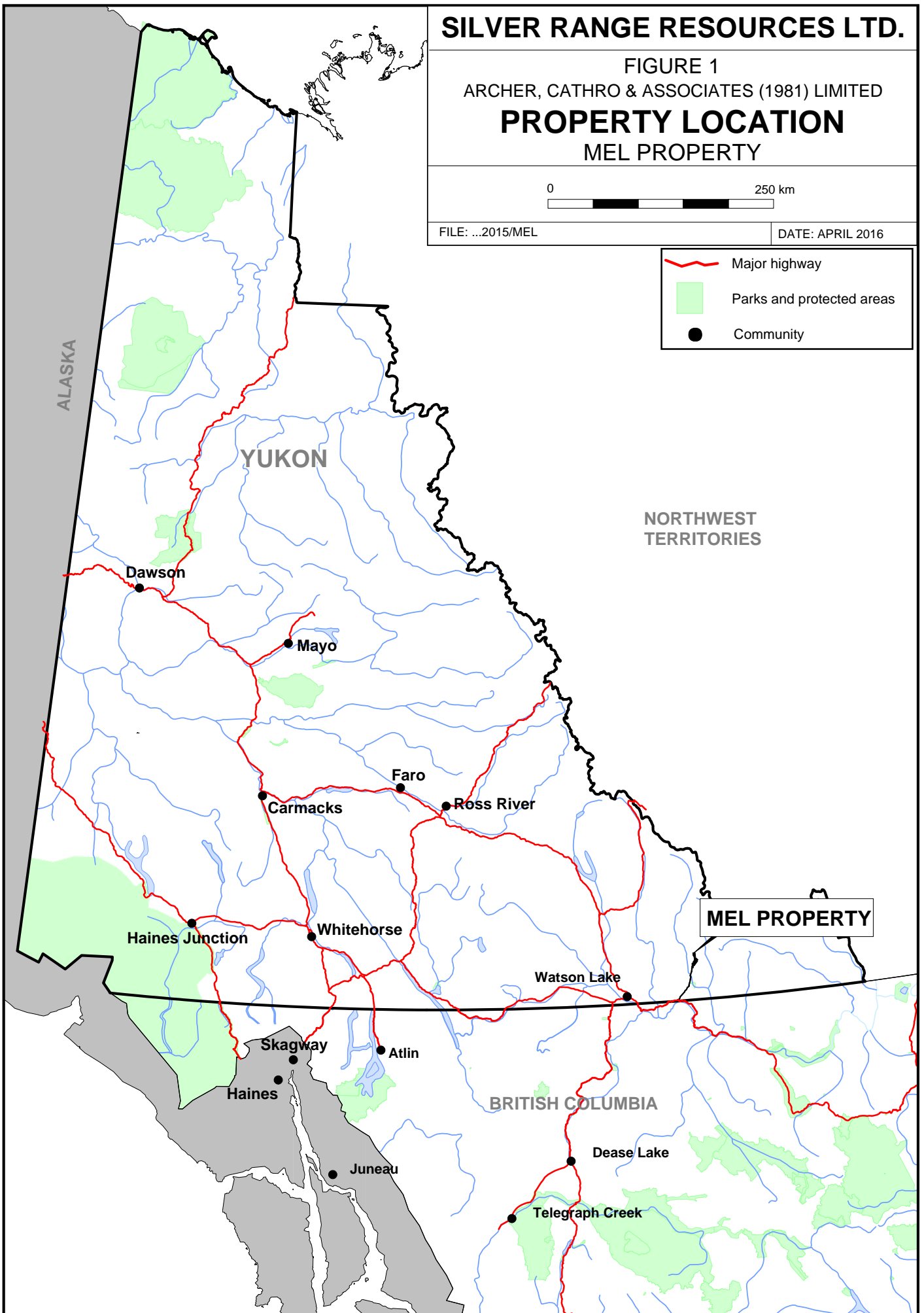
## PROPERTY LOCATION MEL PROPERTY

0 250 km

FILE: ...2015/MEL

DATE: APRIL 2016

-  Major highway
-  Parks and protected areas
-  Community



Tomi 1-8	YA66969-YA66976	April 3, 2024
Wet 1-16	Y83309-Y83324	April 3, 2024
25-32	Y83225-Y83332	April 3, 2024
Yang 1-6	YA66997-YA67002	April 3, 2024

\* Expiry dates include 2015 work, which has been filed for assessment credit but not yet accepted.

The property lies approximately 47 km north of the Alaska Highway and is accessed by a system of bush road/bush trail/winter road, which leaves the Alaska Highway at km 901. A bush road that extends 33.5 km from the Alaska Highway to the Coal River is used year-round by local residents and other mineral exploration companies to access nearby properties. Access to the core of the property requires crossing the Coal River at a ford or ice bridge to reach an 11.4 km section of bush trail/winter road, which links to the air strip deposit area and trails to the other zones (Figure 2). Watson Lake lies on the Alaska Highway, 125 km west-southwest of the property, and is the nearest supply centre. The community of Lower Post is located just off the highway, 55 km west of the turn-off to the property.

The property is situated within the Kaska First Nations (“Kaska”) traditional territory. The Daylu Dena Council is one of the five first nations that comprise the Kaska.

### **HISTORY AND PREVIOUS WORK**

Extensive exploration work was carried out on the Mel property by several operators at various times between 1967 and 1997. The property was dormant from 1997 to 2012. The locations of the Mel Main, Jeri, Jeri North and Mel East zones are illustrated on Figure 2. Table I summarizes work performed and results obtained by exploration programs conducted since 1967.

**Table I – Exploration History of the Mel Property**

<b>Year of Work Reported</b>	<b>Owner/ Operator</b>	<b>Claim Group</b>	<b>Work Performed</b>	<b>Results</b>
<b>1967</b>	J. Melynychuk 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 m. The trenches averaged 5.35% combined lead-zinc over widths of 2.3 to 9 m.

<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 Zn±Pb±Ba. Mel Main Zone averaged 6.1 m (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 m length to the south of the Mel Main Zone.
<b>1978 - 1979</b>	St. Joseph Explorations Ltd.	Mel, Jean, Wet & Sov	Diamond drilling – 19 holes (4,054 m), metallurgical testwork	Mineral resource* estimated at 4,782,380 tonnes of 5.61% Zn, 2.05% Pb, 52.1% barite. Metallurgical testing yielded concentrates ranges from 60.9% to 64.7% Zn, 78.0% to 79.6% Pb, 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 & 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 & 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 550 m and through a vertical range of at least 100 m. Mineralization included 13.11% Zn over 3.37 m within silicified and dolomitized limestone.

<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 490 m. Mineral resource* estimated at 5,581,030 tonnes grading 6.63% Zn, 1.92% Pb, 49.64% barite.
<b>1989</b>	Barytex Resources Corp./ Breakwater Resources Ltd.	Jean	Diamond drilling – 4 holes (663 m). Carried out pre-feasibility study and barite marketing study.	Mineral resource* estimated at 5,687,993 tonnes grading 6.77% Zn, 1.92% Pb, and 51.1% barite. 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 testwork by Westcoast Mineral Testing Inc.	Stripping exposed north end of Mel Main Zone. Drill indicated mineral resource* at 5,238,000 tonnes grading 7.86% Zn, 2.09% Pb, 48.98% barite was estimated for the Mel Main Zone.
<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 mineralization over 9 km. Mineralization was exposed over a 2.5 km section of the Jeri Zone. Assay results for Trench 4 averaged 10.7% Zn over a 5 m wide zone, and in Trench 5 averaged 16.5% Zn over a 5 m wide zone.

<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.	Mineral resource* estimated by the company at 6,778,000 tonnes grading 7.1% Zn, 2.03% Pb, 54.69% barite.
<b>1995</b>	International Barytex Resources Ltd.	Jean & Sam	Diamond drilling – 8 holes (847.6 m) completed on Jeri North Zone. 2 holes (317.5 m) 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 5.1 m (core length) and Hole J-95-4 intersected 9.9% Zn over 5 m (core length). IP conductors and soil geochemical anomalies (Zn + Pb) were outlined along Jeri Zone horizon.
<b>1996</b>	Cominco Ltd.	Jean & Sam	Diamond drilling – 6 holes (1,189 m) on Jeri North Zone tested mineralized horizon over 1,000 m strike length. 1 hole drilled to south of Mel Main Zone. Soil sampling completed over 5.6 km of favorable zinc mineralized horizon on Jeri North Zone. Soil sampling on Mel East Zone.	Hole J-96-10 drilled on the Jeri North Zone, 200 m to the south of J-95-4 & J-95-5, intersected 12.38% Zn over a 3 m 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 1,400 m long by 150 m 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.	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.

			Diamond drilling – 2 holes (360.9 m) tested geophysical conductors located 1.5 km south of Mel Main Zone.	
<b>2012</b>	Kobex Minerals Inc.	Sam	Geochemical soil survey on Jeri North Zone.	Anomalous zinc 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.

\* Mineral resources reported in this table are historical in nature and described below

The exploration programs and highlight results are summarized in the following paragraphs, while more detailed descriptions of results are provided in the appropriate sections below.

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 m. Samples taken from the trenches averaged 5.3% combined lead-zinc over widths from 2.3 to 9 m.

In September 1973, Newmont dropped its option and the property reverted to Empire. Granby Mining Corp. (“Granby”) then optioned it, and between 1974 and 1975, it conducted a diamond drill program of 18 holes (1,952 m). Granby’s drilling intersected two parallel, north-striking, barite-sphalerite-galena zones, the Mel Main Zone and Mel Main North Extension. Mineralized intervals in the Mel Main Zone reportedly averaged 6.1 m 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 m (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 Mel 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 km 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 four kilometres north-northeast of the Mel Main Zone. During 1985, Sulpetro drilled 10 holes totaling 1,009 m to test the Jeri Zone (Miller, 1985). Nine of the 10 holes drilled over a strike length of 550 m intersected zinc mineralization. Significant zinc values were intersected in four of the holes: 3.37 m of 13.11% Zn in Hole J-85-1, 4.5 m of 7.96% Zn in Hole J-85-2, 2 m of 14.6% Zn in Hole J-85-4 and 4.24 m 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 seven holes totaling 2,012 m. Drill results indicated that the zinc-lead-barite mineralization continued to a depth of 490 m 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.

In 1989, Barytex conducted a soil geochemical survey near the Jeri Zone and completed four diamond drill holes (663 m) 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).

A 1989 pre-feasibility study by Sandwell Swan Wooster Inc. concluded that the Mel property was potentially viable and provided recommendations for further exploration and development (Morris, 1989). A barite marketing study (Slim, 1989) concluded that barite as a by-product could offer the opportunity for a viable commercial operation.

In 1990, Barytex conducted an in-fill drill program consisting of 11 diamond drill holes totaling 1,552 m 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 testwork 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-kilometres of grid. Geological mapping traced the favourable contact hosting the Jeri Zone zinc mineralization for a strike length of nine kilometres and discovered the Jeri North Zone. Eleven trenches excavated in 1993, exposed mineralization

along a 2.5 km section of the Jeri Zone. The most significant assay results from trench sampling were obtained from Trench 5, where a five metre wide interval averaged 16.5% Zn and in Trench 4, where a five metre 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 m apart from section 166N to 206N. Soil samples were taken at 25 m intervals along section lines that crossed the favorable contact zone.

In 1994, IBX established grid lines spaced 100 m apart from line 130N to 152N at the Jeri North Zone. Soil samples were collected at 25 m 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 m 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 m (King, 1994b). This was the last drilling completed on the Mel Main Zone, and it remains open to extension down dip.

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, 88+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 m apart. Sample density varied from 10 m to 20 m spacings 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 two kilometre long segment of the favorable contact between cryptograined limestone and wavy-banded limestone in 1994 by IBX. Samples were taken at 25 m intervals along lines spaced 200 m 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. IP geophysical surveys were carried out along 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 cryptograined limestone (King, 1994b)

In 1995, an IP survey was conducted by IBX on lines 85N and 86N, approximately one kilometre south of the Mel Main Zone. This survey defined coincident chargeability and resistivity anomalies that extend north from an anomaly identified on line 84N during the 1994 survey. Two diamond drill holes (317.5 m) 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 cryptograined 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 m 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 m.

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 widely-spaced drill holes, totaling 847.6 m, tested the anomalous zone over a strike length of two kilometres. 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 five metres thick was intersected below the volcanic-volcanoclastic sequence. In places, the chert rests directly on the basal cryptograined limestone unit but on other sections it is separated from the cryptograined 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 of the eight holes drilled intersected zinc mineralization, with two of these holes yielding high zinc assays: 15.6% Zn over a core length of 5.1 m in hole J-95-5 and 9.9% Zn over a core length of five metres 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 km 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 m. These holes further tested zinc mineralization discovered in 1995. Drill hole J-96-10, located 200 m south along strike of holes J-95-4 and J-95-5 encountered 12.38% Zn over a three metre 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 m long by 150 m 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 m intervals along lines spaced 200 m 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 two drill holes totaling 360.9 m tested geophysical conductors located 1.5 km 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.

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 m apart, with soil sampling stations spaced at 50 m 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 four of the previously established grids at the Jeri North Zone and extended two of the areas of anomalous zinc values. Lead values are typically low.

To date a total of 90 diamond drill holes (16,759 m) have been drilled on the property. For details concerning locations, orientations and lengths of the drill holes please see Stephens (2015).

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

In summer and fall 2014, a number of studies and surveys were completed on the Mel property on behalf of Silver Range. This work included aerial photography, LiDAR surveying, a heritage assessment, a barite marketing study, a scoping study, a resource estimation and a technical report. Complete details of this work can be found in Stevens (2015). The technical report was written by H.Leo King and Gary Giroux (2014).

### **2015 FIELD WORK**

A five person crew worked on the Mel property from September 2 to 13, 2015. The crew was comprised of three Archer Cathro personnel and two professional line cutters contracted from Iyon Kechika Contracting Ltd., a Daylu Dena Development Corporation company.

The field work included field surveying, reclamation of old camp sites and air strip clearing. The Archer Cathro personnel initially focussed on field surveying and camp reclamation, while the

line cutters worked on the air strip. Details relating to each of these activities are described below and where possible photographs are provided.

A hand-held GPS survey was done to confirm that location of all roads, trails and historical workings on the property. The crew was successful in locating a number of historical trenches, diamond drill collars, camps and core storage areas; however, not all of the workings were relocated due to vegetation cover. The road and trail surveys are illustrated on Figure 2, while Table II below provides a list of the diamond drill core cached on the property.

**Table II – Diamond Drill Core Inventory**

Drill Hole	Boxes
J-85-1	1 to 15
J-85-2	1 to 16
J-85-3	1 to 23
J-85-4	1 to 15
J-85-5	1 to 13?
J-85-6	1 to 17
J-85-7	1 to 12
J-85-8	2 to 11
J-85-9	1 to 15
J-85-10	1 to 10

An old tent frame camp at the Jeri Zone was reclaimed during the program. Photos 1 and 2 below illustrate the reclamation work that was done.



*Photo 1- Historical Drill Camp pre-reclamation*



*Photo 2 - Reclaimed Drill Camp - garbage and debris removed*

The air strip is 680 m long by 50 m wide, and its base is compacted aggregate. The runway azimuth is 032°. There is no wind sock on the air strip; however, the prevailing wind direction is from the south. After the 2015 clearing, the air strip is now serviceable with a Cessna 206 or Cessna 172.

The air strip is located at latitude N60°20'05.8", W127°25'02.7" or 587373 mE and 6689764 mN (NAD 83, Zone 9). Photo 3 below shows the air strip before the brushing program began, while Photo 4 illustrates its current state.

Fred McMillan and Joe Morris, the Iyon Kechica line cutters, worked tirelessly over the duration of the project to clear approximately 25 years of vegetation from 400 m of the 680 m air strip. The cleared portion is marked by five sets of empty fuel drums spaced every 100 m along the airstrip. Once the willows and other vegetation were cleared, the stumps of the willows had to be manually removed. The Archer Cathro crew removed stumps and roots from the air strip, while also helping clear brush on both sides of it to accommodate the wing-span on landing and take off.

Hugh Kitchen, a pilot from Alkan Air, demobilized the crew from the property using a Cessna 206. Mr. Kitchen had the following to say about the recently cleared air strip upon his return: "the guys did a great job of clearing it and removing the small stumps. The little bit of remaining bush was of no consequence, just small twigs. I think the length was accurate, about 400 m. It is high in the centre, so a bit of upslope from either end. The grade is gentle so it is not much of a factor. The approaches are good from both ends, no obstacles. The surface is good, nice and firm, no ruts just a few gentle rolls. The surface should not be broken, it may dredge up rocks. It

is nice and close to Watson Lake and you don't need much altitude to get in there so it is easy to service.”



*Photo 3- Mel property air strip pre-clearing*



*Photo 4- Mel property air strip post-clearing*

## **DISCUSSION AND CONCLUSIONS**

The Mel Main Zone is a zinc-lead-barite deposit hosted within Cambrian to Ordovician marine sediments. Mappable 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 cryptograined 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 5,380,000 tonnes of 6.45% Zn, 1.85% Pb and 44.79% 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 four kilometres 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 m. The drilling has intersected encouraging zinc values, including 13.11% Zn over 3.37 m, within the larger zone of silicified and dolomitized limestone.

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

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 three kilometres 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 cryptograined 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 five metre and another hole, drilled deeper on the same section, intersected 15.6% Zn over a core length of 5.1 m. Although

additional drilling on the Jeri North Zone did not extend the zone of zinc mineralization beyond an estimated 400 m 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 eight kilometres. Additional drilling is warranted to evaluate several untested targets.

The Mel East Zone is another showing of zinc mineralization, located three kilometres 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 testwork has produced encouraging results. Further work on the Mel Main, Jeri, Jeri North and Mel East zones is warranted.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED



Heather Burrell, P.Geol.

## REFERENCES

- Chisholm, E.O.  
1973 Assessment report describing geological mapping and geochemical sampling report; prepared for The Granby Mining Company Ltd.
- Croft, S.A.S.  
1990 1990 Exploration Program on Mel property Watson Lake Mining District, Yukon; report prepared by Nevin Sadlier-Brown Goodbrand Ltd.
- Hawthorn, G.  
1990 Progress Report # 1, Metallurgical Testing, Mel Property, Yukon Territory; report for Barytex Resources Corp.
- King, H. L.  
1994a Assessment Report on 1993 Exploration Program Mel property, Yukon; report for International Barytex Resources Ltd.  
  
1994b Assessment report on 1994 Exploration Program Mel property, Watson Lake Mining Division, Yukon; report for International Barytex Resources Ltd.  
  
1995 Assessment report on diamond drilling, Mel property, Yukon; report prepared for International Barytex Resources Ltd.  
  
2013 Assessment report on soil geochemical survey, Jeri North Zone, Mel property, Yukon; report prepared for Kobex Minerals Inc.
- King, H.L. and Guroux, G.  
2014 National Instrument 43-101 technical report on the Mel zinc-lead-barite property. Report prepared for Silver Range Resources Ltd.
- Livingston, C.  
2012 Memo on Soil geochemical sampling program on the Jeri North Zone, Mel property; memo prepared for Kobex Minerals Inc. by Apex Geoscience Ltd.
- Miller, D.C.  
1977 Assessment report on geological and geochemical surveys, Mel, Jean and Wet claims, Yukon; report prepared for St. Joseph Explorations Ltd.  
  
1979 Assessment report on diamond drilling, Mel property; report prepared for St. Joseph Exploration Ltd.  
  
1985 Diamond Drilling Report on the Jeri and Sin claims, Mel Property, Yukon; report prepared for Novamin Resources Inc.  
  
1987 Report on Diamond Drilling, Mel Property, Yukon; report prepared for Novamin Resources Inc.

Miller, D.C. cont'

- 1989 Report on the Mel property, Watson Lake Mining Division, Yukon; report prepared for Barytex Resources Corp.
- 1990 Report on the Mel property, Watson Lake Mining Division, Yukon; report prepared for Barytex Resources Corp.

Miller, D.C., Blanchflower, J. D.

- 1982 Geological and geochemical report on Joni, et al claims; report prepared for Sulpetro Minerals Limited.

Morris, G.W.

- 1989 Prefeasibility Report for a lead, zinc, barite mine on Mel property, Yukon; report prepared for Barytex Resources Corp. by Sandwell Swan Wooster Inc.

Senft, D.A.

- 1996 Exploration program, Mel property, diamond drilling and soil geochemistry; report prepared for Cominco Ltd.

Senft, D.A., Hall, D.C.

- 1998 1997 Exploration program, Mel property, line-cutting, geophysics, soil geochemistry and diamond drilling, Watson Lake Mining Division, Yukon; report prepared for Cominco Ltd.

Slim, B.A.

- 1989 Barytex Market, a preliminary review of the barite mineral market in North America; report prepared for Barytex Resources Corp.

Smith, I.R.

- 2000 Preliminary report on surficial geology investigations of La Biche River map area, southeast Yukon Territory; Geological Survey of Canada, Current Research 2000-B3.

Stevens, J.

- 2015 Assessment report describing aerial photography, lidar topographic surveys, heritage study, barite marketing study, resource estimation and scoping study. Report prepared for Silver Range Resources Ltd.

Wilkinson, W.J.

- 1975 Report on Empire Metals option (Otter Lake), diamond drill program; report prepared for Granby Mining Corp.

**APPENDIX I**  
**STATEMENT OF QUALIFICATIONS**

## STATEMENT OF QUALIFICATIONS

I, Heather Burrell, geologist, with business addresses in Vancouver and Squamish, British Columbia and Whitehorse, Yukon Territory and residential address in Squamish, British Columbia do hereby certify that:

1. I graduated from the University of British Columbia in 2006 with a B.Sc in Geological Sciences.
2. From 2004 to present, I have been actively engaged in mineral exploration in the Yukon Territory, British Columbia and Northwest Territories.
3. I am a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia.
4. I am a partner in Archer, Cathro & Associates (1981) Limited.
5. I have personally supervised the fieldwork reported herein and have interpreted all data resulting from this work.



H. Burrell, B.Sc., P.Geo

**APPENDIX II**  
**STATEMENT OF EXPENDITURES**

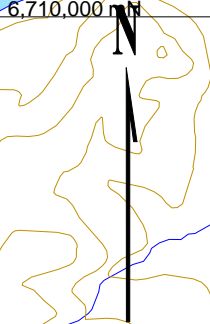
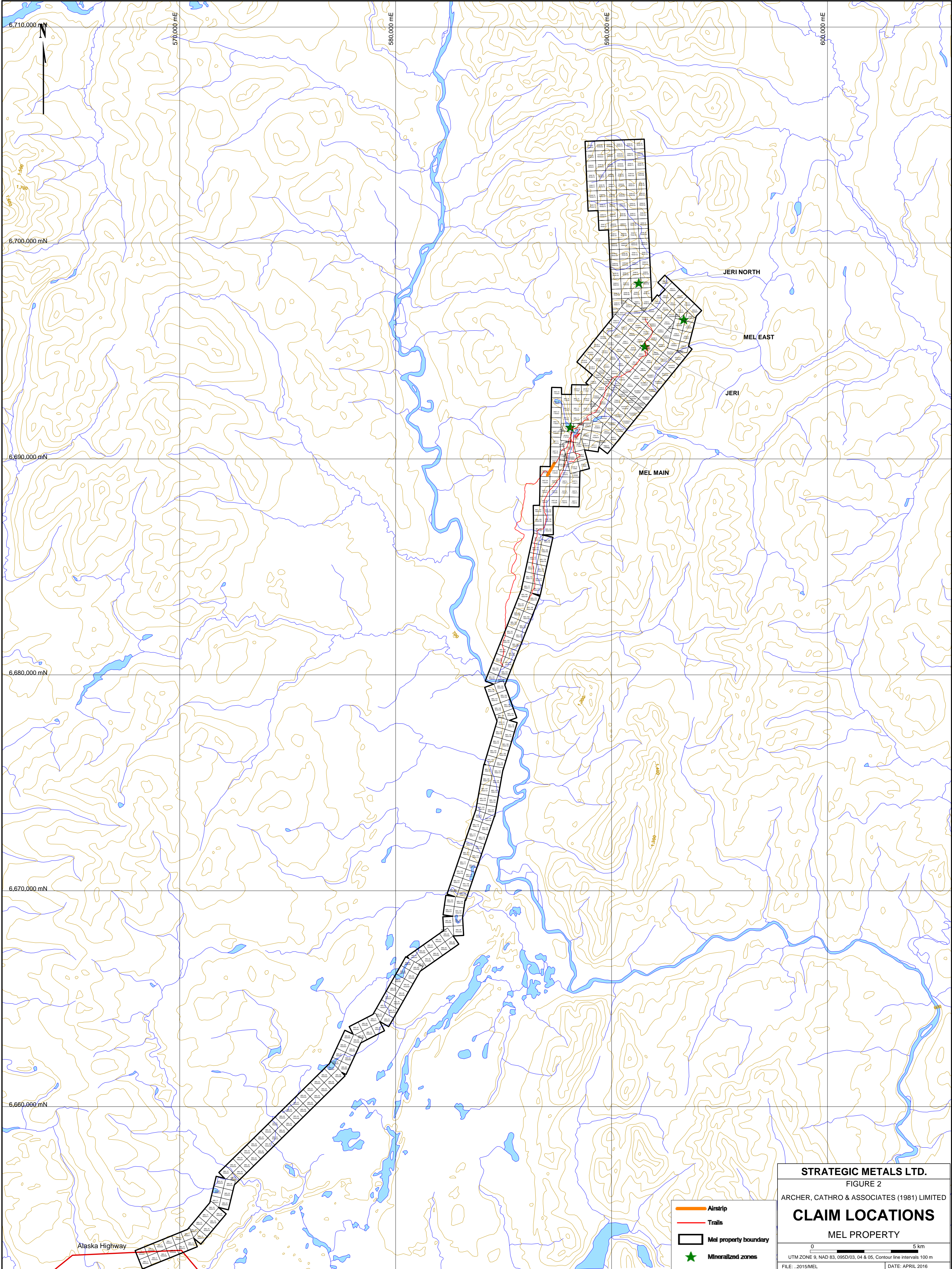
Statement of Expenditures  
575 Mel Project Mineral Claims  
March 17, 2016

Labour

D. Eaton (geologist) 28 hours April to March at \$120/hr	\$ 3,528.00
H. Burrell (geologist) 57 hours April to March at \$106/hr	6,344.10
A. Carne (engineer) 46 hours April to March at \$90/hr	4,347.00
J. Stevens (engineer) 133 hours April to March at \$85/hr	11,870.25
A. Mitchell (geologist) 6 hours April to March at \$82/hr	516.60
J. Morton (geologist) 116 hours April to March at \$82/hr	9,987.60
C. Beck (field assistant) 8 hours April to March at \$74/hr	621.60
M. van Loon (field assistant) 104 hours April to March at \$68/hr	7,425.60
R. Burke (field assistant) 104 hours April to March at \$49/hr	5,350.80
J. Mariacher (office) 43 hours April to March at \$90/hr	4,063.50
W. Schneider (expedite) 58 hours April to March at \$92/hr	5,602.80
D. Arnold-Wallinger (expedite) 37 hours April to March at \$85/hr	3,302.25
L. Corbett (expedite) 26 hours April to March at \$81/hr	2,211.30
L. Smith (expedite & office) 55 hours April to March at \$69/hr	3,984.75
S. Newman (office) 31 hours April to March at \$64/hr	<u>2,083.20</u>
	71,239.35

Expenses (including management)

Field room and board – 60 days at \$180/day	12,204.00
Trans North Helicopters – 6.8 hours Bell 206B at \$990/hr plus fuel	9,370.68
Alkan Air	4,172.75
Iyon Kechika Contracting Ltd.	11,898.90
ALS Chemex	301.69
Stantec	7,174.73
Truck rental and fuel	2,779.05
Storage rental	<u>593.25</u>
	48,495.05
 Total	 <u>119,734.40</u>



6,710,000 mN

6,700,000 mN

6,690,000 mN

6,680,000 mN

6,670,000 mN

6,660,000 mN

570,000 mE

580,000 mE

590,000 mE

600,000 mE




JERI NORTH

MEL EAST

JERI

MEL MAIN

Alaska Highway

-  Airstrip
-  Trails
-  Mel property boundary
-  Mineralized zones

**STRATEGIC METALS LTD.**  
 FIGURE 2  
 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
**CLAIM LOCATIONS**  
 MEL PROPERTY

0 5 km

UTM ZONE 9, NAD 83, 09SD/03, 04 & 05, Contour line intervals 100 m  
 FILE: ..2015/MEL DATE: APRIL 2016